

JHARKHAND BIJLI VITRAN NIGAM LIMITED (JBVNL)

**Petition for Audited True-
up of FY 2022-23, APR for
FY 2023-24, and ARR for
FY 2024-25 of the Control
Period from FY 2021-22 to
FY 2025-26**



**JHARKHAND BIJLI VITRAN NIGAM
LIMITED**



Before the Hon'ble Jharkhand State Electricity Regulatory Commission, Ranchi

Filing Number: _____

Case Number: _____

IN THE MATTER OF: Filing of Petition for approval of audited True-up for FY 2022-23, Annual Performance Review for FY 2023-24 and approval of Aggregate Revenue Requirement for FY 2024-25 of the control Period (FY 2021-22 to FY 2025-26) under Section 45, 46, 61, 62, 64 and 86 of the Electricity Act, 2003 and as per the Regulations of Jharkhand State Electricity Regulatory Commission (JSERC) Terms and Conditions for Determination of Distribution Tariff Regulations, 2020.

AND IN THE MATTER OF: Jharkhand Bijli Vitran Nigam Limited (hereinafter referred to as "JBVNL", or "erstwhile JSEB -Distribution function" which shall mean for the purpose of this Petition the "Licensee" or "Petitioner") having its registered office at HEC, Dhurwa, Ranchi

The Petitioner respectfully submits hereunder:

1. The erstwhile Jharkhand State Electricity Board ("Board" or "JSEB") was a statutory body constituted under Section 5 of the Electricity (Supply) Act, 1948 and was engaged in electricity generation, transmission, distribution and related activities in the State of Jharkhand.
2. Jharkhand Urja Vikas Nigam Ltd. (herein after to be referred to as "JUVNL" or "the Holding company") has been incorporated under Indian Companies Act, 1956 pursuant to decision of Government of Jharkhand to reorganize erstwhile 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 has been incorporated on 16th September 2013 with the Registrar of Companies, Jharkhand, Ranchi and has obtained Certificate of Commencement of Business on 12th November 2013.
3. Jharkhand Bijli Vitran Nigam Ltd. (herein after to be referred to as "JBVNL" or "the Petitioner" or erstwhile "JSEB-Distribution function" has been

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 Distribution Company - Jharkhand Bijli Vitran 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 control period and Tariff Petitions as per procedures outlined in section 61, 62 and 64, of Electricity Act 2003, and the governing regulations thereof.
5. The present Petition is being filed by JBVNL before the Hon'ble Commission for approval of True-up for FY 2022-23, Annual Performance Review (APR) for FY 2023-24 and Approval of Aggregate Revenue Requirement for FY 2024-25 as per the Electricity Act, 2003 and as per the provisions of the Jharkhand State Electricity Regulatory Commission (JSERC) (Terms and Conditions For Determination of Distribution Tariff) Regulations, 2020.

Jharkhand Bijli Vitran Nigam Limited
Petitioner

Place: Ranchi

Dated:

Table of Contents

1. Background and Procedural History	10
1.1. Background	10
1.2. Distribution Tariff Regulations	10
1.3. Business plan for FY 2021-22 to FY 2025-26	13
2. True Up for FY 2022-23	14
2.1. Introduction	14
2.2. Energy Sales	14
2.3. Power Purchase Expense	14
2.4. Renewable Purchase Obligation	16
2.5. Energy Balance	18
2.6. Intra-State Transmission Charges	19
2.7. Operation and Maintenance Expenses	19
2.8. Capital Expenditure Schedule	20
2.9. Calculation of Normative GFA, Loan and Equity	21
2.10. Depreciation	22
2.11. Interest & Finance Charges	22
2.12. Interest on Working Capital	24
2.13. Return on Equity	24
2.14. Revenue from Sale of Power	25
2.15. Non- Tariff Income	25
2.16. Aggregate Revenue Requirement (ARR) for FY 2022-23 after Truing Up	26
3. Annual Performance Review (APR) for FY 2023-24	27
3.1. Introduction	27
3.2. Consumption Parameters: Consumer Numbers, Connected Load and Sales	27
3.3. AT&C Loss	28
3.4. Power Purchase	28
3.5. Renewable Purchase Obligation	32
3.6. Energy Balance	33
3.7. Intra-State Transmission Charges	34
3.8. Calculation of Normative GFA, Loan and Equity	36
3.9. Scheme-wise Capital Expenditure	36
3.10. Depreciation	38
3.11. Interest and Finance Charges	39
3.12. Interest on Working Capital (IoWC)	40

3.13. Return on Equity	40
3.14. Revenue from Sale of Power	41
3.15. Non-Tariff Income	41
3.16. AT&C Loss	42
3.17. Annual Performance Review (APR) for FY 2023-24	43
4. Aggregate Revenue Requirement (ARR) for FY 2024-25	44
4.1. Consumption Parameters: Consumer Numbers, Connected Load and Sales	44
4.2. Distribution Loss	45
4.3. Power Purchase	46
4.4. Renewable Purchase Obligation	48
4.5. Energy Balance	49
4.6. Intra-State Transmission Charges	50
4.7. Operation and Maintenance Expenses	50
4.8. Calculation of Normative GFA, Loan and Equity	52
4.9. Scheme-wise Capital Expenditure	52
4.10. Depreciation	54
4.11. Interest and Finance Charge	55
4.12. Interest on Consumer Security Deposit	55
4.13. Interest on Working Capital	56
4.14. Return on Equity	56
4.15. Revenue from Sale of Power at existing tariff	57
4.16. Non-Tariff Income	57
5. Accumulated Revenue Gap	59
6. Directives	60
7. Prayers	64
8. Annexure: 1 Audited Accounts of JBVNL for FY 2022-23	65

List of Tables

Table 2-1: Energy Sales (MUs) of JBVNL for FY 2022-23	14
Table 2-2: Power purchase quantum and cost for JBVNL for FY 2022-23	14
Table 2-5: Intra-state transmission charges of JBVNL for FY 2022-23	19
Table 2-6: Employee cost of JBVNL for FY 2022-23	20
Table 2-7: Repair and Maintenance expense of JBVNL for FY 2022-23	20
Table 2-8: A&G Expenses of JBVNL FY 2022-23	20
Table 2-9: Actual Capital work in progress of JBVNL for FY 2022-23 (Rs. Crore).....	21
Table 2-10: Consumer contribution and grants of JBVNL for FY 2022-23	21
Table 2-11: Source of Funding of GFA for FY 2022-23 (Rs. Crore).....	21
Table 2-12: Financing of the Capital Investments in FY 2022-23 (Rs. Crore)	Error! Bookmark not defined.
Table 2-13: Interest on Long term loan of JBVNL for FY 2022-23 (Rs. Crore).....	23
Table 2-14: Interest on consumer deposit of JBVNL for FY 2022-23 (Rs. Crore)	23
Table 2-15: Interest and Finance Charges for FY 2022-23 (Rs. Crore).....	23
Table 2-16: Interest on Working Capital of JBVNL for FY 2022-23 (Rs. Crore).....	24
Table 2-17: Return on Equity RoE for FY 2022-23 (Rs. Crore).....	24
Table 2-18: Non-tariff income of JBVNL for FY 2022-23 (Rs. Crore)	25
Table 2-19: Aggregate Revenue Requirement (ARR) for FY 2022-23(Rs. Crore).....	26
Table 3-1: Consumption Parameters for FY 2023-24	27
Table 3-2: AT&C loss (%) for FY 2023-24 to FY 2024-25.....	28
Table 3-3: Detail of Upcoming Power Plants in FY 2023-24.....	29
Table 3-4: Power purchase quantum and cost of JBVNL for FY 2023-24.....	30
Table 3-5: Energy balance of JBVNL estimated for FY 2023-24 (in MU)	34
Table 3-6: Intra-state transmission charges of JBVNL for FY 2023-24	34
Table 3-7: Employee Expenses of JBVNL for FY 2023-24 (Rs. Crore)	35
Table 3-8: R&M Expenses of JBVNL for FY 2023-24 (Rs. Crore)	35
Table 3-9: A&G Expenses of JBVNL for FY 2023-24 (Rs. Crore)	35
Table 3-10: Capital Investment in FY 2023-24 (Rs. Crore)	36
Table 3-11: Estimated Scheme wise Capital Investment in FY 2023-24 (Rs. Crore)	36
Table 3-12: Actual Capital work in progress of JBVNL for FY 2023-24	38
Table 3-13: Consumer Contributions and Capital Grants of JBVNL for FY 2023-24 (Rs. Crore).....	38
Table 3-14: Depreciation cost of JBVNL for FY 2023-24.....	38
Table 3-15: Interest on long term loan of JBVNL for FY 2023-24 (Rs. Crore).....	39
Table 3-16: Interest on Working Capital for FY 2023-24 (In Rs. Crore)	40
Table 3-17: Return on Equity (RoE) of JBVNL for FY 2023-24 (Rs. Crore).....	41
Table 3-18: Non-Tariff income of JBVNL for FY 2023-24.....	41
Table 3-19: Summary of Annual Performance Review (APR) for FY 2023-24 (Rs Crore)	43
Table 4-1: Billing Determinants projected for FY 2024-25.....	45
Table 4-3: Power Purchase Quantum in MUs and cost in Rs Crore for FY 2024-25	46
Table 4-4: Energy Balance for FY 2023-24.....	50
Table 4-5: Intra-state transmission charges of JBVNL.....	50
Table 4-6: Employee Expenses of JBVNL for FY 2024-25 (Rs. Crore).....	51
Table 4-7: R&M Expenses for FY 2024-25 (Rs. Crore)	51
Table 4-8: A&G Expenses for FY 2024-25 (Rs. Crore).....	51
Table 4-9: Capital Investment in FY 2023-24 (Rs. Crore).....	52
Table 4-10: Estimated Scheme wise Capital Investment in FY 2024-25(Rs. Crore).....	52
Table 4-11: Actual Capital work in progress of JBVNL for FY 2024-25.....	54
Table 4-12: Consumer Contributions and Capital Grants of JBVNL for FY 2024-25 (Rs. Crore).....	54
Table 4-13: Depreciation cost of JBVNL for FY 2024-25 (In Rs Crs)	54
Table 4-14: Interest on long term Loan of JBVNL for FY 2024-25	55
Table 4-15: Interest on consumer deposit of JBVNL for FY 2023-24.....	55

Table 4-16: Interest on working capital of JBVNL for FY 2024-25.....	56
Table 4-17: Return on Equity (RoE) for FY 2024-25 (Rs. Crore)	57
Table 4-18: Category-wise revenue of JBVNL (Projected) for FY 2024-25 (Rs. Crore)	57
Table 4-19: Non-Tariff income of JBVNL for FY 2024-25 (Rs. Crore)	57
Table 4-20: Projected Aggregate Revenue Requirement for FY 2024-25 (Rs Crores).....	58
Table 5-1: Accumulated Revenue Gap without carrying cost for FY 2024-25 (Rs. Crore).....	59
Table 6-1: Status of the Pending directives issued by JSERC in the Order dated 31 st May 2023	60

List of abbreviations

Abbreviation	Full Form
A&G	Administration & General
Act	The Electricity Act, 2003
ADP	Annual Development Plan
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
APNRL	Adhunik Power & Natural Resources Limited
AT&C	Aggregate Technical & Commercial
Capex	Capital Expenditure
Commission	Jharkhand Electricity Regulatory Commission
Cr.	Crore
CS	Commercial Services
CWIP	Capital Work-In-Progress
DDUGJY	Deen Dayal Upadhayay Gram Jyoti Yojana
DPS	Delayed Payment Surcharge
DVC	Damodar Valley Corporation
EA 2003	The Electricity Act, 2003
EHT	Extra High Tension
FY	Financial Year
GFA	Gross Fixed Assets
GoJ	Government of Jharkhand
HT	High Tension
IEX	Indian Energy Exchange Limited
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
ISTS	Inter-State Transmission System
JSBAY	Jharkhand Sampurna Bijli Achchhaadan Yojana
JSEB	Jharkhand State Electricity Board
KVA	Kilo Volt Ampere
kWh	Kilo Watt Hour
LT	Low Tension
MOD	Merit Order Dispatch
MU	Million Units
MW	Mega Watt
MYT	Multi-Year Tariff
NHPC	National Hydro Power Corporation
NTPC	National Thermal Power Corporation
NTI	Non-Tariff Income
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Ltd.
PLR	Prime Lending Rate

Abbreviation	Full Form
POSOCO	Power System Operation Corporation Limited
PoC	Point of Connection
PPA	Power Purchase Agreement
PTC	Power Trading Corporation
R&M	Repair and Maintenance
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
RDSS	Revamped Distribution Sector Scheme
RE	Renewable Energy
REC	Renewable Energy Certificate
RGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana
RoE	Return on Equity
SBI	State Bank of India
SECI	Solar Energy Corporation of India
SERC	State Electricity Regulatory Commission
SHPS	Sikidri Hydro Power Station
T&D	Transmission & Distribution
TVNL	Tenughat Vidyut Nigam Limited
UDAY	Ujjwal Discom Assurance Yojana
UI	Unscheduled Interchange

1. Background and Procedural History

1.1. Background

- 1.1.1. Jharkhand Bijli Vitran Nigam Ltd. (herein after to be referred to as “JBVNL” or “the Petitioner” or “erstwhile JSEB-Distribution function) 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”).
- 1.1.2. 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 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 distribution company, Jharkhand Bijli Vitran Nigam Ltd has been incorporated on 23rd October 2013 with the Registrar of Companies, Jharkhand, Ranchi and has obtained Certificate of Commencement of Business on 28th November 2013.
- 1.1.3. The Petitioner is a Distribution Licensee under the provisions of the Electricity Act, 2003 (EA, 2003) having license to supply electricity in the State of Jharkhand. The Petitioner is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged, within the framework of the Electricity Act, 2003, in the business of Distribution of Electricity to its consumers situated over the entire State of Jharkhand.
- 1.1.4. Section 62 of the Electricity Act 2003 requires the licensee to furnish details as may be specified by the Commission for determination of tariff. In addition, as per the Regulations issued by the Hon’ble Commission, JBVNL is required to file for all reasonable expenses, it believes, it would incur over the next financial years forming part of MYT 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.

