BEFORE
THE HON'BLE JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION

FILINGOFPETITIONFORBUSINESS PLAN FOR THE MYT CONTROL PERIOD FY 2021-22 TO FY 2025-26

SUBMITTEDTO:

JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION, RANCHI

SUBMITTEDBY:

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

BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION, RANCHI

IN THE MATTER OF:FilingofthePetitionforsubmission of Business Plan for MYT Control Period FY 2021-22 to FY 2025-26under Jharkhand State Electricity Regulatory Commission(Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 andits 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 readwith the relevant guidelines.

AND

IN THE MATTER OF: Jharkhand UrjaSancharan 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 UrjaVikas 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 UrjaSancharan 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 UrjaSancharan 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 UrjaSancharan Nigam Limited
(Petitioner)

Authorized Signatory

Place: Ranchi
Dated:

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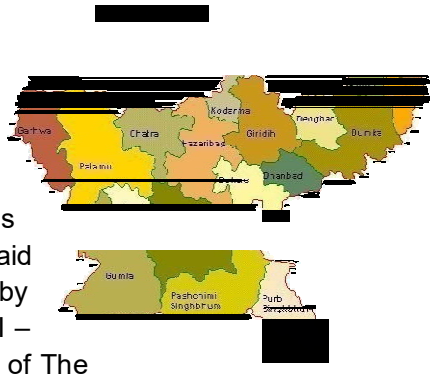
1. Introduction

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 UrjaVikas 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 BijliVitran Nigam Ltd**", means the Distribution Company to which the Distribution Undertakings of the Board are transferred in accordance with this Scheme.
b. "**Jharkhand UrjaUtpadan Nigam Ltd**" means the Generating Company to which the Generating Undertakings of the Board are transferred in accordance with this Scheme;
c. "**Jharkhand UrjaSancharan Nigam Ltd**" means the Transmission Company to which the Transmission Undertakings of the Board are transferred in accordance with this Scheme;
d. "**Jharkhand UrjaVikas Nigam Ltd**" means the Company that owns all shares of newly incorporated reorganized three companies i.e. Jharkhand UrjaUtpadan Nigam Ltd, Jharkhand UrjaSancharan Nigam Ltd and Jharkhand BijliVitran Nigam Ltd;

1.1.4. Jharkhand UrjaSancharan 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 UrjaSancharan 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 UrjaSancharan 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 10thJune 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 UrjaSancharan 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	True-Up Petition for FY 2017-18	04.02.2021	Order yet to be issued
8	True-Up Petition for FY 2018-19, APR 2019-20 & ARR FY 2020-21	10.08.2021	Order yet to be issued
9	Review Petition against True up Order for FY 2015-16 and FY 2016-17	30.03.2022	Order yet to be issued

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 amendmentsthereof, alongwiththeotherguidelinesand 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. Operational Performance
iv. Financial Performance
v. Statutory and Regulatory Framework
vi. Capital Investment Plan
vii. ARR for the MYT Control Period

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. 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 ongoing schemes of the JUSNL and 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 54 GSS (Up to 31st March, 2022) &transmission line length is 6421.17CKM. The details of infrastructure of the Petitioner added during recent years is provided in the table below:

Table 2Growth in Transmission Line

(CKM)

Sl. No	Type of Transmission Network	As on 31.03.2017	As on 31.03.2018	As on 31.03.2019	As on 31.03.2020	As on 31.03.2021	As on 31.03.2022
i)	400 kV	180	180	180	180	180	278
ii)	220 kV	993	1069	1081	1395	2022.39	2482.51
iii)	132 kV	2019	2019	2742	3156	3660.66	3660.66
Total Length (Ckt. Km.)		**3192**	**3268**	**4003**	**4731**	**5863.05**	**6421.17**

3.2.4. JUSNL's current transmission network stands at 6421.17cktkms. There has been a gradual increase in the network levels making it possible for JUSNL to evacuate and transmit power from one end to another. The compounded growth in Network level has witnessed an increase of around 12.50% and still expanding to have an efficient evacuation of power.

Table 3Growth in Grid Substation

Sl. No	Voltage level of Transmission S/S	As on 31.03.2017	As on 31.03.2018	As on 31.03.2019	As on 31.03.2020	As on 31.03.2021	As on 31.03.2022
i)	400/220 KV	0	0	0	0	0	1
il)	220/132 kV and 220/132/33 kV	6	6	6	8	11	13
iil)	132/33 kV	30	33	34	35	39	40
Total No. of GSS		**36**	**39**	**40**	**43**	**50**	**54**

3.2.5. Considering the growth in Substation commissioned by JUSNL in last 7 years, the number of Substation has increased from 36 to 54 witnessing a CAGR of around 8.17%. JUSNL has concentrated more on 132/33 kV substations to evacuate power effectively to the end use of the consumers and to cater to the demand growth in the State.

Table 4Growth in Transformation Capacity

(MVA)

Sl. No	Voltage level of Transmission S/S	As on 31.03.2017	As on 31.03.2018	As on 31.03.2019	As on 31.03.2020	As on 31.03.2021	As on 31.03.2022
i)	400/220KV	0	0	0	0	0	630

Sl. No	Voltage level of Transmission S/S	As on 31.03.2017	As on 31.03.2018	As on 31.03.2019	As on 31.03.2020	As on 31.03.2021	As on 31.03.2022
ii)	220/132 kV and 220/132/33 kV	2000	2000	2000	3120	4120	4920
iii)	132/33 kV	3295	3555	3655	3785	4185	4335
Total Capacity (MVA)		**5295**	**5555**	**5655**	**6905**	**8305**	**9885**

3.2.6. Considering the transformation capacity of JUSNL at present for FY 2021-22, the major transformation capacity has been enhanced in 220/132/33 kV.

3.2.7. In FY 2020-21 the JUSNL catered a demand of around 1566 MW and transmitted 9363 MUs of energy.

3.3. Operational Performance

3.3.1. Operational parameters and performance provide a basis for determining thefinancial viability and strategies for the Company. Some of the operational and performance parameters have been analysed in following subsections.

Availability of JUSNL Transmission System

3.3.2. JUSNL is maintaining a very good Transmission System Availability. It is the endeavor of the JUSNL to maintain a system availability of more than 98% during the 3rd MYT Control Period despite the increase in network loading. Transmission System Availability for the 3rd MYT Control Period is given in the table below:

Table 5Proposed Transmission System Availability during the 3rd MYT Control Period

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
System Availability (in%)	98.50	98.50	98.50	98.50	98.50

Transmission Losses

3.3.3. The transmission loss trajectory proposed for the 3rd Control Period is provided in the table given below:

Table 6 Proposed Transmission Losses during the 3rd Control Period

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Transmission Loss (%)	5.00%	5.00%	5.00%	5.00%	5.00%

Energy Catered

3.3.4. Given below is the energy catered by JUSNL's system from FY 2016-17 to FY 2020-21:

Table 7Energy Catered during the last five years

Financial Year	Energy Transmitted (MUs)	Peak Demand Met (in MW)
FY 2016-17	8056	1524
FY 2017-18	8487	1284
FY 2018-19	8483	1319
FY 2019-20	8730	1419
FY 2020-21	9363	1566

3.3.5. The above is based on the provisional data based on input of SLDC. The same will be finalized once the Samast scheme will be implemented.

Energy Balance for the 3rd MYT Control Period

3.3.6. The energy requirement of the transmission system for the 3rd MYT Control Period is provided in the table given below:

Table 8 Energy Balance for the 3rd MYT Control Period

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Energy available at state periphery (JBVNL) (MU) (a)*	10,387.11	11,834.74	12,614.19	15,262.65	18,099.43
Energy available at state periphery (Railway) (MU) (b)	613.20	678.90	744.60	744.60	744.60
Total Energy available at state periphery (MU) (c=a+b)	11,000.31	12,513.64	13,358.79	16,007.25	18,844.03
Transmission Loss (%) (d)	5.00%	5.00%	5.00%	5.00%	5.00%
Transmission Loss (MU) (e=c*d)	550.02	625.68	667.94	800.36	942.20
Net energy delivered into distribution system (MU) (f=c-e)	10,450.30	11,887.96	12,690.85	15,206.88	17,901.83

(Source: JBVNL)

3.4. Human Resources

3.4.1. A vital ingredient in the effective functioning of an organization is the adequacy and efficiency of its work force. By employing competent professionals, the organization can not only achieve higher levels of efficiency, but also bring down costs and make it more profitable. JUSNL, employs an excellent talent pool. It has a satisfactory performance in recruitment, selection, training and then development of the employees.

3.4.2. JUSNL has reviewed the organisational structure in the light of the changing business needs and particularly to strengthen the functions such as Regulatory, Commercial, Engineering, Legal, Human Resources and Finance & Accounts and has developed a detailed manpower planning process defined with adequate focus on short, medium and long term needs. It has projected that the net additions to the employee work force during the 3rd Control Period would be 200 employees and the number of employees retiring would be 79, bringing the total work force to 960 by the end of FY 2025-26.The recruitment and retirement plan for employees in JUSNL is given as follows:

Table 9Employee Planning

S. No.	Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
1	Opening no. of employees	839	810	843	876	921
2	Recruitment	0	50	50	50	50
3	Retirement	29	17	17	5	11
4	Closing no. of employees	810	843	876	921	960

3.5. Organization Structure

3.5.1. JUSNL is structured into a five-tier structure with the corporate office in Ranchi, and the Zone, Circle, Division and Sub-division Offices in the field areas. 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. Each of the circles has separate construction and operation & maintenance divisions that handle respective tasks.

3.5.2. JUSNL has its Corporate Office at Ranchi. The Corporate office is divided into the following departments:

1. Transmission Department:

The Transmission department is responsible for Operation & maintenance of the network, sub-stations and other Transmission related assets owned by JUSNL. The transmission department is also entrusted with the responsibility of renovation & modernization.

2. Projects Department:

The Project Group is responsible for planning and execution of the new transmission projects in JUSNL. Once the Projects are identified, then detailed technical designing of the lines, sub-stations, etc. is carried out. Then the estimated based on the specifications and quantities are prepared. There are three departments that are functioning under the administrative jurisdiction of Projects Department. They are:

- **Engineering:**

It is entrusted with the responsibility of design & engineering, core engineering& technical scrutiny. It is also responsible for the Quality and Inspection function at present.

- **Procurement:**

This department is not only responsible for materials management under the projects Group but also caters to the needs of multiple groups within JUSNL.

- **Contracts:**

It looks after all the EPC contracts and all tendering procedures involved. Further, it is the monitoring body and co-ordinates between site and procurement department For Non-EPC contracts, the Circles are responsible for identifying agencies for undertaking the construction work. The Contracts department acts as a co-ordinating agency.

3. Human Resource

This department looks after all the issues related to Human resource development in JUSNL including recruitment and training of the JUSNL's personnel.

4. Finance/Accounts

This department is responsible for handling all matters related to finance and maintenance of accounts of JUSNL. The key responsibilities of this department is to manage the cash flows for the company, process the bills for payment, purchase proposal scrutiny, book keeping and account maintenance, internal audit, pre-checking, co-ordination with internal and statutory auditors. They also deal with funding agencies and are also responsible for JSERC related matters like ARR etc. along with the C&RA Department.

5. Load Dispatch

The department looks after all the matters related to load dispatch and scheduling of power through JUSNL's transmission so as to adhere to the GRID Code issued by JSERC. It works in consultation with neighbouring State Electricity Boards, Regional Load DespatchCentres and the Regional Electricity Boards. It is also responsible for the healthy upkeep of all types of communication facility including PLCC, satellite phones, VHF sets and leased lines taken from VSNL.

6. C&RA

C&RA is the earning department of the JUSNL deals with the Regulatory & Commercial activities/matters within the framework of various Regulations, Policies notified by the Hon'ble Jharkhand State Electricity Regulatory Commission/Central Electricity Regulatory Commission & Govt. of Jharkhand.

- The Regulatory functions are to get approved the Transmission & other Charges by way of filing Aggregate Revenue Requirement petition for the entire Transmission business before the State Regulatory Commission & to deal with the Regulatory related issues/cases in various Court of Law.

- Whereas Commercial functions are to arrange recovery of Transmission & Other charges for the extended services to the valued customers & to the Stake holders, processing of new & load extension/reduction of demand of existing EHV consumers applications, the application of shifting of lines under paid deposit work, final bills of EHT deposit work, new applications & connectivity approvals for Non-Conventional energy sources coming up under Solar policy/Regulations etc.

7. Company Secretary

The Company Secretary is responsible for the efficient administration of a company, particularly with regard to ensuring compliance with statutory requirements and for ensuring that decisions of the Board of Directors are implemented.

The company secretary ensures that an organization complies with relevant legislation and keeps board members informed of their legal responsibilities. Company Secretary also registers and communicates with shareholders, to maintain company records, such as lists of directors and shareholders, and annual accounts.

8. Information Technology Department

They are responsible for maintaining the database relating to energy accounting, payroll, network design analysis as well as maintenance of website, intranet, computer equipment, etc. This department is also responsible for collating information from the field offices and generating MIS reports.

9. STU department

STU department is mandated to perform functions as prescribed in state grid code and matters related to connectivity with JUSNL transmission network.

3.6. Financial Performance

3.6.1. Profit and Loss Statement for the last five years i.e. FY 2016-17 to FY 2020-21 is summarized below:

Table 10Profit and Loss for FY 2016-17 to FY 2020-21

S. No.	Particulars	As on 31.03.2017 (Audited)	As on 31.03.2018 (Audited)	As on 31.03.2019 (Audited)	As on 31.03.2020 (Audited)	As on 31.03.2021 (Unaudited)
A	**Revenue**					
1	Revenue from transmission and ancillary services*	189.96	218.65	230.01	217.56	229.58
2	Other Non-tariff income	10.11	13.98	37.21	19.88	12.79
3	Revenue subsidies					-
4	Income from Investment					-
	Total Revenue or	**200.07**	**232.64**	**267.21**	**237.45**	**242.37**

S. No.	Particulars	As on 31.03.2017 (Audited)	As on 31.03.2018 (Audited)	As on 31.03.2019 (Audited)	As on 31.03.2020 (Audited)	As on 31.03.2021 (Unaudited)
	Income					
B	**Expenditure**					
1	Expenses for SLDC's fees & charges					
2	Operations & Maintenance Expenses	79.27	133.19	123.37	117.27	107.89
a	Repairs and Maintenance	24.40	22.70	18.22	34.56	29.85
b	Employee costs	45.86	82.52	72.52	70.13	67.80
c	Administration and General expenses	9.01	27.97	32.64	12.57	10.25
3	Net prior period credits/(charges)					
4	Other Debits, Write-offs					
5	Extraordinary items (net)					
6	Less: Expenses Capitalized					
	Total Expenditure	**79.27**	**133.19**	**123.37**	**117.27**	**107.89**
C	**PBDIT**	**120.79**	**99.45**	**143.84**	**120.18**	**134.48**
D	**Depreciation and Related debits**	**72.18**	**74.77**	**49.77**	**128.74**	**138.30**
E	**PBIT**	**48.61**	**24.68**	**94.08**	**-8.56**	**-3.83**
1	Interest & Finance Charges	176.12	382.94	304.68	494.38	503.26
2	Less: Interest Capitalized	5.46	0.00	0.00	0.00	0.00
F	**Total Interest and Finance Charges**	**170.66**	**382.94**	**304.68**	**494.38**	**503.26**
G	**TOTAL EXPENDITURE**	**322.11**	**590.90**	**477.82**	**740.38**	**749.45**
H	**Profit/Loss before Tax**	**-122.04**	**-358.27**	**-210.60**	**-502.94**	**-507.08**
I	**Provision for Income Tax**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
J	**Profit/Loss after Tax**	**-122.04**	**-358.27**	**-210.60**	**-502.94**	**-507.082**

a. Revenue from Transmission Business

- The major element of revenue for the Company is Transmission charges which is receivable from JBVNL and Railways. The expected revenue is fairly certain, as it has no variable component.

- The revenue from transmission activity for FY 2020-21 is Rs. 229.58 Crores as compared to Rs. 217.56 Crores in FY 2019-20. The revenue earned in FY 2020-21has seen a growth of ~5.52% in comparison to the previous year.
- Due to overall economic development of the State of Jharkhand, the increase in revenue from transmission business has witnessed a growth of 4.85% CAGR in last 5 year period.
- However, the revenue earned from transmission activities is not offsetting the total cost of the company. The tariff as approved by the Hon'ble JSERC in the Tariff Order dated 24.02.2018 has remained the same for the last five years. Whereas, during this period the expenditure of the JUSNL has increased manifold and it can be seen from the table given above that the expenditure has grown at a CAGR of 23.51% during this tenure. Hence, it is imperative that the transmission charges be revised from the next financial year to allow the JUSNL to recover its expenditure incurred in carrying out its operational activities.

b. O&M Activities

- O&M expense is one of the major expenses of JUSNL which accounts for almost one fifth of the total cost.
- The O&M Cost has also witnessed a growth of 8.01% in last 5 years and a sudden hike for FY 2017-18 is due to increase in employee cost due to pay revision, payment of arrears and recruitment of new employees by the JUSNL.
- The major reason for the increase in O&M cost is the increase in employee cost due to the hike in employee cost due to pay revision.
- It is noted that the employee expenses is around 60% of the total O&M cost and around 28% of the total income of JUSNL.

c. Depreciation

- Depreciation as an expenses are around 18% of the total expenses. The depreciation has been increasing from FY 2016-17 due to the commissioning of substations and transmission lines by JUSNL.
- The R&M includes replacement of aged assets like Switchgear, Relays, obsolete technology, re-conductoring of old lines and line structures strengthening, civil maintenance of building, system upgradation etc to have tangible benefits in terms of system availability by reducing failure rate and T&D losses.
- Due to aged infrastructure & rapid load growth, system availability and reliability was affected and hence Renovation and Modernization of existing transmission network / assets was highly essential to meet the expectation of consumers.
- Also, to meet the demand growth in the State, there was a need to augment and expand the transmission infrastructure for which JUSNL has undertaken a CAPEX plan to commission various substation and lines resulting in increase in Fixed Assets and Depreciation.
- The depreciation rate has been applied in line with the rates approved by the Hon'ble JSERC in the MYT Regulations.

d. Interest Expenses

- Interest and Finance charges are worked out on the basis of loans availed by the JUSNL.
- The interest expense is the major component of the total expenses of JUSNL and has been increasing over the last five years. The annual interest expenses have increased from Rs. 176.12 Crore during the FY 2016-17 Rs. 503.26 Crore during the FY 2020-21 witnessing a CAGR of around 30%. The JUSNL is in the process of implementation of a number of capital expenditure schemes in Jharkhand and the same are funded through state Government loans. Hence, the interest expenses have increased tremendously during the last five years.

3.6.2. Based on the transfer scheme notified by the State Government, JUSNL started their operation in FY 2013-14. Balance Sheet for the last 5 years i.e. from FY 2016-17 to FY 2020-21 is summarized below:

Table 11Balance Sheet for FY 2016-17 to FY 2020-21

S. No.	Particulars	As on 31.03.2017 (Audited)	As on 31.03.2018 (Audited)	As on 31.03.2019 (Audited)	As on 31.03.2020 (Audited)	As on 31.03.2021 (Unaudited)
A	**Assets**					
1	***Non-Current Assets***					
a	Plant,Property and Equipment	921.11	873.08	931.72	1188.94	1,733.21
b	Capital work-in-progress	713.46	1504.98	1,934.53	2339.94	2,298.24
c	Other non-current tax assets			2.10	6.14	8.35
d	Other non-current assets	297.14	297.13	754.50	876.93	882.40
2	***Current Assets***					
a	Inventories	43.71	50.75	50.62	49.56	42.93
b	Financial assets					
i	Loans and Advances	690.11	747.94			
ii	Trade receivables	260.40	323.35	424.03	635.98	753.66
iii	Cash and cash equivalents	860.64	1389.26	1,610.33	1087.90	1,950.67
iv	Bank Balances other than Cash & Cash equivalents	11.41	12.01	133.49	116.30	58.55
c	Other Current assets	87.08	121.56	178.71	233.25	297.98
	Total Assets	**3885.06**	**5320.05**	**6020.04**	**6534.92**	**8,026.00**
B	**Equity & Liabilities**					
1	***Equity***					
a	Equity Share Capital	2.10	972.96	972.96	972.96	972.96
b	Other Equity					
	Fund for Equity Capital (Equity Share Pending Allotment)					626.00
	Reserve & Surplus	-217.71	-575.98	-786.58	-1289.52	-1796.36
	Restructuring Account	970.86	0.00	2.00	2.00	2.00

S. No.	Particulars	As on 31.03.2017 (Audited)	As on 31.03.2018 (Audited)	As on 31.03.2019 (Audited)	As on 31.03.2020 (Audited)	As on 31.03.2021 (Unaudited)
	Pending Adjustment					
2	***Liabilities***					
2.1	Non-current liabilities					
a	Financial Liabilities					
i	Borrowings	2139.22	3601.66	4,657.71	5239.83	6,566.17
b	Provisions	7.72	11.71	15.66	18.92	21.90
c	Government Grants			56.80	156.02	160.40
2.2	Current Liabilities					
a	***Financial Liabilities***					
i	Trade Payables	476.62	484.41	104.51	113.89	98.08
ii	Other financial liabilities			453.40	498.97	478.43
b	Other Current liabilities	500.99	817.53	540.42	817.14	889.86
c	Provisions	5.26	7.75	3.14	4.73	6.55
	Total Equity and Liabilities	**3885.06**	**5320.05**	**6020.04**	**6534.92**	**8,026.00**

a. Fixed Assets and Capital Under Consideration

- In last 5 years, Net Fixed Assets have grown at a CAGR of 17.12% due to the major transmission infrastructure plan carried out by JUSNL to improve the quality of power supply. JUSNL is consistent in carrying out the CAPEX every year as per their capital expenditure plan.
- CWIP has also witnessed a growth of around 34% in last 5 years. It is to be noted that in last 5 years, JUSNL has undertaken massive projects for expansion of infrastructure system.
- As can be analysed from the Balance Sheet of JUSNL, around 100% of the fund is utilised for CAPEX and Fixed Assets purpose and the balance is net current assets.
- The CAPEX plan undertaken includes re-enforcement of the system to provide quality, security and availability of power supply to the consumers, to undertake system development to meet the load growth, achieving the targeted reduction in system losses, undertake automation and other improvement works.
- As per the CAPEX plan, JUSNL is planning to undertake the commissioning of the lines and substation of various voltage levels and also to undertake the augmentation of the sub-station / Lines.

b. Net Current Assets

- The Net Current Assets of JUSNL is positive whereby the current assets aremore than the current liabilities of the company. The ratio of current assets to current liabilities is more than 2, which shows that the JUSNL has enough currents assets to meet its current liabilities.
- The CAGR of the Net Current Assets is around 13% which is quite healthy.

- The major portion in the current assets is the cash and cash equivalents and receivables against transmission of power and inventories which has almost been around 80% to 90% of the Total Current Assets.
- Against that the current liabilities has also increased to a large extent with a CAGR of around 10%. The current liabilities include the liabilities towards capital / O&M works, staff liabilities, expenses, deposits and Inter Company Transfer.

c. Equity and Debt

- It can be seen from Balance Sheet that the reserve and surplus as on 31.03.2021 is Rs. -1796.36 Crores. The JUSNL is not able to meet its operational expenses from the revenue it earns from transmission of energy as the tariff approved by the Hon'ble JSERC has not increased since the last five years. The net equity of the JUSNL is Rs. -195.39 Crores as on 31.03.2021 i.e. the JUSNL is having a negative net worth.
- Further, the total liabilities of the JUSNL as on 31.03.2021 stood at Rs. 8221.39 Crores which includes borrowings to the tune of Rs. 6566.17 Crores. This implies that the JUSNL is having a high degree of leverage in its balance sheet and it will be difficult for the JUSNL to raise more funds from the market looking at the current debt equity ratio.
- The secured loans have increased due to major capex work carried out by JUSNL in last 5 years.
- However, to meet its operational expenses the transmission tariff of JUSNL needs to be revised in accordance with the expenses being incurred by the JUSNL.

4. Regulatory Framework

4.1. Background

4.1.1. As per the Constitution, the power sector in India was the combined responsibility of Central and State Government. Over the years, reforms in Indian power sector have been driven by the Union Government in an endeavor to achieve sustainable growth & improvement in operational efficiencies. One of the hallmarks of this reform Agenda is the Electricity Act, 2003 (hereinafter referred as EA, 2003 or simply the "Act" unless specified otherwise).

4.1.2. The Electricity Act 2003 attempts to induce competition in electricity sector for creating an environment conducive to supply good quality of electricity to all categories of consumers at affordable/reasonable prices. The access to electricity markets for captive generators, open access participants and parallel licensees has led to evolution of multi buyer market mechanism. Adequate investment in Intra-state and Inter-state transmission infrastructure would also be required for supporting power generation. This vibrant power market would act as magnet for coastal power plants based on imported fuel, competitive merchant power plants set up pursuant to the promotional policies like mega power plants etc, and incentives offered by the Government such as availability of state specific resources like land, water, rebate in local taxes, etc.

4.1.3. The state regulator (JSERC) has issued several regulations to build a strong framework and a stable business environment. The Statutory and Regulatory provisions of JSERC would require that JUSNL maintains and operates an efficient network that can service the multiple players that would enter the market and ensures that the power flow in the state is not affected.

4.2. Enabling Provisions in EA-2003

4.2.1. The Government of India notified The Electricity Act, 2003 with effect from 10th June 2003 requires the State Governments to initiate major changes in the Industry Structure and Operations of the state power sector. The broad objectives of the Electricity Act, 2003 as incorporated in its preamble is to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry through way of reforms and restructuring, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalisation of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto.

4.2.2. It has introduced a number of innovative concepts like de-licensing of generation, power trading, Open Access, Appellate Tribunal, etc., and special provisions for

the rural areas. The Act has made it mandatory for all the States to restructure their SEBs.

4.2.3. The major provisions of the electricity Act 2003 related to Transmission were:

- As per Section 3 of the Electricity Act 2003, the CEA has been entrusted with the responsibility of preparing the National Electricity Plan in accordance with the National Electricity Policy and notify such plans once in five years.
- Preparation, publication and notification of National Electricity Plan by the Central Electricity Authority. (Section 4)
- Private sector participation in transmission through grant of license by the appropriate Regulatory Commission. (Sections 12,13,14,15)
- CTU (Central Transmission Utility) / STU (State Transmission utility) to be deemed transmission licensee. (Section 14)
- Planning, coordination, development and undertaking transmission of electricity through inter-state system by the Central Transmission Utility. (Section 38)
- Planning, coordination, development and undertaking transmission of electricity through intra-state system by the State Transmission Utilities. (Section 39)
- Licensee to provide non-discriminatory open access to any licensee or generating company and to any consumer as and when open access is provided by SERC in Transmission. (Section 40)
- Open access to be provided against payment of transmission charges as determined by CERC/SERC.
- Advise to the Central Government on matters relating to the national electricity policy, formulate short-term and perspective plans for development of electricity system and coordinate the activities of the planning agencies.
- Governments, licensees or the generating companies for improved and coordinated operation of electricity system under their ownership, and advise to the Appropriate Governments and Appropriate Commissions on technical matters relating to generation, transmission and distribution of electricity by the Central Electricity Authority. (Section 73)
- Regulation and tariff determination for inter-state transmission by the CentralElectricity Regulatory Commission. (Section 79)
- Facilitation and tariff determination for intra-state transmission by the State Electricity Regulatory Commissions. (Section 86)

4.2.4. Also, Act has envisages competition in transmission and has provisions for grant of transmission licenses by the Central Electricity Regulatory Commission (CERC) as well as State Electricity Regulatory Commissions (SERCs). Further, the Act creates a conducive environment for investments in all segments of the industry, both for public sector and private sector, by removing barrier to entry in different segments.

4.2.5. CTUs and STUs functions as specified in the Act are:

- Transmission;
- Planning & co-ordination of transmission system;
- Development of efficient and economical transmission lines from generating stations to load centres;
- Providing non-discriminatory open access to the system

4.3. Legal Structure of Power Transmission in India

4.3.1. Ministry of Power of the Government of India (GoI) is at the helm of Indian Power Industry, providing policy guidance to the sector. The Central Electricity Authority (CEA) constituted under Electricity Supply Act 1948, is a body for advising GoI on technical matters and is responsible for preparing National Electricity Plan in accordance with the National Electricity Policy.

4.3.2. The Central Electricity Regulatory Commission established as per the Electricity Regulatory Commission Act, 1998, regulates the power sector at national level including functioning of central power utilities like the NTPC and NHPC, which are engaged in generation, and PGCIL, which is engaged in interstate power transmission.

4.3.3. At the state level, state governments control the sector through the erstwhile state electricity boards (SEBs) and electricity departments (EDs). In many states the SEBs are now unbundled or corporatized as per the EA 2003. Separate utilities are responsible for generation, transmission, and distribution, usually within their own states and territories. Intra-state transmission is exclusive domain of SEBs and State Transmission Utilities (STUs) formed out of unbundled SEBs.

4.4. National Electricity Policy

4.4.1. The National Electricity Policy was notified by GoI as per provisions of the Act on February 12, 2005. This Policy aims at accelerated development of the power sector, providing supply of electricity to all areas and protecting interests of consumers and other stakeholders keeping in view availability of energy resources, technology available to exploit these resources, economics of generation using different resources and energy security issues;

4.4.2. The development of the National Grid is an important feature of the Policy. The Policy states that the Transmission System requires adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country. It further recognizes that there is need for adequately augmenting transmission capacity in view of the massive increase planned in generation and also for development of power market.

4.4.3. The Policy notes that in view of the required magnitude of the expansion of the sector, a sizeable part of the investment requirement will need to be brought in from the private sector. In keeping with this, it specifies that special mechanisms would be created to encourage private investment in the transmission sector so that sufficient investments are made for achieving the objective of demand to be fully met by 2012.

4.4.4. The National Electricity Policy notified on 12th February, 2005 inter-alia states that– "*5.3.1 The Transmission System requires adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country.*

5.3.2 Keeping in view the massive increase planned in generation and also for development of power market, there is need for adequately augmenting transmission capacity…….. 5.3.10 Special mechanisms would be created to encourage private investment in transmission sector so that sufficient investments are made for achieving the objective of demand to be fully met by 2012.

5.8.1 ……. Considering the magnitude of the expansion of the sector required, a sizeable part of the investments will also need to be brought in from the private sector. The Act creates a conducive environment for investments in all segments of the industry, both for public sector and private sector, by removing barrier to entry in different segments. Section 63 of the Act provides for participation of suppliers on competitive basis in different segments which will further encourage private sector investment."

4.4.5. In order to facilitate the smooth and rapid development of transmission capacity in the country as envisaged in the National Electricity Policy, some transmission projects will be identified for tariff based competitive bidding, in which Private Investors and Transmission Utilities, both Central and State, can participate.

4.5. National Tariff policy

4.5.1. Some of transmission related provisions of National Tariff Policy which have implication with regard to the National Electricity Plan are:

a. Adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country.
b. Augmenting transmission capacity keeping in view the massive increase planned in generation and also for development of power market.
c. While planning new generation capacities, requirement of associated transmission capacity would need to be worked out simultaneously in order to avoid mismatch between generation capacity and transmission facilities.

- The Central Government would facilitate the continued development of the National Grid for providing adequate infrastructure for inter-state transmission of power and to ensure that underutilized generation capacity is facilitated to generate electricity for its transmission from surplus regions to deficit regions.

