Before

The Hon'ble Jharkhand State Electricity Regulatory Commission, Ranchi

Petition for True-up for FY 2018-19, Annual Performance Review for FY 2019-20 and Determination of Aggregate Revenue Requirement and Tariff for FY 2020-21

Submitted By

Jharkhand Bijli Vitran Nigam Limited (JBVNL)
Dhurwa, HEC, Ranchi

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

Filing Number: _____

Case Number: _____

IN THE MATTER OF:	Filing of Petition for approval of True-up for 2018-19, Annual Performance Review for FY 2019-20 and Determination of Aggregate Revenue Requirement and Tariff for FY 2020-21 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, 2015
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 2018-19, Annual Performance Review (APR) for FY 2019-20 and Determination of Aggregate Revenue Requirement (ARR) and Tariff for FY 2020-21 as per the Electricity Act, 2003 and as per the provisions of the regulations issued by the Hon’ble Jharkhand State Electricity Regulatory Commission (JSERC) (Terms and Conditions For Determination of Distribution Tariff) Regulations, 2015.

Jharkhand Bijli Vitran Nigam Limited

Petitioner

Ranchi

Dated:

Table of Content

List of Tables

1. Introduction and Background

Introduction

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").

1.2 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.

1.3 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.

1.4 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 year 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.

Background

1.5 The present Petition for True-up of FY 2018-19, APR for FY 2019-20 and Determination of ARR and Tariff for FY 2020-21 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) Regulation, 2015;

1.6 It is submitted that the Petitioner is committed towards improving the electricity availability in the State, while achieving the operational turnaround for a sustained business model in future and reduced dependence on the State Government finances. A slew of measures are being undertaken and activities are being carried out a considerable level to achieve the greater goal of becoming a sustainable power utility.

1.7 The petition is prepared in line with the letter sent by Energy Dept., Govt of Jharkhand vide letter no 4020 dated 20.10.17 to Hon'ble Commission which specifies that Resource Gap Funding (RGF) shall not be provided to JBVNL and upcoming Tariff fixation shall be done without considering the impact of Resource Gap funding. However, considering the significant gap between revenue required and actual realisation, there has been an accumulation of power purchase liabilities for which JBVNL has been forced to depend upon the support from the state government. Accordingly govt. Support to the tune of Rs. 1250 cr. has been received in 2018-19.

1.8 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 the inadequate tariff hike provided in previous tariff order issued on 28.02.2019, has resulted in significant gap in subsidy that can be drawn by JBVNL and subsidy earmarked in the State Govt. budget. Such an inadequate tariff hike has led to impairment in Petitioner's ability to service its liability and non-achievement of the objective of shifting from RGF mechanism to direct subsidy mechanism. Hence, it would be in the larger interest of the State and electricity consumers that a cost reflective tariff may be issued to ensure that the Petitioner is not required to rely on State Govt. support, other than consumer subsidy.

1.9 Furthermore, the Petitioner has filed Appeal No. 22 and 223 of 2018, against Hon'ble Commission Order dated 27th April, 2018 regarding consideration of loan restructured under UDAY scheme for reducing revenue gap. Furthermore, the Petitioner has also filed Review Petition before Hon'ble Commission in Case No. 06 of 2019 against Order dated 28th February, 2019 regarding True-up for FY 2016-17 & FY 2017-18, APR for FY 2018-19 and ARR & Tariff for FY 2019-20. The Petitioner has made following prayers to Hon'ble Commissions regarding the impugned Order:

1.9.1 To rectify the treatment of DVC Delayed payment surcharge of Rs 352.85 crore, along with the other incidental components of Annual Revenue Requirement of FY 2017-18.

1.9.2 To revise the depreciation allowed for the FY 2017-18, FY 2018-19 and FY 2019-20 along with the other incidental components of Annual Revenue Requirement.

1.9.3 To consider the arguments made by the petitioner and to recalculate the approved revenue gap at the end of FY 2019-20.

1.10 The above Appeal and Review Petition are still pending and therefore the Petitioner for purpose of present Petition 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 favor 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.

1.11 The following sections of the Petition presents the details of projections of Aggregate Revenue Requirement, underlying approach & methodology and rationale for proposed ARR and Tariff.

1.12 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.

2. True-up for FY 2018-19

2.1 This chapter summarizes the components of APR approved by the Hon'ble Commission in its Tariff Order dated 28th Feb '19 for FY 2018-19. The True-up for FY 2018-19 has been carried out on basis of annual accounts audited by the Statutory Auditor with consideration of:

- Clause 9.3 "Review during the Control Period" and Chapter A10:"Truing Up" of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015
- Methodology adopted by the Hon'ble Commission in previous Tariff Orders

2.2 The Petitioner hereby submits the account for FY 2018-19 audited by the Statutory Auditor (submitted in Annexure 1) for the consideration of Hon'ble Commission, based on which the True up for FY 2018-19 has been prepared.

Energy Sales

2.3 The energy sales of JBVNL for FY 2018-19 based on the accounts of FY 2018-19 audited by the Statutory Auditor is provided for the kind consideration of Hon'ble Commission. On overall basis, actual intra-state energy sales for FY 2018-19 is 11% (~1100 MU) less than the energy sales approved by the Hon'ble Commission in its tariff order dated 28th Feb'19 in APR for FY 2018-19 and 4.5% (~425 MU) less than the actual energy sales in FY 2017-18.

2.4 The reduction in actual energy sales in FY 2018-19 is majorly due to reduction in sales to domestic consumers which led to a variation of 764 Mus in actual sales and approved sales for FY 2018-19 in Order dated 28th February, 2019. The energy sales to domestic category consumers in FY 2018-19 has also reduced by 304 MUs as compared to FY 2017-18. The main reasons for reduced energy sales to domestic consumers in FY 2018-19 are as follows:

- Prior to FY 2017-18, billing of the Domestic consumers was done at Area Board/Circle Level. However, various challenges and issues were faced in billing of such consumers. Therefore, in order to induce effectiveness and accuracy in the billing process, new billing system was introduced in FY 2017-18. After introduction of Centralised billing, several billing issues were resolved and credit was given to eligible consumers due to which unaccounted energy consumed in previous years were also accounted in FY 2017-18. This led to spike in energy billed for FY 2017-18. However, since billing system stabilized in FY 2018-19, no previous such issues were faced in FY 2018-19.

Hence in comparison to FY 2017-18, there was a decrease in energy sales recorded in FY 2018-19.

- Due to ongoing electrification drive in the state, it was estimated that the number of consumers may increase to ~35.11 lakhs by end of FY 2018-19. However total domestic consumers by end of FY 2018-19 were only 34.39 lakhs. Due to less number of domestic consumers energy sales was less than anticipated (72,000 consumers would have consumed 86 MU energy considering 1200 units/consumer/year).
- Hon'ble Commission had approved energy sales for domestic category at 6209 MU for FY 2018-19 in its Tariff Order dated 28th February, 2019 which was 200 MUs greater than submitted by JBVNL in its Petition
- Lightning load form bulk of demand from domestic category. However due to efforts of Energy Efficiency Services Limited (EESL) and Discom, there was enhanced usage of energy efficient LED lamps and tubes by domestic consumers. This led to reduction in energy consumption by domestic consumers.

2.5 Additionally there was reduction in energy sales to commercial category consumers which led to a variation of approx. 133 MUs in actual sales and approved sales for FY 2018-19 in Tariff Order dated 28th February, 2019 and reduction of 43 MUs in energy sales as compared to FY 2017-18. The reduction in energy sales for commercial category consumers was also due to less number of additions in consumers than anticipated.

2.6 There was also reduction in HT Industrial sale by approx. 142 MUs as compared to estimated sales for FY 2018-19, which was mainly due to overestimation of Industrial sales by Hon'ble Commission in T.O dated 28th Feb, 2019.

2.7 The following table summarizes the consumer category-wise sales for FY 2018-19 for kind consideration of the Hon'ble Commission.

Table 1: Energy Sales (MUs) of JBVNL for FY 2018-19

Particulars	Approved (MUs)	Actuals (MUs)
Domestic	6,206.61	5,442.39
Commercial/Non Domestic	846.88	713.28
Public Lighting / SS	78.51	20.81
Irrigation / IAS	209.44	211.29
Industrial LT / LTIS/LTIS-D	218.72	221.88
Industrial HT / HTS / S/ EHT	2,623.22	2,481.08
RTS/MES	102.09	96.56
Total Intra-State Energy Sales	**10,285.46**	**9,187.28**
UI Sales	**-**	**90.27**

Particulars	Approved (MUs)	Actuals (MUs)
Total Sales	**10,285.46**	**9277.55**

Power Purchase

2.8 It is submitted that JBVNL has firm allocations of power from central allocations like NTPC, NHPC, DVC and other sources such as DVC, PTC etc. In addition to these, JBVNL has also purchased power from private stations like APNRL, Inland Power, ABCIL, Rungta Mines and some quantum from renewable sources during FY 2018-19.

2.9 The following table provides for station wise Power Purchase quantum and cost for FY 2018-19 as approved in APR vide Order dated 28.02.2019 and actual based on Accounts audited by the Statutory Auditor for FY 2018-19 of JBVNL.

Table 2: Power purchase quantum and cost for JBVNL for FY 2018-19

Particulars	Power Purchase Quantum in (MUs)		Power Purchase Cost in (Rs Cr.)	
	Approved	Actual	Approved	Actual
NTPC				
Farrakka	917.19	889.66	314.56	286.82
Farrakka III	594.69	540.96	231.96	216.04
Khalagaon I	187.42	206.21	67.6	67.05
Talcher	627.26	491.62	213.39	135.40
Khalagaon II	316.43	184.86	104.37	54.74
Barh	561.43	605.66	303.16	252.34
Korba	350.89	382.55	92.73	102.22
Total	**3,555.31**	**3,301.52**	**1,327.77**	**1,114.61**
NHPC				
Rangit	45.15	44.58	17.92	17.52
Teesta	316.95	319.88	79.9	79.25
Total	**362.1**	**364.46**	**97.82**	**96.77**
PTC				
Chukha	175.44	158.28	44.24	38.01
Tala	311.3	291.12	70.6	62.88
Total	**486.74**	**449.4**	**114.84**	**100.89**
Total Central Sector	**4,404.15**	**4,115.38**	**1,540.43**	**1,311.88**
DVC				
DVC (Koderma)	1058.26	4730.78	454.15	2073.34
DVC (Consumer)	2186.62		1,148.03	

Particulars	Power Purchase Quantum in (MUs)		Power Purchase Cost in (Rs Cr.)	
	Approved	Actual	Approved	Actual
DVC	**3244.88**	**4730.78**	**1602.18**	**2073.34**
State Sector				
SHPS	158.32	96.59	46.43	24.3
TVNL	2,830.22	1,472.25	1011.42	596.08
Total State Sector	**2988.54**	**1568.84**	**1057.85**	**620.38**
Private				
Inland Power	409.77	356.74	171.8	160.11
APNRL	914.74	884.31	386.88	443.51
APNRL Add	447.21	475.08	165.64	168.48
Total Private Sector	**1,771.72**	**1,716.13**	**724.32**	**772.10**
Other RE				
Solar IPPs-State	19.29	19.37	34.64	34.79
SECI	24.37	20.41	13.67	12.16
Wind	32.68	115.26	11.54	40.69
Total Other RE	**76.34**	**155.04**	**59.85**	**87.65**
PGCIL			144.73	140.34
Posoco (ERLDC)				1.25
UI Payable		250.23		124.29
Deviation Charges of SER		-14.56		-4.86
Railway				-0.1
Kanti Power		89.09		44.69
Rungta Mines	26.81	41.53	8.83	13.34
ABCIL	73.72	21.47	26.78	6.67
ERLDC(APNRL)				39.21
PTC (IEX) Purchase		312.66		131.26
PTC (IEX) Sale		-124.86		-49.67
Banking of Power (Unit Banked)		25.18		0.38
Banking of Power (Unit Received)		-26.54		0.13
Supplementary Bils				88.15
GBI Claim				-23.54
Rebate				-20.17
Additional REC purchase			108.16	
Grand Total	**12,586.16**	**12,860.36**	**5,273.13**	**5357.10**

2.10 Including UI sales, total power purchase for FY 2018-19 comes out to be 12,770.10 MUs. Without considering sales to inter-state consumers gross power purchase cost for FY 2018-19 comes out be Rs 5,411.74 crore.