1.2. Distribution Tariff Regulations

- 1.2.1. The present Petition for True-up for FY 2022-23, APR for FY 2023-24, Approval of ARR for FY 2024-25 of the Control Period (FY 2021-22 to FY 2025-26) has

been prepared in accordance with the following acts/policies/regulations:

- a) Electricity Act 2003
- b) Provisions of National Electricity Policy;
- c) Provisions of National Tariff Policy;
- d) JSERC (Terms and Conditions for Distribution Tariff) Regulations, 2020

1.2.2. The present Petition presents the projections of various operational and financial parameters and emphasizes on the requirement of further rationalizing the tariff in the State to make it reflective of voltage-wise actual cost of supply, to the extent possible. It is humbly submitted that in the true up of FY 2019-20, the Hon'ble Commission has approved a cumulative gap of INR 6335.68 crores till FY 2021-22, however the same was not passed through the tariff by the Commission. As a result of this accumulated revenue gap, the petitioner is struggling to service its liability. It is also affecting its operational and performance. Hence, it would be in the larger interest of the State and electricity consumers that a cost reflective tariff may be issued to ensure the financial viability for the Petitioner and lessen its dependence on State Govt. support, other than consumer subsidy.

1.2.3. Considering the significant gap between revenue required and actual realization due to tariff being non cost reflective, there has been an accumulation of power purchase liabilities for which JBVNL has been forced to depend upon the support from the State Government.

1.2.4. The Petitioner has filed Appeal No. 22 and 223 of 2018, against Hon'ble Commission Order dated 27th April, 2018 regarding following issues:

- a) Consideration of loan restructured under UDAY scheme for reducing revenue gap
- b) Reduction in Fixed charge of CS-Urban consumer category
- c) Non-consideration of carrying cost for the revenue gap created in FY 2015-16
- d) Disallowance of AT&C loss as per UDAY Trajectory
- e) Imposition of Penalty of 2% of ARR of FY 17-18 for non-compliance of directives

1.2.5. Furthermore, the Petitioner has also filed Review Petition before Hon'ble Commission in Case No. 23 of 2020 against Order dated 1st October, 2020 regarding True-up for FY 2018-19, APR for FY 2019-20 and ARR & Tariff for FY

2021-22. The hearing of the same is going on at the Commission at the time of filing this petition. The Petitioner has made following prayers to Hon'ble Commissions regarding the impugned Order:

- a) Consideration of loss take over under UDAY scheme as revenue in FY 2018-19, FY 2019-20 and FY 2021-22
- b) Consideration of low Power Purchase Cost from DVC- KTPS in APR for FY 19-20 and ARR for FY 20-21
- c) Consideration of Meter Rent as Non-Tariff Income for FY 2021-22
- d) Revision of Minimum Billed Demand (101 KVA) for HT Consumers

1.2.6. The petitioner has filed a review petition before Hon'ble Commission 18 of 2023 against order dated 31st May 2023 regarding true up for FY2019-20, APR for FY 2020-21 and approval of business plan and MYT of control period from FY 2021-22 to FY 2025-26. The hearing on the said case was finished and the order was reserved by the Hon'ble Commission. JBVNL is expecting a favourable order in its favour.

1.2.7. Considering the pending appeals and review petition before the Hon'ble Commission, the Petitioner has considered some of the numbers as per the impugned orders in interest of the consumers to understand the Petition. However, submissions made in this Petition are without prejudice to the prayers made in above mentioned Appeal and Review Petition. If Hon'ble APTEL and Hon'ble Commission dispose the Appeal and Review Petition in favour of the Petitioner (in part or full), it is requested that the effect of the same should be passed on to the Petitioner and the figures considered, wherever applicable, shall be subject to revision.

1.2.8. As of now, the Hon'ble Commission has planned for public hearing for true up for FY 2020-21 and FY 2021-22 along with APR for FY 2022-23 and ARR and tariff for FY 2023-24. It is expected that the public hearings will take place in the month of December 2023 and the tariff for the rest of the FY 2023-24 will be approved by the commission.

1.2.9. It is submitted that the Petitioner is committed towards improving the electricity availability in the State with high reliability and overall sustainability without any assistance from the state government. A slew of measures is being undertaken and activities are being carried out at a considerable level to achieve the greater goal of becoming a sustainable power utility. Also, the petitioner has fully committed to the Revamped Distribution Sector Scheme (RDSS) scheme, it has signed with the central government to achieve established benchmarks in

operational and financial parameters.

- 1.2.10. The following section of the Petition presents the details of projections of Aggregate Revenue Requirement, underlying approach & methodology and rationale for proposed ARR.
- 1.2.11. Hence, it is requested that the Hon'ble Commission may admit the Petition and provide opportunity to JBVNL to supply any deficient information, for expeditious disposal of this Petition.

1.3. Business plan for FY 2021-22 to FY 2025-26

- 1.3.1. The Hon'ble commission has approved the business plan for the petitioner for FY 2021-22 to FY 2025-26 in its last tariff order passed on 31st May 2023. However, the delay in finalising the business plan has resulted in lapsing of initial 3 years of the MYT plan period. In the interest of the consumers, the petitioner has already invested the capital expenditure required for improving the operational and financial health of discoms under several government sponsored schemes (both state and central). The investments resulted in operational improvement of the utility and greater satisfaction of the consumers. In line with the approved business plan of the Hon'ble Commission, the petitioner is committed to align itself with the performance trajectory approved by the commission. The petitioner is glad that the Hon'ble Commission has approved the RDSS plan for the rest of the control period which is a positive sign for the overall improvement of the discom.

2. True Up for FY 2022-23

2.1. Introduction

- 2.1.1. As of now, the Tariff Order for FY 2021-22 is applicable in JBVNL for FY 23-24. The Petitioner is submitting its ARR based on the Audited Annual Accounts for FY 2022-23 (submitted in **Annexure: 1**) for the consideration of Hon'ble Commission.

2.2. Energy Sales

- 2.2.1. The energy sales of JBVNL for FY 2022-23 based on the audited annual accounts is provided for the kind consideration of Hon'ble Commission.
- 2.2.2. The following Table summarizes the consumer category-wise sales for FY 2022-23 for kind consideration of the Hon'ble Commission:

Table 2-1: Energy Sales (MUs) of JBVNL for FY 2022-23

Particulars	Claimed (MUs)
Domestic	5097.02
Commercial/ Non domestic	1061.82
Industrial LT/LTIS	308.33
Irrigation & Agricultural / IAS	148.58
Industrial HT	2282.90
IS-I: Public Lighting / SS	200.17
Theft	202.45
Total Sales	9,301.28

- 2.2.3. The Hon'ble Commission is requested to approve the unit sales as submitted in the above Table.

2.3. Power Purchase Expense

- 2.3.1. It is submitted that JBVNL has firm allocations of power from central allocations like NTPC, NHPC, DVC and other sources such as TVNL, DVC(STOA), PTC etc. In addition to these, JBVNL has also purchased power from private stations like APNRL, Inland Power, and some quantum from renewable sources during FY 2022-23.
- 2.3.2. The following Table provides for station wise Power Purchase quantum and cost for FY 2022-23 based on Actual power purchase for FY 2022-23 of JBVNL.

Table 2-2: Power purchase quantum and cost for JBVNL for FY 2022-23

S.N.	Name of Generating Stations	Allocation (MW)	Total Units purchased (MU)	Total Cost of Purchase (in Crore Rs.)	
1	NTPC	Farrakka I &II	117.64	928.94	469.31
		Farrakka III	56.04	321.88	185.81
		Khalagaon I	17.52	233.78	113.65
		Talcher	65.72	538.94	162.28
		Khalagaon II	9.19	274.31	117.44
		Barh I	5.93	6.33	3.59
		Barh II	17.09	19.02	10.39
		Korba	50.00	347.99	102.36
		Darlipalli I	148.85	972.02	286.74
		Total	487.99	3643.19	1451.56
		N. Karnpura	176.39	102.79	41.08
		Kanti Power	2.79	3.53	1.83
		Nabinagar	32.57	139.14	69.55
		Grand Total	699.75	3888.66	1564.02
2	NHPC	Rangit	7.79	42.13	17.70
		Teesta v	60.94	341.22	87.09
		Total	68.73	383.34	104.79
3	PTC	Chukha	27.60	169.71	40.76
		Tala	116.89	272.20	61.79
		Kurichu	0.49	0.00	0.00
		Mangdechhu	8.50	0.14	0.06
		Total	153.48	442.05	102.61
4	Total Central Sector	921.96	4714.05	1771.42	
5	DVC	KTPS (OA)	600	3877.53	2027.53
		Standby Power	-	77.23	41.41
		UI (Deviation)	-	-167.77	-7.85
		Trans. Charge	-	-	75.56
		HT Points	8	0.53	3.41
		Total	608	3787.51	2140.07
6	DVC (STOA)		235.51	123.13	
7	TVNL	420	2317.25	966.99	
8	UI Payable (Deviation)		135.79	172.36	
9	APNRL	Unit I		351.94	151.87
		Unit II		351.94	105.85
		APNRL (Add.)		378.15	160.21
		ERLDC APNRL			18.68
		Total	188.85	1082.03	433.12

10	SOLAR	SECI (Tranche-I)	450	1021.39	268.17
		SECI (MNRE-II)	10	15.58	9.63
		State IPPs (MNRE-I)	16	19.02	34.16
		Total	476	1055.99	311.96
11	Wind	PTC	200	483.92	170.82
		SECI	100	286.81	78.01
		Total	300	770.73	248.84
12	Inland Power Ltd.	63	372.89	235.40	
13	Grasim Industries	1	3.46	0.00	
14	PTC-IEX (Purchase)	-	353.13	331.20	
15	PTC-IEX (Sale)	-	-441.81	-164.42	
16	Total Purchase	2978.81	14386.53	6570.06	
17	SRHPS (Generation)	130	167.77	21.95	
18	Grand Total	3108.81	14554.31	6592.02	
19	UI Receivable	-	-76.67	-29.28	
20	SER-DSM	-	-9.14	-13.23	
21	Trans. Charge	PGCIL	-	307.64	
		Posoco (ERLDC)	-	1.33	
		JUSNL	-	257.12	
22	Net Unit	-	14468.49	7115.59	
23	Supplementary Bills		0.00	354.11	
24	Net Unit (with Supplementary Bills)		14468.49	7469.70	
	Less:				
	PTC-IEX (Sale)			-164.42	
	Railway			-0.04	
	UI Receivable			-29.28	
	SER			-16.98	
	Rebate			-10.61	
25	Net Power Purchase Cost (Rs. Cr.)			7691.03	

2.4. Renewable Purchase Obligation

- 2.4.1. JBVNL has tied up with SECI for 700 MW of Solar power with SECI, out of which JBVNL is receiving 450 MW of solar power and 250 MW is under pipeline. Similarly, cumulative 500 MW of wind power has been tied up with SECI and PTC, out of which, JBVNL is receiving 200 MW of wind power and 100 MW of wind power is under pipeline.
- 2.4.2. In addition to above, JREDA is installing rooftop solar system in the state in following manner as -
- Rooftop installation work with JREDA is under progress in MNRE subsidy scheme for domestic consumers. The installation work has started from year 2019 and targeted for 1 MW rooftop installation every year. Till date 0.5 MW rooftop has been installed.

- For consumers other than domestic consumers, installation of rooftop solar work is under progress under JSERC “Rooftop Solar PV Grid Interactive Systems and Net /Gross Metering Regulations”, 2015. The installation is targeted to cover 2 to 3 MW every year.
- Other than above, JREDA is installing cumulative 3 MW of rooftop solar in 4 airports in Jharkhand.
- Rooftop solar system of cumulative capacity of 40182 kW in government building has been installed till date and 9680 KW rooftop solar installation on Govt. Building is under progress and expected in to be completed by 2024.
- 2 MW of rooftop solar has been installed at the new building of Jharkhand High Court, 400 kW rooftop has been installed on new building of Vidhan Sabha and 400 kW rooftop has been installed in sadar hospital by JREDA in year 2023.

2.4.3. In addition to above, 1.6 MW Solar Park is under installation in Giridih town city and expected to be commissioned in year 2024.

2.4.4. Also, in Jharkhand Solar Policy 2022, Government of Jharkhand has set target of 4000 MW till FY 2026-27 of solar power in State and JREDA has been made as nodal agency to run various programmes like, Implementation of Solar Park, Canal Top Solar, Floating Solar, etc from 2022-23 to 2026-27. From above mentioned programme, JBVNL will procure power from Solar Power Plant without competitive bidding upto 5 MW.

2.4.5. Under the said programme, floating solar plant of 100 MW on Getalsud Dam has been planned with SECI. The PPA with SECI has been approved by the Commission. Under PM Kusum Yojana 30 MW of solar installation has been targeted till 2025-26.

2.4.6. Also, JBVNL implemented Mini grid in villages. Under DDUGJY scheme 216 villages, and 37 villages (16+21) has been tendered in State Funded Scheme for implementation of mini grid system in the State. Renewable Purchase Obligation fulfilled for FY 2022-23 has been mentioned as below –

Renewable Purchase Obligation for FY 2022-23

Particulars	Unit	Value
Total Power Purchased	MU	14468.49
Hydro power purchased	MU	993.17
Co-generation power purchased	MU	0.00
Solar RPO target	%	0.12
Non solar RPO target	%	0.12
Solar RPO target	MU	1549.66
Non solar RPO target	MU	1549.66
Solar Purchase	MU	1055.99
Non Solar Purchase	MU	770.73
Solar REC Purchase	Nos	0.00
Non Solar REC Purchase	Nos	0.00
Equivalent Solar RPO	MU	0.00
Equivalent Non Solar RPO	MU	0.00
Total Solar RPO compliance	MU	1055.99

Total Non Solar RPO compliance	MU	770.73
--------------------------------	----	--------

2.5. Energy Balance

- 2.5.1. It is submitted that energy availability for FY 2022-23 has been computed based on the actual Power purchase and sales as per the annual accounts for FY 2022-23.
- 2.5.2. JBVNL would like to submit that power purchased from various sources has been segregated into different heads, while calculating the energy balance for the control period. The various sources are listed below:
- Power Purchase from Outside JSEB Boundary – i.e. Power sourced from NTPC, NHPC, PTC, APNRL, part of TVNL, SECI
 - Energy Input Directly to State Transmission System - Input of power from TVNL through TVNL-PTPS directly to State Transmission System
 - State-owned Generation- SHPS, and Inland Power
 - Direct Input of Energy to Distribution System- DVC and Solar IPPs.
- 2.5.3. It is submitted that the Petitioner has computed the energy available for sale as the addition between net energy sent to distribution system and direct input of energy to distribution system.
- 2.5.4. Based on the information provided above, Energy Balance of JBVNL for FY 2022-23 is provided in the Table below:

Table 2-4: Energy Balance for JBVNL for FY 2022-23

Particulars	2022-23
	Claimed
Power Purchase from Outside JSEB Boundary (MU)	8213.46
Loss in External System (%)	3.00%
Loss in External System (MU)	246.40
Net Outside Power Available (MU)	7967.05
Energy Input Directly to State Transmission System (MU)	376.36
State-owned Generation (MU)	2072.14
Energy Available for Onward Transmission (MU)	10415.55
Transmission Loss (%)	8.46%
Transmission Loss (MU)	880.77
Net Energy Sent to Distribution System (MU)	9534.8
Direct Input of Energy to Distribution System (MU)	3806.5
Total Energy Available for Sales (MU)	13341

Particulars	2022-23
	Claimed
Energy Billed (MU)	9301.3
Distribution Loss	30.28%

- 2.5.5. JBVNL would like to submit that it has calculated transmission losses (Both inter and intra State) by subtracting total input energy received at 33 kV from total energy purchased from various power plants. JBVNL thereafter considers Inter-State Transmission Losses at 3% of all power purchase from external sources considering Point of Connection (PoC) withdrawal losses for Jharkhand and PoC injection losses of various power plants with which it has PPA. The loss calculation of 3% is based on average interstate loss calculation as approved by the Hon'ble Commission. Thereafter, JBVNL calculates net energy sent to distribution system through JUSNL network by reading through feeder meters, thus, calculating the intrastate transmission loss that comes out to be 8.27%. The loss in the JUSNL system could have been improved through proper monitoring and overall improvement in O&M of transmission system by the state transmission system.
- 2.5.6. The Actual Distribution loss for FY 2022-23 is coming to be 30.28%. The Petitioner prays to the Hon'ble Commission to allow the Distribution loss of 30.28% for FY 2022-23.