- The Central Transmission Utility (CTU) and State Transmission Utility (STU) have the key responsibility of network planning and development based on the National Electricity Plan in coordination with all concerned agencies as provided in the Act. The CTU would need to coordinate with the STUs for achievement of the shared objective of eliminating transmission constraints in cost effective manner.
- Network expansion should be planned and implemented keeping in view the anticipated transmission needs that would be incident on the system in the open access regime. Prior agreement with the beneficiaries would not be a pre-condition for network expansion.
- Structured information dissemination and disclosure procedures should be developed by the CTU and STUs to ensure that all stakeholders are aware of the status of generation and transmission projects and plans.

d. Open access in transmission has been introduced to promote competition amongst the generating companies. This should lead to availability of cheaper power. The Act mandates nondiscriminatory open access in transmission.

e. To facilitate orderly growth and development of the power sector and also for secure and reliable operation of the grid, adequate margins in transmission system should be created. The transmission capacity would be planned and built to cater to both the redundancy levels and margins keeping in view international standards and practices.

4.6. SERC Regulations

4.6.1. The above mentioned developments at the national level were followed up by similar enabling environment at the state level also through intervention by State Regulatory Commissions. Various regulations were enacted by the Regulatory Commissions in compliance with the provisions of the EA 2003 and as guided by the National Tariff Policy and National Electricity Policy. Some of the key regulations which were enacted by the JSERC as outlined below:

Table 12JSERC Regulations for Transmission Utilities

S.No.	Name of the Regulations
1	State Grid Code, 2019
2	Planning, Coordination, Development and Approval of an economic and efficient Intra state Transmission System Regulations, 2019
3	Procedure, Terms & Conditions for the Grant of Transmission Licence and other related matters Regulations, 2019
4	Multi Year Tariff Regulations, 2020
5	Framework for Sharing of Charges for Intra-State Transmission System Regulations, 2019
6	Intra State Open Access Regulations, 2016

5. Capital Investment Plan

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

5.1.1. 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 along with augmentation and R&M work. The detailed breakup of proposed capital expenditure during the second control period FY 2021-22 to 2025-26 has been indicated below:

Table 13Proposed Capital Expenditure for the MYT Control Period

All figures are in Rs. Crore

S. No.	Particulars	Capital Expenditure till 31.03.2021	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total Value
1	Ongoing Schemes	2173.42	501.22	2316.99	415.90	0.00	0.00	**5407.53**
2	Planned Schemes	0.00	0.00	953.05	1117.01	1039.87	477.43	**3587.36**
3	Augmentation	0.00	50.00	50.00	75.00	50.00	25.00	**250.00**
4	Renovation & modernization	0.00	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**

5.1.2. It can be seen from the table given above that the JUSNL plans to invest Rs. 9,494.89 Crore in various capital expenditure schemes during the 3rd MYT Control Period. Out of Rs. 9,494.89 Crores,expenditure of Rs. 2,173.42 Crores has already been incurred during the previous Control Period in a number of ongoing schemes being financed by the State Government and the World Bank.

5.2. Proposed Capitalization

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

Table 14 Proposed Capitalization Schedule for the MYT Control Period

All figures are in Rs. Crore

S. No.	Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	TotalValue
1	Ongoing Schemes	360.35	3947.50	908.91	190.77	0.00	**5407.53**
2	Planned Schemes	0.00	49.87	151.30	2366.16	1020.03	**3587.36**
3	Augmentation	50.00	50.00	75.00	50.00	25.00	**250.00**
4	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**

5.2.2. The JUSNL will capitalize schemes valuing Rs. 9,494.89 Crores during the 3rd MYT Control Period. The schemes include ongoing schemes which have spill over from the last Control Period and planned schemes which the JUSNL envisages to implement during the next 5 years.

5.3. Rational for Capital Expenditure

5.3.1. 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.
- Reliable system availability.
- Strengthen the transmission network for system improvement like voltage profile, catering more power and additional reactive compensation.

5.4. Capital Investment Plan in conformity with the Capex Plan of the Distribution Licensee and Generating Company

5.4.1. Clause no. 6.9 of the MYT Regulations state the following:

"*6.9 The Capital Investment Plan shall be in conformity with the plans made by the CEA/CTU and with the Capital Investment Plans of the Distribution Licensees and the Generating Companies and shall be developed as per the procedure specified in the Grid Code.*"

5.4.2. The capital investment plan of the JUSNL has been formulated by considering the overall growth in demand of the state of Jharkhand, the capital investment plan of the distribution licensee and the new power generation plants being set up in the state. The capital expenditure plan of the JBVNL includes a number of schemes like the Jharkhand Power System Improvement Project (JPSIP), Jharkhand SampurnaBijliAchchadanYojna (JSBAY), Annual Development Plan which shall be implemented during the 3rd MYT Control Period.

5.4.3. As per the estimate made by JBVNL, the connected load at the end of the Control Period shall be 88,89,117 kVA. The same needs to be complemented by augmentation of the transmission infrastructure of the state as present transmission network is not adequate to meet the growing need of the distribution system of the state.

5.4.4. Also, new power plants are coming up in the state and are under various stages of development. Further, the JBVNL has entered into a JV with NTPC with total capacity of 2,400 MW in Stage-I. In addition to this the JBVNL has entered into new PPAs with Central generation Stations to cater to the increased demand in the state. The details of existing PPA (excluding DVC) signed by JBVNL with various generating stations is provided in the table below:

Table 15Current Power Purchase Allocation of JBVNL

S.No.	Name of Generating Station	Allocation (MW)
I	**NTPC**	
	Farrakka	139.06
	Farrakka III	84.74
	Kahalgaon I	27.66
	Talcher	89.38
	Kahalgaon II	45.72
	Barh	80
	Korba	50
	Darlipalli	73.79
	Total	**590.35**
	Kanti Power	11.5
	Nabinagar	20
	Grand Total	**621.85**
II	**NHPC**	
	Rangit	8
	Teesta	62.83
	Total	**70.83**
III	**PTC**	
	Chukha	38.66
	Tala	116.9
	Total	**155.56**
IV	**Total Central Sector**	**848.24**
V	**TVNL**	**420**
VI	**APNRL**	
	Unit I	63
	Unit II	63
	APNRL (Add.)	63
	Total	**189**
VII	**Solar**	
	SECI	10

S.No.	Name of Generating Station	Allocation (MW)
	State	16
	Total	**26**
VIII	**Wind**	
	PTC	200
	SECI	100
	Total	**300**
IX	INLAND	63
X	ABCIL	11
XI	Rungta Mines	4
	Total Purchase PPA	**1861.24**
XII	SRHPS (Generation)	130
	Grand Total	**1991.24**

5.4.5. The details of upcoming projects along with their expected COD and allocation capacity is provided in the table below:

Table 16Upcoming Allocations

S.No.	Name of Generating Station	Fuel	Allocation (MW)	Exp. CoD
1	NTPC Darlipalli STPS Unit-II	Thermal	62.5	Apr-22
2	NTPC Nabinagar Unit-III	Thermal	20	Jul-21
3	NTPC Barh STPS-I Unit-II	Thermal	67	Oct-21
4	NTPC Barh STPS-I Unit-III	Thermal	67	Apr-22
5	NTPC North Karnpura Unit-I	Thermal	166.7	Oct-21
6	NTPC North Karnpura Unit-II	Thermal	166.7	Apr-22
7	NTPC North Karnpura Unit-III	Thermal	166.7	Oct-22
8	PUVNL Stage-I Unit-I	Thermal	600	Apr-23
9	PUVNL Stage-I Unit-II	Thermal	600	Apr-24
10	PUVNL Stage-I Unit-III	Thermal	600	Apr-25
11	SECI Solar	Solar	700	Apr-21
12	SECI Wind	Wind	200	Apr-21
	Total		**3416.6**	

5.4.6. Hence, by FY 2025-26 the total allocation of JBVNL from various power generating stations shall be 5407.84 MW(1191.24 MW+3416.6 MW) (excluding DVC). The details of existing & UpcomingPower Purchase Allocation of JBVNL have been enclosed as **Annexure A.**

5.4.7. Hence, the JUSNL has formulated its capital investment plan inconformity with the increasing needs of the state and the requirements of the JBVNL and the Generating Companies. Also, all the schemes being proposed by the JUSNL

during the 3rd MYT Control Period have been approved by the Central Electricity Authority (CEA).

5.5. Financing Plan

5.5.1. 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%. The State Government Schemes include schemes being implemented by the JUSNL, schemes being implemented in the DVC Command Area and Schemes being implemented by the PGCIL. 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 financing plan is based on the following 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 DVC: 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) 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.
d) Ongoing Expenditure through World Bank: 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 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.

Table 17Financing Plan

Particulars	Debt	Equity
Ongoing Expenditure by JUSNL	100% (Interest Rate - 13.00%)	-
Ongoing Expenditure through DVC	100% (Interest Rate - 13.00%)	-
Ongoing Expenditure through PGCIL	100% (Interest Rate - 13.00%)	-
Ongoing Expenditure through World Bank	70% (Interest Rate - 2.50%)	30%
Planned Expenditure through JUSNL	100% (Interest Rate - 13.00%)	-

5.5.2. The year wise requirement of debt and equity is shown in the table given below:

Table 18Proposed Financing Plan for the MYT Control Period

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Debt	460.35	3569.98	1079.99	2656.93	1070.03
Equity	0.00	527.39	130.23	0.00	0.00
Total Capitalization	**460.35**	**4097.37**	**1210.21**	**2656.93**	**1070.03**

5.6. Proposed Network Addition during the MYT Control Period

5.6.1. The figures given below depict Substations and Network proposed to be constructed as per the CAPEX plan for FY 2021-22 to 2025-26.

Table 19 Proposed Network Addition during the MYT Control Period

Sl.No.	Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
1	Transmission Lines (Ckms)	558.29	2425.03	2171.48	1376.00	448.00	6978.80
2	Capacity Addition (MVA)	1730	5030	1000	3560	2620	13940

5.6.2. It can be seen from the table given above that a total of 6,978.80Ckm of transmission lines shall be added on to the network of JUSNL during the 3rd MYT Control Period. Further, 13,940.00 MVA of capacity shall be added to the JUSNL network during the 3rd MYT Control Period. The voltage wise network addition during the 3rd MYT Control Period is provided in the following sections.

5.7. Proposed Voltage wise Network Addition during the MYT Control Period

5.7.1. The voltage wise addition to the network of transmission lines is provided in the table given below:

Table 20Proposed Transmission Line Addition during the MYT Control Period

Ckms

Sl.No.	Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
1	400 KV	97.97	312.33	0.00	1040.00	262.00	1712.31
2	220KV	460.32	167.99	4.00	336.00	86.00	1054.31
3	132KV	0.00	1944.70	2167.48	0.00	100.00	4212.18
	Total	**558.29**	**2425.03**	**2171.48**	**1376.00**	**448.00**	**6978.80**

5.7.2. With the addition of 6978.80Ckms transmission lines during the Control Period the total transmission lines of JUSNL will be 12,284.80Ckms at the end of FY 2025-26.

5.7.3. The voltage wise capacity addition during the 3rd MYT Control period is provided in the table below:

Table 21Proposed Capacity Network Addition during the MYT Control Period

MVA

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
132/33 KV	300	3400	500	0	0	4200
220/132 kV	0	300	0	0	0	300
220/132/33KV	800	400	500	1000	1620	4320
400/220 KV	630	0	0	1000	1000	2630
400/220/132 KV	0	930	0	0	0	930
400/220/132/33 KV	0	0	0	1560	0	1560
Total	**1730**	**5030**	**1000**	**3560**	**2620**	**13940**

5.7.4. With the addition of 13,940.00 MVA capacity during the next five years the total transformation capacity of the JUSNL transmission network by FY 2025-26 shall be 22,745.00 MVA. The details of Proposed Infrastructure Addition during the 3rd Control period are being enclosed as **Annexure B**.

5.8. Ongoing Schemes

5.8.1. The details of the ongoing schemes, covering transmission lines and GSS, are as below:

Table 22Ongoing Schemes Proposed to be Capitalized during the Control Period

All figures are in Rs. Crore

S. No.	Particulars	Proposed capitalization during 3rd Control Period	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
A	**Ongoing JUSNL**						
1	Transmission Lines	386.64	0.00	386.64	0.00	0.00	0.00
2	Substation	348.37	70.35	278.02	0.00	0.00	0.00
3	Bays	73.50	0.00	73.50	0.00	0.00	0.00
	Total	**808.51**	**70.35**	**738.16**	**0.00**	**0.00**	**0.00**
B	**DVC**						
1	Transmission Lines	694.63	0.00	218.16	285.70	190.77	0.00
2	Substation	407.28	0.00	218.15	189.13	0.00	0.00
	Total	**1101.91**	**0.00**	**436.31**	**474.83**	**190.77**	**0.00**

S. No.	Particulars	Proposed capitalization during 3rd Control Period	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
C	**PGCIL**						
1	Transmission Lines and substation	1305.06	290.00	1015.06	0.00	0.00	0.00
	Total	**1305.06**	**290.00**	**1015.06**	**0.00**	**0.00**	**0.00**
D	**World Bank**						
1	Transmission Lines	834.47	0.00	400.39	434.08	0.00	0.00
2	Substation	1357.58	0.00	1357.58	0.00	0.00	0.00
	Total	**2192.05**	**0.00**	**1757.97**	**434.08**	**0.00**	**0.00**
	Grand Total	**5407.53**	**360.35**	**3947.50**	**908.91**	**190.77**	**0.00**

5.8.2. A total investment of Rs. 5,407.53 Cr is planned, through ongoing schemes, during the third control period. The ongoing schemes comprise of the following projects:

A. Ongoing JUSNL

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 details of Proposed capital expenditure and capitalization of Ongoing JUSNL projects are being enclosed as **Annexure C.**

B. DVC Command Area Schemes

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 Proposed capital expenditure and capitalization of DVC Command Area Schemes are being enclosed as **Annexure D.**

C. Schemes being implemented by PGCIL

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.

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 details of Proposed capital expenditure and capitalization of PGCIL projects are being enclosed as **Annexure E.**

D. World Bank Funded Schemes

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, 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. The details of Proposed capital expenditure and capitalization of World Bank projects are being enclosed as **Annexure F.**

5.9. Planned Schemes

5.9.1. The details of the planned schemes, covering transmission lines and GSS, are as below:

Table 23 Planned Capital Expenditure during the 3rd Control Period

S. No.	Particulars	Estimated Cost (Rs Crores)	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	400/220/132/33kV Patratu-New (Katia) substation is commissioned as an alternative to old Patratu substation which is to be dismantled. 400kV is to be commissioned first, later on 220/132/33kV is to be commissioned with all the connection of Patratu Old shifted here. 132kV D/c line Patratu (New) – Hatia (Old) D/c line (with one circuit LILO at Kanke) (2Km) : an alternative new D/c from Hatia(old) to kanke is considered.

S. No.	Particulars	Estimated Cost (Rs Crores)	Reason for Investment
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 Hazaribag is considered. Chatra -PBCMP 220kV D/c is also extended to Hazaribag 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 Govindpur-Dhanbad at Baliyapur.
8	400/220KV GSS Mandar& associated lines and220/132/33 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	400/20 kV S/s Mandar and Bero 220/33kV S/s with S/c LILO of Lohardaga-HatiaII 220kV D/c has been considered in planning studies F.Y 2021-26 to reduce the load at Ranchi capital region. Ranchi capital region is mainly fed from Hatia Old-Namkum and Kanke Substation. With increasing load at HatiaOld, Bero 220/33kV is considered to support the additional load
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 Maithon-Dumka 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	Sarwal&Bero both substations are considered as 220/33kV with provision for 132kV bay,to support the increasing load demand in the Ranchi capital region.

S. No.	Particulars	Estimated Cost (Rs Crores)	Reason for Investment
11	220/132/33 Grid sub station, Palajori and 220 KV LILO Dumka- Gobindpur Transmission line at Palajori GSS	126.75	On establishment of Palojori 220/132kV GSS, loading on Maithon-Jamtara 132kV S/c is reduced. Sarath-Chitra 132kV D/c can be LILOed at Palojori 132kV instead of new Palojori-Sarath 132kV D/c line .Addition in power source at Deoghar through Chitra-Deoghar. 132kV S/c reduces loading on Jasidih-deoghar 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 HTLS conductor. Else if Sarath-Chitra line is LILOed at Palojori, then palojori-Chitra 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**	

5.9.2. The capitalization schedule of the planned schemes detailed above is provided in the table given below:

Table 24Capitalization Schedule of the Planned Schemes

All figures are in Rs. Crore

S. No.	Particulars	Total Scheme Value	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
A	**Planned Schemes**						
1	Capex Schemes	3587.36	0.00	49.87	151.30	2366.16	1020.03
	Total	**3587.36**	**0.00**	**49.87**	**151.30**	**2366.16**	**1020.03**

5.9.3. A 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. The details of Proposed capital expenditure and capitalization of 3rd MYT Control Period are being enclosed as **Annexure G.**

5.9.4. It is also submitted that the capital expenditure schemes proposed for the 3rd MYT Control Period is in line with the projections made in the Load Flow study for the period FY 2021-22 to FY 2025-26. The Load Flow study is being enclosed along with the Business Plan as **AnnexureH**.

5.10. R&M Schemes

5.10.1. 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. Proposed schemes received from various offices is attached as **ANNEXURE-I.**

5.11. Augmentation Schemes

5.11.1. 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. Proposed schemes received from various offices is attached as **ANNEXURE-J.**

6. ARR for the MYT Control Period FY 2021-22 to FY 2025-26

6.1. Preamble

6.1.1. In line with the provisions of the JSERC (Terms and Conditions of Determination of Transmission Tariff) Regulations, 2020, the Petitioner hereby submits the Petition for determination of Annual revenue Requirement (ARR) for the MYT Control Period FY 2021-22 to FY 2025-26.

6.2. Capital Expenditure and Capitalization

6.2.1. JUSNL has projected capital expenditure and capitalization for each year of the Control Period. JUSNL has considered the closing CWIP of FY 2020-21 estimated in APR of FY 2020-21 as the opening CWIP for FY 2021-22 and onwards. Accordingly, the closing balance of CWIP has been computed.

6.2.2. The following Table shows the projected capital expenditure and capitalization for the Control Period:

Table 25Capital Expenditure and Capitalization for the Control Period

All figures are in Rs. Crore

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
	Projected	Projected	Projected	Projected	Projected
CWIP					
Opening CWIP	3,207.10	3,347.97	2,620.64	3,093.34	1,576.27
Add: Capital Expenditure	601.22	3370.04	1682.91	1139.87	527.43
Less: Capitalization	460.35	4,097.37	1,210.21	2,656.93	1,070.03
Closing CWIP	**3,347.97**	**2,620.64**	**3,093.34**	**1,576.27**	**1,033.68**

6.2.3. The Hon'ble Commission is therefore requested to approve the capital expenditure and capitalization for the MYT Control Period as provided in the table above.

6.3. Gross Fixed Asset

6.3.1. The Petitioner has considered closing GFA for FY 2020-21 as opening GFA of 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. 2656.93Crore and Rs. 1070.03Crore is proposed to be capitalized during the FY 2021-22, FY 2022-23, FY 2023-24, FY 2024-25 and FY 2025-26 respectively.

6.3.2. A summary of the Opening and Closing GFA and capitalization has been summarized in table below:

Table 26Gross Fixed Asset for the MYT Control Period

All figures are in Rs. Crore

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2021-22	2,612.42	460.35	3,072.78
FY 2022-23	3,072.78	4,097.37	7,170.15
FY 2023-24	7,170.15	1,210.21	8,380.36
FY 2024-25	8,380.36	2,656.93	11,037.29
FY 2025-26	11,037.29	1,070.03	12,107.32

6.3.3. The Hon'ble Commission is therefore requested to approve GFA for the MYT Control Period as provided in the table above.

6.4. Debt Equity Ratio

6.4.1. 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."

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%. 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:

Table 27Debt Equity Ratio

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Debt	460.35	3569.98	1079.99	2656.93	1070.03
Equity	0.00	527.39	130.23	0.00	0.00
Total Capitalization	460.35	4097.37	1210.21	2656.93	1070.03

6.5. Operation and Maintenance Expenses

6.5.1. The O&M expenses of JUSNL for the 3rd MYT control period have 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.

6.5.2. Operation and Maintenance expenses comprise of the following heads:

- Employees Expenses which includes the salaries, dearness allowances, dearness pay, other allowances, incentives and retirement and other benefits 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.

6.5.3. Further, the JSERC (Terms and Conditions of Determination of Transmission Tariff) Regulations, 2020 provides the methodology for calculation of "Operation and Maintenance" as follows:

"*10.18 Operation and Maintenance (O&M) expenses shall comprise the following: (a) Salaries, wages, pension contribution and other employee costs; (b) Administrative and General costs; (c) Repairs and maintenance expenses;*

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 Transmission Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.

10.20 O&M expenses permissible towards ARR for each year of the Control Period shall be determined using the formula detailed below:
O&Mn = (R&Mn + EMPn + A&Gn) + Terminal liabilities;
Where, R&Mn – Repair and Maintenance Costs of the Transmission Licensee for the n th year;
A&Gn – Administrative and General Costs of the Transmission Licensee for the nth year;
EMPn – Employee Costs of the TransmissionLicensee for the nth year excluding terminal liabilities."

Employee Expense

6.5.4. As per regulation 10.21 b) and c) of the MYT Regulations, 2020, the following formula shall be used for estimating Employee expenses:

"b) EMPn+ A&Gn= [(EMPn-1) (1+ Gn)+ (A&Gn-1)] *(INDXn/INDXn-1)*

Where,

EMPn-1 – Employee Costs of the Transmission Licensee for the (n-1)th year excluding terminal liabilities;

A&Gn-1 – Administrative and General Costs of the Transmission Licensee for the (n-1)th year excluding legal/litigation expenses;

INDXn– 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;

Gn– 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 Gn shall be determined by the Commission in the MYT Order for meeting the additional manpower requirement based on the Transmission Licensee's Filing, benchmarking and any other factor that the Commission feels appropriate;
*c) INDXn = 0.55*CPIn + 0.45*WPIn*

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

Note 2: Any variation due to changes recommended by the Pay Commission or wage revision agreement, etc., will be considered separately by the Commission;

Note 3: Terminal Liabilities will be approved as per actual submitted by the Transmission Licensee or be established through actuarial studies."

6.5.5. The Petitioner has projected the employee cost for the MYT Control period by escalating the projected employee cost (excluding the terminal benefits) estimated for FY 2020-21 by the inflation factor of 6.10%. The computation of inflation factor has been given in the table below:

Table 28Inflation Factor considered for the MYT Control Period

Particulars	FY 2018-19
Annual Average CPI Index (a)	299.92
Annual Average WPI Index (b)	119.76
Annual Average CPI Index (c=a*0.55)	164.95
Annual Average WPI Index (d=b*0.45)	53.89
$Indx_{(n-1)}$(e=c+d)	**218.85**
	FY 2019-20

Particulars	FY 2018-19
Annual Average CPI Index (a)	322.50
Annual Average WPI Index (b)	121.80
Annual Average CPI Index (c=a*0.55)	177.38
Annual Average WPI Index (d=b*0.45)	54.81
$Indx_{(n)}$(e=c+d)	**232.19**
$Indx_{(n)}/Indx_{(n-1)}$	**6.10%**

6.5.6. The detailed table of computation of Inflation factor is enclosed as **Annexure K**.

6.5.7. The JUSNL 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.

6.5.8. The table below summarizes the additional cost which the JUSNL shall incur during the 3rd Control Period for recruitment of the additional personnel:

Table 29Cost for Recruitment of Additional Manpower

S. No.	Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
1	No. of Managers proposed to be recruited	0	10	10	10	10
2	Per month Salary including Basic/DA/HRA/other allowances (Manager)	76320	76320	76320	76320	76320
3	Total Salary per month	0	763200	763200	763200	763200
4	No. of Jr. Managers proposed to be recruited	0	20	20	20	20
5	Per month Salary including Basic/DA/HRA/other allowances (Jr. Manager)	64800	64800	64800	64800	64800
6	Total Salary per	0	1296000	1296000	1296000	1296000

S. No.	Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	month					
7	No. of Office Assistant/Account Assistant/Technical Assistant proposed to be recruited	0	20	20	20	20
8	Per month Salary including Basic/DA/HRA/other allowances (Assistant)	42048	42048	42048	42048	42048
9	Total Salary per month	0	840960	840960	840960	840960
10	**Total salary per year (Rs. Crore)**	**0.00**	**3.48**	**3.48**	**3.48**	**3.48**

6.5.9. The year wise employee cost considering the additional cost is provided in the table given below:

Table 30Year wise Employee Cost

All figures are in Rs. Crore

S. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
1	Employee expense FY 2020-21	62.47					
2	New Recruitment FY 2020-21	0.00					
3	**Total**	**62.47**	66.28				
4	New Recruitment FY 2021-22		0.00				
5	**Total**		**66.28**	70.32			
6	New Recruitment FY 2022-23			3.48			
7	**Total**			**73.80**	78.30		
8	New Recruitment FY 2023-24				3.48		
9	**Total**				**81.78**	86.77	
10	New Recruitment FY 2024-25					3.48	
11	**Total**					**90.25**	95.75
12	New Recruitment FY 2024-25						3.48
13	**Total**						**99.23**

6.5.10. Thus, the employee cost projected by the Petitioner for the MYT Control Period including the cost of additional manpower proposed to be recruited during the Control Period and considering the inflation factor of 6.10% is summarized in the following table:

Table 31Employee Cost Projected for the MYT Control Period

All figures are in Rs. Crore

Particular	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
Employee Expenses	66.28	73.80	81.78	90.25	99.23
Terminal Benefits	5.33	5.33	5.33	5.33	5.33
Total	**71.61**	**79.13**	**87.11**	**95.57**	**104.55**

6.5.11. The Hon'ble Commission is therefore requested to approve the above employee expense for the MYT Control Period.

Administrative and General Expenses

6.5.12. As per regulation 10.21 b) and c) of the MYT Regulations, 2020, the following formula shall be used for estimating Employee expenses:

"*b) EMPn+ A&Gn= [(EMPn-1)* (1+ Gn)+ (A&Gn-1)] *(INDXn/INDXn-1)*

Where,

EMPn-1 – Employee Costs of the Transmission Licensee for the (n-1)th year excluding terminal liabilities;

A&Gn-1 – Administrative and General Costs of the Transmission Licensee for the (n-1)th year excluding legal/litigation expenses;

INDXn– 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;

Gn– 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 Gn shall be determined by the Commission in the MYT Order for meeting the additional manpower requirement based on the Transmission Licensee's Filing, benchmarking and any other factor that the Commission feels appropriate;
*c) INDXn = 0.55*CPIn + 0.45*WPIn*

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

Note 2: Any variation due to changes recommended by the Pay Commission or wage revision agreement, etc., will be considered separately by the Commission;

Note 3: Terminal Liabilities will be approved as per actual submitted by the Transmission Licensee or be established through actuarial studies."

6.5.13. The Petitioner has projected the A&G expenses for the MYT Control period by escalating the A&G expenses (excluding the legal expenses) estimated for FY 2020-21 by the inflation factor of 6.10%. Further, a provision for the various consultancy works to be awarded by the petitioner during the MYT Control Period has also been considered while determining the A&G expenses for the MYT Control Period.

6.5.14. Thus, the A&G expenses projected by the Petitioner for the MYT Control Period is summarised in the following table:

Table 32A&G Expenses Projected for the MYT Control Period

All figures are in Rs. Crore

Particular	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
A&G Expenses	10.70	11.35	12.05	12.78	13.56
Legal Expenses	0.16	0.16	0.16	0.16	0.16
Total	**10.86**	**11.51**	**12.21**	**12.94**	**13.72**

6.5.15. The Hon'ble Commission is therefore requested to approve the above A&G expense.

Repair and maintenance Expenses

6.5.16. As per regulation 10.21, a) of the MYT Regulations, 2020, the following formula shall be used for estimating R&M expenses:

"*a) R&Mn= K*GFA*(INDXn/INDXn-1)*

Where

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

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

6.5.17. As given above, the Regulations stipulate to compute the "K" factor governing the relationship between R&M costs and Gross Fixed Assets (GFA). The JUSNL has considered the R&M expenses and the GFA for FY 2019-20 for the computation of the "K" factor. The "K" has been computed as follows:

Table 33Computation of "K" Factor

Particulars	FY 2019-20
Opening GFA	1,543.89
R&M Costs	34.56
R&M Costs as % of GFA	2.24%
K Factor	2.24%

6.5.18. The R&M cost for the MYT Control Period is computed by considering the opening GFA as determined for each year of the Control Period, the "K" factor as determined here and the inflation factor of 6.1%. Year wise R&M expenses proposed for the MYT Control period are given in the following table:

Table 34R&M Expenses Projected for the MYT Control Period

All figures are in Rs. Crore

Particular	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
R&M Expenses	**62.05**	**72.99**	**170.31**	**199.06**	**262.16**

6.5.19. The Hon'ble Commission is therefore requested to approve the R&M expenses as claimed above.

Gist of O&M Expenses

6.5.20. The following table captures the total O&M expenses projected by the Petitioner for the MYT Control Period:

Table 35O&M Expenses Projected for the MYT Control Period

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
Employee Cost	71.61	79.13	87.11	95.57	104.55
R&M	62.05	72.99	170.31	199.06	262.16
A&G	10.86	11.51	12.21	12.94	13.72
O&M Expenses	**144.52**	**163.63**	**269.62**	**307.57**	**380.44**

6.5.21. The Hon'ble Commission is therefore requested to approve the above O&M expenses for MYT Control Period.

6.6. Depreciation

6.6.1. The Hon'ble Commission has notified the rates for asset-wise depreciation in the JSERC (Terms and Conditions of Determination of Transmission Tariff) Regulations, 2020. Same has been considered for calculation of depreciation for the year.

6.6.2. Further, in clause 10.37 to 10.43 of the JSERC MYT Regulations, 2020 the method for calculation of the Depreciation on GFA is provided and is extracted below:

"*10.37 Depreciation shall be calculated for each year of the Tariff period, on the amount of Capital Cost of the assets admitted by the Commission: Provided that depreciation shall not be allowed on assets funded by contribution from Beneficiary, Distribution system user, Capital Subsidy & Grants. Provision for replacement of such assets shall be made in the Capital Investment Plan.*

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

10.39 Depreciation shall be calculated annually, based on the straight-line method at the rates specified at Appendix-I. The base value for the purpose of depreciation shall be original cost of the asset: Provided that the Transmission Licensee shall ensure that once the individual asset is depreciated to the extent of seventy (70) percent of the Book Value of the asset, remaining depreciable value as on March 31 of the closing shall be spread over the balance useful life of the asset.

10.40 Depreciation shall be charged from the first year of operation of the asset. In case, the operation of the asset is for a part of the year, depreciation shall be charged on a prorata basis.

10.41 The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset: Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable.

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

10.43 In case of de-capitalization of assets, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered through tariff corresponding to the decapitalised asset during its useful services."

6.6.3. The Petitioner has calculated depreciation on the projected GFA as per the above-mentioned provisions. Following depreciation rates which are in line with the MYT Regulations, 2020 are provided in the table below:

Table 36Depreciation Rates

Particulars	Depreciation Rates
Land and land rights	0.00%
Building	2.67%
Plant and Machinery	4.22%
Lines and Cable Network	4.22%
Vehicles	12.77%
Furniture and Fixture	6.33%
Office Equipment	6.33%
Spare Units/Service Units	4.22%
Others Civil Works	2.67%

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

Table 37Depreciation Expenses Projected for the MYT Control Period

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
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

6.6.5. The Petitioner requests the Hon'ble Commission to kindly approve the claimed depreciation expense for the MYT Control Period.

6.7. Interest Expenses

6.7.1. The interest charges have been computed based on the clauses 10.28 to 10.36 of the MYT Regulations, 2020:

"*10.28 The loans arrived at in the manner indicated in Clauses10.23 and 10.24of these Regulations shall be considered as gross normative loan for calculation of interest on loan.*

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

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

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

10.32 Notwithstanding any moratorium period availed by the Transmission Licensee, there payment of loan shall be considered from the first year of commercial operation of the scheme.