2.11 Actual Power Purchase quantum and cost for FY 2018-19 is in line with Hon'ble Commission Order dated 28th February, 2019 in its chapter regarding APR for FY 2018-19.

2.12 JBVNL prays to the Hon'ble Commission to approve the power purchase as per the annual accounts of FY 2018-19 as summarized in the table above and approve the power purchase cost accordingly.

Energy Balance

2.13 It is submitted that energy availability for FY 2018-19 has been computed based on the actual Power purchase and sales as per the Accounts of FY 2018-19 audited by the Statutory Auditor.

2.14 JBVNL would like to submit that power purchase from various sources are segregated into different heads, while calculating the energy balance for the control period.

- Power Purchase from Outside JSEB Boundary- NTPC, NHPC, PTC, APNRL, part of TVNL, NVVNL, SECI
- Energy Input Directly to State Transmission System- Input of power from TVNL directly to State Transmission System
- State-owned Generation- PTPS, SHPS, Rungta Mines, ABCIL, Inland Power
- Direct Input of Energy to Distribution System- DVC and Solar IPPs.

2.15 It is submitted that the Petitioner has computed the energy requirement based on the below mentioned formulae:

Energy requirement = sales/ (1- Distribution loss)

2.16 Based on the information provided above, Energy Balance of JBVNL for FY 2018-19 is provided in the table below.

Table 3: Energy balance for JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved	Actual
Power Purchase from Outside JSEB Boundary	8,664.45	6,958.87
Loss in External System (%)	3.00%	3.00%
Loss in External System	259.93	208.77
Net Outside Power Available	8,404.52	6,750.11
Energy Input Directly to State Transmission System	510.29	419.74
State-owned Generation	1,205.50	641.33
Energy Available for Onward Transmission	10,120.31	7,811.17
Transmission Loss (%)	2.23%	8.29%

Particulars	FY 2018-19	
	Approved	Actual
Transmission Loss	225.68	647.44
Net Energy Sent to Distribution System	9,894.63	7,163.73
Direct Input of Energy to Distribution System	2,205.91	4,750.15
Total Energy Available for Sales	**12,100.54**	**11,913.88**

Intra-State Transmission Charges

2.17 It is submitted that in its Order dated 28th February, 2019 Hon'ble Commission approved transmission charges payable to Jharkhand Urja Sanchar Nigam Limited (JUSNL) based on Tariffs approved during FY 2018-19 and the units transmitted as per the Energy Balance approved.

2.18 The actual Intra-state transmission charges payable to JUSNL for FY 2018-19 are provided in the table below for kind consideration of Hon'ble Commission.

Table 4: Intra-state transmission charges of JBVNL for FY 2018-19

	FY 2018-19	
Particulars	Approved	Actual
Transmission Charges (Rs Cr.)	253.01	203.35

Employee Cost

2.19 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.

2.20 The employee cost for FY 2018-19 based on the accounts of FY 2018-19 audited by the Statutory Auditor is provided in the table below for kind consideration of Hon'ble Commission.

Table 5: Employee cost of JBVNL for FY 2018-19

	FY 2018-19	
Particulars	Approved (Rs Cr.)	Actual (Rs Cr.)
Employee Cost Inc. Terminal Benefits	224.44	294.14
Employee Expenses	202.35	275.39
Terminal Benefit	22.10	18.75

Administrative and General Expenses

2.21 The revised A&G expenses for FY 2018-19 as per the accounts for FY 2018-19 audited by the Statutory Auditor is provided in the table below for kind consideration of Hon'ble Commission.

Table 6: A&G expense of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
A&G Expense	79.19	100.73

Repair & Maintenance Expenses

2.22 The revised R&M expenses for FY 2018-19 as per the annual accounts for FY 2018-19 audited by the Statutory Auditor is provided in the table below for kind consideration of Hon'ble Commission.

Table 7: Repair and Maintenance expense of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
R&M Expense	139.51	56.05

2.23 Therefore, it is prayed that the Hon'ble Commission may kindly approve the actual R&M expenses, as per the accounts audited by the Statutory Auditor.

Capital Expenditure Schedule

2.24 The Scheme-wise actual capex schedule for FY 2018-19 as per the JBVNL annual accounts of FY 2018-19 audited by the Statutory Auditor is detailed in the table below:

Table 8: Capital Expenditure Schedule of JBVNL for FY 2018-19

Scheme Name	FY 2018-19	
	Approved (Rs. Cr.)	Actual (Rs. Cr.)
DDUGJY	965.60	3,199.04
IPDS	279.10	628.74
RAPDRP - A		82.25
RAPDRP - B		1,244.56
DDUGJY 12th Plan		1,348.36
ADP + Misc.	315.55	366.49
Tilka Manjhi & AGJY	33.60	46.01

Scheme Name	FY 2018-19	
	Approved (Rs. Cr.)	Actual (Rs. Cr.)
RE State Plan		20.40
JSBAY - RE	900.00	22.86
RGGVY (10th & 11th Plan)		2.89
Deposit & others		99.74
JSBAY - Urban Electrification		-
JSBAY - IT, SCADA & TRW		-
SAUBHAGYA		199.69
IT Schemes (WB Supported)		
Total	**2,493.85**	**7261.01**

2.25 It is submitted that capex of Rs. 7,261.01 crore has been incurred as against approved Capex of Rs. 2,493.85 Cr in FY 2018-19. This is testimony towards JBVNL success in implementing central and state government's scheme on the ground. This also substantiates JBVNL's claim in previous year's petition that the revision in capital expenditure is majorly due to timings of payments which are linked to completion of works under various schemes. The approved vs. actual capital works in progress are detailed below. It is also pertinent to mention that since implementation of large schemes such as Jharkhand Sampurna Bijli Achyadan Yojna (JSBAY) was started in 2018 itself, a significant amount still remains as CWIP, despite transfer of Rs.4,595 Cr. to GFA, as against Rs.3,027 approved by Hon'ble Commission.

Table 9: Actual Capital work in progress of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
Opening CWIP	4,734.24	3,078.75
Capex during the year	2,493.85	7,261.01
Transfer to GFA	3,027.94	4,594.64
Closing CWIP	4,200.15	5,745.22

2.26 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 as per the principles adopted by Hon'ble Commission in its earlier orders.

2.27 The CCG of JBVNL, based on the accounts audited by the Statutory Auditor vis-à-vis as approved by the Hon'ble Commission is provided in the table below.

Table 10: Consumer contribution and grants of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
Opening	5,107.57	5,107.57
Addition	1,893.36	1,774.94
Closing	7,000.93	6,882.51

Calculation of Normative GFA, Loan and Equity

2.28 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.

2.29 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 Claus 6.16 of JSERC Distribution Tariff Regulation, 2015.

2.30 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

2.31 The calculation of Normative Debt and Equity is tabulated below:

Table 11: Source of Funding of GFA for FY 2018-19 (Rs. Crore)

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
Closing GFA (A)	8,990.03	10,556.73
CCG towards GFA (B)	4,771.63	4,456.94
Closing GFA Out of D&E (C= A-B)	4,218.41	6,099.80
Accumulated Depreciation (D)	2,324.32	2,683.51
Accumulated Depreciation Out of D&E GFA (E)	1,090.64	1,550.56
Closing Normative Equity (F = C* 30%)	1,265.52	1,829.94
Closing Normative Loan (G = C-E-F)	1,862.24	2,719.29

Depreciation

2.32 The Petitioner has calculated the depreciation for FY 2018-19 in line with the approach adopted by the Hon'ble Commission in its Tariff orders dated 27th Apr'18 and 28th Feb'19.

2.33 It is hereby submitted that the Hon'ble Commission in it Tariff Order dated 28th February, 2019 has revised the methodology for calculation of Depreciation for FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20. In the revised methodology, the Hon'ble Commission while Truing Up the depreciation for the FY 2016-17 and FY 2017-18 and determining the same for the FY 2018-19 and FY 2019-20 has considered the average GFA of the financial year instead of the closing GFA for a given financial year. Further Hon'ble Commission in the same Order has calculated the GFA created out of loan and equity by reducing the closing balance of GFA created out of Grant and Consumer (CCG) from the Average GFA. Principally, it would be incorrect to consider Average GFA and Closing balance of CCG and the Hon'ble Commission ought to have considered only the Average balance of CCG.

2.34 The Petitioner has first arrived at the opening and closing GFA of FY 2018-19, 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 approved by the Hon'ble Commission on the average GFA thus calculated to arrive at the total depreciation being claimed as part of the true-up exercise.

2.35 The depreciation calculated by the Petitioner based on the Hon'ble Commissions approach in Tariff Order for FY 2019-20 for JBVNL dated 28th February, 2019 vis-à-vis as approved by the Hon'ble Commission is provided in the table below:

Table 12: Depreciation cost of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
Opening GFA (Less CCG)		2,593.88
Closing GFA (Less CCG)		6,099.80
Average GFA excluding Consumer Contributions and Grants (Rs. Cr.)	2,704.44	4,346.84
Depreciation Rate (%)	5.94%	5.94%
Depreciation Cost (Rs. Cr.)	160.64	258.20

Interest & Finance Charges

2.36 The opening debt for FY 2018-19 has been considered equal to closing value of FY 2017-18 as approved by Hon'ble Commission in True-up for FY 2017-18 of JBVNL in Order dated 28th February 2019.