2.6. Intra-State Transmission Charges

- 2.6.1. The actual Intra-state transmission charges payable to JUSNL for FY 2022-23 are provided in the Table below for kind consideration of Hon'ble Commission:

Table 2-3: Intra-state transmission charges of JBVNL for FY 2022-23

Particulars	Unit	Claimed
Transmission Charges	Rs. Crore	257.12

2.7. Operation and Maintenance Expenses

- 2.7.1. Operation and Maintenance Expenses (O&M expenses) comprises of Employee Expenses, Repair & Maintenance Expenses and Administrative & General Expenses.

Employee Expenses

- 2.7.2. Total Employee expenses comprise of Employee Cost (salaries, dearness allowance, bonus, leave encashment and staff welfare expenses) and terminal benefits in the form of pension & gratuity.
- 2.7.3. The employee cost for FY 2022-23 based on the audited annual accounts of FY 2022-23 is provided in the Table 2.6 for kind consideration of Hon'ble Commission.
- 2.7.4. The abnormal increase in terminal benefits expense is due to the actuarial valuation done for the F.Y. 20218-19 to 2022-23. The detailed impact of all the previous year Actuarial valuations have been dealt in the true up for FY 2022-23 and subsequent year. The Govt. of

Jharkhand notified Old Pension Scheme (OPS) vide notification no 181 dt. 30.01.2023. Under the OPS Scheme, the employees under NPS Scheme who had joined after 01.01.2004, switched to OPS. The same was considered in the Actuarial Valuation Report of the F.Y. 2022-23 and the effect of the same was given to the future obligation of Pension. This has resulted in the significant increase in the provisions of the Pension contribution amount during the year. The contributions made by the company against NPS for such period has been considered as receivable and adjusted against the future obligation in the Actuarial Report of the F.Y. 2022-23. Such increase in the provisions has significantly increased the employee cost for the current year as against the previous year.

Table 2-4: Employee cost of JBVNL for FY 2022-23

Particular	claimed
Employee Cost Inc. Terminal Benefits (Rs. Crore)	470.25
Employee Expenses (Rs. Crore)	252.14
Terminal Benefit (Rs. Crore)	218.11

Repairs & Maintenance Expenses (R&M)

2.7.5. The R&M expenses for FY 2022-23 as per the audited annual accounts of FY 2022-23 is provided in the Table below for kind consideration of Hon'ble Commission:

Table 2-5: Repair and Maintenance expense of JBVNL for FY 2022-23

Particulars	claimed
R&M Expenses (Rs. Crore)	266.55

2.7.6. Therefore, it is prayed that the Hon'ble Commission may kindly approve the actual R&M expenses, as per the annual accounts of FY 2022-23.

Administrative and General Expense (A&G)

2.7.7. The A&G expenses for FY 2022-23 as per the audited annual accounts of FY 2022-23 is provided in the Table below for kind consideration of Hon'ble Commission.

Table 2-6: A&G Expenses of JBVNL FY 2022-23

Particulars	claimed
A&G Expenses (Rs. Crore)	114.12

2.8. Capital Expenditure Schedule

2.8.1. The actual capex for FY 2022-23 as per JBVNL audited annual accounts of FY 2022-23 is detailed in the Table below:

Table 2-7: Actual Capital work in progress of JBVNL for FY 2022-23 (Rs. Crore)

Particulars	Claimed
Opening CWIP (A)	1800.59
Capex during the year (B)=(D)-(A)+(C)	706.81
Transfer to GFA (C)	1607.69
Closing CWIP (D)	899.70

- 2.8.2. The additions in GFA are created from various source of financing including Debt, Equity (D&E), Consumer Contribution and Grants (CCG) etc. The CCG has been considered based on actual, however the Debt and Equity are estimated based on norms and principles adopted by Hon'ble Commission in its earlier orders.
- 2.8.3. The CCG of JBVNL, based on the annual accounts for FY 2022-23 is provided in the Table below.

Table 2-8: Consumer contribution and grants of JBVNL for FY 2022-23

Particulars	Claimed (Rs. Crore)
CCG Opening (Based on Closing filed in True-up for FY 2021-22)	9692.29
Addition: Govt Grant	362.27
Addition: Consumer Contribution	53.38
Closing CCG	10,107.94

2.9. Calculation of Normative GFA, Loan and Equity

- 2.9.1. The Petitioner has calculated Normative GFA from Debt & Equity, Loan and Equity as per approach adopted by Hon'ble Commission in its previous Tariff Orders.
- 2.9.2. The Petitioner has bifurcated GFA and Accelerated Depreciation into component from Debt & Equity (D&E) and from CCG as per approach by Hon'ble Commission followed in previous Tariff Orders. The Petitioner has thereafter applied the normative debt-equity ratio of 70:30 on GFA out of D&E to calculate Normative Equity as per JSERC Distribution Tariff Regulation, 2020.
- 2.9.3. After netting Normative Equity from closing GFA (out of D&E), the Petitioner has deducted, accumulated depreciation pertaining to D&E component from the resultant to arrive at normative closing debt.
- 2.9.4. The calculation of Normative Debt and Equity is Tabulated below:

Table 2-9: Source of Funding of GFA for FY 2022-23 (Rs. Crore)

Particulars	Claimed (Rs. Crore)
Opening GFA (A)	19,826.37
CCG towards Opening CWIP (B)	806.95

Particulars	Claimed (Rs. Crore)
CCG towards Opening GFA (C)	8885.34
Opening GFA Less CCG (D = A- C)	10,941.02
Closing GFA (E)	10,107.94
CCG towards Closing GFA (F)	407.19
Closing GFA Out of D&E (G= E-F)	9700.75
Accumulated Depreciation (H)	6244.75
Accumulated Depreciation Out of D&E (I =H*G/E)	3418.46
Closing Normative Equity (J = G* 30%)	2910.22
Closing Normative Loan (K = G-I-J)	3372.07

2.10. Depreciation

- 2.10.1. The Petitioner has first arrived at the opening and closing GFA of FY 2022-23, created out of debt and equity (D&E), by deducting CCG portion deployed towards opening and closing GFA. The Petitioner has applied the depreciation rate, as per audited annual accounts in line with JSERC Distribution Tariff Regulation, 2020, on the average GFA and accordingly calculations are made to arrive at the total depreciation being claimed as part of the true-up exercise. The depreciation calculated by the Petitioner is provided in the Table below:

Particulars	Claimed (Rs. Crore)
Opening GFA (Less CCG) (Rs. Cr.)	10941.02
Closing GFA (Less CCG) (Rs. Cr.)	11733.31
Average GFA excluding Consumer Contributions and Grants (Rs. Cr.)	11,337.17
Depreciation Rate (%)	4.50%
Depreciation Cost (Rs. Cr.)	509.68

2.11. Interest & Finance Charges

Interest on Long Term Loan

- 2.11.1. The opening debt for FY 2022-23 has been considered equal to closing value of FY 2021-22 (True-up filed for FY 2021-22).
- 2.11.2. Closing debt for FY 2022-23 has been calculated above in above Table: 2-11 in line with the JSERC Tariff Regulations, 2020.
- 2.11.3. In line with the JSERC Tariff Regulations, 2020 repayment of loan for FY 2022-23 has been considered equal to Depreciation as calculated above.
- 2.11.4. Further, the rate of interest on long-term loan has been considered at the Base rate of SBI as applicable on April 1st (7.10%) of FY 2021-22 plus 200 basis points as per the JSERC Distribution Tariff Regulations, 2020. Interest cost thus calculated is provided in the Table below:

Table 2-10: Interest on Long term loan of JBVNL for FY 2022-23 (Rs. Crore)

Particulars	Claimed
Opening Balance	4451
Deemed Addition during the year	853.53
Deemed Repayments during the year	509.68
Closing Balance	4794.9
Average balance during the Year	4622.9
Interest Rate	9.10%
Interest Expense	420.69

2.11.5. It is requested that the Hon'ble Commission may approve the interest and finance charges as submitted by the Petitioner.

Interest on Consumer Security Deposits

2.11.6. The Interest on consumer deposit as per annual accounts for FY 2022-23 is provided in the Table below. ₹ 5897.69 Lakh (P.Y: ₹ 4152.77 Lakh) towards interest on consumer security deposits provided at SBI base rate of 7.55% as on 1st April, 2022 on the security deposits received from consumers. Average rate of interest has been used for the amount collected during the year.

Table 2-11: Interest on consumer deposit of JBVNL for FY 2022-23 (Rs. Crore)

Particulars	claimed
Interest on Consumer Security Deposit	58.97

Bank and Finance Charges

2.11.7. The Petitioner humbly submits that it has incurred Bank and Finance charges to the tune of Rs. 11 Crore as per audited annual accounts for FY 2022-23 towards expenditures like Bank charges, finance charges, etc. The Petitioner requests the Hon'ble commission to approve the same.

2.11.8. The following Table summarizes the Interest and Finance charges claimed by the Petitioner.

Table 2-12: Interest and Finance Charges for FY 2022-23 (Rs. Crore)

Particulars	Claimed
A: Interest on Long Term Loans	
Interest Expenses	420.69
B: Finance and Other Charges	
Interest on Consumer Security Deposits	58.98
Bank/ Finance Charges	11
Total Finance Charges	69.98
Total (A+B)	490.67

2.12. Interest on Working Capital

- 2.12.1. The Petitioner has calculated normative working capital requirement for FY 2022-23 in line with the JSERC Tariff Regulations, 2020.
- 2.12.2. Rate of Interest on Working Capital (IoWC) has been considered to be equal to the Base Rate of SBI as applicable on the 1st April of the respective year plus 350 Basis Points as per JSERC Distribution Tariff Regulations, 2020.
- 2.12.3. The Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below:

Table 2-13: Interest on Working Capital of JBVNL for FY 2022-23 (Rs. Crore)

Particulars	Claimed
Maintenance Spares (1% of GFA)	109.41
2 months Receivables	1634.37
Less: 1 month cost of power purchase	593.75
Less: Security Deposit from Customers	707.83
Total Working Capital requirement	442.20
Interest rate on WC	10.25%
Interest on Working Capital	45.33

2.13. Return on Equity

- 2.13.1. The Petitioner has considered the opening balance of normative equity for 2022-23 as per the closing balance for the FY 2021-22, as claimed in the filed True-up petition for FY 2021-22.
- 2.13.2. Closing equity for FY 2022-23 has been calculated using normative debt equity ratio (70:30) as calculated above in Table: 2-11, as per the provisions of JSERC Distribution Tariff Regulations, 2020.
- 2.13.3. Further, the rate of Return on Equity (RoE) is considered to be 14.50% as per the provisions of JSERC Distribution Tariff Regulations, 2020.
- 2.13.4. The return on equity is provided in the Table below for kind consideration of Hon'ble Commission:

Table 2-14: Return on Equity RoE for FY 2022-23 (Rs. Crore)

Particulars	Claimed
Opening Balance of Normative Equity	3299
Deemed Additions	220.99
Closing Balance of Normative Equity	3519.99
Average Equity	3409.49
Return on Equity (%)	14.5%
Return on Equity	494.38

2.14. Revenue from Sale of Power

- 2.14.1. The audited Annual Accounts have reported the revenue from sale of power to be Rs. 5809.41 Crore towards electricity sales. This is excluding rebates allowed to consumers. The Petitioner requests the Hon'ble Commission to approve the same.