10.33 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Transmission Licensee: Provided that if there is no actual loan for a particular year but normative loan is still outstanding, then the rate of interest shall be considered on normative basis and shall be equal to the Bank Rate as on April 01 of the respective year of the Control Period plus 200 basis points.

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

10.35 The above interest computation shall exclude interest on loan amount, normative or otherwise, to the extent of capital cost funded by Consumer Contribution, Grants or Deposit Works carried out by Transmission Licensee.

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 refinancing 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."

6.7.2. Assets proposed to be capitalized during the MYT Control Period shall be funded by the State Government Funds and the World Bank Funds. The State Government Funds are being provided to the JUSNL in the form of Loan at an interest rate of 13%. 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%.

6.7.3. The following table shows the interest charges for the MYT Control Period:

Table 38Interest Expenses Projected for the MYT Control Period

All figures are in Rs. Crore

Interest on Debt	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
Opening Loan	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 schemes 70:30)	0.00	970.65	238.88	0.00	0.00
Loan Repayment	119.21	215.37	327.36	408.96	487.60
Closing Loan	4601.28	6298.98	6790.38	8940.22	9522.65
Interest Cost on Avg. Loans	**553.78**	**658.92**	**791.25**	**950.91**	**1116.08**

6.7.4. 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 39Weightage Average Rate of Interest

All figures are in Rs. Crore

Rate of Interest	FY 2020-21
Opening Loan	3735.22
Loan for additional Capex	824.91
Loan Repayment	0.00
Closing Loan	4560.13
Average Loan	4147.68
Interest expense during the Year	501.43
Interest Rate	12.09%

6.7.5. The petitioner has 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.

6.7.6. The Petitioner requests the Commission to kindly approve the above amount with respect to interest expenses for MYT Control Period.

6.8. Return on Equity

6.8.1. As per Regulation 10.26 and 10.27 of the JSERC Transmission Tariff Regulations, 2020 Return on Equity shall be calculated as follows: -

> *"**Return on Equity***
> *10.26 The rate of return on equity shall be 14.00% (post-tax) for the Control Period.*
>
> *10.27 Return on equity for each year shall be allowed on equity employed in assets in use considering the following:*
>
> *a) Equity employed in accordance with Clause 10.23of these Regulations on assets (in use) capitalised as on the beginning of the year; and*
>
> *b) 50% of the equity projected to be employed in accordance with Clause10.24 of these Regulations on assets (in use) commissioned during the year."*

6.8.2. The Petitioner 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 as reflected in the annual audited accounts. 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 Transmission Tariff Regulations, 2020. The detailed calculation of return on equity is provided below:

Table 40Return on Equity Projected for the MYT Control Period

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
Opening Equity	1600.96	1600.96	1600.96	1600.96	1600.96
Addition in Equity on account of new capitalization	0.00	0.00	0.00	0.00	0.00
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**

6.8.3. The Petitioner requests the Hon'ble Commission to approve the return of equity as provided above.

6.9. Interest on Working Capital

6.9.1. The clause 10.44 of the JSERC (Terms and Conditions of Determination of Transmission Tariff) Regulations, 2020 provides methodology for calculation of normative Working Capital is as follows:

> "10.44 Working Capital for the Transmission Licensee shall comprise:
>
> (a) Maintenance spares @ 15% of the O&M expenses specified in Clauses 10.19- 10.21of these Regulations;
>
> (b) Receivables equivalent to 45 days of annual fixed cost;
>
> (c) Operation and Maintenance expenses for one month; (d) Less: Interest on amount, if any, held as security deposits from Transmission system users."

6.9.2. The clause 10.46 and 10.46 of the JSERC MYT Regulations, 2020 provides methodology for calculation of interest rate for calculation of IoWC is as follows:

> *"10.45 Rate of interest on working capital shall be equal to the Bank Rate as on September 30 of the financial year in which the MYT Petition is filed plus 350 basis points. At the time of true up, the interest rate shall be adjusted as per the actual rate prevailing on April 01 of the financial year for which truing up exercise has been undertaken.*
>
> *10.46 The interest on working capital shall be payable on normative basis notwithstanding that the Transmission Licensee has not taken working capital loan from any outside agency."*

6.9.3. The Petitioner would like to submit that it has arrived at the working capital requirement according to the applicable norms as provided in the JSERC MYT Regulations, 2020, the calculation for which has been shown 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. The details of Bank Rate are being enclosed as **Annexure L**.

Table 41Interest on Working Capital Projected for the MYT Control Period

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
O&M Expenses for one Month	12.04	13.64	22.47	25.63	31.70
15% of O&M expense as Maintenance Spares	21.68	24.54	40.44	46.14	57.07
Receivables equivalent to 45 days of annual fixed cost	128.95	156.54	200.62	235.61	275.39
Total Working Capital requirement	162.67	194.72	263.53	307.38	364.16
Interest on Working Capital	**17.08**	**20.45**	**27.67**	**32.27**	**38.24**

6.9.4. The Hon'ble Commission is requested to kindly approve the interest on working capital loan as provided above for MYT Control Period.

6.10. Non-Tariff Income

6.10.1. The clause 10.32 of the JSERC (Terms and Conditions of Determination of Transmission Tariff) Regulations, 2020 states as follows:

"*10.50 The Non-Tariff Income shall include:*

a) Income from rent of land or buildings;
b) Income from sale of scrap;
c) Income from investments;
d) Interest accrued on advances to suppliers/contractors;
e) Interest income on loans / advances to employees;
f) Income from rental of staff quarters;
g) Income by rental from contractors;
h) Income by hire charges from contactors and others;
i) Income by supervision charges, etc.;
j) Supervision charges for capital works;
k) Income from advertisements;
l) Income from sale of tender documents;
m) Profit from sale of assets (i.e. difference in Sale Value and Book Value)
n) Any other Non-Tariff Income:"

6.10.2. For projection of the non-tariff income for the MYT Control period, the Petitioner has considered the non-tariff income estimated for FY 2020-21 for each year of the control period.

6.10.3. Accordingly, the non-tariff income projected by the Petitioner for MYT Control Period is summarized in the following table:

Table 42Non-Tariff Income Projected for the MYT Control Period

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
Non tariff Income	**12.79**	**12.79**	**12.79**	**12.79**	**12.79**

6.10.4. The Hon'ble Commission is requested to kindly approve the non-tariff income as provided above for MYT Control Period.

6.11. ARR for the MYT Control Period

6.11.1. The Gross ARR for the O&M Costs, depreciation, interest and finance costs, interest on working capital and return on equity. These costs are then adjusted for Non-Tariff Income and other Income. Following is the total revenue requirement for MYT Control Period for the JUSNL:

Table 43 ARR Projected for the MYT Control Period

All figures are in Rs. Crore

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Projected	Projected	Projected	Projected	Projected
O&M Expense	144.52	163.63	269.62	307.57	380.44
Depreciation	119.21	215.37	327.36	408.96	487.60
Interest Cost on Long-term Capital Loans	553.78	658.92	791.25	950.91	1,116.08
Interest on Working Capital Loans	17.08	20.45	27.67	32.27	38.24
Return on Equity	224.13	224.13	224.13	224.13	224.13
Total	**1,058.72**	**1,282.50**	**1,640.04**	**1,923.85**	**2,246.49**
Less:					
Non-Tariff Income	12.79	12.79	12.79	12.79	12.79
Annual Revenue Requirement	**1,045.94**	**1,269.72**	**1,627.26**	**1,911.07**	**2,233.70**

6.11.2. JUSNL has arrived at the Annual revenue Requirement for the MYT Control Period as shown in the above table.

6.11.3. In the light of the above explanation the Petitioner would request the Hon'ble Commission to approve the above towards ARR for the MYT Control Period.

7 Power Availability and Energy Balance

7.1 The requirement of electricity, for JBVNL, both in terms of energy requirement and peak demand are expected to increase significantly from the level of 12,227 MU in FY 15-16 to 13,008 MUs in FY 20-21. In order to meet the burgeoning power demand and considering the existing tied up capacity, the State needs to carefully plan for either developing its own generation capacity or tie up with Central generating stations/ IPPs.

7.2 This Chapter summarizes the overall power allocation of JBVNL through different sources like central generating plants, state generating plants, IPPs and renewables forecasted in the coming years. The year on year projected power purchase quantum vis-à-vis their power purchase cost and rate of power purchase is provided in this section. Also the energy balance between the energy required and energy available is presented in the section.

Present status and key assumptions

7.3 The total allocated capacity, including central allocation, in Jharkhand as on 31st October, 2020 is 3,053.79 MW. In which, 600 MW is available from DVC to JBVNL for the DVC command area through Koderma Thermal Power Station. Owing to the proximity to large coal reserves, the fuel mix of the allocated generation capacity is largely skewed towards thermal, with more than 70% of the installed (and allocated) capacity available is from coal based generation plants only.

7.4 A detailed breakup of present allocation capacity of JBVNL can be tracked from the exhibit below.

Table 13: Current Power Purchase Allocation in MUs

S.N.	Name of Generating Stations		Allocation (MW)
1	NTPC	Farrakka	139.06
		Farrakka III	84.74
		Khalagaon I	27.66
		Talcher	89.38
		Khalagaon II	45.72
		Barh	80
		Korba	50
		Darlipalli	73.79
		Total	**590.35**
		Kanti Power	11.5
		Nabinagar	20
		Grand Total	**631.85**
2	NHPC	Rangit	8
		Teesta	62.83
		Total	**70.83**

S.N.	Name of Generating Stations		Allocation (MW)
3	PTC	Chukha	38.66
		Tala	116.9
		Total	**155.56**
4	**Total Central Sector**		**1438.59**
5	DVC	KTPS (OA)	**600**
		HT Points	**60**
		Total	**660**
6	**TVNL**	**TVNL**	**420**
7	APNRL	Unit I	**63**
		Unit II	**63**
		APNRL (Add.)	**63**
		Total	**189**
8	SOLAR	SECI	**10**
		State	**16**
		Total	**26**
9	Wind	PTC	**200**
		SECI	**100**
		Total	**300**
10	INLAND		**63**
11	ABCIL		**11**
16	Rungta Mines		**4**
17	**Total Purchase PPA**		**2943.59**
18	SRHPS (Generation)		130
	Grand Total		**3073.59**

7.5 It is important to mention that a large number of generation capacities are presently under various stages of development in the State as State utility has also entered into a JV with NTPC to revive the existing units of PUVNL and develop subsequent phases with total capacity of 2,400 MW in Stage-I. Apart from above, the Utility has also entered into PPAs with various Central sector projects. The list of upcoming projects along with their expected COD and allocation capacity is provided in the table below.

Table 14: Upcoming Allocations in MWs

Sl. No.	Name of company	Fuel	Allocated/ Requisition (MW)	Exp. CoD
1.	NTPC Darlipalli STPS Unit-II	Thermal	62.5	April-2022
2.	NTPC Nabinagar Unit -III	Thermal	20.0	July 2021
3.	NTPC Barh STPS-I Unit-II	Thermal	67.0	October-2021
4.	NTPC Barh STPS-I Unit-III	Thermal	67.0	April-2022
5.	NTPC North Karnpura Unit-I	Thermal	166.7	October-2021
6.	NTPC North Karnpura Unit-II	Thermal	166.7	April-2022
7.	NTPC North Karnpura Unit-III	Thermal	166.7	October-2022
8.	PUVNL Stage-I Unit-1	Thermal	600	April-2023
9.	PUVNL Stage-I Unit-II	Thermal	600	April-2024
10.	PUVNL Stage-I Unit-III	Thermal	600	April-2025

11.	SECI Solar	Solar	700	April-2021
12.	SECI Wind	Hydro	200	April-2021
Total			3,417.50	

Power Purchase Quantum

7.6 For making power purchase quantum projection for FY 21-22 to FY 25-26, the existing energy availability based on provisional power purchase of FY 20-21 has been considered, with certain adjustments based on the relevant information about availability of source of generation. The provisional figures of power purchase quantum for FY 20-21 used for projection are provided in the table below.

Table 15: Power Purchase Quantum in MUs for FY 20-21

Particulars	Power Purchase Quantum	
	Approved (MUs)	Estimated (MUs)
NTPC		
FARRAKA	399.62	765.87
FARRAKA III	-	566.28
Kahalgaon I	465.74	174.48
Talcher	537.76	581.01
Kahalgaon STPS II	131.44	123.41
Barh	656.03	489.59
Korba	350.89	449.30
Nabinagar	341.85	182.06
Darilpalli	767.58	293.74
North Karnpura	585.99	-
Barh STPS-I	352.65	81.64
PUVNL		-
Total	**4,589.56**	**3,707.39**
NHPC		
Rangit	58.23	58.23
Teesta	326.54	326.54
Total	**384.77**	**384.77**
PTC		
Chukha	171.15	171.15
Tala	306.25	306.25
Total	**477.40**	**477.40**
Total Central Sector	**5,451.73**	**4,569.56**
DVC	**4133.45**	**3,777.22**
State Sector		
SHPS	48.16	91.79
TVNL	-	1,815.73
Total State Sector	48.16	1,907.52
Private		

ANNEXURE-B

Ongoing JUSNL	Transformation Capicity addition in MVA				
Name of GSS	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
220/132/33 kV Grid Sub-Station at Chatra 2x150 MVA+2x50 MVA,	400				
220/132/33KV Grid Sub-Station Bokaro (jainamore) 2x150 MVA+2x50 MVA,		400			
220/132/33 kV GSS at Ratu 2x150 MVA+2x50 MVA	400				
132/33 KV GSS , Chatra(Pratappur)(2x50 MVA)		100			
132/33 kV GSS at Chandankiyari (2 x 50 MVA)		100			
132/33 kV GSS at Barhet(2x50 MVA)		100			
Total	**800**	**700**	**0**	**0**	**0**
PGCIL	**Capicity addition in MVA**				
Name of GSS	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
220/132 KV, (2x150)MVA GSS at Lohardagga (PG)		300			
400/220 KV GSS at Patratu	630				
400/220/132 KV GSS at Latehar (PG)(2x 315 + 2x150 MVA) Chandil		930			
Total	**630**	**1230**	**0**	**0**	**0**
DVC Command Area	**Capicity addition in MVA**				
Name of GSS	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
132/33 KV GSS Nirsa(2x50 MVA)		100			
132/33 kV GSS at Ramgarh(2x50 MVA)			100		
132/33 kV GSS at Petarwar(2x50 MVA)			100		
132/33 kV GSS at Barkagaon (2x50 MVA)			100		
132/33 kV GSS at Gola (2x50 MVA)		100			
132/33 kV GSS at Barhi (2 x 50 MVA)		100			
132/33 kV GSS at Dugda (2 x 50 MVA)		100			
132/33 kV GSS at Putki (2 x 50 MVA)		100			
132/33 kV GSS at Mahuda (2 x 50 MVA)		100			
132/33 kV GSS at Bishnugarh (2 x 50 MVA)		100			
132/33 KV GSS Simaria (2 x 50 MVA)		100			
132/33kV GSS at Gawan (2x50 MVA)		100			
132/33kV GSS at Hunterganj (2x50 MVA)			100		
Total	**0**	**900**	**400**	**0**	**0**
World bank	**Capicity addition in MVA**				
Name of GSS	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
132/33 kV GSS at Sikaripara(2x50 MVA)	100				
132/33 kV GSS at Jarmundi(2x50 MVA)	100				
132/33 kV GSS at Amarpara(2x50 MVA)	100				
132/33 kV GSS at Angada(2x50 MVA)		100			
132/33 kV GSS at Silli (2x50 MVA)		100			
132/33 kV GSS at Chatarpur (2 x 50 MVA)		100			
132/33 kV GSS at Irba(2x50 MVA)		100			
132/33 kV GSS at Sundarnagar (2x50 MVA)		100			
132/33 kV GSS at Chouka(2x50 MVA)		100			
132/33 kV GSS at Chandwa (2x50 MVA)		100			
132/33KV GSS NagarUntari(2x50 MVA)		100			
132/33KV GSS Meral(2x50 MVA)		100			
132/33KV GSS Ramkanda(2x50 MVA)		100			

132/33KV GSS Panki(2x50 MVA)		100			
132/33KV GSS Mahuadanr(2x50 MVA)		100			
132/33KV GSS Naudiha(2x50 MVA)		100			
132/33 kV GSS at Sarath (2x50 MVA)		100			
132/33 kV GSS at Surda 2x50 MVA)		100			
132/33 kV GSS at Chakuliya(2x50 MVA)		100			
132/33 kV GSS at Hansdiha (2x50 MVA)		100			
132/33 kV GSS at Narayanpur(2x50 MVA)		100			
132/33 kV GSS at Chainpur (2x50 MVA)		100			
132/33 kV GSS at Koleibera(2x50 MVA)		100			
132/33 kV GSS at Kurdeg(2x50 MVA)		100			
Kandra GSS(2x50 MVA)		100			
Total	**300**	**2200**	**0**	**0**	**0**

Planned Project	**Capicity addition in MVA**				
Name of GSS	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
Establishment of new 400/220kV, 2x500MVA S/s at Chandil (New)				1000	
Establishment of new 400/220kV 2x500MVA, 220/132 kV 2x200MVA and 132/33 kV 2x80MVA S/s at 400/220/132/33kV Koderma				1560	
Extension at 400/220kV Patratu(New) JUSNL S/S with 220/132kV 2x200MVA and 132/33kV 2x50MVA ICT to form Patratu 400/220/132/33kV S/s			500		
132/33 KV Grid sub-Station, Kundhit			100		
Establishment of new 220/132kV, 2x200MVA and 132/33 kV 2x50MVA S/s at 220/132/33kV Hazaribagh				500	
Establishment of new 220/132kV 2x200MVA and 132/33kV 2x50MVA S/s at 220/132/33kV Baliyapur					500
Establishment of new 220/132kV 2x200MVA and 132/33 kV 2x80MVA S/s at 220/132/33kV Bero					560
Establishment of new 400/220kV, 2x500MVA S/s at Dumka(New)					1000
Establishment of new 220/132kV 2x200MVA and 132/33kV 2x80MVA S/s at 220/132/33kV Sarwal					560
Establishment of new 220/132kV 2x200MVA and 132/33 kV 2x50MVA S/s at 220/132/33 kV Palojori				500	
Total	**0**	**0**	**600**	**3560**	**2620**
Grand Total	**1730**	**5030**	**1000**	**3560**	**2620**

Ongoing JUSNL	Transmission lines addition in Ckms				
132 kV Transmission Line	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
132KV Hatia - Kanke transmission line		79.6			
132KV Garhwa - Japla transmission line		71.46			
LILO of 132 kV S/C Deoghar - Jamtara trans. line at proposed GSS Chitra		2			
LILO 132 kV D/C Pakur - Rajmahal at Barhet GSS transmission line		50			
132 kV D/C 3 Ph. Chatra(Pratappur)-Chatra(220KV)		101.4			
Total	**0**	**304.46**	**0**	**0**	**0**
220 kV Transmission Line					
220 KV D/C Chatra - Latehar transmission line	216				
220 KV D/C Chatra - PBCMP (Barkagaon) transmission line		117			
LILO of 220 KV D/C TTPS-Govindpur transmission line at Jainamore Bokaro		48			
220KV D/C Ratu - PTPS transmission line	63				
Total	**279**	**165**	**0**	**0**	**0**
PGCIL	**Transmission lines addition in Ckms**				
132 kV Transmission Line	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
132 KV Lohardaga-Lohardaga link line		0.4			
132 KV Latehar-Latehar link line(at latehar)		1.004			
Total	**0**	**1.404**	**0**	**0**	**0**
220 kV Transmission Line					
220 KV D/C Link Line from 220 KV Lohardagga- Latehar TL near 132 KV GSS to 220 KV Lohardagga GSS		1.622			
220 KV D/C Link Line from 400 KV JSEB S/S to existing Lohardagga-Latehar TL near 132 KV Latehar GSS		1.372			
220 KV D/C TTPS-Govindpur transmission line	181.132				
Total	**181.132**	**2.994**	**0**	**0**	**0**
400 kV Transmission Line					
400 KV D/C Latehar(JSEB) to 400 KV PTPS G/S/S		215.014			
400 KV D/C ESSAR (Latehar)-JSEB 400 KV G/S/S (Latehar) TL by Quad Moose conductor		81.12			
400 KV D/C PTPS- Bero (New Ranchi)Line	97.972				
400 KV Essar- Chandwa link Line including 2 no of Bay		2.2			
Total	**97.972**	**298.334**	**0**	**0**	**0**
DVC command Area	**Transmission lines addition in Ckms**				
132 kV Transmission Line	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
132 KV D/C Ramgarh-Hazaribagh			86		
132 KV D/C Ramgarh-Gola		74			
132 KV D/C Gola-Peterwar		32			
132 KV D/C Nirsa-Baliyapur			48		
132 kV D/C 3 Ph. Peterwar - Jaina More (Bokaro) Transmission line		46			
132 kV D/C 3 Ph. Ramgarh - PTPS Transmission line			40		

132 kV D/C 3 Ph. Barkagaon - PTPS (220 kV) Transmission line			64		
132 kV D/C 3 Ph. Silli - Gola Transmission line			52		
132 kV D/C 3 Ph. Putki - Govindpur Transmission line		64			
132 kV D/C 3 Ph. Chandankyari - Bokaro(Jaina more) ransmission line		44			
132 kV D/C 3 Ph. Mahuda - Putki Transmission line		18			
132 kV D/C 3 Ph. Gomia - Dugda Transmission line			100		
132 kV D/C 3 Ph. Barhi - Chatra Transmission line		68			
132 kV D/C 3 Ph. Bishnugarh - Hazaribagh Transmission line			94		
132 kV D/C 3 Ph. Saria - Bishnugarh Transmission line		52			
132 kV D/C 3 Ph. Gomia - Bishnugarh Transmission line			42		
132 kV D/C 3 Ph. Chatra-Simaria		56			
132 kV D/C 3 Ph. Barhi - Hazaribagh (220 kV) Transmission line			84		
132 kV D/C 3 Ph.Jamua- Gawan Transmission line		116			
132 kV D/C 3 Ph. Koderma- Gawan Transmission line			108		
132 kV D/C Hunterganj-Itkhori Transmission line			108		
132 kV D/C Hunterganj-Chatra Transmission line			60		
Total	**0**	**570**	**886**	**0**	**0**

World Bank	**Transmission lines addition in Ckms**				
132 kV Transmission Line	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
132 kV D/C 3 Ph. Silli - Angada Transmission line			78.1		
132 kV D/C 3 Ph. Silli - Chouka Transmission line			104.38		
132 kV D/C 3 Ph. Irba - Kanke Transmission line			45.2		
132 kV D/C 3 Ph. Irba - Ratu Transmission line			85.36		
132 kV D/C 3 Ph. Angada - Sikidiri(Irba) Transmission line			69.06		
132 kV D/C 3 Ph. Dumka - Sikaripara Transmission line			102.56		
LILO of 132 kV D/C 3 Ph. Dumka-Deoghar Transmission line at GSS Jarmundi			7.38		
132 kV D/C 3 Ph. Amrapara - Godda Transmission line			134.9		
132 kV D/C 3 Ph. Amrapara - Pakur Transmission line			49.46		
132 kV D/C 3 Ph. Naudiha - Chatarpur Transmission line			36.98		
132 kV D/C 3 Ph. Nagar Utari - Garhwa(220KV) Transmission line			31.7		
132Kv Latehar- Mahuadanr Transmission line			173.44		
132 kV D/C 3 phase Surda - Jadugoda transmission line			41.64		
132 kV D/C 3 phase Surda - Bharagora transmission line			86.8		

132 kV D/C 3 phase Surda - Musabani transmission line			9.14		
LILO 1 & 2 of 132 kV D/C 3 Ph. Ramchandarpur-Jadugoda Transmission line at GSS Sundarnagar			70.22		
LILO 1 & 2 of 132 kV D/C 3 Ph. Baharagora-Dalbhumgarh Transmission line at GSS Chaukliya			85.16		
LILO of one Ckt Of 132 KV D/C 3 ph Chaibasa- Manoharpur Transmission Line at132/33 KV GS/S at Goelkera including with 2 nos. of 132 kV bay.		5.6			
132 kV D/C 3 Ph. Chauka - Tamar Transmission line		55.22			
LILO 132 kV S/C 3 Ph. Chandil - Rajkharsawan line at kandra .		5.24			
LILO of 132 kV Dumka - Lalmatia transmission line at GSS Hansdiha		6.84			
132 kV D/C 3 Ph. Sarath - Palajori Transmission line		40.2			
132 kV D/C 3 Ph. Sarath - chitra Transmission line		30.28			
LILO 1&2 of 132 kV D/C 3 Ph. jamtara-Madhupur Transmission line at GSS Naranpur		51.9			
Hansdiah-Jasidih		90.8			
132 kV D/C 3 phase Kurdeg -simdega transmission line		71.7			
132 kV D/C 3 Ph. Chainpur-Mahuadanr Transmission line		107.28			
LILO 132 kV D/C 3 Ph. Gumla - Simdega Transmission line at chainpur		71.36			
132 kV D/C 3 phase Kolebira -Kamdara transmission line		77.32			
132 kV D/C 3 phase Kolebira -simdega transmission line		32.8			
132 kV D/C 3 Ph. Chhatarpur - Daltonganj 220 kV Transmission line		68.82			
132 kV D/C 3 Ph. Chhatarpur - Japla Transmission line		71.6			
132 kV D/C 3 Ph. Chandwa - Latehar Transmission line		46.92			
132 kV D/C 3 Ph. Chhatarpur - Panki Transmission line		130.78			
132 kV D/C 3 Ph. Ramkanda - Garhwa (220KV) Transmission line		104.18			
Total	**0**	**1068.84**	**1211.48**	**0**	**0**
Planned Prokect	**Transmission lines addition in Ckms**				
132 kV Transmission Line	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**
Kamdara – Bero 132 kV D/c line with Panther conductor					100
132kV D/c line Patratu(New) – Hatia (Old) D/c line (with one circuit LILO at Kanke)			4		
132 KV Jamtara - Madhupur Transmission line of propose LILO in Kundhit grid			66		
Total	**0**	**0**	**70**	**0**	**100**
220 kV Transmission Line					
220 KV LILO Ranchi - Chandil Transmission line at sarwal GSS					20

220 KV D/C 3 Phase Chandil - Chandil Transmission line				40	
220 KV double circuit Bero- Mandar					42
LILO of Dumka – Godda 220kV D/c line at Dumka (New)					10
220 kv D/C 3 Phase Koderma-GiridihTransmission line				160	
LILO of 220 kV D/C Dumka –Govindpur Line at Palojori GSS				20	
220 KV link patrartu (new) -Hatia (new)			4		
220 KV double circuit Tenughat - Hazaribagh Transmission line				116	
LILO of 220 kV D/C Dumka –Govindpur Line at Baliyapur GSS					14
Total	**0**	**0**	**4**	**336**	**86**
400 kV Transmission Line					
400 KV double circuit Quad Moose Patratu - PVUNL Transmission line and 2no. 400 KV LINE Bay		14			
400 KV D/C 3 Ph QM patratu-chandil transmission line				270	
400 KV D/C 3 PH QM Chandil - chaibasa transmission line				200	
Dumka and Jasidih – Dumka 400kV D/c line					262
400 KV D/C 3 PH QM Patratu - koderma transmission line				300	
400 kV D/C lineJasidih – Koderma				270	
Total	0	14	0	1040	262
Grand Total	**558.104**	**2425.032**	**2171.48**	**1376**	**448**
132 KV	**0**	**1944.704**	**2167.48**	**0**	**100**
220KV	**460.132**	**167.994**	**4**	**336**	**86**
400kv	**97.972**	**312.334**	**0**	**1040**	**262**

Ongoing JUSNL

ANNEXURE - C

TRANSMISSION LINES	Length (In KM)	In CKM	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. Crs.	Expenditure incurred till 31.03.2021 in Rs. Crs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
							Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
132 kV Transmission Line(Ongoing Projects)																				
132KV Hatia - Kanke transmission line	39.8	79.6	07-08-13	30-06-22	22.82	21.4	100%				0	1.42					22.82			
132KV Garhwa - Japla transmission line	35.73	71.46	21-12-12	31-12-22	20.2	17.56	100%					2.64					20.2			
LILO of 132 kV S/C Deoghar - Jamtara trans. line at proposed GSS Chitra	1	2	03-02-16	2017	1.15	1.13	100%					0.02					1.15			
LILO 132 kV D/C Pakur - Rajmahal at Barhet GSS transmission line	25	50	28-05-21	31-03-23	17.69	0	100%				0.48	17.21					17.69			
Total	**101.53**				**61.86**	**40.09**					**0.48**	**21.29**	**0.00**	**0.00**	**0.00**		**61.86**			
220 kV Transmission Line(Ongoing Projects)																				
220 KV D/C Chatra - Latehar transmission line	108	216	20-12-12	05-10-21	100.56	59.43	100%					41.13					100.56			
220 KV D/C Chatra - PBCMP (Barkagaon) transmission line	58.5	117	20-12-12	30-04-22	71.81	34.01	100%					37.80					71.81			
Total	**166.5**				**172.37**	**93.44**						**78.93**					**172.37**			
132 kV Transmission Line(Planned Projects)																				
132 kV D/C 3 Ph. Chatra(Pratappur)-Chatra(220KV)	50.7	101.4	29-11-16	31-05-22	31.18							31.18					31.18			
132 kV D/C, 3 phase Giridih – Saria trans. line	41.5	83	09-09-16	31-12-19	24.26	21.88					1.26	1.12					24.26			
Total	**92.2**				**55.44**	**21.88**					**1.26**	**32.30**					**55.44**			
220 kV Transmission Line(Planned Projects)																				
LILO of 220 KV D/C TTPS-Govindpur transmission line at Jainamore Bokaro	24	48	04-04-17	30-06-22	24.03	22.16					0.03	1.84					24.03			
220KV D/C Ratu - PTPS transmission line	31.5	63	08-11-16	29-12-21	25.03	24.2					0.49	0.34					25.03			
220 kV D/C Dumka – Jasidih	74.3	148.6	30-08-16	18-08-20	47.91	46.62					0.9	0.39					47.91			
Total	**129.8**	**259.6**			**96.97**	**92.98**					**1.42**	**2.57**					**96.97**			
Grand Total	**490.03**				**386.64**	**248.39**					**3.16**	**135.09**					**386.64**			

Ongoing JUSNL

Name of GSS	Capacity Addition (In MVA)	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. Crs.	Expenditure incurred till 31.03.2021 in Rs. Crs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
						Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
220/132/33 KV Grid Substation (Ongoing Projects)																			
220/132/33 kV Grid Sub-Station at Chatra 2x150 MVA+2x50 MVA,	400	25-07-13	01-10-21	66.69	62.9						3.79					66.69			
220/132/33KV Grid Sub-Station Bokaro (jainamore) 2x150 MVA+2x50 MVA,	400	17-05-16	31-12-22	66.85	59.25					0.3	7.3					66.85			
220/132/33 kV GSS at Ratu 2x150 MVA+2x50 MVA	400	30-11-16	29-12-21	74.59	73.66					0.45	0.48					74.59			
Total	**1200**			**208.13**	**195.81**					**0.75**	**11.57**					**208.13**			
132/33 KV Grid Substation (Planned Projects)																			
132/33 KV GSS , Chatra(Pratappur)(2x50 MVA)	100	30-09-16	31-07-22	34.36	32.19						2.17					34.36			
132/33 kV GSS at Bahragora(2x50 MVA)	100	30-09-16	29-12-20	35.39	35.39										35.39				
132/33 kV GSS at Chandankiyari (2 x 50 MVA)	100	30-09-16	31-05-22	34.96	34.96										34.96				
132/33 kV GSS at Barhet(2x50 MVA)	100	28-05-21	31-03-23	35.53	0					15.53	20					35.53			
Total	**400**			**140.24**	**102.54**					**15.53**	**22.17**				**70.35**	**69.89**			
Grand Total	**1600**			**348.37**	**298.35**					**16.28**	**33.74**				**70.35**	**278.02**			