2.37 Closing debt for FY 2018-19 has been calculated above in Table 11 in line with the Regulation 6.16 of the JSERC Tariff Regulations, 2015.

2.38 In line with the Regulation 6.22 of the JSERC Tariff Regulations, 2015 repayment of loan for FY 2018-19 has been considered equal to Depreciation as calculated above.

2.39 Further, the rate of interest on long-term loan has been considered at the Base rate of SBI as applicable on April 1 of FY 2018-19 plus 200 basis points as per Regulation 6.24 of the JSERC Distribution Tariff Regulations, 2015. Interest cost thus calculated vis-à-vis as approved by the Hon'ble Commission is provided in the table below.

Table 13: Interest & finance charges of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
Opening Balance	1,050.10	1,050.10
Deemed Addition during the year	972.78	1,927.40
Deemed Repayments during the year	160.64	258.20
Closing Balance	1,862.24	2,719.29
Average balance during the Year	1,456.17	1,884.70
Interest Rate	10.70%	10.70%
Interest Expense	**155.81**	**201.66**

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

Interest on Consumer Security Deposit

2.41 The Interest on consumer deposit for FY 2018-19 has been computed based on the actual interest on consumer deposit as per annual accounts for FY 2018-19 audited by the Statutory Auditor.

Table 14: Interest on consumer deposit of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
Closing Consumer Deposit	571.50	585.86
Interest Rate	8.70%	8.70%
Interest on Consumer Security Deposit	**49.72**	**51.99**

Interest on Working Capital

2.42 The Petitioner has calculated normative working capital requirement for FY 2018-19 in line with the Regulation 6.29 and 6.30 of the JSERC Tariff Regulations, 2015.

2.43 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 Regulation 6.31 of the JSERC Distribution Tariff Regulations, 2015.

2.44 The Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below.

Table 15: Interest on working capital of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
1 month O&M	36.93	37.58
Maintenance Spares (1% of GFA)	11.90	61.00
2 months Receivables	1,063.34	1,031.97
Less: 1 month cost of power purchase	418.35	405.97
Less: Security Deposit from Customers	571.51	585.86
Total Working Capital requirement	**122.31**	144.18
Interest rate on WC	12.20%	12.20%
Interest on Working Capital	**14.92**	**16.92**

Return on Equity

2.45 The Petitioner has considered the opening balance of normative equity for FY 2018-19 as per the closing balance for the FY 2017-18, as approved by Hon'ble Commission in True-up for FY 2017-18 in its Order dated 28th February, 2019.

2.46 Closing equity for FY 2018-19 has been calculated using normative debt equity ratio (70:30) as calculated above in Table 11, as per the provisions of Regulation 6.16 of JSERC Distribution Tariff Regulations, 2015

2.47 Further, the rate of Return on Equity (RoE) is considered to be 15.50% as per the provisions of Regulation 6.17 of JSERC Distribution Tariff Regulations, 2015

2.48 The return on equity is provided in the table below for kind consideration of Hon'ble Commission

Table 16: Return on equity of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actual (Rs Cr.)
Opening Balance of Normative Equity	934.55	934.55
Deemed Additions	330.98	895.39
Closing Balance of Normative Equity	1,265.52	1,829.94
Average Equity	1,100.06	1,382.24
Return on Equity (%)	15.50%	15.50%
Return on Equity	**170.51**	**214.25**

Non- Tariff Income

2.49 The Non-Tariff Income (Other Income) of JBVNL for FY 2018-19, based on the accounts audited by the Statutory Auditor has been provided for the kind consideration of Hon'ble Commission.

2.50 However, while computing the actual the Non-Tariff income (Other Income) of JBVNL for FY 2018-19, 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.

2.51 The Hon'ble Commission in its Tariff order for Aggregate Revenue Requirement for MYT Period FY 16-17 to FY 20-21 and Tariff Order for FY 2019-20 dated 28th February, 2019 for JBVNL has also considered the above approach in line with the judgement of Hon'ble APTEL in Appeal no.48 of 2016 and Appeal no.316 of 2016 & IA no.656 of 2016 dated 31st May, 2017, while approving the Non-Tariff income.

2.52 The Petitioner humbly prays to the Hon'ble Commission to approve the Non-tariff income for FY 2018-19 as outlined below.

Table 17: Non-tariff income of JBVNL for FY 2018-19

Non-Tariff Income	FY 2018-19	
	Approved	Actual
Interest Income from Investment in Fixed Deposits		10.27
D.P.S from Consumer		442.80
Interest from Bank (Other than FD)		11.97
Supervision Charges		2.15
Miscellaneous Receipt		9.57
Meter Rent		21.03
Receipt from Consumers for capital works		18.06
Miscellaneous Charges from Consumers		1.74
Total	**344.17**	**517.60**
Interest rate for Receivables financing	12.20%	12.20%
Corresponding Receivables against DPS	1,666.67	2,460.01
Interest on Receivables against DPS	203.33	300.12
Net NTI to be considered	**140.84**	**217.48**

Disllowance on account of AT&C losses

2.53 JBVNL has undertaken several administrative measures to curb the AT&C losses along with the technical measures such as metering of un-metered consumers, focusing on billing efficiency and collection efficiency improvement through appointment of dedicated agencies. However due to challenging circumstances in Jharkhand including law & order aspects, it has not been able to achieve performance level specified by Hon'ble Commission.

2.54 The target of 100% of collection efficiency set by Hon'ble Commission is highly impracticable and even the most efficient utilities in the Country are not able to achieve the 100% collection efficiency. The Petitioner humbly submits that it has introduced several avenues for payment of bills by the consumers, to enhance the collections which includes:

- Payment by credit/ debit card through Mobile App (ezy-bzly),
- Online web-based payment facility on JBVNL's website
- Payment through Bharat Bill Payment System (BBPS)
- POS machine and E-wallet facility through Urja Mitras
- Tie-ups with ~4,500 Pragya Kendras
- Collection through ~440 Post Offices
- Collection through ~ 190 Any Time Payment (ATP) machines

2.55 One of the key reason behind the lower collection efficiency of JBVNL than the targeted collection efficiency is the addition of large number of rural consumers during FY 2018-19 under SAUBHAGYA and DDUGJY 12th Plan Scheme. The newly added consumers are from remote parts of state and have poor paying capacity due to limited income. In order to complete mandate of universal electrification, JBVNL is supplying electricity to them. Percent of receipt generated to such rural domestic consumers as number of bills issued is less than 10%. In such a scenario it is impossible to achieve collection efficiency of 100% as mandated by Hon'ble Commission.

2.56 The Petitioner prays to Hon'ble Commission that the amount of revenue which JBVNL has not been able to collect, may be allowed to be considered against the RGF received during FY 2018-19. The calculation for disallowance is done by considering the difference between the Commissions approved collection efficiency i.e. 100% and the actual collection efficiency of 92.27% in FY 2018-19. The details of the same have been provided in the table below. The Petitioner humbly submits that the disallowance on account of Lower Collection efficiency shall be considered while adjusting RGF from ARR.

Table 18: Disallowance on account of Collection efficiency of JBVNL for FY 2018-19

Particulars	FY 2018-19	
	Approved (Rs Cr.)	Actuals (Rs Cr.)
Revenue from sale of power	*4,953.24*	*4,053.77*
Collection efficiency		92.27%
Uncollected revenue – to be adjusted against RGF		313.36

2.57 Further, the Hon'ble Commission has approved Distribution loss target of 15% for FY 2018-19. However actual T&D loss for FY 2018-19 is coming to be 22.89%. Non-achievement of the loss target despite best efforts by the Petitioner is again due to addition of high number of rural domestic consumers. The Petitioner therefore prays to Hon'ble Commissioner to relax T&D loss from 15% to 17% for FY 2018-19. The Petitioner has estimated the disincentive for non-achievement of loss targets and has subtracted the same from power purchase expenditure for FY 2018-19, considering the methodology adopted by Hon'ble Commission previously. The excess cost to be disallowed is the 'Disincentive for non-achievement of T&D loss targets', which needs to be appropriately adjusted against the Resource Gap Funding (RGF) is provided in Table below:

Table 19: Disallowance on account of Distribution loss

Particulars	FY 2018-19
	Actual
Total Energy Sales to Intrastate consumers	9,187.28
Overall T&D loss (%) for intra-state consumers	22.89%
Total Energy requirement for intra- state consumers	11,913.88
Energy Available for Distribution	11,069.01
Disallowed Units due to Excess Loss	844.87
Average Power Purchase Cost	4.08
Disallowed Cost due to Excess Loss	345.06

Resource Gap Funding

2.58 The Petitioner would like to submit that resource gap funding is being provided by Government of Jharkhand to meet the disallowances and slashes made by the Hon'ble Commission during tariff determination process for various parameters such as higher T&D Loss, normative interest computation, normative generation cost etc.

2.59 A communication from the Energy department, Government of Jharkhand was also submitted (annexed for reference) vide letter dated 14 July 2014 stating that

"Amount released towards resource gap may be utilized to meet the

slashes/disallowances worked out by the Hon'ble commission while fixing the tariff".

2.60 In line with the above communication by the GOJ, the Petitioner prays that the Hon'ble Commission should consider adjusting the complete RGF towards disallowance/slashes and remaining amount of RGF may be considered to meet the revenue gap. The resource gap funding available to meet revenue gap is provided below-

Table 20: Resource gap funding received by JBVNL for FY 2018-19

Particulars	Actuals (Rs Cr.)
Resource Gap Funding Received	1250.00
Disallowances – on account of AT&C losses and Addition in Gap due to Efficiency Gains	658.41
Net Resource Gap Funding available to meet revenue gap	591.59

2.61 Hence Hon'ble Commission can consider Rs 591.59 crore for reduction of revenue gap in FY 2018-19.

Summary of ARR for FY 2018-19

2.62 Based on the components of the ARR discussed in the above sections, the final ARR for FY 2018-19 been provided in the table below for kind consideration of Hon'ble Commission.

Table 21: Summary of revised ARR for FY 2018-19

	FY 2018-19	
Particulars	Approved (Rs Cr.)	Actuals (Rs Cr.)
Power Purchase cost	5,020.25	4,871.65
Transmission charges (Inter and Intra State)	397.74	343.69
Additional REC Purchase to meet RPO	108.16	-
O&M expenses	443.14	450.92
Depreciation	160.64	258.20
Interest on Loan	155.81	201.66
Return on Equity	170.51	214.25
Interest on Working Capital	14.92	16.92
Interest on security deposit	49.72	51.99
Provision for doubtful debts	-	-
Less: Non-tariff Income	140.84	217.48
Gross ARR	**6,380.05**	**6,191.81**

	FY 2018-19	
Particulars	Approved (Rs Cr.)	Actuals (Rs Cr.)
Less Penalties	**127.60**	**127.60**
ARR Recoverable	**6,252.44**	**6,064.21**

2.63 It is prayed to the Hon'ble Commission that the above ARR may be allowed and impact shall be passed on to JBVNL, while approving the tariff for FY 2020-21

3. Annual Performance Review (APR) for FY 2019-20

3.1 This chapter of this Tariff Petition provides the details of elements of APR for FY 2019-20, estimated based on the provisions of Clause 9.2 of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015 and actual values for first half of the financial year.