2.15. Non- Tariff Income

- 2.15.1. The Non-Tariff Income (Other Income) of JBVNL for FY 2022-23 based on the audited annual accounts has been provided for the kind consideration of Hon'ble Commission.
- 2.15.2. However, while computing the Non-Tariff income (Other Income) of JBVNL for FY 2022-23, the financing cost for corresponding receivables has to be reduced as accrued DPS is considered as NTI. It is pertinent to mention that the Petitioner has already incurred power purchase costs on such outstanding receivables and DPS is levied as financing cost of such receivables. However, the Petitioner is allowed only 2 months of receivables in allowance of working capital. For the receivables beyond the period DPS is applicable and as DPS is considered to be additional income for the Petitioner financing cost of such receivables are allowed in line with the judgement of Hon'ble APTEL dated 12.07.2011 in case No. 142 & 147 of 2009.
- 2.15.3. The Petitioner humbly prays to the Hon'ble Commission to approve the Non-tariff income for FY 2022-23 as outlined below:

Table 2-15: Non-tariff income of JBVNL for FY 2022-23 (Rs. Crore)

Non-Tariff Income	FY 2022-23
	True-Up FY 2022-23
Interest Income from Investment in Fixed Deposits	10.29
D.P.S from Consumer	465.64
Interest on advance to Supplier/Contractor	0.07
Interest from Bank (Other than FD)	5.53
Income from Staff Welfare activities	-
Supervision Charges	5.39
Miscellaneous Receipt	10.25
Transformer Rent	6.57
Wheeling Charges / Fuel surcharge/ outside sale	167.57
Receipt from Consumers for capital works	0.00
Miscellaneous Charges from Consumers	2.18
Interest Income from Investment in Fixed Deposits	0.00
Total	673.50
Interest rate for Receivable's financing	10.25%
Corresponding Receivables against DPS	3880.30
Less: Interest on Receivables against DPS	397.73
Net NTI to be considered	275.77

2.16. Aggregate Revenue Requirement (ARR) for FY 2022-23 after Truing Up

2.16.1. The Aggregate Revenue Requirement for FY 2022-23 after truing up is summarised in the Table below:

Table 2-16: Aggregate Revenue Requirement (ARR) for FY 2022-23(Rs. Crore)

Particulars	FY 2022-23
	True-Up FY 2022-23
Total Power Purchase Expense	7691.03
<i>Power Purchase Expense</i>	7124.95
<i>Intrastate transmission charges</i>	257.12
<i>Interstate transmission Charge</i>	308.96
Operations and Maintenance Expenses	850.92
<i>Employee Expense</i>	252.14
<i>Administration & General Expense</i>	114.12
<i>Repair & Maintenance Expense</i>	266.55
<i>Terminal Liability</i>	218.11
Depreciation	509.68
Interest on Long Term Loan	420.69
Interest on Working Capital Loan	45.33
Interest on Consumer Security Deposit	58.98
Bank/ Finance Charges	11.00
Return on Equity Capital	494.38
Total Expenditure	10081.99
<i>Less: Non Tariff Income</i>	275.77
Annual Revenue Requirement	9806.22
<i>Total Revenue</i>	5809.41
Net Gap/(Surplus)	3996.80

2.16.2. It is prayed to the Hon'ble Commission that the above ARR and Revenue gap may be allowed, and impact shall be passed on to JBVNL, while approving the tariff for FY 2023-24 & FY 2024-25.

3. Annual Performance Review (APR) for FY 2023-24

3.1. Introduction

3.1.1. This chapter provides the details of elements of APR for FY 2023-24, estimated based on the provisions of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020 and actual values for six months of the financial year.

3.2. Consumption Parameters: Consumer Numbers, Connected Load and Sales

3.2.1. In order to arrive at the Consumers for the FY 2023-24, JBVNL has considered effective consumers of FY 2023-24 (actual 6 months upto September 2023) and escalated the same to arrive at the Effective Consumers at the end of FY 2023-24.

3.2.2. We have considered the active consumers for the FY 2022-23 and extrapolated with the active consumers for the FY 23-24 to have a projection of total active consumers for the year 2023-24. With these 2 years active consumers on actual basis, we have projected consumers for FY 24-25 on the basis of historical trend of such consumers for different categories.

3.2.3. Connected load for different category of consumers are also based on the actual load from FY 2022-23 and the data available with the petitioner for FY 2023-24. The six month data of FY 2023-24 are extrapolated with the number for FY 2022-23 to arrive at the estimated connected load for FY 2023-24.

3.2.4. Similar extrapolation is being used for calculation of the estimated sales for the FY 2023-24. These estimates are considered with the available trend for connected load and sales for each category of consumers and the final figures set for further calculation.

3.2.5. The Category-wise billing determinants estimates submitted by the Petitioner for FY 2023-24 is shown in the Table below:

Table 3-1: Consumption Parameters for FY 2023-24

Categories	Estimates		
	Consumers (No.)	Connected Load (kW)	Sales (MUs)
Domestic	4,631,102	4,968,034	5,523.76
Commercial/Non-Domestic	299,039	712,022	1,464.90
Public Lighting / SS	434	11,661	80.39
Industrial LT / LTIS/LTIS-D	19,947	362,821	317.83

Categories	Estimates		
	Consumers (No.)	Connected Load (kW)	Sales (MUs)
Irrigation / IAS	75,332	69,453	188.36
Industrial HT / HTS / S/ EHT	2,234	991,576	2,605.86
HTIS (RTS)	1	37,834	72.91
HTIS (MES)	7	5,020	17.99
Total	5,028,095	7,158,420	10,272

3.3. AT&C Loss

3.3.1. MOP (vide its letter 12/11(01)/2021-UR&SI-II(263835) dated 21st march 2023 has requested state commission's to revisit the loss reduction trajectory approved for their respective states and set realistic targets. Following the directions of Ministry of Power, the petitioner has filed a miscellaneous petition to consider the same loss trajectory for JBVNL. Accordingly, the petitioner has aligned itself to the loss trajectory approved under the RDSS scheme by MOP for JBVNL as below:

Table 3-2: AT&C loss (%) for FY 2023-24 to FY 2024-25

(AT&C)Loss	FY 2023-24	FY 2024-25
	Projected	Projected
JBVNL	24.00%	19.00%

3.3.2. It is requested that the Hon'ble Commission may approve the AT&C loss target for FY 2023-24 and FY 2024-25 aligning with the MOP target approved under the RDSS scheme.

3.4. Power Purchase

3.4.1. JBVNL has estimated the power purchase quantum for FY 2023-24 based on following facts and assumptions:

- **Purchase of Units during first six months of current financial year:** Power Purchase quantum has been considered as per bills raised by respective generating

companies.

- **Trend for Purchase of Units in Previous Financial Year:** Purchased units during remaining six months in current Financial Year have been estimated as per purchase ratio of the six months of previous Financial Year FY 2022-23.
- **Power Requirement in FY 2023-24:** Based on estimated Sales and Energy balance for FY 2023-24 (as detailed in below section), power requirement for FY 23-24 has been calculated.
- **Purchase through short-term sources:** No new power purchase from IEX (PTC) or UI mechanism has been estimated in remaining six months due to proper planning of power procurement in the long term. However, the petitioner would like to appraise the Hon'ble Commission to allow itself to go for short term power procurement, if any, required at the time of urgency.
- **Current status of upcoming Thermal Power Stations:** As per updates from respective stakeholders, JBVNL has considered following schedule for Date of Commercial Operation (COD) of upcoming plants in FY 2023-24.

Table 3-3: Detail of Upcoming Power Plants in FY 2023-24

Particulars	Allocated Capacity (MW)	COD	Power Purchase Cost (Rs/kWh)
New North Karnpura	150	January 2024	4.98

- Furthermore, PLF of new plants have been considered in range of 60%, as they would be under stabilization mode, just after commissioning and auxiliary losses has been considered at 6.5%.

3.4.2. JBVNL has estimated the power purchase Cost for FY 2023-24 based on following facts and assumptions:

3.4.3. **Power Purchase Cost during first six months of current financial year:** Average Power Purchase cost for first six months as per bills raised by respective generating companies, have been considered for full year estimation. No Escalation have been provided to Generating Stations over six months and actual per unit charges considered to estimate the per unit charges for the complete year. While doing so, it has been considered that the power purchases under long term PPA should not exceed beyond the allocation made to the petitioner for the year under consideration. Adjustments have been made to restrict the power purchase under the allocated capacity in unit terms. It is pertinent to mention that power purchases have been increased in summer period due to increased demand from the consumers. It has been duly considered while projecting the power purchase of the FY 2023-24.

- **Transmission and Scheduling Charges:** Actual Transmission and scheduling Charges for FY 2022-23 has been escalated by 5% to arrive at corresponding figure for

FY 2023-24.

- **Power Purchase Cost for new Plants:** Power Purchase cost of new plants (North Karnpura) have been considered at Rs 4.98 per kWh.
- **Supplementary Bills:** Supplementary bills based on actuals of FY 2023-24 has been considered.

3.4.4. Based on above facts and assumptions, source-wise estimated Power Purchase quantum and cost for FY 2023-24 is Tabulated below:

Table 3-4: Power purchase quantum and cost of JBVNL for FY 2023-24

S.N.	Name of Generating Stations	Allocation (MW)	FY 2023-24 Estimated Quantum MU)	Total Power Purchase Cost for FY 2023-24 (Rs. Cr.)	
1	NTPC	Farrakka I &II	119.35	796.89	451.79
		Farrakka III	56.71	322	185.52
		Khalagaon I	18.34	120	64.44
		Talcher	66.68	450	181.50
		Khalagaon II	10.21	70	33.89
		Barh I	84.72	211.75	138.52
		Barh II	18.97	120	74.95
		Korba	50.00	350	125.90
		Darlipalli I	151.43	950.00	365.94
		N. Karnpura	177.46	950.00	473.05
		N. Karnpura New	150.00	300	149.39
		Kanti Power	16.10	100	62.16
		Nabinagar	33.96	200	112.05
		LPSC			
	Total	953.92			
2	NHPC	Rangit	7.42	31.91	16.55
		Teesta V	48.34	254.06	83.50
		LPSC			
		Total	55.76		
3	PTC	Chukha	27.99	106.28	37.81
		Tala	116.89	195.70	67.05
		Kurichu	0.55	0.47	0.19
		Mangdechhu	9.44	55.53	29.69
		Total	154.87		
4	Total Central Sector	1164.54			
5	DVC	KTPS (OA)	600	3877	1955.19
		Standby	-	105.32	51.41

		Power			
		UI (Deviation)	-	-169.17	-44.89
		Trans. Charge	-	0	38.27
		HT Points	8	0.1	1.22
		Total	608		
6	TTPS, Tenughat		420	1762.44	725.82
7	UI Payable (Deviation)			1320.58	302.43
8	Reactive Energy Charge				2.29
8	APNRL	Unit I	122.8	378.39	140.32
		Unit II		378.39	141.05
		66 MW	66	406.57	151.14
		ERLDC APNRL			19.96
		Adjustment			0.00
		Total	189		
9	SOLAR	SECI (Tranche-I)	450	788.40	316.99
		SECI (MNRE-II)	10	15.86	9.81
		State IPPs (MNRE-I)	16	19.27	34.02
		Total	476		
10	Wind	PTC	200	500	197.05
		SECI	100	240	80.37
		Total	300		
11	Inland Power Ltd.		63	372.08	205.25
12	IEX/ PXIL	Purchase	-	634.84	469.14
		Sell	-	-356.40	-119.53
13	Total Purchase		3220.39		
14	SRHPS (Generation)		130	38.59	27.73
15	Grand Total		3350.39		
16	UI Receivable		-	-1216.75	-115.93
17	SER-DSM		-		
18	Trans. Charge	PGCIL	-		323.02
		Posoco (ERLDC)	-		1.39
		JUSNL	-		269.98
19	Net Unit		-	14680.06	7905.00

3.4.5. Total power purchase claimed (including transmission charges) for the year FY 2023-24 is expected to be Rs. 7905 crores. JBVNL prays to the Hon'ble Commission to approve the

power purchase quantum as summarized in the table above and approve the power purchase cost accordingly.

3.5. Renewable Purchase Obligation

- 3.5.1. JBVNL has tied up with SECI for 700 MW of Solar power with SECI, out of which JBVNL is receiving 450 MW of solar power and 250 MW is under pipeline. Similarly, cumulative 500 MW of wind power has been tied up with SECI and PTC, out of which, JBVNL is receiving 200 MW of wind power and 100 MW of wind power is under pipeline.
- 3.5.2. In addition to above, JREDA is installing rooftop solar system in the state in following manner as -
- Rooftop installation work with JREDA is under progress in MNRE subsidy scheme for domestic consumers. The installation work has started from year 2019 and targeted for 1 MW rooftop installation every year. Till date 0.5 MW rooftop has been installed.
 - For consumers other than domestic consumers, installation of rooftop solar work is under progress under JSERC “Rooftop Solar PV Grid Interactive Systems and Net /Gross Metering Regulations”, 2015. The installation is targeted to cover 2 to 3 MW every year.
 - Other than above, JREDA is installing cumulative 3 MW of rooftop solar in 4 airports in Jharkhand.
 - Rooftop solar system of cumulative capacity of 40182 kW in government building has been installed till date and 9680 KW rooftop solar installation on Govt. Building is under progress and expected in to be completed till 2024.
 - 2 MW of rooftop solar has been installed at the new building of state High Court, 400 kW rooftop has been installed on new building of Vidhan Sabha and 400 kW rooftop has been installed in sadar hospital by JREDA in year 2023.
- 3.5.3. In addition to above, 1.6 MW Solar Park is under installation in Giridih town city and expected to be commissioned in year 2024.
- 3.5.4. Also, in Jharkhand Solar Policy 2022, Government of Jharkhand has set target of 4000 MW till FY 2026-27 of solar power in State and JREDA has been made as nodal agency to run various programmes like, Implementation of Solar Park, Canal Top Solar, Floating Solar, etc from 2022-23 to 2026-27. From above mentioned programme, JBVNL will procure power from Solar Power Plant without competitive bidding upto 5 MW.
- 3.5.5. Under the said programme, floating solar plant of 100 MW on Getalsud Dam has been planned with SECI. The PPA with SECI has been approved by the Commission. Under PM Kusum Yojana 30 MW of solar installation has been targeted till 2025-26.
- 3.5.6. Also, JBVNL implemented Mini grid in villages. Under DDUGJY scheme 216 villages, and 37 villages (16+21) has been tendered in State Funded Scheme for implementation of mini grid system in the State. Renewable Purchase Obligation estimated for FY 2023-24 has been mentioned as below –

Renewable Purchase Obligation for FY 2023-24

Particular	FY 2023-24
Gross Power Procured (MU)	14680.06
Net Power Procured (MU)	14680.06
less: Large Hydro Power procured (MU)	682.55
Power procured considered for RPO (MU)	13997.52
Solar Target in (%)	12.50%
Non-Solar target in (%)	12.50%
Solar Target in (MU)	1,749.69
Non-Solar target in (MU)	1,749.69
Total Targeted RPO (MU)	3,499.38
Solar Power Procured (MU)	823.53
Non-Solar Power Procured (MU)	740.00
Total	1563.53

3.6. Energy Balance

3.6.1. JBVNL would like to submit that power purchased from various sources for FY 2023-24 has been segregated into different heads, while calculating the energy balance for the control period.

- Power Purchase from Outside JSEB Boundary- Power sourced from NTPC, NHPC, PTC, APNRL, part of TVNL, , SECI and RE (Wind)
- Energy Input Directly to State Transmission System- Input of power from TVNL directly to State Transmission System
- Energy Input through Renewables sources- Input from Solar IPPs selected through JREDA
- State-owned Generation- PTPS, SHPS, and Inland Power
- Direct Input of Energy to Distribution System- DVC and Solar IPPs.