Ongoing JUSNL

Sl No.	Name of Bay	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. Crs.	Expenditure incurred till 31.03.2021 in Rs. Crs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
						Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
1	220 kV Rupnarayanpur Substation (Bay Ext.)	15.09.2012	23.07.2015	4.93		100%					4.93					4.93			
2	132 Kv Jamatara Substation (Bay Ext.)	15.09.2012	10.02.2016	2.38		100%					2.38					2.38			
3	132 Kv Jadugoda Substation (Bay Ext.)	15.09.2012	27.03.2016	3.8		100%					3.8					3.8			
4	132 Kv Dhalbhumghar Substation (Bay Ext.)	15.09.2012	28.03.2016	2.4		100%					2.4					2.4			
5	132 Kv Namkum Substation (Bay Ext.)	15.09.2012	18.05.2016	2.2		100%					2.2					2.2			
6	132 Kv Ramchandrapur Substation (Bay Ext.)	15.09.2012	21.12.2016			100%										0			
7	400 Kv Bero Substation (Bay Ext.)	15.09.2012	03.08.2017	13.91		100%					13.91					13.91			
8	220 Kv TTPS Bay Extension	15.09.2012		1.17		100%					1.17					1.17			
9	Dumka 3rd Bay Extension	15.09.2012		0.6		100%					0.6					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	15.09.2012		7.81	7.49	100%				0	0.32					7.81			
11	132 KV feeder Bay at 132/33 KV GSS Garhwa Road	28-10-20	05-01-22	2.7	0	100%				2.5	0.2					2.7			
12	132 KV Transformer BAY at 132/33 KV GSS sindoor, Hazaribagh DVC	21-06-18	20-12-19	2.95	2.93	100%				0	0.02					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	24.07.2018	28.07.2019	3.46	3.41	100%				0.03	0.02					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 turnkey basis.	03.03.2021		1	0	100%				0.97	0.03					1			
15	Design, Engineering, Supply of Mateerials, 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.	01.11.2019	06.01.2022	8.89	6.72	100%				1.88	0.29					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	07.06.2021		0.78	0	100%				0.35	0.43					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.	22.04.2016	18.02.2020	3.41	2.9	100%				0.47	0.04					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 .	21.10.2021		8.39	0	100%				2.23	6.16					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 on turnkey basis	28.09.2021		2.72	0	100%				0.81	1.91					2.72			
20	**Total**			**73.5**	**23.45**					**9.24**	**40.81**					**73.50**			

DVC **ANNEXURE - D**

TRANSMISSION LINES	Length (In KM)	In CKM	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. Crs.	Expenditure incurred till 31.03.2021 in Rs. Crs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
							Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
132 kV Transmission Line(Planned Projects)																				
132 KV D/C Ramgarh-Hazaribagh	43	86	01-11-18	31-12-23	19.88	6.52	100%	0			0.42	6.47	6.47					19.88		
132 KV D/C Ramgarh-Gola	37	74	21-02-19	20-08-22	21.46	13.39	100%	0			1.28	6.79						21.46		
132 KV D/C Gola-Peterwar	16	32	01-11-18	31-07-22	17.87	5.63	100%	0			1.12	11.12						17.87		
132 KV D/C Nirsa-Baliyapur	24	48	21-02-19	20-08-23	13.13	3.27	100%	0			0	4.93	4.93					13.13		
132 kV D/C 3 Ph. Peterwar - Jaina More (Bokaro) Transmission line	23	46	01-11-18	31-07-22	12.46	3.31	100%	0			0.5	8.65						12.46		
132 kV D/C 3 Ph. Ramgarh - PTPS Transmission line	20	40	01-11-18	31-12-23	93.97	2.02	100%	0			0	45.97	45.98					93.97		
132 kV D/C 3 Ph. Barkagaon - PTPS (220 kV) Transmission line	32	64	24-07-18	31-01-23	20.12	13.96	100%	0			0	3.08	3.08					20.12		
132 kV D/C 3 Ph. Silli - Gola Transmission line	26	52	21-02-19	20-08-23	28.71	18.97	100%	0			1.81	3.96	3.97					28.71		
132 kV D/C 3 Ph. Putki - Govindpur Transmission line	33	66	21-02-19	20-08-22	13.27	11.15	100%	0			0	2.12					13.27			
132 kV D/C 3 Ph. Chandankyari - Bokaro(Jaina more) ransmission line	22	44	21-02-19	20-08-22	20.21	16.31	100%	0			0.55	3.35					20.21			
132 kV D/C 3 Ph. Mahuda - Putki Transmission line	9	18	21-02-19	20-08-22	85.64	6.84	100%	0			0	78.8					85.64			
132 kV D/C 3 Ph. Gomia - Dugda Transmission line	50	100	21-02-19	20-08-23	25.3	6.79	100%	0			11.79	3.36	3.36						25.3	
132 kV D/C 3 Ph. Barhi - Chatra Transmission line	34	68	01-11-18	31-12-22	18.89	13.77	100%	0			1.72	3.4					18.89			
132 kV D/C 3 Ph. Bishnugarh - Hazaribagh Transmission line	47	94	01-11-18	31-12-23	20.94	6.29	100%	0			0.49	7.08	7.08						20.94	
132 kV D/C 3 Ph. Saria - Bishnugarh Transmission line	26	52	01-11-18	31-12-22	20.45	14.07	100%	0			1.09	5.29					20.45			
132 kV D/C 3 Ph. Gomia - Bishnugarh Transmission line	21	42	01-11-18	31-12-23	99.68	3.31	100%	0			0.0013	48.18	48.18						99.68	
132 kV D/C 3 Ph. Chatra-Simaria	28	56	21-02-19	20-08-22	25.73	17.27	100%	0			0.39	8.07					25.73			
132 kV D/C 3 Ph. Barhi - Hazaribagh (220 kV) Transmission line	42	84	01-11-18	31-12-23	18.49	5.33	100%	0			0	6.58	6.58						18.49	
132 kV D/C 3 Ph.Jamua- Gawan Transmission line	58	116	01-11-18	30-04-22	33.97	26.92	100%	0			2.2	4.85					33.97			
132 kV D/C 3 Ph. Koderma- Gawan Transmission line	54	108	01-11-18	30-05-23	26.36	9.16	100%	0			0.37	8.41	8.42						26.36	
132 kV D/C Hunterganj-Itkhori Transmission line	54	108	01-11-18	30-04-23	40.03	25.48	100%	0			2.9	11.65						40.03		
132 kV D/C Hunterganj-Chatra Transmission line	30	60	01-11-18	30-04-23	18.07	12.3	100%	0			0.25	5.52						18.07		
Total	**729**	**1458**			**694.63**	**242.06**					**26.88**	**287.63**	**138.05**	**0**	**0**	**0**	**218.16**	**285.7**	**190.77**	**0**

DVC

Name of GSS	Capacity Addition (In MVA)	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. Crs.	Expenditure incurred till 31.03.2021 in Rs. Crs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
						Debt	Equity	Grant	Consumer	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
132/33 KV Grid Substation (Planned Projects)																			
132/33 KV GSS Nirsa(2x50 MVA)	100	21-02-19	20-08-22	26.59	23.86	100%	0			1.16	1.57						26.59		
132/33 kV GSS at Ramgarh(2x50 MVA)	100	01-11-18	31-07-23	36.22	0.4	100%	0			12.98	15.6	7.24					36.22		
132/33 kV GSS at Petarwar(2x50 MVA)	100	01-11-18	31-07-23	32.5	0	100%	0			0	26	6.5					32.5		
132/33 kV GSS at Barkagaon (2x50 MVA)	100	24-07-18	31-07-23	33.71	0	100%	0			0	26.97	6.74					33.71		
132/33 kV GSS at Gola (2x50 MVA)	100	21-02-19	20-08-22	25.56	15.08	100%	0			8.18	2.3						25.56		
132/33 kV GSS at Barhi (2 x 50 MVA)	100	01-11-18	31-12-22	36.74	0.4	100%	0			13.17	23.17					36.74			
132/33 kV GSS at Dugda (2 x 50 MVA)	100	21-02-19	20-08-22	23.56	21.06	100%	0			1.2	1.3					23.56			
132/33 kV GSS at Putki (2 x 50 MVA)	100	21-02-19	20-08-22	26.66	23.88	100%	0			1.37	1.41					26.66			
132/33 kV GSS at Mahuda (2 x 50 MVA)	100	21-02-19	20-08-22	28.85	25.03	100%	0			1.43	2.39					28.85			
132/33 kV GSS at Bishnugarh (2 x 50 MVA)	100	01-11-18	31-12-22	37.55	20.19	100%	0			8.15	9.21					37.55			
132/33 KV GSS Simaria (2 x 50 MVA)	100	21-02-19	20-08-22	29.55	20.33	100%	0			0.48	8.74					29.55			
132/33kV GSS at Gawan (2x50 MVA)	100	01-11-18	30-04-22	35.24	30.97	100%	0			0.35	3.92					35.24			
132/33kV GSS at Hunterganj (2x50 MVA)	100	01-11-18	30-04-23	34.55	0	100%	0			0	27.64	6.91					34.55		
Total	**1300**			**407.28**	**181.20**					**48.47**	**150.22**	**27.39**	**0**	**0**	**0**	**218.15**	**189.13**	**0**	**0**

PGCIL

TRANSMISSION LINES	Length (In KM)	In CKM	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. Crs.	Expenditure incurred till 31.03.2021 in Rs. Crs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
							Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
132 kV Transmission Line(Ongoing Projects)																				
132 KV D/C Simdega-Manoharpur transmission line	94.95	189.9	24-01-13	15-03-18	70.99		100%	0								70.99				
132KV Jadugora – Dalbhumgarh transmission line	31.186	62.372	24-01-13	29-03-17	30.84		100%	0								30.84				
132KV Hatia-1 to Hatia-II link line	1.161	2.322	17-10-12	28-06-16	1.43		100%	0								1.43				
Total	**127.297**	**254.594**			**103.26**											**103.26**				
220 kV Transmission Line(Ongoing Projects)																				
220 kV D/C 3 Ph. Chaibasa -Chaibasa (PG) Transmission line	0.81	1.62	24-01-13	16-11-15	0.8		100%	0									0.8			
220 KV D/C Hatia-Namkum (PGCIL) transmission line	33.417	66.834	17-10-12	17-12-19	41.78		100%	0									41.78			
220 KV D/C Link Line from 220 KV Lohardagga- Latehar TL near 132 KV GSS to 220 KV Lohardagga GSS	0.811	1.622	17-10-12	30-04-22	1.57		100%	0									1.57			
220 KV D/C Link Line from 400 KV JSEB S/S to existing Lohardagga-Latehar TL near 132 KV Latehar GSS	0.686	1.372	17-10-12	30-06-22	1.45		100%	0									1.45			
220 KV D/C TTPS-Govindpur transmission line	90.566	181.132	24-01-13	04-11-21	79.02		100%	0									79.02			
220 KV Joda- Ramchandrapur LILO	2.92	5.84	17-10-12	10-08-15	3.76		100%	0									3.76			
Total	**129.21**	**258.42**			**128.38**											**0**	**128.38**			
400 kV Transmission Line(Ongoing Projects)																				
400 KV D/C Latehar(JSEB) to 400 KV PTPS G/S/S	107.507	215.014	17-10-12	31-12-22	199.05		100%	0									199.05			
400 KV D/C ESSAR (Latehar)-JSEB 400 KV G/S/S (Latehar) TL by Quad Moose conductor	40.56	81.12	17-10-12	30-06-22	138.43		100%	0									138.43			
400 KV D/C PTPS- Bero (New Ranchi)Line	48.986	97.972	17-10-12	29-12-21	74.56		100%	0									74.56			
400 KV Essar- Chandwa link Line including 2 no of Bay	1.1	2.2	17-10-12	30-06-22	43.67		100%	0									43.67			
Total	**198.153**	**396.306**			**455.71**											**0**	**455.71**			
132 kV Transmission Line																				
132 KV S/C Hatia-Sikdri	41.531	83.062	17-10-12	25-09-17	14.79		100%	0									14.79			
132 KV Lohardaga-Lohardaga link line	0.2	0.4	17-10-12	31-05-22	1.2		100%	0									1.2			
132 KV Latehar-Latehar link line(at latehar)	0.502	1.004	17-10-12	30-06-22	1.21		100%	0									1.21			
Total	**42.233**	**84.466**			**17.2**											**0**	**17.2**			
Stautory Compliance					**162.76**	**0**										**32.55**	**130.21**			
Grand Total	**496.893**	**993.786**			**867.31**	**717.31**					**50.00**	**100.00**				**135.81**	**731.50**			

PGCIL

Name of GSS	Capacity Addition (In MVA)	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. Crs.	Expenditure incurred till 31.03.2021 in Rs. Crs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
						Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
220/132/33 KV Grid Substation (Ongoing Projects)																			
220/132/33KV Grid Sub-Station Govindpur (PG)2x150 MVA+2x50 MVA,	**400**	15-09-12	26-09-19	57.11		100%	0									57.11			
Total				**57.11**												**57.11**			
220/132 KV Grid Substation (Planned Projects)																			
220/132 KV, (2x150)MVA GSS at Lohardagga (PG)	300	15-09-12	30-04-22	82.26		100%	0									82.26			
Total				**82.26**												**82.26**			
440/220 KV Grid Substation (Planned Projects)																			
400/220 KV GSS at Patratu and 400 KV D/C PTPS-Namkum (PG) TL (PG)51.5KM	630	15-09-12	29-12-21	154.19		100%	0								154.19				
Total				**154.19**											**154.19**				
440/220132 KV Grid Substation (Planned Projects)																			
400/220/132 KV GSS at Latehar (PG)(2x 315 + 2x150 MVA) Chandil	930	15-09-12	30-06-22	144.19		100%	0									144.19			
Total				**144.19**												**144.19**			
Grand Total	**2260**			**437.75**	**213.23**					**50.00**	**174.52**				**154.19**	**283.56**			

400

World Bank

TRANSMISSION LINES	Length (In KM)	In CKM	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. (with GST)	Expenditure incurred till 31.03.2021 in Rs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
							Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
132 kV Transmission Line(Planned Projects)																				
132 kV D/C 3 Ph. Silli - Angada Transmission line	39.05	78.1	21.01.2019	27.08.2023	160906666	2,561,165.01	85%	15%			0	91240750.45	132,543,658.38					226345574		
132 kV D/C 3 Ph. Silli - Chouka Transmission line	52.19	104.38	21.01.2019	27.08.2023	219140251	18,234,978.20	85%	15%			1860722	115957794.2	172,208,599.96					308262094		
132 kV D/C 3 Ph. Irba - Kanke Transmission line	22.6	45.2	21.01.2019	27.08.2023	126488808	2,192,623.46	85%	15%			0	71634752.87	104,102,988.78					177930365		
132 kV D/C 3 Ph. Irba - Ratu Transmission line	42.68	85.36	21.01.2019	27.08.2023	192089471	3,436,632.43	85%	15%			87077	108689591.1	157,996,769.81					270210070		
132 kV D/C 3 Ph. Angada - Sikidiri(Irba) Transmission line	34.53	69.06	21.01.2019	27.08.2023	177480718	2,559,308.22	85%	15%			0	100771758.7	146,329,036.99					249660104		
132 kV D/C 3 Ph. Dumka - Sikaripara Transmission line	51.28	102.56	10.01.2019	27.08.2023	228696506	20096996.35	85%	15%			10022959	116440513.3	175144300.8					321704769		
LILO of 132 kV D/C 3 Ph. Dumka-Deoghar Transmission line at GSS Jarmundi	3.69	7.38	10.01.2019	27.08.2023	24182120	1923504.112	85%	15%			1401835	12242049.44	18449324.14					34016712.7		
132 kV D/C 3 Ph. Amrapara - Godda Transmission line	67.45	134.9	10.01.2019	27.08.2023	284864404	4107802.921	85%	15%			0	161743130.8	234864577.8					400715512		
132 kV D/C 3 Ph. Amrapara - Pakur Transmission line	24.73	49.46	10.01.2019	27.08.2023	120041501	1731022.976	85%	15%			0	68158351.59	98971637.24					168861012		
132 kV D/C 3 Ph. Naudiha - Chatarpur Transmission line	18.49	36.98	11.01.2019	27.08.2023	123548289	3763293.576	85%	15%			0	69158619.39	100872057.6					173793971		
132 kV D/C 3 Ph. Nagar Utari - Garhwa(220KV) Transmission line	15.85	31.7	11.01.2019	27.08.2023	96162350	9571449.739	85%	15%			0	50507626.38	75191406.03					135270482		
132Kv Latehar- Mahuadanr Transmission line	86.72	173.44	11.01.2019	27.08.2023	457544798	9443328.492	85%	15%			0	258366594.6	375813131.4					643623054		
132 kV D/C 3 phase Surda - Jadugoda transmission line	20.82	41.64	14.02.2019	27.08.2023	216335689	6997550.846	85%	15%			0	120894245.8	176425152.4					304316949		
132 kV D/C 3 phase Surda - Bharagora transmission line	43.4	86.8	14.02.2019	27.08.2023	214645669	12889573.41	85%	15%			3032402	115460272	170557369.7					301939617		
132 kV D/C 3 phase Surda - Musabani transmission line	4.57	9.14	14.02.2019	27.08.2023	39163408	1943060.347	85%	15%			0	21547429.43	31600230.07					55090719.8		
LILO 1 & 2 of 132 kV D/C 3 Ph. Ramchandarpur-Jadugoda Transmission line at GSS Sundarnagar	35.11	70.22	14.02.2019	27.08.2023	190667553	2749465.08	85%	15%			0	108259110.4	157201299					268209875		
LILO 1 & 2 of 132 kV D/C 3 Ph. Baharagora-Dalbhumgarh Transmission line at GSS Chaukliya	42.58	85.16	14.02.2019	27.08.2023	213894947	3084408.848	85%	15%			0	121447390.1	176351786.1					300883585		
LILO of one Ckt Of 132 KV D/C 3 ph Chaibasa- Manoharpur Transmission Line at132/33 KV GS/S at Goelkera including with 2 nos. of 132 kV bay.	2.8	5.6	10.12.2019	09.08.2022	24527209.3	476156.3706	85%	15%			13587659	20,438,330.51					34502145.9			
132 kV D/C 3 Ph. Chauka - Tamar Transmission line	27.61	55.22	10.12.2019	09.08.2022	197516590	3453164.593	85%	15%			73008355	201,382,817.23					277844337			
LILO 132 kV S/C 3 Ph. Chandil - Rajkharsawan line at kandra .	2.62	5.24	10.12.2019	09.08.2022	26787400.2	507834.7852	85%	15%			12805856	24,367,839.88					37681530.7			
LILO of 132 kV Dumka - Lalmatia transmission line at GSS Hansdiha	3.42	6.84	31.01.2020	30.01.2023	30270733.3	642002.1604	85%	15%			6397700	35541793.49					42581495.7			
132 kV D/C 3 Ph. Sarath - Palajori Transmission line	20.1	40.2	31.01.2020	30.01.2023	106600560	2212340.86	85%	15%			42067843	105673609.4					149953793			
132 kV D/C 3 Ph. Sarath - chitra Transmission line	15.14	30.28	31.01.2020	30.01.2023	91604514.9	1976605.825	85%	15%			44696245	82186176.62					128859027			
LILO 1&2 of 132 kV D/C 3 Ph. jamtara-Madhupur Transmission line at GSS Naranpur	25.95	51.9	31.01.2020	30.01.2023	149452615	13701863.25	85%	15%			53049286	143482141.5					210233291			
Hansdiah-Jasidih	45.4	90.8	31.01.2020	30.01.2023	226821678	5843475.951	85%	15%			100974612	212249382.3					319067470			
132 kV D/C 3 phase Kurdeg -simdega transmission line	35.85	71.7	31.01.2020	30.01.2023	180838633	3281186.045	85%	15%			71327495	179774963.7					254383645			
132 kV D/C 3 Ph. Chainpur-Mahuadanr Transmission line	53.64	107.28	31.01.2020	30.01.2023	288499301	5155952.879	85%	15%			62627860	338044866.9					405828680			
LILO 132 kV D/C 3 Ph. Gumla - Simdega Transmission line at chainpur	35.68	71.36	31.01.2020	30.01.2023	178454397	3234555.874	85%	15%			76312497	171482714.2					251029767			
132 kV D/C 3 phase Kolebira -Kamdara transmission line	38.66	77.32	31.01.2020	30.01.2023	184675211	3333071.283	85%	15%			86049698	170397746					259780515			
132 kV D/C 3 phase Kolebira -simdega transmission line	16.4	32.8	31.01.2020	30.01.2023	180838633	2993538.045	85%	15%			39678096	211712010.7					254383645			
132 kV D/C 3 Ph. Chhatarpur - Daltonganj 220 kV Transmission line	34.41	68.82	22.10.2019	21.10.2022	150986153	2752913.182	85%	15%			43583655	166053933					212390501			
132 kV D/C 3 Ph. Chhatarpur - Japla Transmission line	35.8	71.6	22.10.2019	21.10.2022	187188186	3311775.896	85%	15%			45657307	214346405.7					263315489			

132 kV D/C 3 Ph. Chandwa - Latehar Transmission line	23.46	46.92	22.10.2019	21.10.2022	128747164	2348949.416	85%	15%			33651757	145106462.3					181107169			
132 kV D/C 3 Ph. Chhatarpur - Panki Transmission line	65.39	130.78	22.10.2019	21.10.2022	286300284	5227520.604	85%	15%			61188890	336318937					402735348			
132 kV D/C 3 Ph. Ramkanda - Garhwa (220KV) Transmission line	52.09	104.18	22.10.2019	21.10.2022	226220249	4037743.222	85%	15%			72950190	241233513.7					318221447			
Total	**1140.16**	**2280.32**			**5932182660**	**171776814.3**					**956019996**	**4712313625**	**2504623326**				**4003899295**	**4340834466**		

World Bank

Name of GSS	Capacity Addition (In MVA)	Project Commencement	Expected Commissioning Date	Total Awarded Value in Rs. (with GST)	Expenditure incurred till 31.03.2021 in Rs.	Funding Pattern in percentage				Capital Expenditure in Rs. Crs.					Capitalization in Rs. Crs.				
						Debt	Equity	Grant	Consumer Contribution	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
132/33 KV Grid Substation																			
132/33 kV GSS at Sikaripara(2x50 MVA)	100	22.02.2019	31-03-22	363,800,963.20	335,713,509.24	85%	15%			42,660,747.00	133,380,413.86					511,754,670.10			
132/33 kV GSS at Jarmundi(2x50 MVA)	100	22.02.2019	31-03-22	365,407,228.10	365,710,329.90	85%	15%			56,258,192.00	92,045,662.73					514,014,184.63			
132/33 kV GSS at Amarpara(2x50 MVA)	100	22.02.2019	31-03-22	378,012,704.80	308,077,293.46	85%	15%			97,600,977.00	126,067,894.64					531,746,165.09			
132/33 kV GSS at Angada(2x50 MVA)	100	30.01.2019	28-09-22	363,464,779.85	6,349,082.40	85%	15%			236,925,503.00	268,007,179.41					511,281,764.81			
132/33 kV GSS at Kanke Bay Extn (2x50 MVA)		30.01.2019	28.09.2022	43,564,105.35	35,621,974.30	85%	15%			1,404,651.00	24,254,505.36					61,281,130.66			
132/33 kV GSS at Silli (2x50 MVA)	100	30.01.2019	28-09-22	436,841,773.62	6,299,347.65	85%	15%			254,074,383.00	354,126,615.30					614,500,345.95			
132/33 kV GSS at Chatarpur (2 x 50 MVA)	100	18.12.2020	17-12-22	532,340,723.40	7,676,462.02	85%	15%				741,161,168.55					748,837,630.58			
132/33 kV GSS at Irba(2x50 MVA)	100	30.01.2019	28-09-22	399,703,758.10	200,272,323.88	85%	15%			88,714,244.00	273,272,154.76					562,258,722.64			
132/33 kV GSS at Sundarnagar (2x50 MVA)	100	18.12.2020	17-12-22	468,104,453.50	6,750,161.88	85%	15%				651,727,039.68					658,477,201.56			
132/33 kV GSS at Chouka(2x50 MVA)	100	29.08.2019	26-08-22	348,639,260.00	128,919,517.38	85%	15%			113,962,694.00	247,544,663.57					490,426,874.95			
132/33 kV GSS at Chandwa (2x50 MVA)	100	29.08.2019	26-08-22	350,911,772.40	89,750,418.47	85%	15%			131,831,432.00	272,041,741.78					493,623,592.25			
132/33KV GSS NagarUntari(2x50 MVA)	100	15.03.2019	14-09-22	380,742,471.70	7,310,754.25	85%	15%			28,504,250.00	499,771,092.84					535,586,097.09			
132/33KV GSS Meral(2x50 MVA)	100	15.03.2019	14-09-22	267,493,390.80	104,183,745.36	85%	15%			52,947,690.00	219,148,469.89					376,279,905.25			
132/33KV GSS Ramkanda(2x50 MVA)	100	29.08.2019	26-08-22	351,392,774.35	90,958,593.62	85%	15%			124,751,267.00	278,590,351.59					494,300,212.21			
132/33KV GSS Panki(2x50 MVA)	100	29.08.2019	26-08-22	353,883,943.15	12,040,652.78	85%	15%			211,380,359.00	274,383,499.20					497,804,510.98			
132/33KV GSS Mahuadanr(2x50 MVA)	100	15.03.2019	14-09-22	380,577,097.60	29,114,201.52	85%	15%			63,277,622.00	442,961,643.70					535,353,467.23			
132/33KV GSS Naudiha(2x50 MVA)	100	15.03.2019	14-09-22	381,170,688.30	140,835,498.22	85%	15%			76,927,777.00	318,425,189.28					536,188,464.50			
132/33 kV GSS at Sarath (2x50 MVA)	100	18.12.2020	17-12-22	464,361,430.60	6,696,186.73	85%	15%			10,889,431.00	635,626,316.16					653,211,933.89			
132/33 kV GSS at Surda 2x50 MVA)	100	29.08.2019	26-08-22	384,759,062.40	129,798,879.31	85%	15%			131,045,848.00	280,391,462.15					541,236,189.46			
132/33 kV GSS at Chakuliya(2x50 MVA)	100	29.08.2019	26-08-22	353,403,349.80	122,855,574.53	85%	15%			122,068,364.00	252,204,527.26					497,128,465.79			
132/33 kV GSS at Hansdiha (2x50 MVA)	100	14.11.2019	13.11.2022	348,127,892.58	5,020,075.36	85%	15%			7,766,836.00	476,920,628.87					489,707,540.22			
132/33 kV GSS at Narayanpur(2x50 MVA)	100	14.11.2019	13.11.2022	349,377,495.37	5,038,094.88	85%	15%			10,554,018.00	475,873,229.35					491,465,342.23			
132/33 kV GSS at Chainpur (2x50 MVA)	100	30.09.2020	29.09.2022	343,665,952.20	4,955,733.26	85%	15%				478,475,246.26					483,430,979.53			
132/33 kV GSS at Koleibera(2x50 MVA)	100	30.09.2020	29.09.2022	346,223,505.92	4,992,613.71	85%	15%			5,440,211.00	476,595,836.49					487,028,661.21			
132/33 kV GSS at Kurdeg(2x50 MVA)	100	30.09.2020	29.09.2022	344,948,098.74	4,974,222.08	85%	15%			5,248,579.00	475,011,759.38					485,234,560.46			
Pakur bay Extn		22.02.2019	31.03.2022	42,443,467.62	31,623,420.48	85%	15%			1,758,787.00	26,322,534.86					59,704,742.34			
Goielkera GSS bay Extn		29.08.2019	26.08.2022	38,949,173.60	6,348,527.04	85%	15%			19,370,015.00	29,070,816.71					54,789,358.75			
Kandra GSS(2x50 MVA)	100	29.08.2019	26.08.2022	349,119,992.28	121,235,819.64	85%	15%			97,634,110.00	272,233,185.93					491,103,115.57			
Japla GSS Bay Extn		29.08.2019	26.08.2022	38,989,842.81	2,176,382.50	85%	15%			22,847,845.00	29,822,340.16					54,846,567.66			
Kamdara GSS Bay Extn.		30.09.2020	29.09.2022	41,702,960.11	601,365.21	85%	15%				58,061,713.65					58,663,078.86			
Musabani Bay Extn		29.08.2019	26.08.2022	38,776,750.56	559,168.67	85%	15%				53,987,644.56					54,546,813.22			

Total	**2500**			**9,650,900,862.81**	**2,322,459,929.73**					**2,015,845,832.00**	**9,237,506,527.94**					**13,575,812,289.67**			

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Projectwise / Schemewise Capital Expenditure details for 3rd control period(2021-22 to 2025-26)

TRANSMISSION PROGRAMME

Part A: PROPOSED TRANSMISSION WORKS

S. No.	NAME OF THE TRANSMISSION LINE & ASSOCIATED SUBSTATIONS	Transformation capicity (MVA)	LENGTH OF LINE (Kms.)	ESTIMATED COST (Rs Crores)	Capital Expenditure in Rs crores					Capitalization in Rs crores				
					FY 2021-22 (Projected)	FY 2022-23 (Projected)	FY 2023-24 (Projected)	FY 2024-25 (Projected)	FY 205-26 (Projected)	FY 2021-22 (Projected)	FY 2022-23 (Projected)	FY 2023-24 (Projected)	FY 2024-25 (Projected)	FY 2025-26 (Projected)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	400 KV double circuit Quad Moose Patratu - PVUNL Transmission line and 2no. 400 KV LINE Bay	-	7	49.87	0.00	49.87					49.87			
3	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)	1000	255	916.82	0.00	366.73	366.73	183.36					916.82	
4	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)	1560	365	1152.00	0.00	460.80	460.80	230.40					1152.00	
5	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)	500	4	67.60	0.00	33.80	33.80					67.60		
6	132/33 KV Grid sub-Station, Kundhit and 132 KV Jamtara - Madhupur Transmission line of propose LILO in Kundhit grid	100	33	83.70	0.00	41.85	41.85					83.70		
7	220/132/33 kv Grid sub-station , Hazaribagh and 220 KV double circuit Tenughat - Hazaribagh Transmission line	500	58	170.59	0.00	0.00	85.30	85.30					170.59	
8	220/132/33 KV Grid sub station, Baliyapur and LILO of 220 KV double circuit Dumka - Govindpur at Baliyapur GSS	500	7	124.35	0.00	0.00	24.87	49.74	49.74					124.35
9	400/220KV GSS Mandar & 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	560.00	71.00	201.46	0.00	0.00	40.29	80.58	80.58					201.46
10	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)	1000	136	546.22	0.00	0.00	0.00	273.11	273.11					546.22
11	220/132/33 Grid sub station, Sarwal and 220 KV LILO Ranchi - Chandil Transmission line at sarwal GSS	560	10	148.00	0.00	0.00	0.00	74.00	74.00					148.00
12	220/132/33 Grid sub station, Palajori and 220 KV LILO Dumka- Gobindpur Transmission line at palajori GSS	500	10	126.75	0.00	0.00	63.38	63.38					126.75	
	Total	**6780**	**956**	**3587.36**	**0**	**953.048**	**1117.01**	**1039.868**	**477.434**	**0**	**49.87**	**151.3**	**2366.16**	**1020.03**

Renovation & Modernization & Misc.