3.2 The Petitioner has taken special cognizance of the approved figures in Tariff Order dated 28th Feb'19 and principles adopted by Hon'ble Commission in previous Tariff orders, to arrive at the most realistic projections for the APR of FY 2019-20.

Energy Sales

3.3 The Petitioner has estimated the sales for FY 2019-20 based on the actual sales in first six months, expected growth in the number of consumers, changes in pattern of consumption and demand of electricity in previous years. In FY 2018-19, there was a transient fall in recording of energy sales due to challenges with new billing system. However as discussed in previous chapter, the issue would be resolved from FY 2019-20 onwards.

3.4 The Petitioner has estimated the total consumer addition in FY 2019-20 by adopting a practical approach, to arrive at the total sales of JBVNL. The projection of domestic consumers has been done taking into view the large scale electrification being done under various ongoing schemes of Central and State Government. It is pertinent to mention that the pace of consumers getting added in the billing database of JBVNL is a bit slower than the pace for release of connection. The reason behind the same is that as per the Govt. Mandate, connections must be released to the consumers with minimum requirement of essential documents. However, in order to start the billing of these new consumer, proper verification has to be done by JBVNL. This unavoidable lag in providing connection and bringing the consumer in the billing database is the basic reason for increase in domestic consumers to the tune of 40 lakh in FY 19-20 from 34 lakh in FY 2018-19.

3.5 Due to increase in HTSS tariff, many high paying consumers have either shifted to DVC and other distribution licensees or have shut down their operation. This has lead to overall decrease in HT sales. GoJ has also stepped in to control the situation and has granted subsidy of Rs.1.25/kVAh in tariff to HTSS consumers. However due to ongoing economic slowdown and availability of lower tariff as approved by Hon'ble Commission itself for other distribution licensees, the migration has continued. If proper steps are not taken, this trend may continue next year also.

3.6 Further, the Petitioner had also planned to electrify 1,00,000 agriculture consumers every year over the next 3 years period (till FY 2020-21) under the "Tilka Manji" scheme and DDUGJY, the impact of which has been considered in the present APR. For remaining categories, consumers would grow as per trend of previous years.

3.7 The category wise estimation of consumer of all categories for FY 2019-20 are detailed below.

Table 22: Estimated Consumers for FY 2019-20

Particulars	FY 19-20	
	Approved in MYT (No.)	Estimated (No.)
Domestic	56,39,292	39,78,168
Commercial	2,49,722	2,32,769
Irrigation & Agricultural / IAS	3,74,518	63,482
Industrial LT/LTIS	14,695	16,432
Industrial HTS/HTSS/EHT	1,748	1,736
IS-I: Public Lighting / SS	551	410
IS-II: RTS, MES	11	10
Total Consumers (Nos.)	**62,80,537**	**42,93,007**

3.8 Based on consumer-category wise historic average connected load, category-wise connected load is estimated for FY 2019-20 as detailed in the table below.

Table 23: Connected Load (kW) of JBVNL for FY 2019-20

Particulars	Estimated (kW)
Domestic	56,23,665
Commercial	4,19,038
Irrigation & Agricultural / IAS	45,104
Industrial LT/LTIS	2,95,776
Industrial HT/HTSS/EHT	7,76,622
IS-I: Public Lighting / SS	9,840
IS-II: RTS, MES	47,330
Total Connected Load	**72,17,364**

3.9 Based on the above tables, the consumer category wise energy sales have been projected, keeping in view actual sales in first six months of current year, the load factor and average load of various consumer categories. The category-wise sales for FY 2019-20 has been summarized in the table below for kind consideration of Hon'ble Commission.

Table 24: Estimated Energy Sales (MUs) of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (MU)	Projected (MU)
Domestic	6,703.14	6,329.81
Commercial	948.50	752.71
Irrigation & Agricultural / IAS	230.38	206.19
Industrial LT/LTIS	229.65	219.43
Industrial HT/HTSS/EHT	2,708.40	2,283.84
IS-I: Public Lighting / SS	78.51	25.64
IS-II: RTS, MES	112.30	121.41
Total Energy Sales	**11,010.88**	**9,939.02**

Power Purchase

3.10 JBVNL has estimated the power purchase quantum for FY 2019-20 based on following facts and assumptions:

- **Generation during first six months of current financial year:** Power Purchase quantum has been considered as per bills raised by respective generating companies.
- **Generation Trend in Previous Financial Year:** Generation during remaining six months in current Financial Year have been estimated as per generation ratio of first half and second half of previous Financial Year FY 2018-19. However proper adjustments have been made considering merit order dispatch (MOD) and requisite PLF of various power plants.
- **Power Requirement in FY 2019-20:** Based on estimated Sales and Energy balance for FY 2019-20 (as detailed in below section), excess power available for sale in open market 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 excess supply. However the same may be purchased in case of emergency
- **Current status of upcoming Power Stations**: As per CEA Thermal Power Plant Status report for month of August 2019, JBVNL has considered following schedule for Date of Commercial Operation (COD) of upcoming plants in FY 2019-20.

Table 25: Detail of Upcoming Power Plants in FY 2019-20

Particulars	Allocated Capacity (MW)	COD	Power Purchase Cost (Rs/kWh)
NTPC Darlipalli Unit-1	62.5	1st Jan'20	4.00

- Furthermore PLF of new plants have been considered in range of 50%, as they would be under stabilization mode, just after commissioning and auxiliary losses has been considered at 6%.

3.11 JBVNL has estimated the power purchase Cost for FY 2019-20 based on following facts and assumptions:

- **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
- **Transmission and Scheduling Charges:** Actual Transmission and scheduling Charges for FY 2018-19 has been escalated by 5% to arrive at corresponding figure for FY 2019-20
- **Power Purchase Cost for new Plants:** Power Purchase cost of new NTPC plants have been considered at Rs 4.00 kWh (Energy Charge- Rs 1.75/kWh and Capacity Charge-Rs 2.25/kWh).
- **Sale of Excess Power**: Sale of Excess power has been considered at Average Power Purchase Cost (except transmission and scheduling charges) as per methodology adopted by Hon'ble Commission in its MYT Order dated 21st June'17.

3.12 Based on above facts and assumptions, source-wise estimated Power Purchase quantum and cost for FY 2019-20 is tabulated below-

Table 26: Power purchase quantum and cost of JBVNL for FY 2019-20

Particulars	Power Purchase Quantum		Power Purchase Cost	
	Approved (MUs)	Estimated (MUs)	Approved (Rs Cr.)	Estimated (Rs Cr.)
NTPC				
Farrakka	917.19	884.38	328.68	294.24
Farrakka III	594.69	382.29	241.77	157.51
Khalagaon I	187.42	177.01	70.59	56.87
Talcher	627.26	518.33	222.85	158.10
Khalagaon II	316.43	167.70	108.89	48.85
Barh STPS-II	561.01	552.26	316.90	236.65
Korba	350.89	306.73	96.39	86.44
NTPC Darlipalli STPS	-	64.85	-	25.94
NTPC Nabinagar	-	87.08	-	39.10
Total	**3,554.89**	**3,140.63**	**1,386.06**	**1,103.70**
NHPC				

Particulars	Power Purchase Quantum		Power Purchase Cost	
	Approved (MUs)	Estimated (MUs)	Approved (Rs Cr.)	Estimated (Rs Cr.)
Rangit	45.15	44.58	18.44	15.99
Teesta	316.95	319.88	82.29	65.52
Total	**362.10**	**364.47**	**100.73**	**81.51**
PTC				
Chukha	175.44	158.28	46.45	38.01
Tala	311.30	283.49	74.13	61.23
Total	**486.74**	**441.77**	**120.58**	**99.25**
Total Central Sector	**3,650.20**	**3,946.86**	**1,175.14**	**1,284.45**
DVC				
DVC	**4233.05**	**4,560.68**	**1789.92**	**2,367.05**
State Sector				
SHPS	158.32	8.61	47.37	2.17
TVNL	2,630.44	1,894.29	993.88	730.51
Total State Sector	**2,788.76**	**1,902.90**	**1,041.25**	**732.68**
Private				
Inland Power	409.77	393.50	175.63	192.04
APNRL	914.74	927.86	398.80	368.44
APNRL Adjustment		-		-0.87
APNRL (Add. 66 MW)	447.21	498.48	253.40	201.08
Total Private Sector	**1,771.72**	**1,819.84**	**827.83**	**760.68**
Renewable Energy				
Solar IPPs	25.59	18.19	45.96	32.67
SECI Solar	20.26	16.00	11.37	9.65
RE (Wind)	104.59	785.21	36.92	267.84
Total RE	**150.44**	**819.41**	**94.25**	**310.17**
Rungta Mines	26.81	35.85	8.83	11.16
ABCIL	73.72	1.56	26.78	0.12
KBUNL Kanti TPS	-	91.62	-	55.14
PGCIL			151.96	147.36
Posoco (ERLDC)		-		1.31
Posoco (Railway)				- 0.11
ERLDC(APNRL)	-	-		41.17
Net UI Payable		19.87		38.71

Particulars	Power Purchase Quantum		Power Purchase Cost	
	Approved (MUs)	Estimated (MUs)	Approved (Rs Cr.)	Estimated (Rs Cr.)
PTC (IEX) Net Sale		-314.47		-57.30
Supplementary Bills				23.54
Additional REC purchase		-	128.65	
Revenue due to sale of Surplus power		-143.90		-62.20
Grand Total	**13,448.22**	**12,740.21**	**5,676.86**	**5,653.94**

3.13 After deducting PGCIL cost, total power purchase cost comes to be Rs 5,506.58 crore. 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.

Energy Balance

3.14 It is submitted that the energy availability for FY 2019-20 has been estimated based on the actual Power purchase and sales until the month of September 2019, with projections for the remaining period of FY 2019-20.

3.15 JBVNL would like to submit that power purchase from various sources are segregated into different heads, while calculating the energy balance for the control period.

- Power Purchase from Outside JSEB Boundary- NTPC, NHPC, PTC, APNRL, part of TVNL, NVVNL, 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, Rungta Mines, ABCIL and Inland Power
- Direct Input of Energy to Distribution System- DVC and Solar IPPs.