3.6.2. JBVNL would like to submit that it has calculated transmission losses (Both inter and intra State based on actual transmission losses for FY 2022-23, by subtracting total input energy received at 33 kV from total energy purchased from various power plants. JBVNL thereafter considers Inter-State Transmission Losses at 3% of all power purchase from external sources considering Point of Connection (PoC) withdrawal losses for Jharkhand and PoC injection losses of various power plants with which it has PPA. Thereafter, JBVNL segregates Intra-State Transmission Loss by subtracting Inter-State Transmission losses from total Transmission losses. JBVNL has considered the intra state transmission loss at the same level for the FY 2022-23 for estimation of FY 2023-24.

- 3.6.3. Based on the information provided above, Energy Balance of JBVNL for 2023-24 is provided in the Table below:

Table 3-5: Energy balance of JBVNL estimated for FY 2023-24 (in MU)

Particulars	2023-24
	Estimated
Power Purchase from Inter State Transmission System (MU)	9087.37
Loss in External System (%)	3.00%
Loss in External System (MU)	272.02
Net Outside Power Available (MU)	8814.75
Energy Input Directly to State Transmission System (MU)	372.08
State-owned Generation (MU)	1388.14
Energy Available for Onward Transmission	10574.96
Transmission Loss (%)	8.46%
Transmission Loss (MU)	894.25
Net Energy Sent to Distribution System (MU)	9680.72
Direct Input of Energy to Distribution System (MU)	3832.48
Total Energy Available for Sales (MU)	13513.20

3.7. Intra-State Transmission Charges

- 3.7.1. It is submitted that transmission charges payable to JUSNL have been computed based on the Actual Transmission Charges for FY 2022-23, which has been escalated by 5% to arrive at corresponding figure for FY 2023-24.
- 3.7.2. The estimated Intra-state transmission charges payable to JUSNL for FY 2023-24 is provided in the Table below:

Table 3-6: Intra-state transmission charges of JBVNL for FY 2023-24

Particulars	FY 2023-24
	Estimated
Transmission Charges (Rs Cr.)	269.98

3.6 Operation and Maintenance Expenses

- 3.7.3. Operation and Maintenance Expenses (O&M expenses) comprises of Employee Expenses, Repair & Maintenance Expenses and Administrative & General Expenses.

Employee Expenses

- 3.7.4. The Petitioner has calculated the employee cost for FY 2023-24 by escalating the employee cost of FY 2022-23 as submitted above in Chapter for audited True-Up for FY 2022-23 by the inflation factor of 3.10 % and the methodology provided under Clause 10.6 (b) and (c) of JSERC MYT Regulations, 2020.
- 3.7.5. The projected employee cost for FY 2023-24 is provided in the table below for kind consideration of Hon'ble Commission.

Table 3-7: Employee Expenses of JBVNL for FY 2023-24 (Rs. Crore)

SI No.	Particular	Estimated
A	Total Employee Expense	484.84
B	Employee Expense	259.97
C	Terminal Benefits	224.87

Repairs & Maintenance Expenses (R&M)

- 3.7.6. In line with the Regulation 10.6 (a) of JSERC MYT Regulations 2020, the R&M expenses for FY 2023-24 have been estimated by applying K-factor of 1.34% computed based on audited account data of FY 2022-23. Further the Petitioner has considered Indexation Factor of 3.10% as per Regulation 10.6 (a) of JSERC MYT Regulations 2020 for projecting Repair & Maintenance Expenditure in next Control Period.
- 3.7.7. The R&M expenses for FY 2023-24 is provided in the table below for kind consideration of Hon'ble Commission.

Table 3-8: R&M Expenses of JBVNL for FY 2023-24 (Rs. Crore)

S. No.	Particulars	Estimated
1	R&M Expenses	288.16

Administrative and General Expense (A&G)

- 3.7.8. In line with the Clause 10.6 (b) and (c) of JSERC MYT Regulations 2020, the A&G expenses for FY 2022-23 has been calculated by escalating A&G expense of FY 2021-22 by inflation factor of 3.10%.
- 3.7.9. The A&G expenses for FY 2023-24 is provided in the table below for kind consideration of Hon'ble Commission.

Table 3-9: A&G Expenses of JBVNL for FY 2023-24 (Rs. Crore)

Sr. No.	Particulars	Estimated
1	A&G Expenses	117.66

3.8. Calculation of Normative GFA, Loan and Equity

- 3.8.1. The Petitioner has calculated Normative GFA, Debt and Equity as per approach adopted by Hon'ble Commission in its previous Tariff Orders.
- 3.8.2. The Petitioner has first arrived at the opening and closing GFA, created out of D&E, by deducting the CC&G portion deployed towards opening and closing GFA. The Petitioner has applied the depreciation rate as approved by the Hon'ble Commission on the average GFA calculated as per Regulation 10.39 of JSERC Distribution Tariff Regulations, 2020 to arrive at the total depreciation.
- 3.8.3. After calculating the closing GFA out of D&E, the petitioner has deducted accumulated depreciation out of D&E and normative equity calculated at 30% of Closing GFA out of D&E from the resultant to arrive at normative closing debt.
- 3.8.4. Calculation of Normative GFA out of Debt and Equity, Loan and Equity is Tabulated below:

Table 3-10: Capital Investment in FY 2023-24 (Rs. Crore)

Particulars	Derivation	Estimates
Closing GFA	A	22865.39
CCG towards closing GFA	B	9957.37
Closing GFA Out of D&E	C=A-B	12908.02
Accumulated Depreciation	D	6798.64
Accumulated Depreciation towards GFA out of D&E	E	3837.98
Closing Normative Equity	F= C*30%	3872.40
Closing Normative Loan	G= C-E-F	5197.63

3.9. Scheme-wise Capital Expenditure

- 3.9.1. The Capital expenditure schedule for FY 2023-24 is detailed in the present section. A brief discussion regarding the expected expenditure is also provided for consideration of Hon'ble Commission:

Table 3-11: Estimated Scheme wise Capital Investment in FY 2023-24 (Rs. Crore)

Scheme Name	FY 2023-24
	Estimated (Rs Cr)
Revamped Distribution Sector Scheme (RDSS)	244.75
<i>Consumer Metering</i>	-
<i>Energy Accounting (DT Metering)</i>	3.47
<i>Energy Accounting (Feeder Metering)</i>	0.94
<i>Loss Reduction</i>	235.20

<i>PMA</i>	<i>5.14</i>
Consumer contribution	200.00
Annual Development Plan	577.00
JSBAY (RE and Urban)	212.50
Jharkhand Power System Improvement Project (JPSIP)	<i>90.00</i>
<i>Smart metering in Ranchi</i>	<i>40.00</i>
<i>It Hardware and software upgradation</i>	<i>3.00</i>
<i>Software for Power Management</i>	<i>2.50</i>
<i>IT project Management</i>	<i>4.00</i>
<i>Business Process Upgradation</i>	<i>3.00</i>
<i>Upgradation of training centre</i>	<i>70.00</i>
<i>Energy Accounting (Ranchi and Jamshedpur)</i>	45.00
Smart Metering Dhanbad	244.75
Total	1279.25

Brief overview of Schemes undertaken in Jharkhand

- 3.9.2. **Revamped Distribution Sector Scheme:** The introduction of Revamped Distribution Sector Scheme by MoP aims to curb down the overall AT&C losses of utilities. The JBVNL has opted the Revamped scheme and all the major works of the Discom will now come under this scheme. The Revamped scheme is under process, and it will be the major scheme to be implemented by the petitioner. The Scheme aims to reduce the Aggregate Technical & Commercial (AT&C) losses to pan-India levels of 12-15% and Average Cost of Supply (ACS)-Average Revenue Realised (ARR) gap to zero by 2024-25. The Scheme has two major components: Part 'A' – Financial support for Prepaid Smart Metering & System Metering and upgradation of the Distribution Infrastructure and Part 'B' – Training & Capacity Building and other Enabling & Supporting Activities. Financial assistance to DISCOMs is provided for upgradation of the Distribution Infrastructure and for Prepaid Smart Consumer Metering & System Metering based on meeting pre-qualifying criteria and achieving basic minimum benchmark in reforms.
- 3.9.3. **Annual Development Plan (ADP):** The budget for Annual Development plan is prepared every year by the Sub-Transmission and Distribution Network (erstwhile S&D) wing of JBVNL, based on the requirements raised by the field offices. The budget generally covers the equipment or works not covered under any other State, Central or Multi-lateral scheme and mostly focused on miscellaneous infrastructure replacement and small works. To cater the load growth and the addition of new consumers in the system, the state has kept aside budget apart from centrally sponsored scheme in the form of ADP budget. The funding of Annual Development Plan is provided by State Government in form of loan.
- 3.9.4. Considering the above capital expenditure schedule for FY 2023-24, the Petitioner has projected revised CWIP and creation of GFA.

Table 3-12: Actual Capital work in progress of JBVNL for FY 2023-24

Particulars	FY 2023-24
	Estimated (Rs Cr.)
Opening CWIP	899.70
Capex during the year	1,332.63
Transfer to GFA	1,431.33
Closing CWIP	801.01

3.9.5. The CCG funding of JBVNL for FY 2023-24, based on the closing CCG funding of FY 2023-24 is provided in the Table below:

Table 3-13: Consumer Contributions and Capital Grants of JBVNL for FY 2023-24 (Rs. Crore)

Particulars	Estimated (Rs Cr)
Opening (Closing from FY 2022-23)	10,107.94
addition: Govt Grant	144.87
addition: Cons Contribution	53.38
Closing	10,306.19

3.10. Depreciation

3.10.1. The Petitioner has estimated the Depreciation for FY 2023-24 in line with the approach adopted in audited true-up for FY 2022-23.

3.10.2. The Petitioner has first arrived at the opening and closing GFA, created out of D&E, by deducting the CC&G portion deployed towards opening and closing GFA. The Petitioner has applied the depreciation rate as approved by the Hon'ble Commission on the average GFA calculated as per Regulation 10.39 of JSERC Distribution Tariff Regulations, 2020 to arrive at the total depreciation.

3.10.3. The depreciation expense for FY 2023-24 is provided below for kind consideration of Hon'ble Commission.

Table 3-14: Depreciation cost of JBVNL for FY 2023-24

Particulars	FY 2023-24
	Estimated (Rs Cr.)
Opening GFA (Less CCG)	11,733.31
Closing GFA (Less CCG)	12,908.02
Average GFA excluding Consumer Contributions and Grants (Rs. Cr.)	12,320.66
Depreciation Rate	4.50%

Particulars	FY 2023-24
	Estimated (Rs Cr.)
Depreciation Cost (Rs. Cr.)	553.89

3.11. Interest and Finance Charges

Interest on Long Term Loan

- 3.11.1. The opening debt for FY 2023-24 has been considered equal to closing value of FY 2022-23 as submitted above in chapter regarding audited True-up for FY 2022-23.
- 3.11.2. Closing debt for FY 2023-24 has been calculated in the above tables in line with the Regulation 10.22 of the JSERC Tariff Regulations, 2020.
- 3.11.3. In line with the Regulation 10.23 of the JSERC Tariff Regulations, 2020 repayment of loan for FY 2023-24 has been considered equal to Depreciation as calculated above.
- 3.11.4. Further, the rate of interest on long-term loan, has been considered as Bank Rate as on April 01 of the respective year of the Control Period plus 200 basis points as per Regulation 10.26 of the JSERC Distribution Tariff Regulations, 2020. Interest cost is provided in the Table below:

Table 3-15: Interest on long term loan of JBVNL for FY 2023-24 (Rs. Crore)

Particulars	Estimate
Opening Balance	4,794.85
Addition during the year	956.67
Repayments during the year	553.89
Closing Balance	5,197.63
Average balance during the Year	4,996.24
Interest Rate (%)	10.55%
Interest Expense	527.10

- 3.11.5. It is requested that the Hon'ble Commission may approve the interest and finance charges as submitted by the Petitioner.

Interest on Consumer Security Deposits

- 3.11.6. In order to estimate the interest on consumer security deposit for FY 2023-24, the petitioner has assumed an escalation of 5% over the accumulated consumer security of FY 2022-23 as per audited accounts.
- 3.11.7. Further, the applicable interest rate as per JSERC Supply code Regulations, 2020 has been applied to estimate the Interest on consumer deposit for FY 2021-22. The interest rate considered is the SBI Base Rate prevailing (7.95%) as claimed in the MYT petition. Interest on Consumer Security Deposit computed for FY 2022-23 is as under:

Int. on CSD	Estimated for FY 2022-23
Consumer Deposit	743.22
Interest Rate	7.95%
Interest on Consumer Security Deposit	59.09

Bank and Finance Charges

- 3.11.8. The Petitioner humbly submits that it has estimated the Bank and Finance charges for the FY 2023-24 to the tune of Rs. 11 Crore as per audited annual accounts for FY 2022-23 towards expenditures like Bank charges, finance charges, etc. The Petitioner requests the Hon'ble commission to approve the same.

3.12. Interest on Working Capital (IoWC)

Interest on Working Capital

- 3.12.1. The Petitioner has estimated the working capital requirement for FY 2023-24 in line with the Regulation 10.29 and 10.30 of the JSERC Tariff Regulations, 2020.
- 3.12.2. Rate of IoWC has been considered to be equal to the SBI MCLR (for 1 year period) prevailing as on 1 April, 2023 plus 350 Basis Points as per Regulation 10.31 of the JSERC Distribution Tariff Regulations, 2020.
- 3.12.3. It is submitted that based on the expenditure for FY 2023-24, the Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below.

Table 3-16: Interest on Working Capital for FY 2023-24 (In Rs. Crore)

Particulars	Derivation	Estimated
Maintenance Spares (1% of GFA)	A	117.33
2 months Receivables	B	1,750.36
Less: 1 month cost of power purchase	C	609.22
Less: Security Deposit from Customers	D	743.22
Total Working Capital requirement	E = A+B-C-D	515.25
Interest Rate on WC	F	11.45%
Interest on Working Capital	G = E x F	59.00

3.13. Return on Equity

- 3.13.1. The Petitioner has considered the opening balance of normative equity for FY 2023-24 as per the closing balance for the FY 2022-23 as submitted above in chapter regarding True-up for FY 2022-23.
- 3.13.2. Closing equity for FY 2023-24 has been calculated using normative debt equity ratio (70:30) as per the provisions of Regulation 10.16 of JSERC Distribution Tariff Regulations, 2020.