Name of GSS	Name of Scheme	Captacity (MVA)/Length (cKM)
Gumla	Construction of home guard room with bathroom	
	Height raising & repairing of boundry wall of GSS	
	6 inch deep boring	
	Rennovation of carrier room	
	Repair of IB at GSS	
Kamdara	Construction of home guard room with bathroom	
	Height raising & repairing of boundry wall of GSS	
	Renovation of carrier room	
	Renovation of Control room	
	Colony boundry wall	
Simdega	Construction of boundary wall including angle suports with barbed wire and concertina coi at top of wall	420 m
	Construction of officer quarter. Store room and Guard room with water boring with submersible pump for staff and officer quarter.	1 lot
	new electrical wiring of E-Type and F-type staff quarter	1 lot
	CCTV Surveilance system installation for improvement of security of assets	
	Repair & Maintenance of Control Room Building	1 lot
	Area development in staff quarter area with approach road repairing	1 lot
Madhupur	Replacement of Earth wire with OPGW & related hardware on 132 kV Jasidih Madhupur TL with FOTE panel	37 KM
	Installation of FOTE Panel for 132 kV Jamtara Madhupur TL	
	Replacement of 04 no.s of 132 kV SF6 Circuit Breakers	
	Replacement of 04 no.s of 33 kV Vacuum Circuit Breakers	
	Replacement/ Recalibration of all 14 nos. Energy Meters	
	Relay co-ordination of all numerical relays	
	Construction/ raising of boundary wall with installation of concertina wire.	
	Construction of Staff quarters.	
	Construction of RCC approach road around the switchyard	
	Construction of Retaining wall aroudn the switchyard	
	New Boring & Piping for water supply.	
Jasidih	Connectivity of 220 kV D/C Dumka-Jasidih TL networkd through OPGW with FOTE panel for telecommunication	74.5 Km
	Replacement of conductor jumper with Aluminium tubler bus pipe of all 220 kV and 132 kV Bus pipe	

	Construction/ raising of boundary wall with barbed wire.	
Chitra	Construction of 02 nos. new 132 kV high level isolators in 132 kV main bus including foundation and structure	
	Suppply, Erection and Commissioning of 03 nos. High mast.	
	Replacement of conductor of 33 kV Main bus and Transfer Bus with Twin Bus Bar System.	
	Control room extension with office, battery room, PLCC room, kitchen and bathroom	
	Construction/raising of boundary wall with installation of concertina wire	
	Construction of Store	
	Construction of Approach road	
	Construction of Guard Room	
	Construction of Staff & Officers Quarters	
Jamtara	Connectivity of 132kV Jamtara-maithon and 132 kV Jamtara-Chitra TL network through OPGW with FOTE Panel for communication	
	Replacement of existing conductor of 132kV Jamtara-maithon T/L with HTLS conductor	34 KM
	Laying of new Earthmat in 33 kV Switchyard and fresh gravelling	
	Replacement of conductor jumper with Aluminium tubler bus pipe of all 220 kV and 132 kV Bus pipe	
	Replacement of conductor of 33 kV Main bus and Transfer Bus with Twin Bus Bar System.	
	Replacement of 33 kV C&R Panel of 04 Nos. of bay	
	Construction/raising of boundary wall with installation of concertina wire	
	Construction of fresh cable trench in place of exisiting cable trench	
	Construction of Store	
	Construction of Approach Road with gates	
	Construction of Staff quarters.	
	New deep boring & piping for water supply.	
Deoghar	Suppply, Erection and Commissioning of 132 kV line feeder/ bus coupler	
	Connectivity of 132 kV D/C Deoghar-Dumka 132 kV d/C Deoghar-Jasidih, 132 kV s/C Deoghar-Chitra TL network through OPGW with Existing PLCC/ FOTE Panel for OPC	147 KM
	Replacement of conductor jumper with aluminium tubler bus pipe of all 132 kV and 33 kV bay	
	Replacement of 132 kV SF6 Breaker of 04 Nos. 132 kV bay	
	Replacement of 132 kV C&R Panel of 02 Nos. 132 kV bay	
	Replacement of conductor of 33 kV Main bus and Transfer Bus with Twin Bus Bar System.	
	Copnstruction of New Control Room	
	Construction/ raising of boudnary wall alongwith barbed wire	
	Construction of fresh cable trench in place of exisiting cable trench	
	Construction of Store	
	Construction of Approach Road with gates	

	Gravelling work with drainage	
	New deep boring & piping for water supply.	
Jamua	Construction of staff and officer quarter	
	Construction/repairing of boundary wall	
	Installation of 220 kV Batter bank and charger	
	Procurement of Testing & Diagonosis equipment for Transmission system (Viz/ thermovision Camera, protective relays, hardware fittings, measuring	
Giridih	Construction of staff and officer quarter	
	Construction/repairing of boundary wall	
	Installation of 220 kV Batter bank and charger	
	Procurement of Testing & Diagonosis equipment for Transmission system (Viz/ thermovision Camera, protective relays, hardware fittings, measuring	
Govindpur	Replacement of Battery bank (220v) - 02 Set	
	Replacement of Battery Bank (48V) - 02 Set	
	Installation of check meter in all feeder/ line bays.	
	New deep boring & piping for water supply.	
Namkum	Height raising of 132 kV Namkum-Hatia-I-Sikidiri ckt-II TL	
	Implementation of SCADA System (SAS) (27 bays)	
	Replacement of 05 nos. of 33 kV Old VCB	
	Replacement of 12 No.s of Old CT	
	R&M of quarters of GSS	
	R&M of control room building & guard room of GSS	
	R&M of approach road of GSS and inside switchyard area	
	Repairing and erection of damaged boundary wall and raising height of boundry wall and raising height of boundary wall of switchyard area and	
	Provision of concentrena wire fencing in complete boundary wall	
Kanke	Implementation of SCADA/Sub-Station automation system for existing system part of GSS including synchronisation all GSS equipments & relay with GPS	For 20 bays (132
	Establishment of OPGW based telementry communication from GSS Kanke to SCADA/SLDC alongwith terminatl equipments and integration of remaining	
	Provision of OPGW by replacing GI Earth Wire over 132 kV D/C Hatia-2 Kanke Transmission Line and establishment of Fiber based communication	45 KM
	Implementation of complete pumping arrangement with pump house/fire fighting control room, pipe line & water storage, HVWS & Hydrant system base	Entire GSS
	Renovation of entire control room building wirings, Indoor & outdoor lighting wiring and airconditioning system by replacing old Acs.	Entire GSS
	Provisional of false Sealing and proper sealing of all windows & doors etc complete with allied works in control room building including offices and	
	Implementation of preventive maintenance system for sale and reliable operation of transmission system including procurement of testing & diagnosis	
	CCTV Surveilance system installation for improvement of security of assets	
	Overhauling of 100 kVA DG Set including reamping of AC & DC auxiliary system of GSS	
	Renovation of Cable trenches in 132 kV & 33 kV side and switchyard roads.	Road 450 m,

	R&M of equipments foundation in 132 & 33 kV side including transformer	20 bays and 03
	Construction of protection of towers (Protection wall/ revertment)	15 Towers &
	Construction of Security Post cum watch tower with amentiies facility for Home guard/ security personal-02 nos. and replacement of main doors.	02 Nos.
	Renovation of DG Room and entire control room building including works of water proofing, foundations & Plinth ptn R&M painting strenthening of beam &	
	Painting of metal fencing and outdoor equipments and construction of metal fencing from north side.	
	Renovation of water drainage system of entire GSS	
	Renovation of sub-divisional store and fencing	
	Renovation of sub-divisional colony including approach road, fencing/boundary, street light, water and other amminities etc. complete works.	
	1000 ft. deep boring work with storage tank, piple line and pump house etc. complete work for water facility of control room & offices and earthpit watering.	
	Provisiona of essential amminities like drinking filter water supp0ly, male & female toilet with washroom etc.	
	construction of parking shed and rain water harvesting system.	
	Construction of open store yard for storage of heavy outdoor equipments/materials and heavy scrap materials with RCC/PCC flooring and unloading	
	Renovation & strengthening of existing boundary wall, raising 10 ft. height of GSS boundary wall from existing and erection of concertina coil over the	
	Renovation of GSS Approach road from public road to entrance.	
Tamar	Enhancement of Load capacity of 132 kV Tamar LILO Line	
Hatia-I	Renovation & strengthening of 132 kV & 33 kV main Bus by means of changing single zebra to twin zebra	
	Renovation & strengthening of 33 kV Gantries and supporting structure	
	Renovation of earthing system of all Power Transformer by installation of effective & efficient treated - deep boring type earthings and water system pipe	08 nos.
	Implementation of SCADA/Sub-Station automation system for existing system part of GSS including synchronisation all GSS equipments & relay with GPS	For 36 bays (132
	Establishment of OPGW based telementry communication from GSS Kanke to SCADA/SLDC alongwith terminatl equipments and integration of remaining	
	Provisiona of OPGW by replacing GI Earth Wire over 132 kV Transmission Line and Establishment of Fiber based communication system between GSS	
	Implementation of complete pumping arrangement with pump house/fire fighting control room, pipe line & water storage, HVWS & Hydrant system base	Entire GSS
	Renovation by means of replacement of 09 nos. 33 kV VCB, 21 nos. 33 kV CTs, 33 nos. 33 kV las, Energy meters etc.	
	CCTV Surveilance system installation for improvement of security of assets	Entire GSS
	Gravelling work in foundation & bays in GSS	
	Renovation of Old Control Room building with Civil work, wirings, provision of False sealing and proper sealing ofall windows & doors, etc. complete work	
	Renovation of Cable Trenches in 132 & 33 kV side and switchyard roads	
	Construction of Security Post cum watch tower with amentiies facility for Home guard/ security personal-02 nos. and replacement of main doors.	02 Nos.
	Painting of metal fencing and outdoor equipments and construction of metal fencing from north side.	
	Renovation of water drainage system of entire GSS	
	Renovation of sub-divisional store and fencing	
	Renovation of sub-divisional colony including approach road, fencing/boundary, street light, water and other amminities etc. complete works.	
	1000 ft. deep boring work with storage tank, piple line and pump house etc. complete work for water facility of control room & offices and earthpit watering.	02 Nos.

	Provision of essential amminities like Drinking filter water supply, male & female toilet with washroom etc.	
	Construction of DG Room, Parking shed and Rain water Harvesting system.	
	Construction of open store yard for storage of heavy outdoor equipments/materials and heavy scrap materials with RCC/PCC flooring and unloading	01 No.
	Renovation & strengthening of existing boundary wall, raising 10 ft. height of GSS boundary wall from existing and erection of concertina coil over the	
	Construction of Lighting Towers	
	Renovation of GSS Approach road from main road to entrance, Entrace Gate and entrance security room.	280 m
Lohardaga	Implementation of SCADA/Sub-Station automation system for existing system part of GSS including synchronisation all GSS equipments & relay with GPS	For 20 bays (132
	Establishment of OPGW based telementry communication from GSS Kanke to SCADA/SLDC alongwith terminatl equipments and integration of remaining	
	Provision of OPGW by replacing GI Earth Wire over 132 kV D/C Hatia-2 Kanke Transmission Line and establishment of Fiber based communication	45 Km approx.
	Implementation of complete pumping arrangement with pump house/fire fighting control room, pipe line & water storage, HVWS & Hydrant system base	
	Renovation of entire control room building wirings, Indoor & outdoor lighting wiring and airconditioning system by replacing old Acs.	Entire GSS
	Provision of false sealing and proper sealing of all windows & doors etc complete with allied works in control room building including offices and	
	Implementation of preventive maintenance system for sale and reliable operation of transmission system including procurement of testing & diagnosis	
	CCTV Surveilance system installation for improvement of security of assets	
	Overhauling of 100 kVA DG Set including reamping of AC & DC auxiliary system of GSS	
	Renovation of Cable Trenches in 132 & 33 kV side and switchyard roads	Road 450 m,
	R&M of equipments foundation in 132 & 33 kV side including transformer	20 bays and 03
	Construction of protection of towers (Protection wall/ revertment)	15 Towers &
	Construction of Security Post cum watch tower with amentiies facility for Home guard/ security personal-02 nos. and replacement of main doors.	02 Nos.
	Provision of water tank pipe line arrangement for watering of earth pit of all power transformer at 132/33 kV GSS, Lohardaga.	
	Renovation of DG Room and entire control room building including works of water proofing, foundations & Plinth ptn R&M painting strenthening of beam &	
	Painting of metal fencing and outdoor equipments and construction of metal fencing from north side.	
	Renovation of water drainage system of entire GSS	1 Km
	Renovation of sub-divisional store and fencing	
	Renovation of sub-divisional colony including approach road, fencing/boundary, street light, water and other amminities etc. complete works.	(G+1) 03 units
	1000 ft. deep boring work with storage tank, piple line and pump house etc. complete work for water facility of control room & offices and earthpit watering.	02 Nos.
	Provisional of essential amenities like drinking water supply, male & female toilet with washroom etc.	
	Construction of parking shed and rain water harvesting system.	1+1 Nos.
	Construction of open road store yard for storage of heavy outdoor equipments/ materials and heavy scrap materials with RCC/PCC flooring and unloading	01 Nos. (300 to
	Renovation of strengthening of existing boundary wall, raising 10ft. Height of GSS boundary wall from existing and erection of concertina coil over the	850 m approx.
	Renovation of GSS Approach road from public road to entrance.	280 m
	Replacement of 70 KN Disc Insulator of 132 kV D/C Lohardaga-Gumla Transmission Line.	2000 Nos.
Khunti	Installation of SCADA at GSS Khunti and allied system to ensure better coordination and efficent O&M	

Hatia-II	Charger Pepair & Conncetion	01 No.
	High Level ISO for Main Bus-I,II (Motorised)	04 Nos.
	PLCC Room A.C (02 Ton Cap.	05 Nos.
	ACDB Air Circuit Breaker (Complete Set)	1 No.
Sariya	Construction of residential quarters for officer's and Staffs at GSS Sariya	
	Construction of IB at GSS Sariya	
	Repairing of Boundary Wall	
	Procurement of Testing & Diagonosis equipment for Transmission system (thermovision Camera, protective relays, hardware fittings, measuring	
Maharo GSS	Implementaion of SCADA system (SAS) at GSS Maharo (22 Bays)	1.5 KM
	Replacement of Ground wire with OPGW of 132KV Madanpur (Dumka- Maharo D/C T/L	
	Replacement of 03 Nos. 33KV old VCB at GSS	
	GPS time synchronisarion equipemnt at GSS Maharo	
	R&M of Quarters fo GSS Maharo.	
	Repairing & Erection of damaged Boundary wall of Swithchyard & Colony area and construction of Main gate, guard room at GSS.	
	Provision of concentrena wire fencing in complete boundary wall at GSS	01 Set.
Pakur	Comprehensive Intrigration of 18 Nos. Bays in SAS & Control Centre at GSS Pakur	
	Replacement of Ground wire with OPGW of 132KV Madanpur (Dumka- Pakur D/C T/L	84.5 KM
	Replacement of 07 Nos. 33KV old VCB at pakur GSS	
	GPS time synchronisarion equipemnt at GSS Pakur	
	Stone Metal spereding in 132 & 33KV SwitchYard at GSS Pakur.	
	R&M of Quarters of GSS Pakur.	
	Repairing & Erection of damaged Boundary wall of Swithchyard & Colony area and construction of Main gate, guard room at GSS Pakur.	
Lalmatia	Replacement of damage/defective/outdated equipments and C&R panels by new in 220/132KV NTPC side.	
	PCC cum Gravling of Complete switchyard in NTPC side and some area in JUSNL at GSS Lalmatia	
	Renovation of complete site store building at Manoharpur including water supply and electrical wireing.	
	Renovation of boundary wall of site store at Manoharpur of GSS Lalmatia.	
Rajmahal & Sahibganj	Hight Raising of 132 KV Lalmatia-Sahibganj Transmission Line between two locations	
	Stone Metal spereding in complete 132 & 33KV SwitchYard at GSS Sahibganj.	
	R&M of Quarters of GSS Sahibganj	
	Repairing & Errection of damaged Boundary wall of Switchyard & Colony area and construction of Main Gate for Colony area at GSS Sahibganj	
Giridih	Construction of Staff and Officer Quarter	
	Construction/repairing of boundary wall	
	Installation of 220V Battery Bank and Charger	

	Procurement of Testing & Diagnosis equipment for transmission system (Vix. Thermovison Camera, protective relays, hardware fitting, Measuring	
Jamua	Construction of Staff and Officer Quarter	
	Construction/repairing of boundary wall	
	Installation of 220V Battery Bank and Charger	
	Installation of Testing & Diagnosis equipment for transmission system (Vix. Thermovision Camera, protective relays, hardware fitting, Measuring	
Daltonganj	Construction of home guard room with bathroom	
	Height raising & repairing of boundry wall of GSS Daltonganj	
	Procurement of Air Conditioners for Control Room, Carrier Room & Officer.	
	GPS Clock at GSS	
	Rennovation of carrier room	
	Provision of new Quarter at Grid Colony Campus for Officers and Staffs	
	Construction of Home Guard Shed and Construction Store Room at GSS Garhwa Road.	
	Regravelling of 132KV & 33KV Switchyard	
	Constrution of Shed	
	Repair of IB at GSS, Daltonganj	
Latehar	Replacement of Ground wires with OPGW in 220 KV Chatra-Lahehar LT.	108 KM
	Replacement of Panther Conductors with HTLS Conductor in 132KV D/C link line (400/220/132KV GSS, Latehar to 132/33KV GSS, Latehar)	2x0.6=1.2 cKM
	Procurement of Testing Kits and equipments such offline fault locator, thermo vision camera, DCRM and winding resistance test kit, Transformer Oil	
	Repairing of cable trench wall and repolacemnt of damaged RCC stabes on the cable trench.	
	Leveling & Water proofing of Control Room Roof Slab.	
	Repairing of plinth proctection, washroom drainage & rain water drains along the plinth protection of Control Room Building.	
	Repairing, Height raising and plaster-painting of Boundary wall with retaining wherever required of at 132KV/33KV Grid Campus.	
	Repairing and Painting of all residential Buildings including water supply and waste water drainage at 132/33kv Lahehar GSS, Colony Campus.	
Garhwa Road	Replacement of Ground wires with OPGW of 132KV D/C Rihand-Garhwa Road Transmission line and 132KV D/C Bhagodih-Garhwa Road.	212 CKM
	Replacement of Ground wires with OPGW of 132KV/DC Bhagodih-Garhwa Road Transmission Line.	10 CKM
	Procurement of Testing & Diagnosis equipment for transmission system (Viz. Thermovision Camera, protective relays etc.)	
	GPS Clock at GSS	
	Rennovation of carrier room	
	Provisions of new Quarters at Grid Colony Campus for Officers and Staffs.	
	Construction of Home Guard Shed and Construction Store Room at GSS Garhwa Road.	
	Regravelling of 132KV & 33KV Switchyard	
	Repair/Construction of Boundary wall at GSS Garhwa Road.	
	Repair/Construction of Ajpproach Road at GSS Garhwa Road.	

	Repair/replacemnt of GSS entry Gate	
	Repair of IB at GSS, Garhwa Road.	
Japla	Replacement of Panther Conductors with HTLS Conductor in 132KVD/C Sonenagar-Japla Ckt-I &II	2x16=32cKM
	Procurement of Testing Kits and equipments such offline fault locator, thermo vision camera, DCRM and winding resistance test kit, Transformer Oil	
	Replacement of cable trench wall and replacement of damaged RCC stables on the cable tranch.	
	Repairing and Painting of Controll Room at 132/33KV GSS Japla.	
Bhagodih	Replacement of Ground wires with OPGW of 220KV Bhaodih-PGCIL D/C T/L	186 Ckm
	Repair/Construction of Boundary wall at Bhagodih GSS	
	Procurement of Testing & Diagnosis equipment for transmission system (Viz. Thermovision Camera, protective relays, hardware fitting, Measuring	
	Procurement of Offline Fault Locator	
Lohardaga	Replacement of 70 KN Disc Insulator of 132 kV D/C Lohardaga-Gumla Transmission Line.	59.3 KM
Tamar	Enhancement of Load capacity of 132 kV Tamar LILO Line	0.65 cKM
Noamundi	Installation of 350 AH 220 V Battery Bank with Charger	3x50 MVA
	Extension of 132KV/33KV GSS Control Room Building	3x50 MVA
	Supply and Erection f 01 No.33/.4kV 315 KvA Sub-Station Tranformer	0.315 MVA
	Construction of SST bay with Isolators, PT, LA etc.	0.315 MVA
	Replamcemnt of panther Conductor of 132Kv KNPS-NMD Trans. Line by HTLS Conductor.	26 cKM
	Replacement of existing earth wire to OPGW of 132KV/S/C KNPS-NMD Trans. Line	26cKM
	Installation and intergration of SCADA System at 132/33KV GSS Noamundi	150MVA
CKP	Renovation of GSS CKP Control Room, Manger's Office, Home Guard Barrack etc. Work.	40 MVA
	Installation of ASA System for GSS CKP inculiding SCADA, with monitor & Control Level Assess.	40 MVA
	Installationoif PLCC/RTU Module at GSS CKP	40 MVA
	Upgradation of Panther Conductor to HTLS Conductor and earth wire to OPGW of 132KV D/C Rajkharwawan-CKP Trans. Line.	120MVA/23 Ckm
Kendposi	Supply and Erection of 350 AH Plante Type 220V Battery Set with Charger	2x20 MVA
	Construction of Extension Building of Control Romm	2x20 MVA
	Supply and Erection fo 02 Nos. 33/.4KV315 KVA Sub-Station Tranformer	2x20 MVA
	Construction of SST Bay with Isolators, PT<, LA etc.	2x20 MVA
	Replacemnet of Panther Conductor of 132 Kv Joda-Kandposi Trans. Line by HTLS Conductor.	45 cKm
Chaibasa-II	Replacement of existing earth wire into OPGW earthwire (20KM) of 132KV S/C RKSN-CBSA-II Section of RKSN-KNPS Trans. Line	20 KM
	Intergration of SCADA System (IEC 61850 Protocol)	50+20=75 MVA
	Replacement of existing ACSR Panther into HTLS Conductor eqiv. To Panther (20KM) of 132 KV S/C RKSN-CBSA-II Section of RKSN-KNPS Trans. Line.	10 KM
	Renovation of Control Room Building.	50+20=75MVA
GOILKERA	Supply and Erection of 01 No. 33/0.4 KV 315 KVA Sub-Station Transformer Construction of SST Bay with Isolator.	315 KVA

Rajkharsawan	Extension &Renovation of GSS Rajkharsawan Control Room, Manager's Office, Home Guard Barrck etc. Work.	150MVA
	Installation of SAS System for GSS Rajkharsawan including SCADA with minotor & Control level Access.	150 MVA
	132/33 KV Transformer Pannel.	150 MVA
	Hiagh mast Lighting	2
	GSS Boundary Wall	
Chaibasa-I	Boundary Wall of 220/132/33 KV GSS Jlijhari	400MVA
	Constrution of 02 Nos. of Watch Tower for Security Purpose.	400MVA
	Installation of CCTV Camera Near to Each Bay Equipments.	400MVA
CRITL	Automatic Relay Test KIT(Maggar/OMICRON)	01No.
	IR Tester 5KV (Magger)	01 No.
	Capicitancy & Tan Dalta Test KIT (Magger/Omicron)	01 No.
	Laptop (for testing, setting Configration for Relays	01No.
Adityapur-1	Installation of SCADA and allied system	1 System
	Procurement of Thermovision Camera, Measurement and Testing Equipment at GSS Adityapur-1	1 Unit
	Installaiton of GPS Clock for relay & Meters at GSS, Adityapur-1	1 Set
	Renovation of Carrier Room at each GSS for AC environment at GSS Adityapur-1	1 No.
	GPS Lock installation in Control Room	1 Unit
	Procurement of Hardware fittings and connectrors and conductor	1 Time
	Fire resistance point in all cables entering in control room	1 Time
Adityapur-2	Installation of SCADA System	1 System
	Replacement of 132kV adp d/c panther conductor with HTLS Conductor	26Km
	Installation of PDH panel for real time data processing	1 Set
	Yearly testing of protective relays, circuit breakers & energy meters calibration required.	1 Time/year
	Thermovision Camera, CRM test Kit, DCRM test kit, Voltage injection kit, Tan5 capacitance testing kit, WRM Kit, Turn Test Kit, Relay Testing Kit required for	1 No. each
	RTU Connection with SDH Panel and PLCC Panel.	1 Set
	Optical fiber installation in place of earth wire in all connected TL	13KM
	Relay co-ordination required.	1 Time
	GPS Clock installation required for relay and meters	1 Set
	Control Room and carrier room repairing required.	30 M2
	Chemical earthing of Transmission tower legs required.	106 Nos.
	stub welding of rusted tower legs.	424 Legs
	Reventment of tower foundation at low laying areas.	4 Nos.
	Height elevation of 220kV Transmission lines at Road, Canal crossings.	1 Time

	Colony quarters re-wirting.	1 Time
	Name plate, danger plate, phase plate of 220kV lines under the jurisdiction of Adityapur-2 GSS	1 Time
	Fire resistant paint in cables entering in control room is required.	1 Time
	Furniturea (Rack, almirah etc.) are required for proper record keeping.	1 Time/year
Adityapur-3	Installation of SCADA and allied System	1 Unit
	Procurement of Thermovision Camera, Measurment and testing equipment	1 Unit
	Procurement of Hardwar fittings and connector and conductor.	1 Unit
	oPGW Connection.	1 Time.
Chandil-2	Installation of SCADA and allied System	1 Unit
	Procurement of Thermovision Camera, Measurement and testing equipment	1 Unit
	Procurement of Hardware fitting and connector and conductor	1 Unit
	OPGW connection from GSS Chandil to GSS Manikui	1 Unit
	GPS Lock installation in Control Room	1 Unit
Golmuri	Implementation of SCADA & EMAS at GSS Golmuri	01 System
	Replacement of Grund wire with OPGW & reconductoring with HTLS Conductors of 132 KV D/C Chandil Golmuri Transmission Line.	32 KMS
	Replacement of old defective 50 MVA transformer no. 1 with a new 50 MVA power transformer at GSS Golmuri	01 No. 50 MVA
	Procurement of thermovision Camera for GSS Golmuri.	1 Set
	Interconnectivity of GSS Golmuri for SCADA & EMAS through OPGW.	1 Set
	Installation of GPS clock for relay & meters at GSS Golmuri	1 Set
	Renovation of Carrier room at each GSS for AC environment at GSS Golmuri.	1 No.
Jadugoda	implementation of SCADA & EMAS at GSS Jadugoda	1 System
	Replacement of ground wire with OPGW of 132kV S/C Golmuri-Jadugoda Transmission Line.	24 Kms
	Replacement of old defective Two numbers 20 MVA Transformer no. 1 & 2 with Two new 50 MVA Power Transformer at GSS jadugoda.	02 Nos., 50 MVA
	Procurement of Thermovisoin Camera for GSS Jadugoda.	1 Set

	Installation of One number 220 Volt. 300AH Battery Bank with Charger in GSS Jadugoda.	1 Set
	Installation of GPS clock for relay & meters at GSS Jadugoda.	1 Set
	Renovation of carrier room at GSS for AC environment at GSS Jadugoda.	1 No.
Mango	Re-conductoring of existing panther conductor with HTLS conductor of 132kV Chandil-Mango Line (CKT-1)	2 Kms
	Procurement of Thermovision Camera for GSS Mango.	1 No.
	Testing & Calibration of energy meter of 05 Nos. 132kV Feeder & 7 Nos. 33 kV Feeder.	1 Time/Yr.
	Furniture & Furnishment of (Rack, Almirah, Table, Chair etc.) are required for controll room office room & conference Room of Mango GSS.	1 Time
	imPlementation of SCADA & EMAS at GSS Mango	1 System
	Replacement of Ground wire with OPGW of 132kV S/C Mango-Chandil Transformer Line.	19 Kms.
	Installaiton of GPS Clock for relay & meters at GSS Mango.	1 Set
	Interconnectivity of GSS Mango for SCADA & EMAS through OPGW.	1 Set
	Extension of Control Room Building including construction of cable tranch at Mango GSS	20 M2
	Repairing & Painting of Control Room is required at Mango GSS	1 Time
	Nameplate board erection, febrication along with naming of different bays & important place at Mango GSS	1 Time
	Repair & Maintenance of boundary wall infront of the Control Room of Mango GSS	1 Time
Dhalbhumgarh	Yearly testing of prtection relay, Circuit breaker & Energy meters calibration required.	1 Time/yr.
	Reconductoring of 132kV & 33kV Main Bus bar with panther Conductor and 132kV & 33kV transformer bus & all bay conductors with singhle moose	60Kms
	Replacement of old Two nos. of 132 KV High level isolators with motorised isolator of 2000 Ampere	1250 Ampere
	Installation of 4 Nos. 132kV & 2 Nos. of 33 kV 3 Phase 4 Wire energy meters	7 Nos.
	Construction of new site Store in GSS Dhalbhumgarh	400sqft
	Construction of Guard Room in GSS Dhalbhumgarh	100sqft
	Renovation of approach road from main interance colony to IB in GSS Colony Dhalbhumgarh	400mts.
	Installation of 1 No. of 315KVA 33/415 SST with associated bay and Cable at GSS Dhalbumgarh	315KVA
	Replacement of 33kV Panel of Ghatsila Feeder	1 No.
	Replacement of Two nos. 132kV very old Breaker with support structure including all mandatory at GSS Dhalbhumgarh	315 KA SF6
	Water storage tank and pipe line for colony campus and GSS	10000 Ltrs.
IT department	Website Hosing, Operation of 20 Nos. of existing email IDs. Maintenance of JUSNL Website (www.jusnl.in). Registration & installation of DV Wild Card SSL Certification and Cyber Security Audit as per Guideline of Minstry of Power, Govt. of India at interval of every 06 months alongwith its compliances for the period of Three (03) Years.	
	Creation of Cyber Security Cell and development of Manpower through outsource agencies.	
	Cyber Security Training	
	IT related equipments procurement such as Computer alongwith its accessories, Server, Modem, etc.	
	Installation of LAN System in the Nigam Hqr.	
	Software Procurement & its Upgardation.	

	Miscellaneous (Against those unseen work which may be inevitable to the Nigam.	