3.16 Based on the information provided above, Energy Balance of JBVNL for 2019-20 is provided in the table below.

Table 27: Energy balance of JBVNL estimated for FY 2019-20 (in MU)

Particulars	FY 2019-20	
	Approved	Estimated
Power Purchase from Inter State Transmission System	11,780.75	7,164.85
Loss in External System (%)	3.00%	3.00%

Particulars	FY 2019-20	
	Approved	Estimated
Loss in External System	353.42	214.95
Net Outside Power Available	11,427.33	6,949.90
Energy Input Directly to State Transmission System	510.29	430.91
State-owned Generation	1,131.58	709.50
Energy Available for Onward Transmission	13,069.21	8,090.31
Transmission Loss (%)	2.23%	5.00%
Transmission Loss	291.44	404.52
Net Energy Sent to Distribution System	12,777.76	7,685.79
Direct Input of Energy to Distribution System	25.59	4,578.86
Total Energy Available for Sales	**12,803.35**	**12,264.66**

Intra-State Transmission Charges

3.17 It is submitted that transmission charges payable to JUSNL been computed based on the approved rate in Tariff Order of JUSNL dated 24th Feb'18.

3.18 The energy wheeled through transmission network, as estimated above in the section of Energy Balance has been considered for calculating the Intra-State transmission charges payable to JUSNL. The estimated Intra-state transmission charges payable to JUSNL for FY 2019-20 is provided in the table below.

Table 28: Intra-state transmission charges of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved MYT Order	Estimated
Energy Wheeled at Transmission Level (MU)	13,069.21	8,090.31
Transmission Rate (Rs/unit)	0.25	0.25
Transmission Charges (Rs Cr.)	**326.73**	**202.26**

Employee Cost

3.19 The Petitioner has calculated the employee cost for FY 2019-20 by escalating the actual employee cost of FY 2018-19 as submitted above by the inflation factor of 4.66% and the methodology provided under Clause 6.6 (b) and (c) of JSERC MYT Regulations 2015.

3.20 The projected employee cost for FY 2019-20 is provided in the table below for kind consideration of Hon'ble Commission.

Table 29: Employee cost of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Total Employee Expense	233.29	307.86
Employee cost	*211.20*	288.23
Terminal Benefits	*22.10*	19.63

Administrative and General Expenses

3.21 In line with the Clause 6.6 (b) and (c), the A&G expenses for FY 2019-20 have been calculated by escalating A&G expense of FY 2018-19 by the inflation factor of 4.66%.

3.22 The A&G expenses for FY 2019-20 is provided in the table below for kind consideration of Hon'ble Commission.

Table 30: A&G expense of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
A&G Expenses	82.65	105.42

Repair & Maintenance Expenses

3.23 In line with the Regulation 6.6 (a) of JSERC MYT Regulations 2015, the R&M expenses for FY 2019-20 have been estimated by applying K-factor of 2.34% as approved by the Hon'ble Commission in Tariff Order dated 28th Feb'19 on opening value of GFA for FY 2019-20 as submitted above.

3.24 The R&M expenses for FY 2019-20 is provided in the table below for kind consideration of Hon'ble Commission.

Table 31: Repair and Maintenance expense of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
R&M Expenses	210.37	247.03

Calculation of Normative GFA, Loan and Equity

3.25 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.

3.26 The Petitioner has bifurcated GFA and Accelerated Depreciation into component from 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 Debt & Equity to calculate Normative Equity as per Claus 6.16 of JSERC Distribution Tariff Regulation, 2015.

3.27 After netting Normative Equity from closing GFA out of D&E, the Petitioner has deducted accumulated depreciation out of D&E from the resultant to arrive at normative closing debt

3.28 Calculation of Normative GFA out of Debt and Equity, Loan and Equity is tabulated below:

Table 32: Source of Funding of GFA for FY 2019-20 (Rs. Crore)

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Actual(Rs Cr.)
Closing GFA (A)	10,882.25	16,410.10
CCG towards GFA (B)	5,657.97	7,594.62
Closing GFA Out of D&E (C= A-B)	5,224.28	8,815.48
Accumulated Depreciation (D)	2,578.44	3,126.50
Accumulated Depreciation towards GFA (E)	1,237.84	1,679.55
Closing Normative Equity (F = C* 30%)	1,567.28	2,644.64
Closing Normative Loan (G = C-E-F)	2,419.16	4,491.28

Capital Expenditure Schedule

3.29 The Capital expenditure schedule for FY 2019-20 is detailed in the present section. A brief discussion regarding ongoing schemes and the expected expenditure is also provided for consideration of Hon'ble Commission:

Table 33: Capex schedule of JBVNL for FY 2018-19 to FY 2020-21 (Rs Crore)

Scheme Name	FY 19		FY20		FY 21	
	Approved	Actual	Approved	Projected	Approved	Projected
DDUGJY	965.60	3,199.04	-	2,732.14	-	
IPDS	279.10	628.74	-	384.20	-	
RAPDRP - A		82.25	15.50	28.00	16.50	57.00
RAPDRP - B		1,244.56	-	561.85	-	
DDUGJY 12th Plan		1,348.36	-	465.07	-	
ADP + Misc.	315.55	366.49	770.80	849.75	900.00	804.15
Tilka Manjhi & AGJY	33.60	46.01	-	45.59	-	-
RE State Plan		20.40	-		-	-
JSBAY - RE	900.00	22.86	-	961.00	-	3,975.56
RGGVY-10th Plan		2.89				
Deposit & others		99.74				-

Scheme Name	FY 19		FY20		FY 21	
	Approved	Actual	Approved	Projected	Approved	Projected
SAUBHAGYA		199.69		90.00		-
IT Schemes (WB Supported)				28.34		386.60
Total	**2,493.85**	**7,261.01**	**786.30**	**6,145.94**	**916.50**	**5,223.31**

3.30 Brief overview of Schemes undertaken in Jharkhand

3.30.1 Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY):

DDUGJY is a Government of India scheme designed for Rural Areas to provide regulated supply to agricultural consumers and 24X7 power supply to non-agricultural consumers of rural areas.

Key objectives:

- To separate agriculture and non-agriculture feeders in rural areas;
- To facilitate Discoms in the judicious roistering of supply to agricultural and non-agricultural consumers in rural areas;
- Strengthening and Augmentation of Sub Transmission & Distribution infrastructure in rural areas.

Scheme Coverage and Budget: JBVNL has proposed to cover 259 Unelectrified villages under DDUGJY and the DPR of total Rs. 5,816 Cr. was prepared for various components of the scheme. However, while approving the investment outlay, the central government has approved only Rs.3,722.12 Cr. For the rest component of DDUGJY works of all 24 districts were awarded through tender to 12 different turnkey contractors in 29 packages with total awarded cost of Rs. 4163 Cr. In view of cost escalation, an extra amount Rs. 609 Crores has been requested for arrangement from GoJ for completion of the project. REC vide its letter no. REC/DDUGJY/Saubhagya/JH/2018-19/72 dtd. 05.06.2018 has allowed a total variation upto maximum +30% of contract price to cover electrification of villages in saturation mode and to complete Saubhagya Scheme.

Physical Progress: Physical Progress of the scheme till October, 2019 is tabulated below:

Village Component/ Schemes	Scope	Completion till Date
Villages/ P.E	18,298	15,214
Household Connection	6,88,067	6,88,067
DSS (New+ Aug+ R&M)	56,523	44,349
LT Line (CKm) (New + Re-conductoring)	42,057	34,685
11KV Line (CKm) (New + Re-conductoring)	14,297	10,972

Village Component/ Schemes	Scope	Completion till Date
33KV Line (CKm) (New + Re-conductoring)	1,466	654
33/11 KV PSS (New + Aug.)	214	96

Capital Expenditure: It is expected that the scheme would be completed in FY 2019-20 and a capex of Rs 1,654.44 crore would be incurred for the same in current year. Additionally Rs 1077.70 crore would be incurred for the additional infra scheme in FY 2019-20.

3.30.2 <u>Integrated Power Development Scheme (IPDS)</u>

The scheme was launched by Govt. of India with the aim to help in reduction in AT&C losses, establishment of IT enabled energy accounting / auditing system, improvement in billed energy based on metered consumption and improvement in collection efficiency.

Key objectives of IPDS are listed as below:

- Strengthening of Distribution network including provisioning of solar panels on P/S/S including Net-metering
- Metering of feeders / distribution transformers / consumers
- IT enablement of distribution sector

Scheme Coverage and Budget: The central government has approved the capital outlay to the tune of only Rs. 778.2 crore for various works of 40 towns of Jharkhand that were eligible under the IPDS Scheme. DPR amount against Rs. 731.73 crore and Rs. 3.66 crore against PMA charges has been sanctioned and communicated by PFC Ltd. on dated 18.08.2016. Additional DPR amount of Rs. 20.00 crore and PMA charges of Rs. 10 Lacs was sanctioned and communicated by PFC on 24.11.2017. Hence total sanctioned project cost was arrived at Rs 756.92 crore. Works of all 40 towns were awarded to TKC at Rs. 184.86 crore higher than sanctioned project cost. Proposal for arrangement of excess fund is already sent to Energy Deptt, GoJ. Hence project cost comes to Rs. 941.78 crore.

Physical Progress: Physical Progress of the scheme till October, 2019 is tabulated below:

Village Component/ Schemes	Scope	Completion till Date
DSS (New+ Aug+ R&M)	2,258	1,600
LT Line (CKm) (New + Re-conductoring)	2,293	1,555
11KV Line (CKm) (New + Re-conductoring)	754	463
33KV Line (CKm) (New + Re-conductoring)	285	215

Village Component/ Schemes	Scope	Completion till Date
33/11 KV PSS (New + Aug.)	86	57

Capital Expenditure: It is expected that the scheme would be completed in FY 2019-20 and a capex of Rs. 384.20 crore would be incurred for the same in current year

3.30.3 **Restructured Accelerated Power Development Programme (R-APDRP):** Re-structured APDRP was approved as Central Sector Scheme in the year 2008 for IT enablement & strengthening of distributions sector. The focus of the program is urban areas – towns and cities with population of more than 30,000. Projects under the scheme are taken up in two parts. Part-A is for establishing IT enabled system for energy accounting / auditing and SCADA for big cities (population: 4 lacs and Annual Energy Input: 350MU) whereas Part-B is for regular distribution up-gradation & strengthening projects.

R-APDRP Part A:

Key objectives:

- Establishment of baseline data and IT applications for energy accounting/auditing & IT based consumer service centers
- Preparation of Base-line data for the project area covering Consumer Indexing, GIS Mapping, Metering of Distribution Transformers and Feeders, and Automatic Data Logging for all Distribution Transformers and Feeders and SCADA / DMS system.
- Asset mapping of the entire distribution network at and below the 11Kv transformers and include the Distribution Transformers and Feeders, Low Tension lines, poles and other distribution network equipment.
- Adoption of IT applications for meter reading, billing & collection; energy accounting & auditing; MIS; redressal of consumer grievances; establishment of IT enabled consumer service centers etc.

Scheme Coverage and Budget: Scheme for R-APDRP Part-A was sanctioned by PFC, MoP having project cost of Rs. 225.72 crore in September 2009. Project funding structure comprised Rs. 160.61 crore from PFC and counter-part fund i.e. Rs. 65.11 crore. from GoJ. However, GoJ has released its counter-part fund of Rs. 65.11 Cr. while PFC has released Rs. 75.96 Cr. Only.