- 3.13.3. Further, the rate of Return on Equity (RoE) is considered to be 14.50% as per the provisions of Regulation 10.19 of JSERC Distribution Tariff Regulations, 2020.
- 3.13.4. The return on equity is provided in the Table below for kind consideration of Hon'ble Commission:

Table 3-17: Return on Equity (RoE) of JBVNL for FY 2023-24 (Rs. Crore)

Particulars	Revised Estimates
Opening Balance of Normative Equity	3,519.99
Deemed Additions	352.41
Closing Balance of Normative Equity	3,872.41
Average Equity	3,696.20
Return on Equity (%)	14.50%
Return on Equity	535.95

3.14. Revenue from Sale of Power

- 3.14.1. The Petitioner has estimated the revenue for FY 2023-24 to Rs. 7433.89 Crore.

3.15. Non-Tariff Income

- 3.15.1. The Non-Tariff Income (Other Income) of JBVNL for FY 2023-24 has been at the level of FY 2022-23 for the kind consideration of Hon'ble Commission. The Petitioner has already submitted the rationale behind the computation of NTI in Chapter regarding True-up, which is in line with the judgement of Hon'ble ATEL dated 12.07.2011 in case No. 142 & 147 of 2009.
- 3.15.2. The Petitioner humbly prays to the Hon'ble Commission to approve the Non-tariff income as outlined below:

Table 3-18: Non-Tariff income of JBVNL for FY 2023-24

Non Tariff Income	FY 2023-24 Estimate
Interest Income from Investment in Fixed Deposits	10.29
Interest on advance to Supplier/Contractor	0.07
Interest from Bank (Other than FD)	5.53
Supervision Charges	5.39
Miscellaneous Receipt	10.25
Meter Rent/Transformer rent	6.57

Wheeling Charges / Fuel surcharge/outside sale	-
Receipt from Consumers for capital works	
Miscellaneous Charges from Consumers	2.18
Total	40.29

3.16. AT&C Loss

- 3.16.1. The Petitioner would like to further reiterate that several administrative measures has been undertaken to curb the AT&C losses along with the technical measures such as increasing the metering, focusing on billing efficiency and collection efficiency improvement. It is submitted that Hon'ble Commission has approved 99% collection efficiency for FY 2023-24, which is on extremely higher side and even the most efficient State utilities in the Country are not able to achieve it.
- 3.16.2. In order to reduce the losses JBVNL has already completed 100% Feeder Metering and is in process of ensuring 100% metering of DTs and Consumers to enable energy auditing. Further, Petitioner is also taking other measures like Name and Shame Campaign, preparation of MIS for performance monitoring and management, Feeder Improvement Program for network strengthening, Physical segregation of feeders, Installation of AMR meters, providing electricity access to unconnected households, Implementation of ERP systems, Installation of AB Cables, Tying up with Bank and Post Offices, Feeder Segregation, Revenue Intelligence Cell Formation, etc. Moreover, to enhance the collection efficiency, consumers are facilitated with multiple collection avenues such as Mobile App (ezy-bzly), online payment, E-wallet (through UM), post offices, ATP machines etc. The Petitioner humbly submits that despite creating several avenues for payment of bills by the consumers, the collections have remained lower than the targets.
- 3.16.3. Further, JBVNL has migrated to a centralized Android based mobile photo spot billing (with collection facility) platform, having complete control over consumer billing database. In order to ensure 100% billing coverage, a maximum of 1200 designated consumers have been assigned to each Urja Mitra, that also acts as a JBVNL Touch-point for billing, collection and various other consumer services. In cases where the performance of UMs is not upto the benchmark, concerned GM and ESEs of the area board are empowered to hire "URJA SATHIS" to perform the billing operations. The centralized billing database and software tool has dedicated dashboards for JBVNL, agencies and UMs, for real-time progress and performance monitoring and enhancing billing and collection. To improve the billing coverage, JBVNL has recently introduced carrot and stick approach for urja mitras where there is system of awards and penalties for best and worst performing Urja Mitras.
- 3.16.4. The Petitioner is prone to difficulties of T&D losses and collection inefficiencies due to difficult terrains and large rural consumers with limited paying capacity, in overall consumer mix. Further, under Universal Supply Obligation (USO), the petitioner is obliged to provide quality power without any interruption or reduction in power supply in areas with poor collection efficiencies.
- 3.16.5. The Petitioner has aligned itself to the trajectory approved for Jharkhand under the RDSS scheme by Ministry of Power. Therefore the petitioner prays to Hon'ble Commission to consider the target of AT&C loss as per the RDSS targets for the state of Jharkhand while approving the APR for FY 2023-24.

3.17. Annual Performance Review (APR) for FY 2023-24

3.17.1. Based on the components of the ARR discussed in the above sections, the final ARR for FY 2023-24 has been provided in the Table below for kind consideration of Hon'ble Commission:

Table 3-19: Summary of Annual Performance Review (APR) for FY 2023-24 (Rs Crore)

Particulars	FY 2023-24
	APR for FY 2023-24
Total Power Purchase Expense	7905.00
<i>Power Purchase Expense</i>	7310.61
<i>Intrastate transmission charges</i>	269.98
<i>Interstate transmission Charge</i>	324.41
Operations and Maintenance Expenses	890.66
<i>Employee Expense</i>	259.97
<i>Administration & General Expense</i>	117.66
<i>Repair & Maintenance Expense</i>	288.16
<i>Terminal Liability</i>	224.87
Depreciation	553.89
Interest on Long Term Loan	527.10
Interest on Working Capital Loan	59.00
Interest on Consumer Security Deposit	59.09
Bank/ Finance Charges	11.00
Return on Equity Capital	535.95
Total Expenditure	10542.45
<i>Less: Non Tariff Income</i>	40.29
Net: Aggregate Revenue Requirement	10502.16
<i>Revenue from Intrastate sales / Sale of Power</i>	7,433.89
Net Revenue Gap/ (Surplus)	3068.27

3.17.2. The Petitioner requests to approve the Revised Estimates of the ARR claimed/ Revenue Gap for FY 2023-24 as provided in table no 3.19.

4. Aggregate Revenue Requirement (ARR) for FY 2024-25

4.1. Consumption Parameters: Consumer Numbers, Connected Load and Sales

- 4.1.1. The Petitioner while projecting the billing determinants (number of consumers, load and energy sales) for FY 2024-25, in its Petition has considered appropriate growth rates for different categories and sub-categories, considering FY 2024-25 to be a normal 'business as usual' year and the trend available for FY 2023-24.
- 4.1.2. The Petitioner, therefore, requests the Hon'ble Commission to consider the billing determinants for FY 2024-25 as per estimations submitted in this Petition, which have been arrived at by considering the actual data of FY 2022-23 and 6 month estimates for FY 2023-24.
- 4.1.3. The category wise number of consumers connected load and Energy sales projected for FY 2024-25 is done based on the estimate percentage growth rate. JBVNL has considered a growth rate of 2% for LT Domestic Consumers for the FY 2024-25 over FY 2023-24.
- 4.1.4. For projecting the Commercial consumers for the FY 2024-25, a nominal growth rate of 1 %, which has been applied on the number of consumers during FY 2023-24.
- 4.1.5. Industrial Consumers are comprised of mainly two following sub-categories. LT consumers (LTIS) - This category applied on all industrial units applying for a load of less than or equal to 100 kVA (or equivalent in terms of HP or kW). HT Consumers (HTIS) - The category applied on all consumers having contract demand above 100 kVA.
- 4.1.6. For projecting the industrial consumers for the FY 2024-25, a growth rate of 6% has been computed for LT consumers whereas, for HT consumers a growth rate of 8% has been applied on the number of consumers during FY 2023-24.
- 4.1.7. In order to arrive at the number of agricultural Consumers at the end of FY 2024-25, JBVNL has considered a nominal growth in the number of Consumers in FY 2023-24.
- 4.1.8. In order to arrive at the number of Street Light Consumers, JBVNL has kept the Consumers base at the same level of FY 2023-24.
- 4.1.9. MES- MES stands for Military Engineering Services (MES) and is having mixed load in defence cantonment and related area. JBVNL has assumed the same number of Consumers.
- 4.1.10. Railways - It is pertinent to mention that railway traction consumers have been considered to be 1 for the control period as the railway traction has been shifted from JBVNL's network and opted for purchase of power through open access only. No increase in number of railway consumers has been considered for the control period.

4.1.11. The Category-wise billing determinants by the petitioner for FY 2023-24 is shown in the Table below:

Table 4-1: Billing Determinants projected for FY 2024-25

Categories	Projection		
	Consumers (No.)	Connected Load (kW)	Sales (MUs)
Domestic	4,735,331	5,826,482	6,600.53
Commercial/Non-Domestic	302,029	508,035	1,036.36
Public Lighting / SS	434	13,831	67.76
Irrigation / IAS	75,592	67,300	180.83
Industrial LT / LTIS/LTIS-D	21,083	383,487	335.93
Industrial HT / HTS / HTSS/ EHT	2,411	1,043,776	2,743.04
HTIS (RTS/ MES)	8	42854	84.79
Total	5,136,888	7,885,766	11,049

4.1.12. The Hon'ble Commission is requested to approve the billing determinants as submitted in the above table.

4.2. Distribution Loss

4.2.1. As discussed in APR section, revised distribution loss of 19% has been projected for FY 2024-25 in accordance with RDSS targets set for the state of Jharkhand by Ministry of

Power. With the various initiatives taken by the petitioner, it aims to reduce the distribution loss under 19% for the FY 2024-25.

4.3. Power Purchase

4.3.1. JBVNL has projected the power purchase quantum for FY 2024-25 based on following facts and assumptions:

- **Power Purchase Cost projection for the financial year:** Per Unit Escalation of 5% have been provided to per unit charges of Generating Stations over FY 2023-24 to project the per unit charges for the FY 2024-25. In view of the upcoming CERC orders for central generating stations, it is expected that the cost of power generation will be increased considering the increase in cost of coal and it will be passed through in tariffs by the CERC.
- **Transmission and Scheduling Charges:** Transmission and scheduling Charges for FY 2023-24 has been escalated by 5% to arrive at corresponding figure for FY 2024-25.
- **Reduction in Units for Costlier Power Plants:** To reduce dependency in costlier power plants, the Petitioner has reduced power purchase from the costlier plants considerably.
- **Power Requirement in FY 2024-25:** Based on estimated Sales and Energy balance for FY 2024-25 (as detailed in below section), power requirement in FY 24-25 has been calculated. This also includes the demand from upcoming industries such as Jindal power at Patrattu, Tata mines and SAIL units at Noamundih.

4.3.2. The source-wise estimated Power Purchase quantum and cost for FY 2024-25 is Tabulated below:

Table 4-2: Power Purchase Quantum in MUs and cost in Rs Crore for FY 2024-25

S.N.	Name of Generating Stations	Allocation (MW)	Total Units Purchased for FY 2024-25 (MU) (Projection)	Total power purchase cost (Rs. Cr.) for FY 2024-25	
1	NTPC	Farrakka I &II	119.35	796.89	474.37
		Farrakka III	56.71	322	194.79
		Khalagaon I	18.34	126	71.042
		Talcher	66.68	450	190.57
		Khalagaon II	10.21	73.50	37.36
		Barh I	84.72	222.34	152.72
		Barh II	18.97	126	82.63
		Korba	50.00	350	132.19
		Darlipalli I	151.43	950.00	384.24

		N. Karnpura	177.46	950.00	496.70
		N. Karnpura New	150.00	300	156.85
		Kanti Power	16.10	105	68.53
		Nabinagar	33.96	210	123.53
		LPSC			0
		Total	953.92		
2	NHPC	Rangit	7.42	33.50	18.24
		Teesta V	48.34	254.06	87.67
		LPSC			
		Total	55.76		
3	PTC	Chukha	27.99	111.59	41.68
		Tala	116.89	205.48	73.92
		Kurichu	0.55	0.50	0.20
		Mangdechhu	9.44	58.31	32.73
		Total	154.87		
4	Total Central Sector		1164.54		
5	DVC	KTPS (OA)	600	3877	1888.99
		Standby Power	-	105.32	53.97
		UI (Deviation)	-	-169.17	-47.13
		Trans. Charge	-	0	0
		HT Points	8	0.06	1.28
		Total	608		
6	TTPS, Tenughat		420	1800.00	778.35
7	UI Payable (Deviation)			1320.58	317.54
8	Reactive Energy Charge				
8	APNRL	Unit I	122.8	378.38	147.34
		Unit II		378.38	148.09
		66 MW	66	406.57	158.70
		ERLDC APNRL			20.95
		Adjustment			
		Total	189		
9	SOLAR	SECI (Tranche-I)	450	788.4	217.19
		SECI (MNRE-II)	10	16.65	10.81
		State IPPs (MNRE-I)	16	20.23	37.50
		Total	476		
10	Wind	PTC	200	525	194.59
		SECI	100	252	71.97
		Total	300		
11	Inland Power Ltd.		63	390.67	226.29

12	IEX/ PXIL	Purchase	-	634.84	469.14
		Sell	-	-356.40	-119.53
13	Total Purchase		3220.39		
14	SRHPS (Generation)		130	40.51	30.57
15	Grand Total		3350.39		
16	UI Receivable		-	-1216.75	
17	SER-DSM		-		
18	Trans. Charge	PGCIL	-		339.16
		Posoco (ERLDC)	-		1.46
		JUSNL	-		283.47
19	Net Unit		-	14837.50	8050.81

4.3.3. JBVNL prays to the Hon'ble Commission to approve the power purchase quantum as summarized in the table above and approve the power purchase cost accordingly.

4.4. Renewable Purchase Obligation

4.4.1. As per JSERC (Renewable Purchase Obligation and its compliance) first amendment regulations 2021 clause no 10, obligated entities are mandated to purchase electricity from renewable sources upto FY 2023-24. There are no targets specified for FY24-25. However, JBVNL is committed to sustainable development with a focus on renewable energy purchase and development in association with JREDA. Hence, its purchase from Renewable energy sources remain intact and it would endeavour to purchase more power from renewable energy sources in future.