	Augmentation and any other schemes/ projects		
Name of GSS	**Name of Scheme**	**Capacity**	**Augmented Capacity (MVA)**
Gumla	new Installation of 132/33 kV 50 MVA Transformer with associated complete set. (02 No.)		50x2=100
	01 No. 33 kV bay Extension		
	33 kV Gantry Extension		
	SST 01 No. additional installation		
Kamdara	01 No. 33 kV bay Extension		
	SST 01 No. additional installation		
Simdega	Replacement of 33 kV electromechanical backup relays with Numerical backup relay	9	
	Replacement of 132kV electromechanical backup relays with Numerical backup relay	10	
Chitra	Required installation of 01 no. of new 33/415 kV Sub-Station Transformer	315 kVA	630 kVA
	Supply, Erection, testing and commissioning of 01 no. 220 V battery bank with charger		
Jamtara	Required installation of 01 no. of new 33/415 kV Sub-Station Transformer	315 kVA	630 kVA
Deoghar	Required installation of 01 no. of new 33/415 kV Sub-Station Transformer	315 kVA	630 kVA
Giridih	Required installation of 01 no. of new 50 MVA Power Transformer and construction of bay on 132 kV and 33 kV side with extension of bus	100 MVA	150 MVA
Govindpur	Installation of 132/33 kV, 80/100MVA Power Transformer & associated works.	50 MVA	80/100 MVA
Namkum	CCTV surveillance system installation for security of assets		1 set
	Supply, Installation and Commissioning of conventional type Earth pits for 50 MVA Power Transformer Neutral earthing		08 nos.
	Supply, erection, testing and commissioning of Energy Meters for Power Transformer (LV Side)		04 nos.
	Supply, erection, testing and commissioning of 3 nos. 33 kV bays and 01 no. LM tower		03 nos.
	Provision of street lighting system for switchyard and colony area		1 set
	Arrangement of Fire Fighting system by water spray including boring , supply of pimp & pipeline, erection etc for control room and switchyard area		1 set
	Construction of POCC road around the switchyard area		
	Construction of watch tower		1 no.
	Replacement of Old 33 kV feeder panel		1 no.
	Procurement of different type of relays		1 no.
	33/0.4kV Sub Station transformer		1 no.
	Supply, Erection, Testing and Commissioning of 132 PT set with isolator		1 no.
	Construction of open store		
	Strengthening of Earthing system of switchyard		
Kanke	Augmentation of Transformation capacity of GSS by installing 4th 50 MVA Power Transformer with its 132/33 kV allied bays	50 MVA	150 MVA to 200 MVA (50 MVA)
	Augmentation of feeders capacity by construction of 03 nos. 33 kV feeder bays and 01 LM tower including shifting of SST-2 bay contour development	03 Nos.	06 nos. to 09 nos.
	Replacement & refurbishment of VCB, CB, CT, LA, CVT, Relays etc S/Y equipment		40 nos.
	Replacement & refurbishment of protection relays and other etc. C/R equipment		20 nos.
	Augmentation of Indoor & Outdoor Lighting system of entire GSS	25 No.s	35 nos.
	Gravelling work in foundation & allied bays of 50 MVA Power transformer no. 03 including some allied works		50 MVA ICT-3
	Augmentation of earthing system of all Power Transformer by installation of effective & efficient treated - deep boring type earthing and watering system pipe line with deep boring & dedicated water tank.	10 Nos.	
	220V backup Battery Bank Set including charger	220V DC	

Tamar	electrical wiring of quarters with water supply system	NA	
	construction of pending boudnary walls at one side of GSS (Approx 250 Mtr.)	250 Mtr	
Hatia-I	Augmentation of Transformation capacity of GSS by installing 04 nos. of 80/1000 MVA transformer each in place of installed 50 MVA trans. Each	11 Nos.	14 Nos.
	Augmentation of 33 kV feeder capacity by construction of 02 nos. 33 kV Feeder bays and 01 nos. 33 kV Bus boupler bay.	30 Nos.	50 Nos.
	Augmentation of Indoor & Outdoor Lighting system of entire GSS		
Lohardaga	Assignment of feeder's capacity by construction of 04 nos. 33 kV Feeder bays	4 Nos.	5 Nos. to 9 Nos.
	Replacement & refurbishment of VCB, CB, CT, LA, CVT, Relays. Etc. S/Y equipments.		40 Nos.
	Replacement & refurbishment of protection relays and other etc. C/R equipments.		20 Nos.
	Augmentation of Indoor and Outdoor lighting system of entire GSS	25 Nos.	35 Nos.
	Gravelling Work in foundation & allied bays of 50 MVA Power transformer no. 3 including some allied work..		50 MVA ICT-3
	Augmentation of earthing system of all Power transformer by installation of effective & efficient treated deep boring type earthing and watering system pipe line with deep boring & dedicated work tank.	10 Nos.	
Khunti	Construction of residential colony for officers and staffs under GSS		
	Construction of new T/L for GSS Khunti because GSS Khuti have only one incoming source from Tamar GSS		
Hatia-II	Enrgey Meters (3-4 Wire) Type Class 0.025	06 Nos. (06x36000)	
	Earthing PIT (Chemical Treated)	09 Nos. (09x25000)	
	Lighting System (400 Watt LED Light	20 Nos. (20x36000)	
	150 MVA, ICT-2 Over haulling Required	01 No. (01x3000000)	
Sariya	Required 01 No. of 50MVA 132/33KV Transformer AT GSS Sariya	01 No.	
	02 Nos. Nay Extension at 33KV Side	02 Nos.	
	Purchase of 20 Nos. Spare Batteries for batter Bank	20 Nos.	
Maharo GSS	Arrangement of Fire Fighting system by water spray, supply of pipeline, erection etc. for Control room & Complete switchyard area	01 Set	
	CCTV surveillance system installation for security of assets	01 Set	
	Provision of street light system inside GSS area (along the pathway)	01 Set	
Pakur	Reconditioning of Panther Conductor of 132 KV Madhupur (Dumka-Pakur D/C T/L with HTLS Conductor equivalent to Panther		
	Arrangement of Fire Fighting system by water spray including pump & pipeline, erection etc for control room and switchyard area at GSS Pakur.	01 Set	
	Provision of Barbed wire fencing in complete Boundary Wall at GSS Paker	01 Set	
	CCTV surveillance system installation for security of assets of GSS Pakur.	01 Set	
	Provision of Street Light system for Colony area of GSS Pakur.	01 Set	

Madanpur	Installation of one no. 220/132KV 150 MVA ICT as well as construction of one no. 220 KV and 132 KV Bay at GSS Madanpur	150 MVA	
	Upgradation of Scada System at GSS Madanpur.	01 Set	
Lalmatia	Supply, Installation and Commissioning of complete set of Battery Bank with Charger in NTPC side.		
	Supply, errction, testing and commissioning of complete ACSR Zebra Conductor from 01 to 248 and associated hardware fittings to installed in 2nd circuit of 220KV Latimai-Farakka Transmission Line including provision of OPGW in place of existing GI Earth wire in complete abvoe Transmission Line.		
	Supply, errection, testing and commissioning of 2 Nos. 220KV Bays at NTPC side and Farakka end to installed in 2nd Circuit of 220KV Lalmatia-Farakka Transmission Line.		
	Construction of residential colony for officers and staffs under GSS Lalmatia		
Godda	Construction of boundary wall in west side of GSS, Godda premises to sale man & materials		
Rajmahal & Sahibganj	Arrangement of Fire Fitting system by water sprey, including borring, supply of pump & pipeline, errection etc. for Control room & complete switchyard area at GSS Sahibganj.	01 Set	
	Provision of Barbed wire fencing in complete Boundary wall at GSS Sahibganj	01 Set	
	CCTV Surveilance system installation for Security of assets of GSS Sahibganj	01 Set	
	Supply & Installation of 220 DC Battery Bank with Charger at GSS Sahibganj	01 Set	
	Provision of Street Light system for Colony area of GSS Sahibganj		
	Construction of PCC Road for Colony area of GSS Sahibganj	01 Set	
	Provision of Barbed wire fencing at GSS Rajmahal.	01 Set	
	CCTV Surveilance system installation for Security of assets of GSS Rajmahal.	01 Set	
Giridih	Required installation of 01 No. of New 50 MVA Power Transformer of Bay on 132KV and 33KV side with extension of Bus	01 No.	
Daltonganj	New installation of 132/33 KV 50 MVA Transformer with its 132 KV & 33 KV associated bay complete set		
	Procurement of 132 KV & 33KV Energy Meters		
Latehar	Overhaulling of 132KV isolator mechanism (with Box) and restoring motorised operation of isolators.		
	Replacement of old & shabby 132KV SF6 CBs and 33KV VCBs.		
	Rejuvenation of existing 100 KVA DG Set.		
	Rejuvenation of indoor (CR building) & outdoor (S/Y area) lighting system including replacement of shabby MLDB, outdoor LDB, indoor LDB & emergency DC LDB.		
	Replacement of defective energy meters & callibration os set of the meters at the GSS.		
	Construction of residential buildings complete in all respect for sub-station incharge, engineers and staffs at newly constructed 400/220/132 KV GSS, Lahehar.		
Garhwa Road	Replacemnt of 132KV and 33KV Circuit Breakers		
	Replacemnt of 132KV and 33KV CT		
	Replacement of 132KV PT		
	Replacment of 132KV & 33KV old Energy Meters		
	Refurbishment of lighting system		
	Replacment of 132KV & 33KV isolators		
	Replacement of 132KV CVT		
	Replamement of 132KV & 33 KV LA		
	Replacement of 33KV Busbars		
	Provision of fresh laying of 33KV XLPE 3 Core, 400sq. Mm power cable for different 33KV Feeders at GSS Garhwa Road.		

Japla	Overhaulling of 132KV isolator mechanism (with Box) and restoring motorised operation of isolators.		
	Replacement of old & shabby 132KV SF6 CBs and 33KV VCBs.		
	Rejuvenation of existing 100 KVA DG Set.		
	Agumentation of 20MVA 132/33KV Power Transformer No.1 to 50 MVA 132KV/33KV Power Transformer at GSS Japla		
	Construction of residential buildings complete in all respect for sub-station incharge, engineers and staffs at newly constructed 400/220/132 KV GSS, Japla		
Bhagodih	NIL		
Lohardaga	04 Nos. 33KV bay Extension at GSS, Lohardaga	04 Nos.	
	CCTV Camera 12Nos.	12 Nos.	
	Lap Top		
Noamundi	Replacement of 20MVA 132/33KV NGEF make (Mfg. Yr. 1991) Power Transformer Nos.02	20MVA	50MVA
	Construction of new 132KV bay for TATA STEEL Ltd. With stringing of power conductor on existing transmission tower from 132/33KV GSS Noamundi to Tata Steel Premises.	20 MVA	70MVA
	Construction of new 132KV D/C Chaibasa-1 (Ulijhari) to Noamundi Transmission Line for 2nd incoming source at 132KV/33KV GSS Noamundi Trans. Line.	37MVA	95MVA
	Construction of 02 Nos. New 132KV bays for 132KV D/C Chaibasa-1 to Noamundi Trans. Line.	37MVA	95MVA
CKP	Agumentation of 20 MVA 132/33 KV Power Transformer No.01 to 50 MVA 132/33KV Power Transformer at GSS CKP	20 MVA	50MVA
	Agumentation of 20 MVA 132/33 KV Power Transformer No.02 to 50 MVA 132/33KV Power Transformer at GSS CKP	20 MVA	50MVA
	Construction of 132KV I/C bay at GSS CKP		
Kendposi	Replacement of 20MVA132/33 KV HEL make (Mfg. Yr. 1967) Power Transformer No.03	20 MVA	50 MVA
	Replacement of 20 MVA 132/33KVNGEF make (Mfg. Yr. 1991) Power Transformer No. 04	20 MVA	50 MVA
	Construction of 02 Nos. New 33 KV bays for Khasira and Tonto PSS	60 MVA	80 MVA
	Construction of new 132KV D/C Chaibasa-1 (Uiljhari) to Dendposi Transmission Line.	75 MVA	225 MVA
	Construction of 02 Nos. New 132KV bays for 132KV D/C Chaibasa-1 to Kendposi Trans. Line.	75 MVA	225 MVA

Chaibasa-II	Augmentation of 25MVA Prolec make Transformer into 50 MVA Transformer	25MVA	50 MVA
	2 Nos. 250, 350 AH Battery Bank with Charger	250V	250V
	1 No. 100 KVA DG Set.	100KVA	100KVA
	1 No. 315 KVA SST.	315KVA	730KVA
	2 Nos. 132 KV Bays for connecting GSS Sikursai to GSS Jlijhari		
	132KV Ulijhari to Sikursai D/C Trans. Line		
	Construction fo Staff and Officer Residen/Quarter	75MVA	75MVA
	Installation f NIFPES System to each Power Transformer to Protect from fire.	75MVA	75MVA
GOILKERA	Replacement of 20 MVA 132/33KV HEL Make (Very Old Power Transformer no. 1)	20 MVA	50MVA
Rajkharsawan	Agumentation of 20 MVA 132/33 KV Power Transformer No.01 to 50 MVA 132/33KV Power Transformer at GSS Rajkharsawan	20MVA	50MVA
	Agumentation of 220 V Battery Bank with Charger at GSS Rajkharsawan	1	2
	Construction of 132 KV Chaibasa-1 (Ullijhari) to RKSN Trans. Line	0	100MVA
	Construction of 3 Nos. 33KV Bay at GSS Rajkharsawan with extension of BUS	40MVA	60MVA
	Replacement of Panther Conductor of 132KV Rajkharsawan-Chandil Trans. Line by HTLS Conductor.	40KM	120MVA
Chaibasa-I	Installation of 1 no. 220/132KV , 150 MVA Transformer including Construction of Bays and extension of Main and Transfer Bus	400MVA	550MVA
	Installation of 1 No 132/33KV, 50MVA Transformer including Construction of Bay and extension of Main and Transfer Bus	400 MVA	550MVA
	4 Nos. of 132KV Bays for Connecting Other GSS		
	2 Nos. of 33KV Bays for Connecting upcoming PSS		
	Construction of Staff and Officer resident/Quarter		
	2Nos. 250, 350 AH Battery Bank with Charger		
	2 Nos. 48 V, 150 AH Battery Bank with Charger		
Adityapur-1	Energy Meter testing and calibration of 8 Nos. 132kV & 19 Nos. 33KV at GSS Adityapur-I	27 Nos.	
	Construction of a Guard-Room in GSS Adityapur-1		
	Water Storage tank and pipe line for colony campus and GSS		
	DG Set SHED Construction		
	Installation of 2 Nos. High Mast Light in GSS, Adityapur-1		
	Installation of 4 Nos. 132kV & 10 nos. kV Energy Meter	14 Nos.	
	Construction of Boundary wall at the Back side of Control Room of GSS, Adityapur-!		
	Earthing PIT Construction and earth mat in whole switchyard.		

Adityapur-2	220kV main bus bar sectionalizer scheme implementation	1 Set	
	installation of 1 No. of new 220/132kV Tansformer	1 No.	
	Replacement of 1 no. of 220kV line feeder C&R Panel	1 No.	
	Replacement of 04 Nos. of 132kV Circuit Breakers.	4 Nos.	
	Replacement of 1 no. of 132kV Main Bus High level insolator	1 No.,	
	Replacement of 3 Nos. 220kV Low level insolators.	3 Nos.	
	Replacement of 48 Nos. of 220kV Bus Post Insolatros	48 Nos.	
	Replacement of 66 Nos. of 132kV bus post insolators.	66 Nos.	
	Installation of 01 No. of new SST with C&R Panel, 1 No. of CB, 2 Nos. of 33kV L/L isolators, 1 No. of Ctand support structure.	1 Set	
	Replacement of 2 Sets of 220kV CT	2 Set	
	Replacement of 3 Set. of 132kV CT	3 Set	
	Replacement of 1 Sets of 220kV LA.	1 Set	
	Replacement of 5 Sets of 132kV LA.	5 Set	
	Replacement of old SST 1 No. of C&R Panel.	1 No.	
	Replacement of 11 Nos. of old132kV energy meter	11 Nos.	
	Switchyard lighting with lighting Mast at Cnetre and electric poles alongs periphery.	30 Nos.	
	Grid New Earthing mat installation.	1 No.	
	Gravelling of switchyard area.	3957 M^2	
	Colony lighting with lighting mast at centre and electric poles along periphery.	4 Nos.	
	Colony power supply conductor replacement with under ground cables.	1 No.	
	Colony SKL water Tank Construction.	1 No.	
	Cable trench cover slab Construction.	200 Slab	
	Road & Colvet construction inside switchyard.	2 Nos.	
	Switchyard Boundary Wall repairing.	1 No.	
	Colony Water supply new pipe line construction.	1 No.	
	Colony boundary wall barbed wire installation.	1 No.	
	5 Nos. of permanent home guard post construction	5 Nos.	
	DG set shed constrution	1 No.	
	Colony to IB PCC Road Construction.	1 No.	

Adityapur-3	Replacement of 2 Nos. 33 kV Circuit Breaker	2 Nos.	
	Replacement of 9 Nos. 33 KV and 4 Nos. 132 Kv Energy Meters	13 Nos.	
	Refurbishment of lightening system in switchyard	20 Nos.	
	Earthing pit construction and earth mat in whole switchyard	6 Nos.	
	Supply and Installation of 33Kv C/B for existing SST	1 No.	
	Supply and Installation of 33kV C/B or existing SST	1 No.	
	Supply and Installation of 2 Nos. 132 Isolator in 132 kV main bus with structure, with construction of foundation.	2 Nos.	
Chandil-2	Replacement of 2 Nos. 33kV Circuit Breaker	02 Nos.	
	Replacement of 9 Nos. 33kV and 4 Nos. 132 kV Energy Meters	13 Nos.	
	Refurbishment of lightening system in switchyard	20 Nos.	
	Earting Pit Construction and earth mat in whole switchyard	6 Nos.	
	Suypply and installation of 1 No. 33/0.4 KV SST in Switchyard	1 No.	
	Supply and installation of 33kV C/B for existing SST	1 No.	
	Supply and installation of 2 Nos. 132 Isolator in 132kV main bus with structure, with construction of foundation.	2 Nos.	
	Construction of 1 Nos. new 33 KV bay	1 No.	
	Construction of 1 Nos. new 33 KV bay	1 No.	
	Replacement of RTCC Panel for 1 No. 50 MVA Transformer No.1	1 No.	
	Replacement of RTCC Panel for 1 No. 50 MVA Transformer No.2	1 No.	
	Installation of alarm system in 2 Nos. panel, 33kV Aadardih feeder and 33kV Patamdah feeder.	2 Nos.	
	Replacement of old slab in 33kV and 132kV side swtichyard	60 Meter	
	Replacement of 8 Nos. set 33kV isolator	8 Set	
	Replacement of 6 Nos. Set 33kV CT	6 Set	
	Removal of Scarp Material from Switchyard	1 Time	
	Replacement of 2 Set 132 KV Isolator (1 at low level 1 at high level)	2 Set	
	Replacement of 2 Set 33kV LA (Tr. No.1 and Tr. No. 2)	2 Set	
	Replacement of 1 Set 132 KV LA	1 No.	
	Replacement of 1 Set 33 KV PT	1 No.	
Golmuri	Reconductoring of 132kV & 33 kV Main Bus bar with twin Mosse Conductor and 132kV & 33kV tranfer bus & all bay conductors with single moose conductor.	860 Ampere	
	Replacement of old Three nos. of High level isolators with motorised isolators of 2000 Ampere.	03 Nos. 1250 Ampere	
	Installation of 7 nos. 132 kV & 7 nos. of 33kV phase 4 Wire energy meters	14 Nos.	
	Control Room Building Extension of GSS Golmuri	1 No.	
	Construction of a new site store in GSS Golmuri		
	Construction of Guard Room in GSS Golmuri		
	Installation of 2 Nos. High Mast Light in GSS Golmuri.		
	Installation of 1 No. of 315 kVA, 33/415 kV SST with associated bay at GSS Golmuri	1 No. 315 KVA	

Jadugoda	Construction of a new 220/132 KV GS with all asociated incoming & outgoing Lines in Jadugoda		
	Reconductoring of 132 KV & 33kV Main Bus bar with twin Moose Conductor and 132Kv & 33 Kv Transfer bus & all bay conductors with single moose conductor	860 Ampere	
	Replacement of old TwoNos. Of 132kV High level Isolators with motorised isolators of 2000 Ampere.	2 Nos. 1250 Ampere	
	Fabrication of one no additional 132 KV High level isolator structure with motorised isolator set of 20000 Ampere.	2 Nos. 1250 Ampere	
	Installation of 7 Nos. 132 kV & 11 nos. of 33kV phase 4 Wire energy meters	18 Nos.	
	Control Room Building Extension of GSS Jadugoda.	1 No.	
	Construction of a new site store in GSS Jadugoda		
	Construction of a Guard Room in GSS Jadugoda		
	Renovation of approach road from main entrance to Control Room in GSS Jadugoda	1 No.	
	Installation of 2 Nos. of High mast light in GSS Jadugoda.		
	Installation of 1 no. of 315 kVA, 33/.415 kVSST with associated bay at GSS Jadugoda	1 No. 315 KVA	
	Construction of 10 Kl water tank in colony of GSS Jadugoda		
Mango	Installiono f 1 No. New additional Transformer (50MVA) with accociated bay at GSS Mango.	50 MVA	
	Construction of new 132KV D/C Transmission line (Ramchandrapur-Mango) at Mango GSS	30 Kms.	
	Installation of 3 Nos. of additional 33KV feeder aby along with control and relay panel at Mango GSS		
	Construction of a Guard Room in gSS Mango		
	Construction of quarters for employee at GSS Mango		
	Construction of Boundary wall at the back side of Control Room of Mango GSS		
	Ground Concreting & Construction of drain out side the main entrance in GSS Mango.		
	Laying of paver blocks I frount of the control room of Mango GSS		
Dhalbhumgarh	Implementationof SCARDA & EMAS at GSS Dhalbhumgarh	1 Time/ Yr.	
	Boundary wall in the campus area.	220 Mts	
	Renovation of Boundary wall of Colony Campus area at GSS Dhalbhumgarh	500 Mts	
	Procurement of Thermovision Camera for GSS Dhalbhumgarh	7 Nos.	
	Installation of One Set 220 Volt 300AH Battery bank with	400sqft	
	Installation of GPS Clock for relay & Meters at GSS Dhalbhumgarh	100 sqft	
	Renovaiton of Carrier Room at GSS for AC environment at GSS Dhalbumgarh	400 mtrs.	
Baharagora	Procurement of Thermovision Camera for GSS Dhalbhumgarh	1 No.	
	Installation of One set 220 Volt 300 AH Battery Bank with Charger in GSS Dhalbhumgarh	1 Set	

Under Civil Works

1	Construction of annexe building for JUSNL Hq in the Campus of existing JUSNL HQ building at Kusai Coliny, Doranda, Ranchi. Estimated Project Cost: Rs. 45702735/-		
2	Provision of Chequerred tiles in front of canteen shed in the premises of JUSNL HQ Building at Kusai Coliny, Doranda, Ranchi. Estimated Project Cost: Rs. 121500/-		
3	Construction of boundary wall at back side of administrative building of JUSNL HQ at Kusai Colony, Doranda, Ranchi. Estimated Project Cost: Rs. 151400/-		
4	Construction of 06 nos. water harvesting unit at JUSNL HQ. buidling Kusai Colony, Doranda, Ranchi. Estimated Project Cost: Rs. 275050/-		
5	Construction of store shed for the shifting of records, accessories, furniture etc. from Civil Div. Office to Tr. Zone-III, Ranchi near JSUNL HQ Building at Kusai Colony, Doranda, Ranchi. Estimated Project Cost: Rs. 612600/-		

GSS HATIA-I	A) PCC in switch yard area.		
	B) Watch Tower Construction		
	C) New staff quarters construction		
	D) PCC Road in Colony		
	E) Renovation of Boundary Wall		
GSS HATIA-II	A) PCC in Switch Yard Area.		
	B) Watch Tower Construction.		
	C) Store Shed Construction.		
	D) Bathroom Construction		
	E) R/M of Staff Quarters.		
GSS Namkum	A) PCC Road connecting colony to main road.		
	B) Watch tower construction		
	C) R/M of Staff Quarter		
GSS KANKE	A) Main gate repairing increasing height of boundary wall		
	B) R/M of Staff Quarters.		
	C) R/M of Control Room.		
	C) Sinking of boring with submersible pump.		
GSS GUMLA	A) Boundary wall, R/M, Painting and barbed wire repairing.		
	B) R/M of Staff Quarters		
	C) R/M of Control Room		
	D) Sinking of boring with submersible pump.		
	E) New Staff Quarters Constructin.		
	F) Transmission Div. Building Construction.		
	G) R/M of Store Shed		
GSS KAMDARA	A) New Store Shed		
	B) Watch Tower Construction.		
	C) R/M of Staff Quarters.		
	D) R/M of Control Room		
	E) Boundary Wall, R/M, Painting and Barbed wire repairing		
GSS Lohardaga	A) New Store Shed		
	B) Watch Tower Construction.		
	C) R/M of Staff Quarters.		
	D) R/M of Control Room		
	E) Boundary Wall, R/M, Painting and barbed Wire repairing.		
	F) Water Supply Pipe Line of Earth Pit.		

GSS SIMDEGA	A) New Store Shed		
	B) Watch Tower Construction.		
	C) New AE's Quarters		
	D) R/M of Control Room		
	E) Sinding of boring with submersible pump.		
	F) Area Development in Colony Area		
	G) New Boundary wall in Colony Area		
	H) Approach Road in Colony Area		
	I) Boundary Wall, R/M, Painting and barbed Wire repairing.		
GSS TAMAR	A) R/M of Control Room		
	B) Area Development in Colony Area		
	C) New Boundary Wall in Colony Area		
GSS BURMU	A) Construction of New Residential Colony.		

ANNEXURE - K INFLATION FACTOR

CPI	January	February	March	April	May	June	July	August	September	October	November	December	
2010	172	170	170	170	172	174	178	178	179	181	182	185	177.89
2011	188	185	185	186	187	189	193	194	197	198	199	197	191.50
2012	198	199	201	205	206	208	212	214	215	217	218	219	209.33
2013	221	223	224	226	228	231	235	237	238	241	243	239	232.17
2014	237	238	239	242	244	246	252	253	253	253	253	253	246.92
2015	254	253	254	256	258	261	263	264	266	269	270	269	261.42
2016	269	267	268	271	275	277	280	278	277	278	277	275	274.33
2017	274	274	275	277	278	280	285	285	285	287	288	286	281.17
2018	288	287	287	288	289	291	301	301	301	302	302	301	294.83
2019	307	307	309	312	314	316	319	320	322	325	328	330	317.42
2020	330	328	326	329	330	332	336	338	340.13	344.16	345.31	342.14	335.06
2021	340.42	342.72	344.45	345.89	347.33	350.5	353.66	354.24	355.1				348.26
	April	May	June	July	August	September	October	November	December	January	February	March	
FY 2010-11	170	172	174	178	178	179	181	182	185	188	185	186	180.64
FY 2011-12	186	187	189	193	194	197	198	199	197	198	199	201	194.83
FY 2012-13	205	206	208	212	214	215	217	218	219	221	223	224	215.17
FY 2013-14	226	228	231	235	237	238	241	243	238	237	238	239	236.00
FY 2014-15	242	244	246	252	253	253	253	253	253	254	253	254	250.83
FY 2015-16	256	258	261	263	264	266	269	270	269	269	267	268	265.00
FY 2016-17	271	275	277	280	278	277	278	277	275	274	274	275	275.92
FY 2017-18	277	278	280	285	285	285	287	288	286	288	287	287	284.42
FY 2018-19	288	289	291	301	301	301	302	302	301	307	307	309	299.92
FY 2019-20	312	314	316	319	320	322	325	328	330	330	328	326	322.50
FY 2020-21	329	330	332	336	338	340.13	344.16	345.31	342.14	340.42	342.72	344.45	338.69
FY 2021-22	345.89	347.33	350.5	353.66	354.24	355.1							

WPI													
	January	February	March	April	May	June	July	August	September	October	November	December	
2012				104.7	105.3	105.3	106.2	106.9	107.6	107.4	107.3	107.1	**106.42**
2013	108	108.4	108.6	108.6	108.6	110.1	111.2	112.9	114.3	114.6	114.3	113.4	**111.08**
2014	113.6	113.6	114.3	114.1	114.8	115.2	116.7	117.2	116.4	115.6	114.1	112.1	**114.81**
2015	110.8	109.6	109.9	110.2	111.4	111.8	111.1	110	109.9	110.1	109.9	109.4	**110.34**
2016	108	107.1	107.7	109	110.4	111.7	111.8	111.2	111.4	111.5	111.9	111.7	**110.28**
2017	112.6	113	113.2	113.2	112.9	112.7	113.9	114.8	114.9	115.6	116.4	115.7	**114.08**
2018	116	116.1	116.3	117.3	118.3	119.1	119.9	120.1	120.8	121.7	121.6	119.7	**118.91**
2019	119.2	119.5	119.9	121.1	121.6	121.5	121.3	121.5	121.3	122	122.3	123	**121.18**
2020	123.4	122.2	120.4	119.2	117.5	119.3	121	122	122.9	123.6	125.1	125.4	**121.83**
2021	126.5	128.1	129.9	132	132.9	133.7	135	136.2	136	139.1			
	April	May	June	July	August	September	October	November	December	January	February	March	
FY 2012-13	104.7	105.3	105.3	106.2	106.9	107.6	107.4	107.3	107.1	108	108.4	108.6	106.90
FY 2013-14	108.6	108.6	110.1	111.2	112.9	114.3	114.6	114.3	113.4	113.6	113.6	114.3	112.46
FY 2014-15	114.1	114.8	115.2	116.7	117.2	116.4	115.6	114.1	112.1	110.8	109.6	109.9	113.88
FY 2015-16	110.2	111.4	111.8	111.1	110	109.9	110.1	109.9	109.4	108	107.1	107.7	109.72
FY 2016-17	109.00	110.40	111.70	111.80	111.20	111.40	111.50	111.90	111.70	112.60	113.00	113.20	111.62
FY 2017-18	113.2	112.9	112.7	113.9	114.8	114.9	115.6	116.4	115.7	116	116.1	116.3	114.68
FY 2018-19	117.3	118.3	119.1	119.9	120.1	120.8	121.7	121.6	119.7	119.2	119.5	119.9	119.76
FY 2019-20	121.1	121.6	121.5	121.3	121.5	121.3	122	122.3	123	123.4	122.2	120.4	121.80
FY 2020-21	119.2	117.5	119.3	121	122	122.9	123.6	125.1	125.4	126.5	128.1	129.9	123.38
FY 2021-22	132	132.9	133.7	135	136.2	136	139.1						

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CLR Base Rate History

evised Date	Overnight MCLR	1 month MCLR	3 month MCLR	6 month MCLR	1 year MCLR	2 year MCLR	3 year M
2022	7.05%	7.05%	7.05%	7.35%	7.40%	7.60%	7.70%
2022	6.75%	6.75%	6.75%	7.05%	7.10%	7.30%	7.40%
ch 2022	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	7.30%
uary 2022	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	7.30%
ary 2022	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	7.30%
mber 2021	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	
mber 2021	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	
ber 2021	6.65%	6.65%	6.65%	6.65%	7.00%	7.20%	7.30%
mber 2021	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	7.30%
st 2021	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	7.30%
2021	6.65%	6.65%	6.65%	6.95%	7.00%	7.20%	7.30%

Authorised under Notaries Act - 1952
& Notaries Rules 1956 by Govt. of
Jharkhand, Ranchi (India)

1007 — 13 OCT 2022 — Date

I, Shyam Mahali, Son of Late Dasmat Mahali, Aged 48 years Residing at Namkum, Ranchi, Police Station – Namkum, District–Ranchi (Jharkhand), do hereby solemnly affirm and declare as under : -

(1) THAT I am presently working as General Manager (Commercial & Regulatory Affairs) Jharkhand Urja Sancharan Nigam Ltd, (JUSNL) Kusai Colony, Doranda, Ranchi and duly authorized to file this petition and swear in the affidavit.

(2) THAT I solemnly affirm at Ranchi on this day 13th Day of October 2022 that the contents of this petition are true to my knowledge and I believe that no part of it is false and no material has been concealed therefrom. The statement made in this petition are true to my knowledge and are either based on information derived from the records of the case which I believe to be true or by way of submissions to the Hon'ble Commission.

Verified at Ranchi on 13th Day of Oct, 2022.

The deponent who has been
Identified by Shri
.....(Advocate), Ranchi
affirmed/ declared that the
statements made above are true to
the best of his knowledge and belief.