For SCADA/DMS system project was sanctioned by PFC, MoP in September 2013, having total project cost of Rs.70.23 Cr whole project cost will be financially assisted by PFC, MoP. Further an amount of 2.76 Cr. against civil & other infra works has arranged from GoJ fund.

Physical Progress: All 30 towns have been declare as Go Live by March 2017 and closure of the project is under progress. However some changes are required to be done in IT enabled billing system by implementing agency, HCL and the remaining capex would be incurred for the same purpose.

Capital Expenditure: It is expected that the scheme would be completed in FY 2020-21 and a capex of Rs 28 crore would be incurred for the same in current year and remaining Rs. 57 crore in next year.

R-APDRP Part B

RAPDRP program has been prepared and finalized for 30 towns in the State. The DPRs have already been prepared and approved for R-APRDRP part A and part B both. The expenditure has been partly incurred.

Key objectives:

- Renovation, modernization and strengthening of 11 kV level Substations, Transformers/Transformer Centers, Bring about commercial viability
- Reduce outages & interruptions
- Increase consumer satisfaction.

Scheme Coverage and Budget: DPR of Part B for 30 towns under R-APDRP has been sanctioned by MoP / PFC in the month of September 2013. Total cost of this project is Rs. 1300.00 Cr. and time line was fixed for completion of this project was in March 2018. Request for time extension has been sought from PFC because the expected date of completion of the project is June'2019. Out of Rs. 1300 crore, Rs. 295.36 crore has to be released as a loan from PFC and rest Rs. 1004.09 crore funding has been sanctioned by Govt. of Jharkhand. Work in all 30 towns were started in F.Y. 2016-17 and targeted to complete the work by January, 2020. Awarded cost was Rs. 121.69 crore higher than sanctioned project cost. Proposal for arrangement of extra fund has been sought from Energy Department, GoJ. Hence project cost comes around Rs. 1421.14 Cr

Physical Progress: The works of all the towns except Jamshedpur out of 30 towns are completed. Final JMC are under progress. Works of Jamshedpur town shall be completed latest by Jan'20Physical Progress of the scheme till October, 2019 is tabulated below:

Village Component/ Schemes	Scope	Completion till Date
DSS (New+ Aug+ R&M)	10,004	9,364
LT Line (CKm) (New + Re-conductoring)	2,955	2,867
11KV Line (CKm)	1,817	1,742

Village Component/ Schemes	Scope	Completion till Date
(New + Re-conductoring)		
33KV Line (CKm) (New + Re-conductoring)	380	344
33/11 KV PSS (New + Aug.)	142	139

Capital Expenditure: It is expected that the scheme would be completed in FY 2019-20 and a capex of Rs 561.85 crore would be incurred for the same in current year.

3.30.4 **Deen Dayal Upadhyaya Gram Jyoti Yojana 12th Plan (DDUGJY 12th Plan):** Government of India for continuation of "Rajiv Gandhi Grameen Yojana (RGGVY) – Scheme of Rural Electrification in the 12 Plan with the following key objectives

- Completing spillover works of projects sanctioned in the 10th and 11th Plan.
- Continuing the scheme for covering all remaining census villages and habitations with population of above 100.
- Providing free electricity connections to BPL households at the rate of Rs 3000 per connection in villages and habitations with population of above 100
- Extending DDG to the grid connected areas to supplement the availability of power in areas where power supply is less than six hours a day.

Scheme Coverage and Budget: The 12th plan DDUGJY (erstwhile RGGVY) scheme implemented for covering spillover works of projects sanctioned in 10th and 11th plan of RGGVY scheme, continuing the scheme for covering all remaining census villages and habitations with population of above 100 and providing free electricity connections to BPL households in villages and habitations with population of above 100 with 90% of the amount sanctioned by REC/MOP as grant and rest 10% is to be provided by REC as loan component through GOJ.

DPR's for 17 districts of Jharkhand for total amount of Rs.1260.92 Crore was sanctioned by monitoring committee (MoP) including 5% PIA charges. JBVNL was appointed project implementing agency (PIA) for implementation of the 12th plan DDUGJY (Erstwhile RGGVY) in 17 sanctioned districts of Jharkhand. JBVNL has awarded the electrification work to nine different agencies and total awarded cost is Rs. 1351.88 Crore.

After approval from BoD, the extra fund of Rs. 145.51 Crore over the sanctioned cost has been requested for arrangement from GoJ for implementation of 12th plan DDUGJY vide letter no-518/RE dated 18.04.2016, 699/RE dated 06.06.2017 and 2498/RE dated 25.10.2017. Out of which Rs. 100 Cr. has been received in F.Y. 2018-19 and rest Rs. 46 Cr. has been provided for F.Y. 2019-20.

Village electrification work under 12th plan DDUGJY is to be done in saturation mode in all respect along with execution of Saubhagya scheme in which the volume of LT infrastructures have increased accordingly. The variation of 30% on awarded cost has been allowed vide REC letter No. REC/DDUGJY/Saubhagya /JH/2018-19/72 Dtd. 05.06.2018.

Physical Progress: Physical Progress of the scheme till October, 2019 is tabulated below:

Village Component/ Schemes	Scope	Completion till Date
Villages	10,581	10,581
Household Connection	3,67,010	3,67,010
DSS (New+ Aug+ R&M)	21,813	21,813
LT Line (CKm) (New + Re-conductoring)	15,819	15,819
11KV Line (CKm) (New + Re-conductoring)	5,486	5,386
33KV Line (CKm) (New + Re-conductoring)	227	185
33/11 KV PSS (New + Aug.)	31	27

Out of 17 districts, work completed in 16 districts. In Hajaribagh, completion delayed due to Forest Issues which shall be completed by Jan'20.

Capital Expenditure: It is expected that the scheme would be completed in FY 2019-20 and a capex of Rs 465.07 crore would be incurred for the same in current year

3.30.5 **JASBAY:**

Scheme Coverage and Budget: Jharkhand Sampurna Bijli Achchadan Yojna (JASBAY) is a new State Govt. sponsored scheme which aims to cover the several left over work required to ensure 24x7 power supply to all villages/Habitations and achievement of objectives of UDAY Yojana for reduction of AT&C losses. Detailed Project Reports (DPRs) under the JASBAY Scheme has already been prepared and the some part of Rural Electrification work has already been awarded and is currently under progress. Details of work and amount to be to be covered under the **JASBAY scheme** is provided in the below section.

Sl No.	Work Description	Amount (In Crore)
1	Forest, Railway and other Statutory clearances coming in the schemes of Central and the State Government	25
2	Construction of new 33/11 KV power substation, 33 & 11 KV line and other remaining works & construction / renovation of electric structure for agricultural work.	2085

Sl No.	Work Description	Amount (In Crore)
3. (i)	Installation of meters to un-metered consumer to reduce AT&C loss.	580
(ii)	Metering of Feeders and DTRs to perform energy audit.	
(iii)	Providing new agricultural connections with electricity feeder pillar.	
4 (i)	Work related to underground cabling and other reinforcements in order to provide 24x7 power supply in urban/sub-urban areas including tourist and pilgrim sites.	1700
(ii)	Strengthening of electricity infrastructure in the existing as well as in the industrial areas so as to provide 24x7 uninterrupted power supply to the industrial areas.	
5 (i)	Implementation of SCADA and other IT related work for automation of distribution infrastructure / Sub- Station.	615
(ii)	Installation of smart meters to reduce the AT&C loss and enhance the metering and billing of consumers	
6	Construction and installation of necessary equipments in the new TRW/ Store/ M.R.T alongwith upgradation of existing TRW/ Store/ M.R.T	34.56
7	PMA and other consultancy work to complete the above mentioned tasks within the stipulated timeline.	88
	Total	**5127.56**

Abstract of revised DPR of JSBAY for RE wing:-

Sl. No.	Phase	Description	Qty.	Amount (Rs. in Cr.)
(i)	Phase-I	Tenders have already been floated for Phase-1	--	978.57
(ii)	Phase-II	New additional PSS as per site requirement	118 Nos (Additional)	337.8
(iii)		Additional 33 kV line for additional PSS	1778.80 km (New)	181.96
(iv)		11 kV line (additional, remaining works, Conversion & Renovation)	3751 km.(New) 868 (Conversion)	190.40
(v)		Installation of DTR (new + replacement) & other remaining works related to DTR	6077 Nos. (New) 3172 Nos. Replacement)	255.58
(vi)		Other remaining LT line works including other line crossing	1477 Km (New) 3095 (Conversion)	140.62

Sl. No.	Phase	Description	Qty.	Amount (Rs. in Cr.)
		Total		**2084.93**

In the first phase works amounting to Rs. 977.46 Cr. was awarded against estimated cost of Rs. 978.57 Cr. in six packages. In the second phase works amounting to Rs. 1119.39 crore. has been awarded against estimated cost of 1106.35 crore.

Physical Progress: Physical Progress of the scheme under Rural Project department till September, 2019 is tabulated below:

Component/ Scheme	Phase-I		Phase-II	
	Scope	Completion till Date	Scope	Completion till Date
DSS (New+ Aug+ R&M)	**-**	-	**9,249**	-
LT Line (CKm) (New + Re-conductoring)	**-**	-	**4,572**	-
11KV Line (CKm) (New + Re-conductoring)	**4,119**	614	**3,395**	-
33KV Line (CKm) (New + Re-conductorin)	**3,399**	503	**1,779**	-
33/11 KV PSS (New + Aug.)	**201**	4	**118**	-

Abstract of revised DPR of JSBAY for S&P wing:-

The Petitioner is committed to achieve 100% metering of its consumers & DTs in order to cover the entire distribution value chain and enable energy auditing. Towards this goal fund amounting to Rs. 579.61 Cr. has been sanctioned in metering components for consumer metering, feeder metering, DTR metering and to provide agriculture connections to farmers under the **Stores & Procurement (S&P) Wing** of JBVNL. The feeder metering work is completed for all rural feeders. The consumer metering work is going on departmentally, tender for providing agriculture connection is in the process.

Sl. No.	Description	Qty.	Amount (Rs. In Cr.)
1	Installation of meters to un-metered consumer	1354237 Nos.	406.27
2	DTR metering for energy auditing	4409 Nos.	14.73
3	Feeder for energy auditing	--	14.00
4	Providing new agricultural connections with	189282 Nos.	144.61

Sl. No.	Description	Qty.	Amount (Rs. In Cr.)
	electricity feeder pillar.		
	Total		**579.61**

Further, balance amount under the JASBAY Scheme has been allocated to the R-APDRP wing, IT wing & S&D wing of JBVNL towards the strengthening of the distribution network and enablement of Information Technology (IT), the. DPRs have already been prepared by the above mentioned Wings of Petitioner.