4.4.2. The estimated power purchase from RE for JBVNL would be as follows:

Particular	Projection for Renewable purchase for FY 2024-25
Gross Power Procured (MU)	14837.50
Net Power Procured (MU)	14837.50
less: Large Hydro Power procured (MU)	702.04
Power procured excluding large hydro (MU)	14135.46
Solar Target in (%)	0.00%
Non-Solar target in (%)	0.00%
Solar Target in (MU)	0.00
Non-Solar target in (MU)	0.00
Total Targeted RPO (MU)	0.00

Solar Power Procured (MU)	825.29
Non-Solar Power Procured (MU)	777.00
Total	1602.29

4.5. Energy Balance

- 4.5.1. Considering the energy available, energy sales and T&D loss projections discussed in previous sections, JBVNL has worked out the Energy Balance for the FY 2024-15. For the purpose of power purchase, the above available allocated capacity of various central generating stations and own generating stations has been considered.
- 4.5.2. JBVNL would like to submit that power purchased from various sources has been segregated into different heads, while calculating the energy balance for the control period.
- Power Purchase from Outside JSEB Boundary- sourced from NTPC, NHPC, PTC, APNRL, part of TVNL, SECI and RE (Wind)
 - Energy Input Directly to State Transmission System- Input of power from TVNL directly to State Transmission System
 - Energy Input through Renewables sources- Input from Solar IPPs selected through JREDA
 - State-owned Generation- PTPS, SHPS, and Inland Power
 - Direct Input of Energy to Distribution System- DVC and Solar IPPs.
- 4.5.3. JBVNL would like to submit that it has calculated transmission losses (Both inter and intra State based on actual transmission losses for FY 2022-23, by subtracting total input energy received at 33 kV from total energy purchased from various power plants. JBVNL thereafter considers Inter-State Transmission Losses at 3% of all power purchase from external sources considering Point of Connection (PoC) withdrawal losses for Jharkhand and PoC injection losses of various power plants with which it has PPA. Thereafter, JBVNL segregates Intra-State Transmission Loss by subtracting Inter-State Transmission losses from total Transmission losses. JBVNL has estimated intra state transmission loss at the same level for FY 2022-23 (i.e) at 8.46% for arriving at the sales figure for FY 2024-25.
- 4.5.4. Based on the information provided above, Energy Balance of JBVNL for 2024-25 is provided in the Table below:

Table 4-3: Energy Balance for FY 2023-24

Particulars	FY 2023-24
Power Purchase from Outside JSEB Boundary (MU)	9185.74
Loss in External System (%)	3.00%
Loss in External System (MU)	275.57
Net Outside Power Available (MU)	8910.17
Energy Input Directly to State Transmission System (MU)	390.68
State-owned Generation (MU)	1427.63
Energy Available for Onward Transmission (MU)	10728.48
Transmission Loss (%)	8.46%
Transmission Loss (MU)	907.23
Net Energy Sent to Distribution System (MU)	9821.26
Direct Input of Energy to Distribution System (MU)	3833.44
Energy Available for Sale	13654.70

4.6. Intra-State Transmission Charges

- 4.6.1. It is submitted that transmission charges payable to JUSNL have been computed based on the Transmission Charges for FY 2023-24, which has been escalated by 5% to arrive at corresponding figure for FY 2024-25.
- 4.6.2. The estimated Intra-state transmission charges payable to JUSNL for FY 2024-25 is provided in the Table below:

Table 4-4: Intra-state transmission charges of JBVNL

Particular	FY 2024-25
Transmission Charge (Rs. Crore)	283.48

4.7. Operation and Maintenance Expenses

- 4.7.1. Operation and Maintenance Expenses (O&M expenses) comprises of Employee Expenses, Repair & Maintenance Expenses and Administrative & General Expenses.

Employee Expenses

- 4.7.2. The Petitioner has calculated the employee cost for FY 2024-25 by escalating the employee cost of FY 2023-24 as submitted above in Chapter of APR for FY 2023-24 by the inflation factor of 3.10% and the methodology provided under Clause 10.6 (b) and (c) of JSERC MYT Regulations, 2020.

- 4.7.3. The projected employee cost for FY 2024-25 is provided in the Table below for kind consideration of Hon'ble Commission.

Table 4-5: Employee Expenses of JBVNL for FY 2024-25 (Rs. Crore)

Sl No.	Particular	Projected
A	Employee Expenses after escalation	268.03
B	Terminal Benefits	231.85
C	Total Employee Expenses	499.88

Repair & Maintenance Expenses (R&M Expenses)

- 4.7.4. In line with the Regulation 10.6 (a) of JSERC MYT Regulations 2020, the R&M expenses for FY 2024-25 has been estimated by applying K-factor of 1.49% computed on actual details of FY 2021-22. Further the Petitioner has considered Indexation Factor of 3.10% as per Regulation 10.6 (a) of JSERC MYT Regulations 2020 for projecting Repair & Maintenance Expenditure.

- 4.7.5. The R&M expenses for FY 2024-25 is provided in the Table below for kind consideration of Hon'ble Commission.

Table 4-6: R&M Expenses for FY 2024-25 (Rs. Crore)

S. No.	Particulars	Projected
1	R&M Expenses	307.40

Administrative & General Expenses (A&G)

- 4.7.6. In line with the Clause 10.6 (b) and (c) of JSERC MYT Regulations 2020, the A&G expenses for FY 2024-25 has been calculated by escalating A&G expense of FY 2023-24 by inflation factor of 3.10%.

- 4.7.7. The A&G expenses for FY 2024-25 is provided in the Table below for kind consideration of Hon'ble Commission.

Table 4-7: A&G Expenses for FY 2024-25 (Rs. Crore)

Sr. No.	Particulars	Projected
1	A&G Expenses for FY 24-25	121.31
2	A&G Expenses	121.31

4.8. Calculation of Normative GFA, Loan and Equity

- 4.8.1. The Petitioner has calculated Normative GFA, Debt and Equity as per approach adopted by Hon'ble Commission in its previous Tariff Orders.
- 4.8.2. The Petitioner has first arrived at the opening and closing GFA, created out of D&E, by deducting the CC&G (Consumer Contribution and Grant) portion deployed towards opening and closing GFA. The Petitioner has applied the depreciation rate as approved by the Hon'ble Commission on the average GFA calculated as per Regulation 10.39 of JSERC Distribution Tariff Regulations, 2020 to arrive at the total depreciation.
- 4.8.3. After calculating the closing GFA out of D&E, the petitioner has deducted accumulated depreciation out of D&E and normative equity calculated at 30% of Closing GFA out of D&E from the resultant to arrive at normative closing debt.
- 4.8.4. Calculation of Normative GFA out of Debt and Equity, Loan and Equity is Tabulated below:

Table 4-8: Capital Investment in FY 2023-24 (Rs. Crore)

Particulars	Derivation	Estimates
Closing GFA	A	25,051.00
CCG towards closing GFA	B	10,863.13
Closing GFA Out of D&E	C=A-B	14187.87
Accumulated Depreciation	D	7,407.71
Accumulated Depreciation towards GFA out of D&E	E	4,195.43
Closing Normative Equity	F= C*30%	4256.36
Closing Normative Loan	G= C-E-F	5736.08

4.9. Scheme-wise Capital Expenditure

- 4.9.1. The Capital expenditure schedule for FY 2024-25 is detailed in the present section. A brief discussion regarding the expected expenditure is also provided for consideration of Hon'ble Commission:

Table 4-9: Estimated Scheme wise Capital Investment in FY 2024-25(Rs. Crore)

	ARR for FY 2024-25
Revamped Distribution Sector Scheme (RDSS)	1,806.72
<i>Consumer Metering</i>	<i>98.86</i>
<i>Energy Accounting (DT Metering)</i>	<i>11.39</i>
<i>Energy Accounting (Feeder Metering)</i>	<i>1.03</i>
<i>Loss Reduction</i>	<i>1,680.02</i>
<i>PMA</i>	<i>15.42</i>

Annual Development Plan (ADP)	562.00
JSBAY -RE and Urban	
Jharkhand Power System Improvement Project (JPSIP)	157.62
<i>Smart Metering in Ranchi</i>	61.00
<i>IT Hardware and software Upgradation</i>	25.00
<i>Software for Power Management</i>	3.00
<i>IT Project Management</i>	1.50
<i>Business Process Upgradation</i>	2.00
<i>Upgradation of Training Centre</i>	0.50
<i>Energy Accounting (Ranchi and Jamdeshpur)</i>	64.62
Smart metering Dhanbad	28.00
Total	2,554.34

Brief overview of Schemes undertaken in Jharkhand

- 4.9.2. **Revamped Distribution Sector Scheme:** The introduction of Revamped Distribution Sector Scheme by MoP which aims to curb down the AT&C losses. The JBVNL has opted the Revamped scheme and all the majority works of the Discom will now come under this scheme. The Revamped scheme is under process for the petitioner. Thus, in view of the above, the licensee is estimating the limited capital expenditure details which have clarity till date. The Scheme aims to reduce the Aggregate Technical & Commercial (AT&C) losses to pan-India levels of 12-15% and Average Cost of Supply (ACS)-Average Revenue Realised (ARR) gap to zero by 2024-25. The Scheme has two major components: Part 'A' – Financial support for Prepaid Smart Metering & System Metering and upgradation of the Distribution Infrastructure and Part 'B' – Training & Capacity Building and other Enabling & Supporting Activities. Financial assistance to DISCOMs is provided for upgradation of the Distribution Infrastructure and for Prepaid Smart Consumer Metering & System Metering based on meeting pre-qualifying criteria and achieving basic minimum benchmark in reforms.
- 4.9.3. **Annual Development Plan (ADP):** The budget for Annual Development plan is prepared every year by the Sub-Transmission and Distribution Network (erstwhile S&D) wing of JBVNL, based on the requirements raised by the field offices. The budget generally covers the equipment or works not covered under any other State, Central or Multi-lateral scheme and mostly focused on miscellaneous infrastructure replacement and small works. To cater the load growth and the addition of new consumers in the system, the state has kept aside budget apart from centrally sponsored scheme in the form of ADP budget. The funding of Annual Development Plan is provided by State Government in form of loan.
- 4.9.4. Considering the above capital expenditure schedule for FY 2024-25, the Petitioner has projected revised CWIP and creation of GFA.

Table 4-10: Actual Capital work in progress of JBVNL for FY 2024-25

Particulars	FY 2024-25
	Estimated (Rs Cr.)
Opening CWIP	801.01
Capex during the year	2,607.73
Transfer to GFA	2,185.61
Closing CWIP	1,223.12

4.9.5. The CCG funding of JBVNL for FY 2024-25, based on the closing CCG funding of FY 2024-25 is provided in the Table below:

Table 4-11: Consumer Contributions and Capital Grants of JBVNL for FY 2024-25 (Rs. Crore)

Particulars	Estimated
Opening	10,306.19
<i>addition: Govt Grant</i>	1,033.95
<i>addition: Cons Contribution</i>	53.38
Closing	11,393.53

4.10. Depreciation

- 4.10.1. The Petitioner has proposed the Depreciation for FY 2024-25 in line with the approach adopted by the Hon'ble Commission in its Tariff orders dated 01st October'2020.
- 4.10.2. The Petitioner has first arrived at the opening and closing GFA, created out of D&E, by deducting the CC&G portion deployed towards opening and closing GFA. The Petitioner has applied the depreciation rate as approved by the Hon'ble Commission on the average GFA calculated as per Regulation 10.39 of JSERC Distribution Tariff Regulations, 2020 to arrive at the total depreciation.
- 4.10.3. The depreciation expense for FY 2024-25 is provided below for kind consideration of Hon'ble Commission.

Table 4-12: Depreciation cost of JBVNL for FY 2024-25 (In Rs Crs)

Particulars	FY 2024-25
	Projected
GFA Excl. CCG-Opening	12,908.02
GFA Excl. CCG-Closing	14,187.87
Average GFA	13,547.94
Depreciation Rate	4.50%
Depreciation	609.07

4.11. Interest and Finance Charge

- 4.11.1. The opening debt for FY 2024-25 has been considered equal to closing value of FY 2023-24 as submitted above in chapter regarding APR for FY 2023-24.
- 4.11.2. Closing debt for all financial years of FY 2024-25 in consideration has been calculated in accordance with the Regulation 10.22 of the JSERC Tariff Regulations, 2020.
- 4.11.3. In line with the Regulation 10.23 of the JSERC Tariff Regulations, 2020 repayment of loan for FY 2023-24 has been considered equal to Depreciation as calculated above.
- 4.11.4. Further, the rate of interest on long-term loan, has been considered as prevailing MCLR of SBI plus 200 basis points as per Regulation 10.26 of the JSERC Distribution Tariff Regulations, 2020. Interest cost thus calculated vis-à-vis as approved by the Hon'ble Commission is provided in the Table below.

Table 4-13: Interest on long term Loan of JBVNL for FY 2024-25

Particulars	FY 2024-25 (Rs. Crore)
Opening Loan Balance	5,197.63
Addition in loan	1,147.52
Repayment	609.07
Closing Loan Balance	5,736.08
Average Loan	5,466.85
Rate of Interest	10.55%
Interest Cost	576.75

- 4.11.5. It is requested that the Hon'ble Commission may approve the interest cost as submitted by the Petitioner.

4.12. Interest on Consumer Security Deposit

- 4.12.1. In order to estimate the interest on consumer security deposit for FY 2024-25, the petitioner has assumed an escalation of 5% over the accumulated consumer security of FY 2023-24 as submitted in above chapter regarding APR for FY 2023-24.
- 4.12.2. Further, the applicable interest rate as per JSERC Supply code Regulations, 2020 has been applied to estimate the Interest on consumer deposit for FY 2024-25. The interest rate considered is the SBI Base Rate prevailing as on date of filing Petition i.e. 7.40% p.a.

Table 4-14: Interest on consumer deposit of JBVNL for FY 2023-24

Particulars	FY 2024-25 Projected (Rs. Crore)
Consumer Deposit	780.38
Interest Rate	8.95%
Interest on Consumer Security Deposit	69.84

Bank and Finance Charges

- 4.12.3. The Petitioner humbly submits that it has estimated the Bank and Finance charges for the FY 2024-25 to the tune of Rs 11 crores as per audited annual accounts for FY 2022-23 towards expenditures like bank charges, finance charges, etc. The Petitioner requests the Hon'ble commission to approve the same.