Deponent

Identified by me

Signature Attested on
Identification of Lawyer

VIKASH KUMAR SINHA
NOTARY
Ranchi (Jharkhand) India

Tariff Petition for True-Up for FY 2019-20, APR for FY 2020-21 & ARR for MYT Control Period FY 2021-22 to FY 2025-26

JHARKHAND URJA SANCHARAN NIGAM LIMITED
Ranchi

JHARKHAND URJA SANCHARAN NIGAM LIMITED

INDEX

JHARKHAND URJA SANCHARAN NIGAM LIMITED

P&L Account **Form No: S1**

(Rs Crores)

	Particulars	As on 31.03.2020 (Audited)	As on 31.03.2021 (Unaudited)
A	**Revenue**		
1	Revenue from transmission and ancillary services*		
2	Other Non-tariff income		
3	Revenue subsidies	217.56	229.58
4	Income from Investment	19.88	12.79
	Total Revenue or Income	**237.45**	**242.37**
B	**Expenditure**		
1	Expenses for SLDC's fees & charges		
2	Operations & Maintenance Expenses	117.27	107.89
a	Repairs and Maintenance	34.56	29.85
b	Employee costs	70.13	67.80
c	Administration and General expenses	12.57	10.25
3	Net prior period credits/(charges)		
4	Other Debits, Write-offs		
5	Extraordinary items (net)		
6	Less: Expenses Capitalized		
	Total Expenditure	117.27	107.89
C	**PBDIT**	**120.18**	**134.48**
D	**Depreciation and Related debits**	**128.74**	**138.30**
E	**PBIT**	**- 8.56**	**- 3.83**
1	Interest & Finance Charges	494.38	503.26
2	Less: Interest Capitalized	0	0
F	**Total Interest and Finance Charges**	**494.38**	**503.26**
G	**TOTAL EXPENDITURE**	**740.38**	**749.45**
H	**Profit/Loss before Tax**	**- 502.94**	**- 507.08**
I	**Provision for Income Tax**	**-**	**-**
J	**Profit/Loss after Tax**	**- 502.94**	**- 507.08**

* Ancillary Services implies revenues from grid support, reactive energy and other facility provided.

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Balance Sheet **Form No: S2**

(Rs Crores)

	Particulars	As on 31.03.2020 (Audited)	As on 31.03.2021 (Unaudited)
A	**Assets**		
1	***Non-Current Assets***		
a	Plant,Property and Equipment	1,188.94	1,733.21
b	Capital work-in-progress	2,339.94	2,298.24
c	Other non-current tax assets	6.14	8.35
d	Other non-current assets	876.93	882.40
2	***Current Assets***		
a	Inventories	49.56	42.93
b	Financial assets		
i	Loans	-	-
ii	Trade receivables	635.98	753.66
iii	Cash and cash equivalents	1,087.90	1,950.67
iv	Bank Balances other than Cash & Cash equivalents	116.30	58.55
c	Other Current assets	233.25	297.98
	Total Assets	**6,534.92**	**8,026.00**
B	**Equity & Liabilities**		
1	***Equity***		
a	Equity Share Capital	972.96	972.96
b	Other Equity		
	Fund for Equity Capital (Equity Share Pending Allotment)	-	626.00
	Reserve & Surplus	- 1,289.52	- 1,796.36
	Restructuring Account Pending Adjustment	2.00	2.00
2	***Liabilities***		
2.1	Non-current liabilities		
a	Financial Liabilities		
i	Borrowings	5,239.83	6,566.17
b	Provisions	18.92	21.90
c	Government Grants	156.02	160.40
2.2	Current Liabilities		
a	***Financial Liabilities***		
i	Trade Payables	113.89	98.08
ii	Other financial liabilities	498.97	478.43
b	Other Current liabilities	817.14	889.86
c	Provisions	4.73	6.55
	Total Equity and Liabilities	**6,534.92**	**8,026.00**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Cash Flow Statement **Form No: S3**

(Rs Lakhs)

Particulars	FY 2019-20	FY 2020-21
Cash flows from operating activities		
Profit before taxation	-502.9417	(506.84)
Adjustments for:		
Depreciation	128.7388	138.03
Interest on State Govt. Loan	492.7899	501.43
Change in accounting policy or Prior priod errors		
Investment income		
Profit / (Loss) on the sale of property, plant & equipment		
Working capital changes:		
Increase/ Decrease in inventories	1.0596	6.63
Increase/ Decrease in trade and other receivables	-160.7765	(79.80)
Increase/ Decrease in trade and other payables	121.5227	11.37
Cash generated from operations	**80.39**	**48.36**
Interest paid	0	0.00
Income taxes paid	0	0.00
Dividends paid	0	0.00
Net cash from operating activities	**80.39**	**48.36**
Cash flows from investing activities		
Purchase of Building	0.00	(1.29)
Purchase of Vehicles	0.11	(0.15)
Purchase of Land and Land Rights	(2.37)	0.00
Other Civil Works	(0.94)	(1.33)
Purchase of Plant & Machinery	(117.73)	(282.96)
Purchase of Furniture & Fixture	(0.24)	(0.11)
Purchase of Lines and Cable Net Work	(264.23)	(396.56)
Purchase of Office Equipments	(0.34)	(0.18)
CWIP	(405.41)	41.69
Net cash used in investing activities	**(791.36)**	**(640.88)**
Cash flows from financing activities		
Changes in Restructuring Account Pending Adjustment	0.00	626.00
Proceeds from long-term borrowings	89.32	824.91
Conversion in Equity share capital		
Grant received from Government	99.22	4.38
Net cash used in financing activities	188.54	1,455.29
Net increase in cash and cash equivalents	**(522.43)**	**862.77**
Cash and cash equivalents at beginning of period	**1,610.33**	**1,087.90**
Cash and cash equivalents at end of period	**1,087.90**	**1,950.67**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Annual Revenue Requirement **Form No: S4**

All figures in Rs Crores

S. No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
	Energy Input into the system (MU)	9041.26	9703.42	11000.31	12513.64	13358.79	16007.25	18844.03
	Energy sold to consumers (MU)	8730.30	9363.05	10450.30	11887.96	12690.85	15206.88	17901.83
	Transmission Loss %	3.44%	3.51%	5.00%	5.00%	5.00%	5.00%	5.00%
	Transmission Cost per unit (Rs/U)	0.25	0.25	0.95	1.01	1.22	1.19	1.19
1	**Receipts**							
a	Revenue from tariffs & Miscell. Charges	217.56	229.58	1045.94	1269.72	1627.26	1911.07	2233.70
b	Revenue Subsidy from government	0	0	0	0	0	0	0
	Total	**217.56**	**229.58**	**1045.94**	**1269.72**	**1627.26**	**1911.07**	**2233.70**
2	**Expenditure**							
a	SLDC Fees & Charges							
b	O&M Expenses	**117.27**	**107.89**	**144.52**	**163.63**	**269.62**	**307.57**	**380.44**
	i) R&M Expense	34.56	29.85	62.05	72.99	170.31	199.06	262.16
	ii) Employee Expenses	70.13	67.80	71.61	79.13	87.11	95.57	104.55
	iii) A&G Expense	12.57	10.25	10.86	11.51	12.21	12.94	13.72
c	Depreciation	128.74	138.06	119.21	215.37	327.36	408.96	487.60
d	Interest & Finance Charges	494.38	503.26	553.78	658.92	791.25	950.91	1,116.08
e	**Less:** Interest & other expenses capitalised	0.00	0.00	0.00	0.00	0.00	0.00	0.00
f	Other Debits (incl. Prov for Bad debts)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
g	Extraordinary Items	0.00	0.00	0.00	0.00	0.00	0.00	0.00
h	Other (Misc.)-net prior period credit/(charges)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**740.38**	**749.20**	**817.51**	**1,037.92**	**1,388.24**	**1,667.44**	**1,984.12**
3	**Reasonable Return**	**150.96**	**150.96**	**224.13**	**224.13**	**224.13**	**224.13**	**224.13**
4	**Interest on Working Capital**	**22.27**	**19.30**	**17.08**	**20.45**	**27.67**	**32.27**	**38.24**
5	**Other Income**	**19.88**	**12.79**	**12.79**	**12.79**	**12.79**	**12.79**	**12.79**
6	**Annual Revenue Requirement (2)+(3)-(4)**	**893.74**	**906.69**	**1,045.94**	**1,269.72**	**1,627.26**	**1,911.07**	**2,233.70**
7	**Surplus(+) / Shortfall(-) : (1)-(5) before tariff**	**-676.17**	**-677.10**	**-**	**-**	**-**	**-**	**-**
8	**Tariff Revision Impact**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
9	**Surplus(+) / Shortfall(-) : (6)-(7) after tariff r**	**-676.17**	**-677.10**	**-**	**-**	**-**	**-**	**-**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Return on Equity **Form No: S5**

(Rs Crores)

S. No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
1	Equity (Opening Balance)	972.96	972.96	1600.96	1600.96	1600.96	1600.96	1600.96
2	Net additions during the year	2.00	2.00	0.00	0.00	0.00	0.00	0.00
3	Equity (Closing Balance)	974.96	974.96	1600.96	1600.96	1600.96	1600.96	1600.96
	Average	973.96	973.96	1600.96	1600.96	1600.96	1600.96	1600.96
4	Rate of Return on Equity	15.50%	15.50%	14.00%	14.00%	14.00%	14.00%	14.00%
5	Applicable MAT Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Return on Equity	**150.96**	**150.96**	**224.13**	**224.13**	**224.13**	**224.13**	**224.13**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Energy Balance: Energy Input & Cost of Power **Form No: S6**

	Particulars	FY 2019-20			FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24			FY 2024-25			FY 2025-26		
		%	MU	Rs. Cr.	%	MU	Rs.Cr.	%	MU	Rs.Cr.	%	MU	Rs.Cr.	%	MU	Rs.Cr.	%	MU	Rs.Cr.	%	MU	Rs.Cr.
1	**Energy Input**																					
	a). Energy from JSEB Stations																					
	i) Patratu TPS																					
	ii) Sikidri Hydro station																					
	b). Energy from TVNL station																					
	c). CPP/IPP																					
	d). NTPC+NHPC+APNRL+DVC+others																					
	Total Energy Availability (a+b+c+d)		9041.26			9703.42			11000.31			12513.64			13358.79			16007.25			18844.03	
2	**Intra State Transmission Loss**		**3.44%**			**3.51%**			**5.00%**			**5.00%**			**5.00%**			**5.00%**			**5.00%**	
3	**Intra State Sale - Energy transmitted to:**																					
	a) Discoms		8274.567			9005.62			9867.76			11243.00			11,983.48			14,499.51			17,194.46	
	b) Open Access Consumers (Railway)		455.73			357.43			582.54			644.96			707.37			707.37			707.37	
	Total Energy Sales (a+b)		**8730.30**			**9363.05**			**10450.30**			**11887.96**			**12690.85**			**15206.88**			**17901.83**	
4	**Energy to be transmitted for inter state sale**		8730.30	0.00		9363.05	0.00		10450.30	0.00		11887.96	0.00		12690.85	0.00		15206.88	0.00		17901.83	0.00

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Expenditure Allocation into Fixed, Variable & Other Costs **Form No: S7**

(Rs Crores)

S. No.	Particulars	FY 2019-20 (Audited)				FY 2020-21 (APR)				FY 2021-22 (ARR)			
		Fixed	Variable	Others	Total	Fixed	Variable	Others	Total	Fixed	Variable	Others	Total
I.	**Expenditure**												
1	SLDC's fees & charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Repairs and Maintenance	34.56	0.00	0.00	34.56	29.85	0.00	0.00	29.85	62.05	0.00	0.00	62.05
3	Employee Costs	70.13	0.00	0.00	70.13	67.80	0.00	0.00	67.80	71.61	0.00	0.00	71.61
4	Admin and General Expenses	12.57	0.00	0.00	12.57	10.25	0.00	0.00	10.25	10.86	0.00	0.00	10.86
5	Depreciation and related debits	128.74	0.00	0.00	128.74	138.06	0.00	0.00	138.06	119.21	0.00	0.00	119.21
6	Interest & Finance charges	494.38	0.00	0.00	494.38	503.26	0.00	0.00	503.26	553.78	0.00	0.00	553.78
7	**Sub-Total (1 to 6)**	**740.38**	**0.00**	**0.00**	**740.38**	**749.20**	**0.00**	**0.00**	**749.20**	**817.51**	**0.00**	**0.00**	**817.51**
8	Less: Expenses capitalised	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Less: Interest & Finance Charges capitalised	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	**Sub-Total (8+9)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
11	Return on Equity	150.96	0.00	0.00	150.96	150.96	0.00	0.00	150.96	224.13	0.00	0.00	224.13
12	Unfunded Liabilities		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00
13	**Total Expenditure (7-10+11+12)**	**891.35**	**0.00**	**0.00**	**891.35**	**900.17**	**0.00**	**0.00**	**900.17**	**1041.64**	**0.00**	**0.00**	**1041.64**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Expenditure Allocation into Fixed, Variable & Other Costs **Form No: S7**

(Rs Crores)

S. No.	Particulars	FY 2022-23 (ARR)				FY 2023-24 (ARR)				FY 2024-25 (ARR)				FY 2025-26 (ARR)			
		Fixed	Variable	Others	Total	Fixed	Variable	Others	Total	Fixed	Variable	Others	Total	Fixed	Variable	Others	Total
I.	**Expenditure**																
1	SLDC's fees & charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Repairs and Maintenance	72.99	0.00	0.00	72.99	170.31	0.00	0.00	170.31	199.06	0.00	0.00	199.06	262.16	0.00	0.00	262.16
3	Employee Costs	79.13	0.00	0.00	79.13	87.11	0.00	0.00	87.11	95.57	0.00	0.00	95.57	104.55	0.00	0.00	104.55
4	Admin and General Expenses	11.51	0.00	0.00	11.51	12.21	0.00	0.00	12.21	12.94	0.00	0.00	12.94	13.72	0.00	0.00	13.72
5	Depreciation and related debits	215.37	0.00	0.00	215.37	327.36	0.00	0.00	327.36	408.96	0.00	0.00	408.96	487.60	0.00	0.00	487.60
6	Interest & Finance charges	658.92	0.00	0.00	658.92	791.25	0.00	0.00	791.25	950.91	0.00	0.00	950.91	1116.08	0.00	0.00	1116.08
7	**Sub-Total (1 to 6)**	**1037.92**	**0.00**	**0.00**	**1037.92**	**1388.24**	**0.00**	**0.00**	**1388.24**	**1667.44**	**0.00**	**0.00**	**1667.44**	**1984.12**	**0.00**	**0.00**	**1984.12**
8	Less: Expenses capitalised	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Less: Interest & Finance Charges capitalised	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	**Sub-Total (8+9)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
11	Return on Equity	224.13	0.00	0.00	224.13	224.13	0.00	0.00	224.13	224.13	0.00	0.00	224.13	224.13	0.00	0.00	224.13
12	Unfunded Liabilities		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00
13	**Total Expenditure (7-10+11+12)**	**1262.06**	**0.00**	**0.00**	**1262.06**	**1612.37**	**0.00**	**0.00**	**1612.37**	**1891.58**	**0.00**	**0.00**	**1891.58**	**2208.25**	**0.00**	**0.00**	**2208.25**

a) Revenue from tariffs

		FY 2019-20										FY 2020-21										FY 2021-22									
	Particulars	No. of Consumers	Maximum Demand	Unit sold	Rev. from fixed charges	Rev. from variable charges	Total Revenue	Realization rate	Subsidy / Govt support	Collection against rev. demand	Collection Efficiency	No. of Consumers	Maximum Demand	Unit sold	Rev. from fixed charges	Rev. from variable charges	Total Revenue	Realization rate	Subsidy / Govt support	Collection against rev. demand	Collection Efficiency	No. of Consumers	Maximum Demand	Unit sold	Rev. from fixed charges	Rev. from variable charges	Total Revenue	Realization rate	Subsidy / Govt support	Collection against rev. demand	Collection Efficiency
			MW	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	P/U	Rs. Cr.	Rs. Cr.	(%)		MW	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	P/U	Rs. Cr.	Rs. Cr.	(%)		MW	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	P/U	Rs. Cr.	Rs. Cr.	(%)
	Revenue from Intrastate wheeling of power:																														
1	Licensee (JBVNL)					206.28	206.28									220.61	220.61									-	0.00				
	Licensee (Railway)					11.28	11.28									8.97	8.97									-	0.00				
2	CPP wheeling																														
3	HT consumer wheeling																														
4	Other States energy wheeling																														
	Other Operating Revenues																														
	Grand Total					**217.56**	**217.56**		**0.00**							**229.58**	**229.58**									**1045.94**	**0.00**				

b) Revenue from other charges

		FY 2018-19										FY 2019-20										FY 2020-21									
	Particulars	Cess	Meter Rent	Surcharge	Other Misc. revenue	Total Revenues						Cess	Meter Rent	Surcharge	Other Misc. revenue	Total Revenues						Cess	Meter Rent	Surcharge	Other Misc. revenue	Total Revenues					
		Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.						Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.						Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.					
1	Interest on Advances to Suppliers/ Contractors					2.58										2.04										2.04					
2	Interest from Banks (Other than on F.D.)					3.88										3.32										3.32					
3	Income from Trading					-										-										-					
4	Quarter House Rent					0.02										0.03										0.03					
5	Miscellaneous Receipts					0.54										0.30										0.30					
6	Income from Fixed Deposit					10.32										5.60										5.60					
7	Supervision Charge					2.54										1.49										1.49					
	Total					**19.88**										**12.79**										**12.79**					

JHARKHAND URJA SANCHARAN NIGAM LIMITED

a) Revenue from tariffs

		FY 2022-23										FY 2023-24											
	Particulars	No. of Consumers	Maximum Demand	Unit sold	Rev. from fixed charges	Rev. from variable charges	Total Revenue	Realization rate	Subsidy / Govt support	Collection against rev. demand	Collection Efficiency	No. of Consumers	Maximum Demand	Unit sold	Rev. from fixed charges	Rev. from variable charges	Total Revenue	Realization rate	Subsidy / Govt support	Collection against rev. demand	Collection Efficiency	No. of Consumers	Maximum Demand
			MW	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	P/U	Rs. Cr.	Rs. Cr.	(%)		MW	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	P/U	Rs. Cr.	Rs. Cr.	(%)		MW
	Revenue from Intrastate wheeling of power:																						
1	Licensee (JBVNL)					-	0.00									-	0.00						
	Licensee (Railway)					-	0.00									-	0.00						
2	CPP wheeling																						
3	HT consumer wheeling																						
4	Other States energy wheeling																						
	Other Operating Revenues																						
	Grand Total					**1269.72**	**0.00**									**1627.26**	**0.00**						

b) Revenue from other charges

		FY 2022-23										FY 2023-24											
	Particulars	Cess	Meter Rent	Surcharge	Other Misc. revenue	Total Revenues						Cess	Meter Rent	Surcharge	Other Misc. revenue	Total Revenues						Cess	Meter Rent
		Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.						Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.						Rs. Cr.	Rs. Cr.
1	Interest on Advances to Suppliers/ Co					2.04										2.04							
2	Interest from Banks (Other than on F.					3.32										3.32							
3	Income from Trading					-										-							
4	Quarter House Rent					0.03										0.03							
5	Miscellaneous Receipts					0.30										0.30							
6	Income from Fixed Deposit					5.60										5.60							
7	Supervision Charge					1.49										1.49							
	Total					**12.79**										**12.79**							

Form No: F1

a) Revenue from tariffs

		FY 2024-25								FY 2025-26									
	Particulars	Unit sold	Rev. from fixed charges	Rev. from variable charges	Total Revenue	Realization rate	Subsidy / Govt support	Collection against rev. demand	Collection Efficiency	No. of Consumers	Maximum Demand	Unit sold	Rev. from fixed charges	Rev. from variable charges	Total Revenue	Realization rate	Subsidy / Govt support	Collection against rev. demand	Collection Efficiency
		MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	P/U	Rs. Cr.	Rs. Cr.	(%)		MW	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	P/U	Rs. Cr.	Rs. Cr.	(%)
	Revenue from Intrastate wheeling of power:																		
1	Licensee (JBVNL)			-	0.00									-	0.00				
	Licensee (Railway)			-	0.00									-	0.00				
2	CPP wheeling																		
3	HT consumer wheeling																		
4	Other States energy wheeling																		
	Other Operating Revenues																		
	Grand Total			**1911.07**	**0.00**									**2233.70**	**0.00**				

b) Revenue from other charges

		FY 2024-25								FY 2025-26									
	Particulars	Surcharge	Other Misc. revenue	Total Revenues					Cess	Meter Rent	Surcharge	Other Misc. revenue	Total Revenues						
		Rs. Cr.	Rs. Cr.	Rs. Cr.					Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.						
1	Interest on Advances to Suppliers/ Co			2.04									2.04						
2	Interest from Banks (Other than on F.			3.32									3.32						
3	Income from Trading			-									-						
4	Quarter House Rent			0.03									0.03						
5	Miscellaneous Receipts			0.30									0.30						
6	Income from Fixed Deposit			5.60									5.60						
7	Supervision Charge			1.49									1.49						
	Total			**12.79**									**12.79**						

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Projection of Sales, Customers & Connected load — Form No: F1A

A) Projection of sales

	In Million Units	PY2	PY1	CY	Control Period				
	Category	FY (n-2)	FY (n-1)	FY (n)	FY (n+1)	FY (n+2)	FY (n+3)	FY (n+4)	FY (n+5)
1	Licensee		9,041	9,703	11,000	12,514	13,359	16,007	18,844
2	CPP wheeling								
3	HT consumer wheeling								
4	Other States energy wheeling								
	TOTAL								

B) Projection of Number of Customers

		PY	PY	CY	Control Period				
	Category	FY (n-2)	FY (n-1)	FY (n)	FY (n+1)	FY (n+2)	FY (n+3)	FY (n+4)	FY (n+5)
1	Licensee								
2	CPP wheeling								
3	HT consumer wheeling								
4	Other States energy wheeling								
	TOTAL								

NOT APPLICABLE

C) Projection of Connected Load (in MW)

		PY	PY	CY	Control Period				
	Category	FY (n-2)	FY (n-1)	FY (n)	FY (n+1)	FY (n+2)	FY (n+3)	FY (n+4)	FY (n+5)
1	Licensee								
2	CPP wheeling								
3	HT consumer wheeling								
4	Other States energy wheeling								
	TOTAL								

NOT APPLICABLE

D) Projection of Maximum or Peak Demand (in KVA)

		PY	PY	CY	Control Period				
	Category	FY (n-2)	FY (n-1)	FY (n)	FY (n+1)	FY (n+2)	FY (n+3)	FY (n+4)	FY (n+5)
1	Licensee								
2	CPP wheeling								
3	HT consumer wheeling								
4	Other States energy wheeling								
	TOTAL								

NOT APPLICABLE

E) Projection of Minimum Demand (in KVA)

		PY	PY	CY	Control Period				
	Category	**FY (n-2)**	**FY (n-1)**	**FY (n)**	**FY (n+1)**	**FY (n+2)**	**FY (n+3)**	**FY (n+4)**	**FY (n+5)**
1	Licensee	**NOT APPLICABLE**							
2	CPP wheeling								
3	HT consumer wheeling								
4	Other States energy wheeling								
	TOTAL								

F) Projection of Average Demand (in KVA)

		PY	PY	CY	Control Period				
	Category	**FY (n-2)**	**FY (n-1)**	**FY (n)**	**FY (n+1)**	**FY (n+2)**	**FY (n+3)**	**FY (n+4)**	**FY (n+5)**
1	Licensee	**NOT APPLICABLE**							
2	CPP wheeling								
3	HT consumer wheeling								
4	Other States energy wheeling								
	TOTAL								

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Income from investments and other non-tariff income | **Form No: F2**

All figures in Rs. Crore

	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
A	**Income from Investment, Fixed & Call Deposits**							
1	Interest Income from Investments	0	0	0	0	0	0	0
2	Interest on fixed deposits	0	0	0	0	0	0	0
3	Interest from Banks other than Fixed Deposits	0	0	0	0	0	0	0
4	Interest on (any other items)	0	0	0	0	0	0	0
I	**Sub-Total**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
B	**Non Tariff Income**							
1	Interest on Advances to Suppliers/ Contractors	2.58	2.04	2.04	2.04	2.04	2.04	2.04
2	Interest from Banks (Other than on F.D.)	3.88	3.32	3.32	3.32	3.32	3.32	3.32
3	Income from Trading	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Quarter House Rent	0.02	0.03	0.03	0.03	0.03	0.03	0.03
5	Miscellaneous Receipts	0.54	0.30	0.30	0.30	0.30	0.30	0.30
6	Income from Fixed Deposit	10.32	5.60	5.60	5.60	5.60	5.60	5.60
7	Supervision Charge	2.54	1.49	1.49	1.49	1.49	1.49	1.49
II	**Sub-Total**	19.88	12.79	12.79	12.79	12.79	12.79	12.79
	Total (I+II)	**19.88**	**12.79**	**12.79**	**12.79**	**12.79**	**12.79**	**12.79**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Expenses for SLDC's fees & charges **Form No: F3**

		FY 2019-20			FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24			FY 2024-25			FY 2025-26		
S. No	Particulars	Energy Units (MU)	Rs Crs.	Paise/ Unit	Energy Units (MU)	Rs Crs.	Paise/ Unit	Energy Units (MU)	Rs Crs.	Paise/ Unit	Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit	Energy Units (MU)	Rs Crs.	Paise/Unit

NOT APPLICABLE

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Repair & Maintenance Expenditure — **Form No: F4**

All figures in Rs. Crore

Sl.No.	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
1	Plant and Machinery	21.77	21.34	44.37	52.19	121.79	142.35	187.48
2	Building	1.67	1.79	3.72	4.37	10.20	11.92	15.70
3	Civil Works	1.59	0.47	0.98	1.15	2.68	3.14	4.13
4	Hydraulic Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Lines, Cables Net Works etc.	9.38	6.17	12.83	15.09	35.21	41.15	54.19
6	Vehicles	0.03	0.0044	0.01	0.01	0.03	0.03	0.04
7	Furniture and Fixtures	0.01	0.0046	0.01	0.01	0.03	0.03	0.04
8	Office Equipments	0.12	0.07	0.14	0.16	0.38	0.44	0.59
9	Station Supplies	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Spare Inventory for maintaining Transformer redundancy	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Sub station maintenance by private agencies	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Any other items (Capitalisation)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**34.56**	**29.85**	**62.05**	**72.99**	**170.31**	**199.06**	**262.16**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Employee Cost and Provisions — **Form No: F5**

Rs. Crore

		Particulars (Rs in Crore)							
A		Wing Wise Details - FAO, Civil, Head Office, etc	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
B		**Employee's Cost**	**65.03**	**62.47**	**66.28**	**73.80**	**81.78**	**90.25**	**99.23**
	1	Salaries	64.17	61.55	65.30	72.71	80.57	88.91	97.76
	2	Dearness Allowance							
	3	Other Allowances & Relief							
	4	Medical Expenses Reimbursement	0.22	0.33	0.35	0.39	0.43	0.47	0.52
	5	Leave Travel Assistance							
	6	Fee & Honorarium							
	7	Incentives/Awards Including That In Partnership Project (Specify Items)							
	8	Earned Leave Encashment	0.62	0.59	0.63	0.70	0.77	0.85	0.94
	9	Tution Fee Re-Imbursement							
	10	Leave Salary Contribution							
	11	Payment Under Workman'S Compensation And Gratuity							
	12	Subsidised Electricity To Employees							
	13	Staff Welfare Expenses	0.02	0.00	0.00	0.00	0.01	0.01	0.01
C		**Apprentice And Other Training Expenses**							
D		**Payment/Contribution To PF Staff Pension And Gratuity**							
	1	Terminal Benefits	5.10	5.33	5.33	5.33	5.33	5.33	5.33
		a) Provident Fund Contribution							
		b) Provision for PF Fund							
		c) Pension Payments							
		d) Gratuity Payment							
	2	Any Other Items							
		Total D	**5.10**	**5.33**	**5.33**	**5.33**	**5.33**	**5.33**	**5.33**
E		Bonus/Exgratia To Employees	0	0	0	0	0	0	0
F		**Grand Total**	**70.13**	**67.80**	**71.61**	**79.13**	**87.11**	**95.57**	**104.55**
G		Chargeable To Construction Works	0	0	0	0	0	0	0
		Balance Item 'F' Apropriate For (F)-(G)	**70.13**	**67.80**	**71.61**	**79.13**	**87.11**	**95.57**	**104.55**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Employee strength

S. No.	Particulars	FY 2019-20		FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24		FY 2024-25		FY 2025-26	
		Working Strength At The Beginning Of The Year	Sanctioned Strength At The Beginning Of The Year	Working Strength At The Beginning Of The Year	Sanctioned Strength At The Beginning Of The Year	Working Strength At The Beginning Of The Year	Sanctioned Strength At The Beginning Of The Year	Working Strength At The Beginning Of The Year	Sanctioned Strength At The Beginning Of The Year	Working Strength At The Beginning Of The Year	Sanctioned Strength At The Beginning Of The Year	Working Strength At The Beginning Of The Year	Sanctioned Strength At The Beginning Of The Year	Working Strength At The Beginning Of The Year	Sanctioned Strength At The Beginning Of The Year
1	Managing Director			1	1	1	1	1	1	1	1	1	1	1	1
2	Director			2	2	2	2	2	2	2	2	2	2	2	2
3	General Manager			14	17	12	17	11	17	11	17	11	17	9	17
4	Deputy General Manager			24	44	24	44	24	44	24	44	24	44	22	44
5	Sr. Manager			53	141	50	141	50	141	48	141	46	141	46	141
6	Manager			90	281	90	281	100	281	110	281	120	281	129	281
7	Junior Electrical Engineer			49	526	48	526	68	526	88	526	108	526	128	526
8	Account			10	55	10	55	10	55	10	55	10	55	10	55
9	Account Assistant			60	179	60	179	60	179	60	179	60	179	60	179
10	Administration			16	73	15	73	15	73	14	73	14	73	14	73
11	Office Assistant			26	313	26	313	46	313	66	313	86	313	106	313
12	Electrician			0	194	0	194	0	194	0	194	0	194	0	194
13	Technical Assistant			82	156	82	156	82	156	80	156	78	156	78	156
14	Supporting Staff			412	663	390	663	374	663	362	663	361	663	355	663
	Total			**839**	**2645**	**810**	**2645**	**843**	**2645**	**876**	**2645**	**921**	**2645**	**960**	**2645**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Adminstration & General Expenses **Form No: F6**

In Rs Crores

S.No.	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
A)	**Administration Expenses**							
1	Rent rates and taxes (Other than all taxes on income and profit)	0.10	0.09	0.10	0.10	0.11	0.11	0.12
2	Insurance of employees, assets, Legal insurance	0.03	0.05	0.05	0.05	0.06	0.06	0.06
3	Revenue Stamp Expenses Account							
4	Telephone,Postage,Telegram, Internet Charges	0.20	1.09	1.15	1.22	1.30	1.38	1.46
5	Incentive & Award To Employees/Outsiders							
6	Consultancy Charges	4.73	0.02	0.02	0.02	0.02	0.03	0.03
7	Technical Fees	0.01	0.08	0.09	0.09	0.10	0.10	0.11
8	Other Professional Charges /Collection & Remittance Charge							
9	Conveyance And Travel (vehicle hiring, running)	2.06	2.23	2.36	2.51	2.66	2.82	2.99
10	License fee							
11	Plant And Machinery							
12	Security / Service Charges Paid To Outside Agencies							
13	Regulatory Expenses							
14	Ombudsman Expenses							
	Sub-Total of Administrative Expenses	**7.13**	**3.55**	**3.77**	**4.00**	**4.24**	**4.50**	**4.78**
B)	**Other Charges**							
1	Fee And Subscriptions Books And Periodicals	0.36	0.37	0.39	0.42	0.44	0.47	0.50
2	Printing And Stationery	0.15	0.19	0.20	0.21	0.23	0.24	0.26
3	Advertisement Expenses (Other Than Purchase Related) Exhibition & Demo.							
4	Contributions/Donations To Outside Institute / Association							
5	Electricity Charges To Offices	0.01	0.00	0.00	0.00	0.00	0.00	0.00
6	Water Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Any Study - As per requirements							
8	Miscellaneous Expenses	3.63	5.82	6.17	6.55	6.95	7.37	7.82
9	Any Other expenses	0.88	0.05	0.05	0.06	0.06	0.06	0.07
	Sub-Total of other charges	**5.02**	**6.43**	**6.83**	**7.24**	**7.68**	**8.15**	**8.65**
C)	**Legal Charges**	0.42	0.16	0.16	0.16	0.16	0.16	0.16
D)	**Auditor'S Fee**	0.00	0.10	0.11	0.11	0.12	0.13	0.13
E)	**Frieght - Material Related Expenses**	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00
F)	**Direction And Supervision Charges**	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G)	**Total Charges**	**12.57**	**10.25**	**10.86**	**11.51**	**12.21**	**12.94**	**13.72**
H)	**Total Charges Chargeable To Capital Works**	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I)	**Total Charges Chargeable to Revenue Expenses**	**12.57**	**10.25**	**10.86**	**11.51**	**12.21**	**12.94**	**13.72**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Fixed Assets and Provision for Depreciation