Urban Wing

Out of sanctioned amount of Rs. 5127.56 Cr. under JSBAY Scheme a sum of Rs. 1699.86 Cr. inclusive of PMC cost is carved out for underground cabling work in six towns for creating infrastructure in eight industrial areas and other works in Government Organization.

Work awarded for underground cabling work, infrastructure development work in industrial area except Ranchi, Khunti Industrial Area. The activities covered under R-APDRP wing are shown in the below table:

Sl. No	Description	No. of District	Amount (Rs. in Cr.)
1.	Industrial area under JIADA	8	476.89
2.	UG cabling & other works	6	1187.59
3.	Other work for various Govt. organizations	-	35.38
Total			**1699.86**

IT and SCADA:-

Sl. No	**Work Description**	**Capex Cost**		
		Smart Meter (Rs. In Cr.)	IT infrastructure and communication (Rs. In Cr.)	Total Cost (Rs. In Cr.)
1	Procurement and installation of Single Phase smart meter with associated accessories (516899 Nos)	183.26	18.25	201.50
2	Procurement and installation of Three Phase (73024 Nos) & LT/ HT CT smart meter (10000 Nos) with associated accessories	62.41	6.69	69.1

3	SCADA DMS	333.00
4	NABL	12.00
Total		**615.60**

Capital Expenditure: A capex of Rs 60 crore would be incurred for the same in current year and Rs 120 crore in FY 2020-21.

Capital Expenditure: It is expected that Rs. 961 crore would be incurred on various schemes/heads under JSBAY in FY 2019-20 and Rs. 3,975.56 crore in FY 2020-21.

3.30.6 **Annual Development Plan (ADP) and Miscellaneous Capital Work**

In order 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. In FY 2019-20, no new ADP budget has been proposed by JBVNL and re-appropriated budget of FY 2018-19 has been continued for execution in FY 2019-20

Key objectives:

- To maintain the load growth and increased system demand as well as strengthening the existing system for more reliable power supply,
- Strengthening and Augmentation of existing Electrical infrastructure in Urban and Rural Areas of Jharkhand State.
- Electricity Access – Erecting new 33/11 KV PSS along with new 33KV, 11KV and LT Lines and providing service connection to new consumers including Govt. Schools, Gram Panchayat bhawan and primary health centers.
- System Strengthening & Capacity Augmentation – Adding additional capacity and augmentation of distribution system and facilitate existing consumers by augmenting the capacity of Power Transformers
- Operational Efficiency – Maintenance of Power Sub-Stations, 33 KV, 11KV, LT Distribution line and Distribution Transformer
- Capacity Building and institutional strengthening – Training programs, workshops to enhance the internal capacity of employees. Provision for consultancy services.
- IT and Technology Interventions - IT services dependent new work like ERP, Video Conferencing, and Ease of Doing Services etc.

Scheme Coverage and Budget: Power distribution system strengthening has been prioritized considering necessity as intimated by field officers and as per the priority given during various review meetings. After due exercise a sum of Rs. 670 Cr. has been proposed under ADP for the F.Y. 2018-19 and work programme has been continued in FY 2019-20 accordingly. Works proposed under ADP head are tabulated below:-

Sl. No.		Name of Work	Unit	Unit Rate	Budget	
				(In Rs. Crore)	Total Qty.	Amount (Rs. Crore)
1)	***Project Name: Construction of New 33/11 kV P/S/S***					
	(i)	Construction of 2x5MVA P/S/S (Dumka District- 2 No (Chota Chapuliya & Maharo), Deoghar District- 1 Nos (Tirkuti Pahad))	Nos.	2.49	3.00	7.47
	(ii)	Construction of 3x10MVA P/S/S (Ramgarh District- 1 No. (PTPS)	LS	4.76	1.00	4.76
		Sub Total				12.24
2)	***Project Name: Construction of New 33 kV Line***					
	(i)	33kV line Overhead	Ckm	0.16	137.00	22.18
		Sub Total				22.18
3)	***Project Name: Construction of New 11 kV Line***					
	(i)	11kV Line Overhead	Ckm	0.08	191.00	14.57
		Sub Total				14.57
4)	***Project Name: Construction of New LT Line (Using AB Cable) & New DSS***					
	(i)	LT Line by using AB Cable (120 Sqmm)	Km	0.12	650.00	76.12
	(ii)	LT Line by using AB Cable (95 Sqmm)	Km	0.08	525.00	42.32
	(iii)	New DSS	Nos.	0.03	2913.00	98.61
	(iv)	Strengthening & Renovation of DSS	LS			34.50
		Sub Total				251.54
5)	***Generic Item***					
	(i)	MRT, TRW & Store Equipments, Tools & plant including OFF Line Over Head Fault Locator Machine, Cable fault locator Etc.	LS			12.26
	(ii)	TRW Management (Binding Wire and strips of diff. sizes and other HQ level items)	LS			4.00
	(iii)	Strengthening of MRT Labs	LS			16.00
	(iv)	Construction of 02 Nos. additional TRW	LS			3.60
		Sub Total				35.86
6)	***Project Name: Spillover work of 33/11 kV PSS & Associated Lines***					
	(i)	Spillover works material requirement at Ranchi	LS			2.87
	(ii)	Spillover works material requirement at Gumla	LS			1.14
	(iii)	Spillover works material requirement at Hazaribag	LS			2.04
	(iv)	Spillover works material requirement at Ramgarh	LS			0.78
	(v)	Spillover works material requirement at Giridih	LS			20.00
	(vi)	Spillover works material requirement at Jamshedpur	LS			10.14
	(vii)	Spillover works material requirement at Chaibasa	LS			5.11
	(viii	Spillover works material requirement at Chas	LS			11.78
	(ix)	Spillover works material requirement at Dumka	LS			4.36

Sl. No.		Name of Work	Unit	Unit Rate (In Rs. Crore)	Budget	
					Total Qty.	Amount (Rs. Crore)
	(x)	Miscellaenous Spill-over Works including Spill-over works of 33/11 kV PSS and Associated Lines	LS			2.00
		Sub Total				60.22
7)	***Civil works***					
	(i)	Civil works for construction of new 33/11 kV P/S/S including Electrical wiring, fitting, fixing & furnishing etc.	LS			3.00
	(ii)	Spill-over Civil works for Construction of 33/11kV P/S/S including Electrical wiring, fitting, fixing & furnishing etc.	LS			5.50
	(iii)	Spill-over Civil works for construction of new office buildings & IB (Area, Circle, Division, Sub-Division, Section,IB) including Electrical wiring, fitting, fixing & furnishing etc.	LS			9.20
	(iv)	Civil works for Construction of new TRW including Electrical wiring, fitting, fixing & furnishing etc.	LS			2.00
	(v)	Civil works for Construction and renovation in existing TRW including Electrical wiring, fitting, fixing & furnishing etc.	LS			1.05
	(vi)	Civil works for Construction and renovation in existing Central Store & Divisional Store including Electrical wiring, fitting, fixing & furnishing etc.	LS			2.00
	(vii)	Consultancy charges for civil work	LS			2.56
		Sub Total				25.31
8)	***Metering (Supply & Installation Included)***					
	(i)	Supply & Installation of HT metering for main meter, MDAS software, HT metering for check meter, ABT metering & feeder metering	LS	-	-	133.44
	(ii)	Supply & Installation of LTCT Electronic Meter (150/5) 3 Phase 4 Wire with meter box, Class 1.0 accuracy	LS			2.80
	(iii)	Supply & Installation of Three phase whole current meter with MDI feature for-	LS			6.00
		Sub Total				142.24
9)	***Others***					
	(ii)	Additional Liabilities on account of implications of GST for FY 2017-18	LS			4.00
	(iii)	Running Projects of IT Initiatives, Revenue Collection - reconciliation related software procurement through GeM and Technological Intervention	LS			30.82
	(iv)	GIS Projects	LS			25.60
	(v)	Communication Projects	LS			20.01
	(vi)	Trolley Mounted DSS with 250 kVA DTR with all accessories	Nos.	0.06	85.00	5.49
		Sub Total				85.92
TOTAL						**650.08**

Capital Expenditure: It is expected that Rs 849.75 crore would be incurred under the scheme in present FY 2019-20 (including slippages from previous FYs) and Rs. 804.15 crore in FY 2020-21.

3.30.7 **Atal Gram Jyoti Yojana**

Government of Jharkhand has launched a scheme namely Atal Gram Jyoti Yojana which is associated with centrally sponsored scheme DDUGJY in which lower capacity of single phase DTRs of 10 and 16 KVA capacity shall be replaced with higher capacity of multiple 25 kVA DTR to cater the load of free electric connection in selected villages. Under the scheme, all left over un-electrified households will be provided free electrical connection as well as meters, whereby a total of 2.5 Lac households are expected to be covered.

Capital Expenditure: Majority of the work under the DDUGJY 12th Plan has been completed and it is expected that the scheme would be closed after incurring expenditure of Rs 45.59 crore in FY 2019-20.

3.30.8 **Saubhagya:**

The Saubhagya Scheme or Pradhan Mantri Sahaj Bijli Har Ghar Yojana is an Indian government project to provide electricity to all the un-electrified households in all the villages and for all the poor households in all the towns in any of the State/UTs of the country. The scheme aimed to complete the electrification process by March, 2019 and was largely successful in achieving the same. However there are 2 lakh households which were not willing to get electrified before March 2019, but have now shown their willingness to get electrified. These households would be electrified before December, 2019. It is expected that in FY 2019-20, these 2 lakh households would be electrified at cost of Rs 90 crore.

3.30.9 **IT Schemes:**

The Petitioner is currently undertaking several IT initiatives with an objective of installing smart meters and business process upgradation.

Scheme Coverage and Budget: Total project cost for JPSIP under World Bank funded project comes to Rs. 449.20 crore s with 35.62% funds coming from World Bank in the form of loan, 21.38% from the Central Govt. under IPDS Phase-II or NSGM and the remaining 43% from the State Govt. under State Plan. The detail of the same is tabulated below:

Sl. No.	Work / Name of Project	Total Cost (In Crore)	Amount in %		
			State Govt.	Central Govt.	World Bank
1	Smart Metering in Ranchi for 3.5 Lakhs consumer	250	38%	30%	32%
2	Smart Meter >10KW consumer for	50	70%	0	30%

	entire Jharkhand				
3	Upgradation of IT Hardware & Software	100	49%	21%	30%
4	IT projects office and consultant	8	12.5%	0	87.5%
5	Software for Power Management	10.2	21.6%	0	78.4%
6	Business process upgradation	9	0	0	100%
7	Upgradation of training centre and training	22	50%	0	50%
Total		**449.2**	**40%**	**21.4%**	**35.6%**

Physical Progress: Tender for the Work of Smart Metering for 3.5 Lakh consumers of electric supply circle, Ranchi has been published, whose estimated expenditure is only 250Crores(The tender No. 197/PR/JBVNL/18-19)

Capital Expenditure: It is expected that capital expenditure of Rs 28.34 crore would be incurred in FY 2019-20, Rs 386.6 crore in FY 2020-21 and remaining Rs. 54 crore in FY 2021-22.