4.13. Interest on Working Capital

- 4.13.1. The Petitioner has estimated the working capital requirement for MYT Control Period in line with the Regulation 10.29 and 10.30 of the JSERC Tariff Regulations, 2020.
- 4.13.2. Rate of IoWC has been considered to be equal to the SBI MCLR (for 1 year period) prevailing as on 30th Sep, 2020 plus 350 Basis Points as per Regulation 10.31 of the JSERC Distribution Tariff Regulations, 2020.
- 4.13.3. It is submitted that based on the estimated expenditure for FY 2024-25, the Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below:

Table 4-15: Interest on working capital of JBVNL for FY 2024-25

Particulars	FY 2024-25 (Rs. Crore)
Maintenance Spares (A)	129.08
Receivables (B)	1,809.65
Less: 1-month cost of power purchase (C)	618.89
Less: Security Deposit from Customers (D)	780.38
Total Working Capital requirement E= A+B-C-D	539.46
Interest rate on WC	11.50%
Interest on Working Capital	62.04

4.14. Return on Equity

- 4.14.1. The Petitioner has considered the opening balance of normative equity for FY 2024-25 as per the closing balance for the FY 2023-24 as submitted above in chapter regarding APR for FY 2023-24.
- 4.14.2. Closing equity in FY 2024-25 has been calculated using normative debt equity ratio (70:30) as calculated above in table above, as per the provisions of Regulation 10.16 of JSERC Distribution Tariff Regulations, 2020.
- 4.14.3. Further, the rate of Return on Equity (RoE) is considered to be 14.50% as per the provisions of Regulation 10.19 of JSERC Distribution Tariff Regulations, 2020.
- 4.14.4. The Return on Equity (RoE) for FY 2024-25 is shown below:

Table 4-16: Return on Equity (RoE) for FY 2024-25 (Rs. Crore)

Particulars	Projected
Opening Equity	3872.41
Additions during the year	383.95
Closing Equity	4,256.36
Average Equity	4,064.38
Rate of Equity	14.50%
Return on Equity	589.34

4.15. Revenue from Sale of Power at existing tariff

4.15.1. Category-wise revenue at existing tariff has been worked-out based on above assumptions and projected billing determinants are shown in the Table below:

Table 4-17: Category-wise revenue of JBVNL (Projected) for FY 2024-25 (Rs. Crore)

Category	Energy Charges	Fixed Charges	Total Revenue
Domestic (including DS HT)	3,987.90	358.12	4,346.03
NDS	634.03	87.82	721.86
SS	42.69	2.49	45.18
LTIS	264.27	51.77	316.04
IAS	90.41	3.23	93.64
HTS	1,716.94	450.91	2,167.85
HTIS (RTS)	43.75	16.34	60.09
HTIS (MES)	7.12	2.17	9.29
Total	6787.12	972.86	7759.98

4.15.2. The Revenue at existing tariff from sale of power for FY 2024-25 as projected by the Petitioner works out to be Rs. 7,759.98 Crore towards electricity sales.

4.16. Non-Tariff Income

4.16.1. The Non-Tariff Income (Other Income) of JBVNL for FY 2024-25 has been considered at the level of FY 2023-24 for the kind consideration of Hon'ble Commission. The Petitioner has already submitted the rationale behind the computation of NTI in Chapter regarding True-up, which is in line with the judgement of Hon'ble ATEL dated 12.07.2011 in case No. 142 & 147 of 2009.

4.16.2. The Petitioner humbly prays to the Hon'ble Commission to approve the Non-tariff income as outlined below:

Table 4-18: Non-Tariff income of JBVNL for FY 2024-25 (Rs. Crore)

Non-Tariff Income	FY 2024-25
Interest Income from Investment in Fixed Deposits	10.29

Non-Tariff Income	FY 2024-25
Interest on advance to Supplier/Contractor	0.07
Interest from Bank (Other than FD)	5.53
Supervision Charges	5.39
Miscellaneous Receipt	10.25
Meter Rent/Transformer rent	6.57
Wheeling Charges / Fuel surcharge	-
Receipt from Consumers for capital works	-
Miscellaneous Charges from Consumers	2.18
Total	40.29

4.16.3. Based on the components of the ARR discussed in the above sub-sections, the projected ARR for FY 2024-25 has been provided in the Table below:

Table 4-19: Projected Aggregate Revenue Requirement for FY 2024-25 (Rs Crores)

Particulars	ARR for FY 2024-25
Total Power Purchase Expense	8050.81
<i>Power Purchase Expense</i>	7426.70
<i>Intrastate transmission charges</i>	283.48
<i>Interstate transmission Charge</i>	340.63
Operations and Maintenance Expenses	928.60
<i>Employee Expense</i>	268.03
<i>Administration & General Expense</i>	121.31
<i>Repair & Maintenance Expense</i>	307.40
<i>Terminal Liability</i>	231.85
Depreciation	609.07
Interest on Long Term Loan	576.75
Interest on Working Capital Loan	62.04
Interest on Consumer Security Deposit	69.84
Bank/ Finance Charges	11.00
Return on Equity Capital	589.34
Total Expenditure	10898.22
<i>Less: Non Tariff Income</i>	40.29
Annual Revenue Requirement	10857.93
Revenue from Intrastate sales / Sale of Power	7,759.98
Net Gap/(Surplus)	3097.95

4.16.4. The Petitioner requests to approve the ARR claimed for FY 2024-25 in Table provided above.

5. Accumulated Revenue Gap

5.1.1. The Petitioner submits that accumulated Revenue Gap from True-up for FY 2022-23, APR for FY 2023-24 and ARR for FY 2024-25 is summarized without considering carrying cost is as under:

Table 5-1: Accumulated Revenue Gap without carrying cost for FY 2024-25 (Rs. Crore)

Particulars (Rs Crore)	Revenue Gap
Revenue Gap for FY 2022-23 Gap/(Surplus)	3996.80
Revenue Gap for FY 2023-24 Gap/(Surplus)	3068.27
Revenue Gap for FY 2024-25 Gap/(Surplus) at Existing Tariff	3097.95
Total Gap/(Surplus) to be recovered in FY 2024-25	10163.02

5.1.2. The Petitioner prays to the Hon'ble Commission to approve the cumulative revenue gap till FY 2024-25 as proposed by the Petitioner along with carrying cost and allow it to either recover of the same through tariff in the ensuing year or allow financing cost with recovery of the gap in future years. It is pertinent to mention that the Hon'ble Commission has approved a cumulative gap of Rs 6335.68 crores till FY2021-22 without any viable treatment of the same for the petitioner.

6. Directives

- 6.1.1. The Petitioner humbly submits that it is committed to follow and comply with the directives of the Hon'ble Commission to become a 100% regulatory compliant distribution utility. Hon'ble Commission has issued last Tariff Order on 31st May 2023. From June 2023 onwards the petitioner had tried complying with the Hon'ble Commission's order for compliance of directives. In this instant petition, the petitioner L would like to update the compliance status to the commission.

Table 6-1: Status of the Pending directives issued by JSERC in the Order dated 31st May 2023

Sl. No.	Directives (Items)	Details	Status of Compliance/ Petitioner's Reply
1	Fixed Asset Register	<p>The Commission directs the Petitioner to prepare an FAR before filing of the next petition.</p> <p>Further, the Commission directs that the Petitioner should specifically comply with observations of statutory authorities/auditors on the matter of Verification & Monitoring of Fixed Assets/CAPEX/Inventory and Maintenance of proper records preferably in digital form for observance of statutory provisions.</p> <p>The Petitioner should also put in place a robust Integrated Accounts & Financial Management System to minimize the time for preparation of Annual Accounts & filing of Petitions/Business Plans/APR's. in time.</p>	<p>The substantial amount of assets has been added post formation of the company on 06.01.2014 and such additions have been duly audited in the respective years. The company has records for the assets so added in respective years. In order to further improve, the company appointed M/s Deloitte for physical verification and preparation of Fixed Asset Register, determination of historical cost for fixed assets and providing support in migration of the asset register into SAP etc. The work has already started in the year 2023 and there is significant progress in this area.</p> <p>The preparation of FAR is an exhaustive and extensive exercise covering physical verification of all 33/11kV PSS, all 33kV feeders and on sample basis 11kV feeders and DTRs, their historical cost estimation which requires significant effort and resources.</p> <p>The consultant has commenced the physical verification of the assets and is utilizing digital tools to aid and carry out the physical verification in systematic manner. The process of comiliation of the historical cost are under preparation. It is expected that the work will be finished by March 2024.</p>
2	Segregation	According to the Regulation 6.10	It is understood that segregation of

Sl. No.	Directives (Items)	Details	Status of Compliance/ Petitioner's Reply
	into Retail & wheeling supply business of	<p>of the Tariff Regulations 2020, separate accounting has to be done for Wheeling & Retail supply of Business which has not been the case till now.</p> <p>As per Regulation 6.10 of Tariff Regulations 2020, until the accounts are not segregated, an Allocation Statement shall be prepared and submitted to apportion the costs and revenues after the approval of the Board of Directors.</p>	<p>accounts into wheeling and retail would require the drawing of Fixed Asset Register, without which 100% accuracy in such segregation may not be feasible.</p> <p>The petitioner is seriously contemplating to segregate the business into retail and wheeling of electricity after the process of FAR is completed.</p> <p>The petitioner is continuously monitoring the progress of FAR.</p>
3	Voltage Wise-Cost of Supply	<p>The Commission has noted the submissions of the Petitioner. The Petitioner is directed to submit the complete study along with all its annexures and clear methodology used for calculation of VCoS within 1 month from the date of issue of this Order.</p>	<p>JBVNL had appointed an agency for conducting Voltage-Wise Cost of Supply as per directive of Hon'ble Commission. The agency completed its study and submitted Voltage-Wise Cost of Supply for FY 17-18 which JBVNL subsequently submitted along with its last Tariff Petition for FY 23-24 by taking proportionality values for VCoS.</p> <p>JBVNL is in process of conducting a similar study for VCoS and the preparation of the scope of work and tender work is in progress. The petitioner would submit the work progress once the tender is finalized and the tender for the same is awarded.</p>
4	Employee Performance Appraisal	<p>The Commission has observed that the Petitioner's is yet to submit any report in this regard to the Commission.</p> <p>The Commission observes that the Petitioner has made some interim arrangement.</p> <p>The Commission directs the Petitioner to develop an arrangement where the quality of supply can be objectified into key performance indicators (KPI) for an area linked to respective Officers. The Petitioner must submit the compliance report within 3 months from the date of</p>	<p>The employee performance appraisal is being done internally and the parameter such as new connection request, collection target , billing target is being mapped to concerned officers. However, quality of supply parameters is very difficult to quantify and linked to respective officers.</p> <p>The petitioner is developing its internal KPI parameters to be tagged with field officers, however, quality of supply can be a part of it but KPI mapped to the concerned field officers is difficult to conceptualize and map distinctively.</p>

Sl. No.	Directives (Items)	Details	Status of Compliance/ Petitioner's Reply
		issuance of this order.	
5	Conversion of UDAY Loan into Grant/Equity	The Commission noted the Petitioner submission and again directs the Petitioner to expedite the conversion of State Government loan into grant/equity as per the agreed UDAY MoU.	The state government loan under the UDAY scheme as per agreed MOU has been converted to grant by the state government and the letter for the same has been submitted to the Hon'ble Commission. (Letter reference no : 962 dated 24 august 2023)
6	Computation of SAIDI, CAIFI and SAIFI	The Commission directs the Petitioner to submit the quarterly report on calculation of SAIDI, CAIFI and SAIFI with the details of feeders utilised for calculation of the same to the Commission and regularly update the same in its website	The computation for SAIDI, CAIFI and SAIFI quarterly report has been submitted to the Hon'ble Commission as per requirement. These parameters are progressively monitored by the petitioner and action has been taken to streamline the same and the process for regular updation of the work is under progress now.
7	Consumer Awareness Programmes	The Commission directs the Petitioner to improve the Consumer Awareness Programme to enhance awareness of the consumers about Electricity Tariffs, Standards of Performance and Other Regulations as applicable.	As per the direction of the commission, the petitioner has started the Urja Melas to aware the consumer on several issues and addressing any pending issues of the consumers. Apart from Urja Melas, the utility has been conducting various other schemes and making consumer aware through various other initiatives such as urja sambad, whatsapp groups involving local representees, campaign through papers and cartoons ads, educational videos, miking and camps etc.
8	Submission of impact analysis and requisite data along with proposal for introduction of ToD Tariff	The Commission observes that the Petitioner has not submitted impact analysis and requisite data for ToD Tariff. The Commission directs the Petitioner to submit the same at the earliest in its own interest.	On implementation of TOD tariff, an internal analysis has been done for the HT consumers and it was found that the utility will be benefited if it is being implemented. However, the feedback of the same from HT consumers are not positive and they are reluctant for implementation of the TOD tariff as of now. The report on the same is under work in progress and the same will be submitted to the Hon'ble Commission in due course of time.
9	Reduction in Fixed Charges	The Commission observes that the Petitioner has not submitted the report on implementation of the reduction in Fixed Charges. In view of the above, the Commission directs the Petitioner	Reduction of fixed charges has been provided to HT consumers. However, the same has not been extended to the LT consumers due to some operational issues with the billing software. The petitioner has been working on the Billing software

Sl. No.	Directives (Items)	Details	Status of Compliance/ Petitioner's Reply
		to implement the same and strictly comply with the directives of the Commission within 30 days from the date of issuance of this Order, without any fail.	to include the supply hours so that fixed charge can be calculated automatically and passed on to the LT consumers. Once the system is in place, the petitioner will inform the Hon'ble commission. For smart meters that is being implemented, the fixed charge reduction will be automatically calculated and passed on to the consumers after reconciliation at the end of the month.
10	Testing of Pre-Paid Meters from third party meter testing labs	The Commission directs the Petitioner to test the prepaid meters from empanelment party meter testing labs approved by the Commission before installation of prepaid meters at the consumers premises.	The prepaid meters are being tested by our MRT (Meter and Relay testing) wing that was duly approved by our own procedures. The tender for the testing is underway for 5% of the prepaid meters from the empanelment agencies of the Hon'ble commission.

7. Prayers

The Petitioner humbly prays that the Hon'ble Commission may be pleased to:

- a) Admit the True-up Petition accompanying audited True-up for FY 2022-23, APR for FY 2023-24 and ARR for FY 2024-25 in accordance with the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2020.
- b) To allow Petitioner to submit the tariff proposal for FY 2024-25 in due course of time.
- c) Allow the Petitioner to add/ change / alter / modify this application at a future date;
- d) To condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioners to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date;
- e) To pass such Orders as deemed fit and proper in the facts and circumstances of the case in the interest of justice.

8. Annexure: 1 Audited Accounts of JBVNL for FY 2022-23