All figures in Rs. Crore

S.No	Particulars	Depreciation Rate	FY 2019-20(Audited)							
			Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
			At Beginning of Year	Additions/ (Disposals)	At End Of Year	At Beginning of Year	Depreciation during the year	Accumulated Depreciation at end	At Beginning of Year	At the End Of Year
1	Land and land rights	0.00%	5.56	2.37	7.93	0.00	0.00	0.00	5.56	7.93
2	Building	3.34%	12.18	0.00	12.18	6.94	0.41	7.34	5.24	4.83
3	Plant and Machinery	5.28%	1069.55	117.73	1187.28	424.39	90.00	514.39	645.17	672.89
4	Lines and Cable Network	5.28%	449.90	264.23	714.13	178.80	37.96	216.76	271.10	497.37
5	Vehicles	9.50%	0.46	0.11	0.57	0.28	0.02	0.30	0.18	0.27
6	Furniture and Fixture	6.33%	1.06	0.24	1.30	0.31	0.07	0.39	0.75	0.91
7	Office Equipments	6.33%	1.29	0.34	1.63	0.56	0.09	0.66	0.73	0.97
8	Spare Units/Service Units	5.28%	0.21	0.00	0.21	0.19	0.00	0.19	0.02	0.02
9	Others Civil Works	3.34%	3.68	0.94	4.62	0.70	0.18	0.88	2.99	3.74
	Total (1 to 10)		**1543.89**	**385.96**	**1929.85**	**612.17**	**128.74**	**740.91**	**931.72**	**1188.94**

S.No	Particulars	Depreciation Rate	FY 2020-21 (APR)							
			Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
			At Beginning of Year	Additions/ (Disposals)	At End Of Year	At Beginning of Year	Depreciation during the year	Accumulated Depreciation at end	At Beginning of Year	At the End Of Year
1	Land and land rights	0.00%	7.93	0.00	7.93	0.00	0.00	0.00	7.93	7.93
2	Building	3.34%	12.18	1.29	13.46	7.34	0.54	7.88	4.83	5.58
3	Plant and Machinery	5.28%	1187.28	282.96	1470.24	514.39	75.04	589.43	672.89	880.82
4	Lines and Cable Network	5.28%	714.13	396.56	1110.69	216.76	62.16	278.92	497.37	831.77
5	Vehicles	9.50%	0.57	0.15	0.72	0.30	0.03	0.33	0.27	0.38
6	Furniture and Fixture	6.33%	1.30	0.11	1.41	0.39	0.09	0.47	0.91	0.94
7	Office Equipments	6.33%	1.63	0.18	1.81	0.66	0.11	0.77	0.97	1.05
8	Spare Units/Service Units	5.28%	0.21	0.00	0.21	0.19	0.00	0.19	0.02	0.02
9	Others Civil Works	3.34%	4.62	1.33	5.95	0.88	0.34	1.22	3.74	4.73
	Total (1 to 10)		**1929.85**	**682.58**	**2612.42**	**740.91**	**138.30**	**879.21**	**1188.94**	**1733.21**

S.No	Particulars	Depreciation Rate	FY 2021-22 (ARR)							
			Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
			At Beginning of Year	Additions/ (Disposals)	At End Of Year	At Beginning of Year	Depreciation during the year	Accumulated Depreciation at end	At Beginning of Year	At the End Of Year
1	Land and land rights	0.00%	7.93	0.00	7.93	0.00	0.00	0.00	7.93	7.93
2	Building	2.67%	13.46	0.00	13.46	7.88	0.36	8.24	5.58	5.22
3	Plant and Machinery	4.22%	1470.24	460.35	1930.59	589.43	71.76	661.18	880.82	1269.41
4	Lines and Cable Network	4.22%	1110.69	0.00	1110.69	278.92	46.87	325.79	831.77	784.90
5	Vehicles	12.77%	0.72	0.00	0.72	0.33	0.09	0.43	0.38	0.29
6	Furniture and Fixture	6.33%	1.41	0.00	1.41	0.47	0.09	0.56	0.94	0.85
7	Office Equipments	6.33%	1.81	0.00	1.81	0.77	0.11	0.88	1.05	0.93
8	Spare Units/Service Units	4.22%	0.21	0.00	0.21	0.19	0.01	0.20	0.02	0.01
9	Others Civil Works	2.67%	5.95	0.00	5.95	1.22	0.16	1.38	4.73	4.57
	Total (1 to 10)		**2612.42**	**460.35**	**3072.78**	**879.21**	**119.45**	**998.66**	**1733.21**	**2074.11**

S.No	Particulars	Depreciation Rate	FY 2022-23 (ARR)							
			Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
			At Beginning of Year	Additions/ (Disposals) during the year	At End Of Year	At Beginning of Year	Depreciation during the year	Accumulated Depreciation at end of the year	At Beginning of Year	At the End Of Year
1	**Land and land rights**	0.00%	7.93	0.00	7.93	0.00	0.00	0.00	7.93	7.93
2	**Building**	2.67%	13.46	0.00	13.46	8.24	0.36	8.60	5.22	4.86
3	**Plant and Machinery**	4.22%	1930.59	4097.37	6027.96	661.18	167.93	829.11	1269.41	5198.85
4	**Lines and Cable Network**	4.22%	1110.69	0.00	1110.69	325.79	46.87	372.66	784.90	738.03
5	**Vehicles**	12.77%	0.72	0.00	0.72	0.43	0.09	0.52	0.29	0.20
6	**Furniture and Fixture**	6.33%	1.41	0.00	1.41	0.56	0.09	0.65	0.85	0.76
7	**Office Equipments**	6.33%	1.81	0.00	1.81	0.88	0.11	1.00	0.93	0.82
8	**Spare Units/Service Units**	4.22%	0.21	0.00	0.21	0.20	0.01	0.21	0.01	0.00
9	**Others Civil Works**	2.67%	5.95	0.00	5.95	1.38	0.16	1.54	4.57	4.41
	Total (1 to 10)		**3072.78**	**4097.37**	**7170.15**	**998.66**	**215.62**	**1214.28**	**2074.11**	**5955.86**

S.No	Particulars	Depreciation Rate	FY 2023-24 (ARR)							
			Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
			At Beginning of Year	Additions/ (Disposals) during the year	At End Of Year	At Beginning of Year	Depreciation during the year	Accumulated Depreciation at end of the year	At Beginning of Year	At the End Of Year
1	**Land and land rights**	0.00%	7.93	0.00	7.93	0.00	0.00	0.00	7.93	7.93
2	**Building**	2.67%	13.46	0.00	13.46	8.60	0.36	8.96	4.86	4.50
3	**Plant and Machinery**	4.22%	6027.96	1210.21	7238.18	829.11	279.92	1109.02	5198.85	6129.15
4	**Lines and Cable Network**	4.22%	1110.69	0.00	1110.69	372.66	46.87	419.53	738.03	691.16
5	**Vehicles**	12.77%	0.72	0.00	0.72	0.52	0.09	0.61	0.20	0.11
6	**Furniture and Fixture**	6.33%	1.41	0.00	1.41	0.65	0.09	0.74	0.76	0.67
7	**Office Equipments**	6.33%	1.81	0.00	1.81	1.00	0.11	1.11	0.82	0.70
8	**Spare Units/Service Units**	4.22%	0.21	0.00	0.21	0.21	0.01	0.22	0.00	-0.01
9	**Others Civil Works**	2.67%	5.95	0.00	5.95	1.54	0.16	1.70	4.41	4.25
	Total (1 to 10)		**7170.15**	**1210.21**	**8380.36**	**1214.28**	**327.61**	**1541.89**	**5955.86**	**6838.47**

S.No	Particulars	Depreciation Rate	FY 2024-25 (ARR)							
			Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
			At Beginning of Year	Additions/ (Disposals) during the year	At End Of Year	At Beginning of Year	Depreciation during the year	Accumulated Depreciation at end of the year	At Beginning of Year	At the End Of Year
1	**Land and land rights**	0.00%	7.93	0.00	7.93	0.00	0.00	0.00	7.93	7.93
2	**Building**	2.67%	13.46	0.00	13.46	8.96	0.36	9.32	4.50	4.15
3	**Plant and Machinery**	4.22%	7238.18	2656.93	9895.11	1109.02	361.51	1470.54	6129.15	8424.57
4	**Lines and Cable Network**	4.22%	1110.69	0.00	1110.69	419.53	46.87	466.40	691.16	644.29
5	**Vehicles**	12.77%	0.72	0.00	0.72	0.61	0.09	0.70	0.11	0.02
6	**Furniture and Fixture**	6.33%	1.41	0.00	1.41	0.74	0.09	0.83	0.67	0.58
7	**Office Equipments**	6.33%	1.81	0.00	1.81	1.11	0.11	1.23	0.70	0.59
8	**Spare Units/Service Units**	4.22%	0.21	0.00	0.21	0.22	0.01	0.23	-0.01	-0.01
9	**Others Civil Works**	2.67%	5.95	0.00	5.95	1.70	0.16	1.85	4.25	4.09
	Total (1 to 10)		**8380.36**	**2656.93**	**11037.29**	**1541.89**	**409.21**	**1951.10**	**6838.47**	**9086.19**

			FY 2025-26 (ARR)							
S.No	Particulars	Depreciation Rate	Gross Fixed Assets			Provision For Depreciation			Net Fixed Assets	
			At Beginning of Year	Additions/ (Disposals) during the year	At End Of Year	At Beginning of Year	Depreciation during the year	Accumulated Depreciation at end of the year	At Beginning of Year	At the End Of Year
1	**Land and land rights**	0.00%	7.93	0.00	7.93	0.00	0.00	0.00	7.93	7.93
2	**Building**	2.67%	13.46	0.00	13.46	9.32	0.36	9.68	4.15	3.79
3	**Plant and Machinery**	4.22%	9895.11	1070.03	10965.14	1470.54	440.15	1910.69	8424.57	9054.45
4	**Lines and Cable Network**	4.22%	1110.69	0.00	1110.69	466.40	46.87	513.27	644.29	597.42
5	**Vehicles**	12.77%	0.72	0.00	0.72	0.70	0.09	0.79	0.02	-0.07
6	**Furniture and Fixture**	6.33%	1.41	0.00	1.41	0.83	0.09	0.92	0.58	0.49
7	**Office Equipments**	6.33%	1.81	0.00	1.81	1.23	0.11	1.34	0.59	0.47
8	**Spare Units/Service Units**	4.22%	0.21	0.00	0.21	0.23	0.01	0.24	-0.01	-0.02
9	**Others Civil Works**	2.67%	5.95	0.00	5.95	1.85	0.16	2.01	4.09	3.93
	Total (1 to 10)		**11037.29**	**1070.03**	**12107.32**	**1951.10**	**487.85**	**2438.94**	**9086.19**	**9668.38**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Interest & Finance Charges

In Rs Crores

			Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
A	**I**		**Interest and Finance Charges on Long Term Loans / Credits from the FIs/banks/organisations approved by the State Government**							
		1	LIC							
		2	REC							
		3	PFC							
		4	Bonds							
		5	Bank/FIIs							
		6	APDRP							
		7	State Govt. Loan/World Bank Loan	494.38	503.26	553.78	658.92	791.25	950.91	1116.08
		8	Any Other							
			Total of I	**494.38**	**503.26**	**553.78**	**658.92**	**791.25**	**950.91**	**1116.08**
	II		**Interest on Working Capital Loans Or Short Term Loans**	22.27	19.30	17.08	20.45	27.67	32.27	38.24
			Total of A : I + II	516.65	522.56	570.86	679.37	818.92	983.19	1154.32
B			**Other Interest & Finance Charges**							
		1	Cost of raising Finance & Bank Charges etc.							
		2	Interest on Security Deposit from staff	0.00	0.00					
		3	Penal Interest Charges							
		4	Lease Rentals							
		5	Penalty charges for delayed payment for power purchase							
			Interest on Group Saving Scheme	0.05	0.06					
			Interest on G.P.F.	1.54	1.76					
			Total of B	**1.59**	**1.62**					
C			**Grand Total Of Interest & Finance Charges: A + B**	**518.24**	**524.18**	**570.86**	**679.37**	**818.92**	**983.19**	**1154.32**
D			**Less: Interest & Finance Charges Chargeble to Capital Account**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
E			**Net Total Of Interest & Finance Charges : For Revenue Account: C-D**	**518.24**	**524.18**	**570.86**	**679.37**	**818.92**	**983.19**	**1154.32**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Domestic loans, bonds and financial leasing **Form No: F8A**

Sl. No.	Particulars	Opening Balance at the beginning of the year				Amount received during the year	Principal repayment		Interest			Closing Balance
	In Rs Crores	Principal not overdue	Principal overdue	Interest overdue	Total		Due	Paid	Due	Paid	%	
	FY 2019-20 (Audited)											
A	**LONG-TERM**											
7	State Government	3645.90	0.00	0.00	3645.90	89.32	0.00	0.00	492.79	492.79	13.35%	3735.22
	Total	**3645.90**	**0.00**	**0.00**	**3645.90**	**89.32**	**0.00**	**0.00**	**492.79**	**492.79**	13.35%	**3735.22**
B	**SHORT-TERM**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
	Total	**3645.90**	**0.00**	**0.00**	**3645.90**	**89.32**	**0.00**	**0.00**	**492.79**	**492.79**		**3735.22**
	FY 2020-21 (APR)											
A	**LONG-TERM**											
7	State Government	3735.22	0.00	0.00	3735.22	824.91	0.00	0.00	501.43	501.43	12.09%	4560.13
	Total	**3735.22**	**0.00**	**0.00**	**3735.22**	**824.91**	**0.00**	**0.00**	**501.43**	**501.43**	12.09%	**4560.13**
B	**SHORT-TERM**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
	Total	**3735.22**	**0.00**	**0.00**	**3735.22**	**824.91**	**0.00**	**0.00**	**501.43**	**501.43**		**4560.13**
	FY 2021-22 (ARR)											
A	**LONG-TERM**											
7	State Government	4560.13	0.00	0.00	4560.13	160.35	119.21	119.21	553.78	553.78	12.09%	4601.28
	Total	**4560.13**	**0.00**	**0.00**	**4560.13**	**160.35**	**119.21**	**119.21**	**553.78**	**553.78**	12.09%	**4601.28**
B	**SHORT-TERM**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
	Total	**4560.13**	**0.00**	**0.00**	**4560.13**	**160.35**	**119.21**	**119.21**	**553.78**	**553.78**		**4601.28**

	FY 2022-23 (ARR)											
A	LONG-TERM											
7	State Government	4601.28	0.00	0.00	4601.28	1913.07	215.37	215.37	658.92	658.92	12.09%	6298.98
	Total	**4601.28**	**0.00**	**0.00**	**4601.28**	**1913.07**	**215.37**	**215.37**	**658.92**	**658.92**	12.09%	**6298.98**
B	SHORT-TERM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
	Total	**4601.28**	**0.00**	**0.00**	**4601.28**	**1913.07**	**215.37**	**215.37**	**658.92**	**658.92**		**6298.98**

	FY 2023-24 (ARR)											
A	LONG-TERM											
7	State Government	6298.98	0.00	0.00	6298.98	818.76	327.36	327.36	791.25	791.25	12.09%	6790.38
	Total	**6298.98**	**0.00**	**0.00**	**6298.98**	**818.76**	**327.36**	**327.36**	**791.25**	**791.25**	12.09%	**6790.38**
B	SHORT-TERM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
	Total	**6298.98**	**0.00**	**0.00**	**6298.98**	**818.76**	**327.36**	**327.36**	**791.25**	**791.25**		**6790.38**

	FY 2024-25 (ARR)											
A	LONG-TERM											
7	State Government	6790.38	0.00	0.00	6790.38	2558.81	408.96	408.96	950.91	950.91	12.09%	8940.22
	Total	**6790.38**	**0.00**	**0.00**	**6790.38**	**2558.81**	**408.96**	**408.96**	**950.91**	**950.91**	12.09%	**8940.22**
B	SHORT-TERM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
	Total	**6790.38**	**0.00**	**0.00**	**6790.38**	**2558.81**	**408.96**	**408.96**	**950.91**	**950.91**		**8940.22**

	FY 2025-26 (ARR)											
A	LONG-TERM											
7	State Government	8940.22	0.00	0.00	8940.22	1070.03	487.60	487.60	1116.08	1116.08	12.09%	9522.65
	Total	**8940.22**	**0.00**	**0.00**	**8940.22**	**1070.03**	**487.60**	**487.60**	**1116.08**	**1116.08**	12.09%	**9522.65**
B	SHORT-TERM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
	Total	**8940.22**	**0.00**	**0.00**	**8940.22**	**1070.03**	**487.60**	**487.60**	**1116.08**	**1116.08**		**9522.65**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Details of Expenses Capitalised **Form No: F9**

All figures in Rs Crores

Sl.No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
1	Interest & Finance charges Capitalised	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Other expenses capitalised:							
	a. Employee expenses							
	b. R&M Expenses							
	c. A&G Expenses							
	Total of 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grand Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Debits, Write-offs and any other items **Form No: F10**

All figures in Rs Crores

Sl.No	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
1	Material Cost Variance (Audit Reports)							
2	Miscellaneous Losses And Write Off							
3	Bad Debt Written Off/Provided For							
4	Cost Of Trading & Manufacturing Activities							
5	Net Prior Period Credit/Charges							
	Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Less Chargible To Capital Expense	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Net Chargeable To Revenue	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Statement of Sundry Debtors and provision for Bad & Doubtful Debts Form No: F11

All figures in Rs Crores

Sl.No.	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
1	Receivable from customers as at the beginning of the year	423.15						
2	Revenue billed for the year	217.56	229.58	1,045.94	1,269.72	1,627.26	1,911.07	2,233.70
3	Net Collection for the year	119.28						
	Against current dues							
	Against arrears upto previous year							
4	Gross receivable from customers as at the end of the year	521.43						
5	Receivables against customers no longer availing services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Receivables(4-5)	521.43	-	-	-	-	-	-
7	% of provision	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8	Provision for bad and doubtful debts	0.00	0.00	0.00	0.00	0.00	0.00	0.00

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Net Prior Period Expenses / Income — **Form No: F12**

All figures in Rs Crores

Sl.No.	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
A	**Income relating to previous years:**							
1	Interest income for prior periods							
2	Income Tax proir period							
3	Excess Provision for Depreciation							
4	Excess Provision for Interest and Fin. Charges							
5	Receipts from consumers							
6	Other Excess Provision							
7	Others Income				NA			
	Sub-Total A	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
B	**Expenditure relating to previous years**							
1	R&M Expenses							
2	Employee Cost							
3	Depreciation							
4	Interest and Finance Charges							
5	Admn. Expenses							
6	Withdrawal of Revenue Demand							
7	Material Related							
8	Other							
	Sub-Total B	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Net prior period Credit/(Charges) : A-B	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Contributions, Grants and subsidies towards Cost of Capital Assets **Form No: F12**

All figures in Rs Crores

Sl No	Particulars	FY 2019-20 (Audited)			FY 2020-21 (APR)			FY 2021-22 (ARR)		
		Balance at the beginning of the year	Additions during the Year	Balance at the end of the Year	Balance at the beginning of the year	Additions during the Year	Balance at the end of the Year	Balance at the beginning of the year	Additions during the Year	Balance at the end of the Year
1	Consumer Contribution Towards Cost Of Capital Assets HT									
2	Subsidies Towards Cost Of Capital Asset									
3	Grant Towards Cost Of Capital Assets	56.80	99.22	156.02	156.02	4.38	160.40	160.40	-	160.40
	Total	**56.80**	**99.22**	**156.02**	**156.02**	**4.38**	**160.40**	**160.40**	**-**	**160.40**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Capital Works In Progress **Form No. 15**

All figures in Rs Crores

S. No.	Particulars	FY 2019-20 (Audited)				FY 2020-21 (APR)				FY 2021-22 (ARR)				FY 2022-23 (ARR)				FY 2023-24 (ARR)				FY 2024-25 (ARR)				FY 2025-26 (ARR)			
		Opening	Additions	Adjustments	Closing Balance	Opening	Additions	Adjustments	Closing Balance	Opening	Additions	Adjustments	Closing Balance	Opening	Additions	Adjustments	Closing Balance	Opening	Additions	Adjustments	Closing Balance	Opening	Additions	Adjustments	Closing Balance	Opening	Additions	Adjustments	Closing Balance
	Capital Work in Progress	2721.00	526.35	0	3247.35	3247.35	-40.25	0	3207.10	3207.10	140.87	0	3347.97	3347.97	-727.33	0	2620.64	2620.64	472.70	0	3093.34	3093.34	-1,517.06	0	1576.27	1576.27	-542.60	0	1033.68
	TOTAL	**2721.00**	**526.35**	**0.00**	**3247.35**	**3247.35**	**-40.25**	**0.00**	**3207.10**	**3207.10**	**140.87**	**0.00**	**3347.97**	**3347.97**	**-727.33**	**0.00**	**2620.64**	**2620.64**	**472.70**	**0.00**	**3093.34**	**3093.34**	**-1517.06**	**0.00**	**1576.27**	**1576.27**	**-542.60**	**0.00**	**1033.68**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Investments **Form No: F16**

FY 2019-20 (Rs Crores)

Sl. No.	Description of investment	Opening Balance	Additional Capitalisation	Investments realised during the year	Closing Balance	Source of Funding	Remarks
1							
2							
3							
	Total	0	0	0	0	N.A.	N.A.

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Current Assets & Liabilities **Form No: F17**

All figures in Rs Crores

Sl.No.	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)
A	**Current Assets, Loans and Advances**		
	Inventories	49.56	42.93
	Trade Receivables	635.98	753.66
	Cash and cash equivalents	1,087.90	1,950.67
	Bank Balances other than Cash & Cash equivalents	116.30	58.55
	Other Current Assets	233.25	297.98
	TOTAL OF 'A'	**2,122.98**	**3,103.79**
B	**Current Liabilities and Provisions**		
I	Current Liabilities	1,429.99	1,466.38
	Trade Payables	113.89	98.08
	Other Financial Liabilities	498.97	478.43
	Other Current Liabilities	817.14	889.86
II	Provisions	4.73	6.55
	TOTAL OF 'B' (I+II)	**1,434.72**	**1,472.93**
C	**NET CURRENT ASSETS (= A - B)**	**688.25**	**1,630.87**

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Working Capital Requirements **Form No: F18**

(Rs Crores)

Sl.No.	Particulars	FY 2019-20 (Audited)	FY 2020-21 (APR)
1	**O&M expenses**	**117.27**	**107.89**
a.	R&M expenses	34.56	29.85
b.	A&G expenses	12.57	10.25
c.	Employee expenses	70.13	67.80
d.	1/12th of total	9.77	8.99
2	Receivables		
a.	Annual revenues from tariffs and charges	893.74	906.69
b.	Receivables equivalent to 2 months months of transmission charges calculated on Target Availability Level	150.10	151.11
3	Maintenance Spares (15% of O&M Expense)	17.59	16.18
	Total Working Capital	**177.47**	**176.29**
	Interest Rate for Working Capital	12.55%	10.95%
	Interest on working Capital	22.27	19.30

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Working Capital Requirements **Form No: F18**

(Rs Crores)

Sl.No.	Particulars	FY 2021-22 (ARR)	FY 2022-23 (ARR)	FY 2023-24 (ARR)	FY 2024-25 (ARR)	FY 2025-26 (ARR)
1	**O&M expenses**	**144.52**	**163.63**	**269.62**	**307.57**	**380.44**
a.	R&M expenses	62.05	72.99	170.31	199.06	262.16
b.	A&G expenses	10.86	11.51	12.21	12.94	13.72
c.	Employee expenses	71.61	79.13	87.11	95.57	104.55
d.	1/12th of total	12.04	13.64	22.47	25.63	31.70
2	Receivables	1,045.94	1,269.72	1,627.26	1,911.07	2,233.70
a.	Annual revenues from tariffs and charges					
b.	Receivables equivalent to 45 days of transmission charges calculated on Target Availability Level	128.95	156.54	200.62	235.61	275.39
3	Maintenance Spares (15% of O&M Expense)	21.68	24.54	40.44	46.14	57.07
	Total Working Capital	**162.67**	**194.72**	**263.53**	**307.38**	**364.16**
	Interest Rate for Working Capital	10.50%	10.50%	10.50%	10.50%	10.50%
	Interest on working Capital	17.08	20.45	27.67	32.27	38.24

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Existing and Proposed Tariff Schedule

		FY 2019-20				FY 2020-21				FY 2021-22				FY 2022-23			
		EXISTING TARIFFS				EXISTING TARIFFS				PROPOSED TARIFFS				PROPOSED TARIFFS			
Sl. No.	User Type	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/KWh)	Monthly Fixed Charge per Connection (Rs.) Lacs	Monthly Capacity Charge (Rs. Lacs per MW)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/KWh)	Monthly Fixed Charge per Connection (Rs.) Lacs	Monthly Capacity Charge (Rs. Lacs per MW)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/KWh)	Monthly Fixed Charge per Connection (Rs.) Lacs	Monthly Capacity Charge (Rs. Lacs per MW)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/KWh)
1	Licensee										4.23				5.13		
2	CPP wheeling																
3	HT consumer wheeling																
4	Other States energy wheeling																
	TOTAL				**0.25**				**0.25**		**4.23**				**5.13**		

Form No: T1

FY 2023-24				FY 2024-25				FY 2025-26			
PROPOSED TARIFFS				PROPOSED TARIFFS				PROPOSED TARIFFS			
Monthly Fixed Charge per Connection (Rs.) Lacs	Monthly Capacity Charge (Rs. Lacs per MW)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/KWh)	Monthly Fixed Charge per Connection (Rs.) Lacs	Monthly Capacity Charge (Rs. Lacs per MW)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/KWh)	Monthly Fixed Charge per Connection (Rs.) Lacs	Monthly Capacity Charge (Rs. Lacs per MW)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/KWh)
	6.58				7.73				9.03		
	6.58				**7.73**				**9.03**		

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Revenue from Current Tariffs in Control Period **Form No: T2**

FY 2021-22

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/unit)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Unit Cost of transmission in Rs/unit
1	Discom	1	10387.11	N.A.	N.A.	N.A.	0.25	N.A.	259.68	259.68	0.25
2	Open Access Consumers (Railway)	1	613.20	N.A.	N.A.	N.A.	0.25	N.A.	15.33	15.33	0.25
	Total	2	11000.31	0	0	0		0	275.01	275.01	

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2022-23

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/unit)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Unit Cost of transmission in Rs/unit
1	Discom	1	11834.74	N.A.	N.A.	N.A.	0.25	N.A.	295.87	295.87	0.25
2	Open Access Consumers (Railway)	1	678.90	N.A.	N.A.	N.A.	0.25	N.A.	16.97	16.97	0.25
	Total	2	12513.64	0	0	0		0	312.84	312.84	

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2023-24

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/unit)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Unit Cost of transmission in Rs/unit
1	Discom	1	12614.19	N.A.	N.A.	N.A.	0.25	N.A.	315.35	315.35	0.25
2	Open Access Consumers (Railway)	1	744.60	N.A.	N.A.	N.A.	0.25	N.A.	18.62	18.62	0.25
	Total	2	13358.79	0	0	0		0	333.97	333.97	

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2024-25

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/unit)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Unit Cost of transmission in Rs/unit
1	Discom	1	15262.65	N.A.	N.A.	N.A.	0.25	N.A.	381.57	381.57	0.25
2	Open Access Consumers (Railway)	1	744.60	N.A.	N.A.	N.A.	0.25	N.A.	18.62	18.62	0.25
	Total	2	16007.25	0	0	0		0	400.18	400.18	

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2025-26

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/unit)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Unit Cost of transmission in Rs/unit
1	Discom	1	18099.43	N.A.	N.A.	N.A.	0.25	N.A.	452.49	452.49	0.25
2	Open Access Consumers (Railway)	1	744.60	N.A.	N.A.	N.A.	0.25	N.A.	18.62	18.62	0.25
	Total	2	18844.03	0	0	0		0	471.10	471.10	

***Note:** Licensee is required to fill up one sheet for each MYT year.

JHARKHAND URJA SANCHARAN NIGAM LIMITED

Revenue from Proposed Tariffs in Control Period **Form No: T3**

FY 2021-22

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Maximum Demand (KVA)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/MW/month)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Proposed Realization Rate (Rs/u)	Unit Cost of transmission in Rs/unit	Expected additional Revenue at proposed charges (Rs Crs) for Full	Proposed Percentage increase (%)
1	Discom														
2	Open Access Consumers (Railway)														
	Total							**4.23**		**1045.94**	**1045.94**				

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2022-23

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Maximum Demand (KVA)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/MW/month)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Proposed Realization Rate (Rs/u)	Unit Cost of transmission in Rs/unit	Expected additional Revenue at proposed charges (Rs Crs) for Full	Proposed Percentage increase (%)
1	Discom														
2	Open Access Consumers (Railway)														
	Total							**5.13**		**1269.72**	**1269.72**				

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2023-24

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Maximum Demand (KVA)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/MW/month)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Proposed Realization Rate (Rs/u)	Unit Cost of transmission in Rs/unit	Expected additional Revenue at proposed charges (Rs Crs) for Full	Proposed Percentage increase (%)
1	Discom														
2	Open Access Consumers (Railway)														
	Total							**6.58**		**1627.26**	**1627.26**				

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2024-25

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Maximum Demand (KVA)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/MW/month)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Proposed Realization Rate (Rs/u)	Unit Cost of transmission in Rs/unit	Expected additional Revenue at proposed charges (Rs.Crs) for Full	Proposed Percentage increase (%)
1	Discom														
2	Open Access Consumers (Railway)														
	Total							**7.73**		**1911.07**	**1911.07**				

***Note:** Licensee is required to fill up one sheet for each MYT year.

FY 2025-26

Sl.No.	User Type	No. of consumers	Energy Wheeled (MU)	Maximum Demand (KVA)	Monthly Fixed Charge per Connection (Rs.)	Monthly Capacity Charge (Rs/KVA)	Grid Support Charges (Rs/KVA)	Transmission Tariff (Rs/MW/month)	Fixed Charges Total in Rs. Crs.	Variable Charges Total in Rs. Crs.	TOTAL BILLED AMT (RS.CRS) without tax	Proposed Realization Rate (Rs/u)	Unit Cost of transmission in Rs/unit	Expected additional Revenue at proposed charges (Rs.Crs) for Full	Proposed Percentage increase (%)
1	Discom														
2	Open Access Consumers (Railway)														
	Total							**9.03**		**2233.70**	**2233.70**				

***Note:** Licensee is required to fill up one sheet for each MYT year.