3.31 Considering the above capital expenditure schedule for FY 2019-20, the Petitioner has projected revised CWIP and creation of GFA. Considering the past experience, JBVNL has proposed a capitalization period of 3 years in the ratio of 20:40:40 for all the proposed works and capital expenditure of schemes in the respective years. Further, opening CWIP has been proposed to be capitalized in the proportion of 80:20 in first and second year.

Table 34: Actual Capital work in progress of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	App. (Rs Cr.)	Estimated (Rs Cr.)
Opening CWIP	4,200.15	5,745.22
Capex during the year	786.30	6,285.95
Transfer to GFA	1,892.22	5,853.37
Closing CWIP	3,094.23	6,177.80

3.32 The CCG funding of JBVNL for FY 2019-20, based on the closing CCG funding of FY 2018-19 is provided in the table below.

Table 35: Consumer contribution and grants of JBVNL for FY 2019-20

Particulars	FY 20190-20	
	App. (Rs Cr.)	Estimated (Rs Cr.)
Opening	7,000.93	6,882.51
Addition	265.81	3,571.22
Closing	7,266.74	10,453.72

Depreciation

3.33 The Petitioner has proposed the revised depreciation for FY 2019-20 in line with the approach adopted by the Hon'ble Commission in its Tariff orders dated 27th Apr'18 and 28th Feb'19.

3.34 It is hereby submitted that the Hon'ble Commission in it Tariff Order dated 28th February, 2019 has revised the methodology for calculation of Depreciation for FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20. In the revised methodology, the Hon'ble Commission while Truing Up the depreciation for the FY 2016-17 and FY 2017-18 and determining the same for the FY 2018-19 and FY 2019-20 has considered the average GFA of the financial year instead of the closing GFA for a given financial year. Further Hon'ble in the same Order has calculated the GFA created out of D&E by reducing the closing balance of GFA created out of CCG from the Average GFA. Principally, it would be incorrect to consider Average GFA and Closing balance of Grants and Consumer Contribution and the Hon'ble Commission ought to have considered only the Average balance of Grants and Consumer Contribution.

3.35 In view of same, The Petitioner has first arrived at the Opening and closing GFA of FY 2019-20, created out of D&E, by deducting the CCG 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 thus calculated to arrive at the total depreciation

3.36 The depreciation expense for FY 2019-20 is provided below for kind consideration of Hon'ble Commission.

Table 36: Depreciation cost of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Opening GFA (Less CCG)	4,218.41	6,099.80
Closing GFA (Less CCG)	5,224,28	8,815.48
Average GFA excluding Consumer Contributions and Grants (Rs. Cr.)	4,278.17	7,457.64
Depreciation Rate (Rs. Cr.)	5.94%	5.94%
Depreciation Cost	**254.12**	**442.98**

Interest & Finance Charges

3.37 The opening debt for FY 2019-20 has been considered equal to closing value of FY 2018-19 as submitted above in chapter regarding True-up for FY 2018-19.

3.38 Closing debt for FY 2019-20 has been calculated above in Table 32 in line with the Regulation 6.16 of the JSERC Tariff Regulations, 2015.

3.39 In line with the Regulation 6.22 of the JSERC Tariff Regulations, 2015 repayment of loan for FY 2019-20 has been considered equal to Depreciation as calculated above.

3.40 Further, the rate of interest on long-term loan, has been considered at the Base rate of SBI as applicable on April 1 of FY 2019-20 plus 200 basis points as per Regulation 6.24 of the JSERC Distribution Tariff Regulations, 2015. Interest cost thus calculated vis-à-vis as approved by the Hon'ble Commission is provided in the table below.

Table 37: Interest & finance charges of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Opening Balance	1,862.24	2,719.29
Deemed Addition during the year	811.04	2,214.97
Deemed Repayments during the year	254.12	442.98
Closing Balance	2,419.16	4,491.28
Average balance during the Year	2,140.70	3,605.29
Interest Rate	10.70%	11.05%
Interest Expense	**229.05**	**398.38**

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

Interest on Consumer Security Deposit

3.42 In order to estimate the interest on consumer security deposit for FY 2019-20, the petitioner has assumed an escalation of 5% over the accumulated consumer security of FY 2018-19 as per Accounts audited by the Statutory Auditor.

3.43 Further, the applicable interest rate as per JSERC Supply code Regulations, 2015 has been applied to estimate the Interest on consumer deposit for FY 2019-20. The interest rate considered is the SBI Base Rate prevailing on 1st April 2019 i.e. 9.05% p.a.

Table 38: Interest on consumer deposit of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Consumer Deposit	662.16	615.15
Interest Rate	8.70%	9.05%
Interest on Consumer Security Deposit	**57.61**	**55.67**

Interest on Working Capital

3.44 The Petitioner has estimated the working capital requirement for FY 2019-20 in line with the Regulation 6.29 and 6.30 of the JSERC Tariff Regulations, 2015.

3.45 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 Regulation 6.31 of the JSERC Distribution Tariff Regulations, 2015.

3.46 It is submitted that based on the expenditure for FY 2019-20, the Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below.

Table 39: Interest on working capital of JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
1 month O&M	43.86	55.03
Maintenance Spares (1% of GFA)	33.32	88.15
2 months Receivables	1,194.04	1,272.00
Less: 1 month cost of power purchase	449.69	458.88
Less: Security Deposit from Customers	662.16	615.15
Total Working Capital requirement	**159.37**	**341.14**
Interest rate on WC	12.20%	12.55%
Interest on Working Capital	**19.44**	**42.81**

Return on Equity

3.47 The Petitioner has considered the opening balance of normative equity for FY 2019-20 as per the closing balance for the FY 2018-19 as submitted above in chapter regarding True-up for FY 2018-19.

3.48 Closing equity for FY 2018-19 has been calculated using normative debt equity ratio (70:30) as calculated above in Table 32, as per the provisions of Regulation 6.16 of JSERC Distribution Tariff Regulations, 2015

3.49 Further, the rate of Return on Equity (RoE) is considered to be 15.50% as per the provisions of Regulation 6.17 of JSERC Distribution Tariff Regulations, 2015

3.50 The return on equity is provided in the table below for kind consideration of Hon'ble Commission

Table 40: Return on equity of JBVNL for FY 2019-20

Particulars	FY 2019-20

	Approved (Rs Cr.)	Estimated (Rs Cr.)
Opening Balance of Normative Equity	1,265.52	1,829.94
Deemed Additions	301.76	814.70
Closing Balance of Normative Equity	1,567.29	2,644.64
Average Equity	1,416.40	2,237.29
Return on Equity (%)	15.50%	15.50%
Return on Equity	**219.54**	**346.78**

Non- Tariff Income

3.51 The Non-Tariff Income (Other Income) of JBVNL for FY 2019-20 has been projected based on the growth trend of historical figures as provided in the table below for the kind consideration of Hon'ble Commission. The Petitioner has already submitted the rationale behind the computation of NTI in Chapter regarding True-, which is in line with the judgement of Hon'ble ATEL dated 12.07.2011 in case No. 142 & 147 of 2009.

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

Table 41: Non-tariff income of JBVNL for FY 2019-20

Particulars	2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
D.P.S from Consumer		442.80
Other NTI		37.09
Total NTI	348.79	479.89
Interest rate for Receivables financing	12.20%	12.55%
Corresponding Receivables against DPS	1,666,67	2,460.61
Interest on Receivables against DPS	203.33	308.73
Net NTI to be considered	**145.46**	**171.15**

Disallowance on account of AT&C losses

3.53 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 100% collection efficiency for FY 2019-20, which is on extremely higher side and even the most efficient utilities in the Country are not able to achieve the 100% collection efficiency.

Hon'ble Commission in its MYT Order and Tariff Order dated 28th Feb'19 has fixed T&D loss target of 14% which is even less than UDAY target of 15%

3.54 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), ~4,500 Pragya Kendras, ~440 post offices, ~194 ATP machines etc. The Petitioner humbly submits that despite creating several avenues for payment of bills by the consumers, the collections have still remained lower than the targets.

3.55 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, which also acts as a JBVNL Touch-point for billing, collection and various other consumer services. 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.

3.56 The Petitioner is prone to difficulties of T&D losses and collection inefficiencies due to difficult terrains and large rural consumers in overall consumer mix. Further, the Petitioner also has Universal Supply Obligation (USO) so it cannot stop/reduce the power supply in areas with poor collection efficiencies.

3.57 The Petitioner therefore prays to Hon'ble Commission to consider the revised target of T&D loss of 18% while approving the APR for FY 2019-20. Further the Hon'ble Commission is prayed to relax normative collection efficiency to 95% for FY 2019-20.

3.58 The Petitioner also prays to Hon'ble Commission that a reasonable amount of revenue which JBVNL has not been able to collect, may be allowed as provision for bad debt. The calculation for provision for bad debt is done by considering the difference between the Commissions approved collection efficiency i.e. 100% and the submission target of 95% for FY 2019-20 as provided in the table below.

Table 42: Provision for bad & doubtful debt of JBVNL

Particulars	FY 2019-20
Receivables (Rs. Cr.)	5,486.03
Collection efficiency (%)	95.00%
Total disallowance (Bad debt) (Rs. Cr.)	**274.30**

3.59 Therefore, it is prayed to the Hon'ble Commission to approve for addition of provision of bad debt in total ARR.

Summary of ARR for FY 2019-20

3.60 Based on the components of the ARR discussed in the above sections, the final ARR for FY 2019-20 has been provided in the table below for kind consideration of Hon'ble Commission.

Table 43: Summary of revised ARR for JBVNL for FY 2019-20

Particulars	FY 2019-20	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Power Purchase cost	5,396.25	5,506.58
Transmission charges (Inter and Intra State)	478.69	349.62
Additional REC Purchase to meet RPO	128.65	
O&M expenses	526.31	660.31
Depreciation	254.12	442.98
Interest on Loan	229.05	398.38
Return on Equity	219.54	346.78
Interest on Working Capital	19.44	42.81
Interest on security deposit	57.61	55.67
Provision for doubtful debts	-	274.30
Less: Non-Tariff Income	145.46	171.15
Gross ARR	**7,164.22**	**7,906.28**

3.61 It is prayed to the Hon'ble Commission that the above revenue gap may be allowed and impact shall be passed on to JBVNL.

4. Aggregate Revenue Requirement (ARR) for FY 2020-21

4.1 The present section of this Tariff Petition provides the details of elements of ARR for FY 2020-21, projected based on the provisions of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations 2015, figures approved in previous tariff orders and Principles adopted by Hon'ble Commission.

Energy Sales

4.2 The Petitioner has projected the sales for FY 2020-21 based on the addition of consumers, consumption pattern and past trend of consumption growth rate. It is noteworthy, that JBVNL has witnessed a significant growth in the total sales across all categories in the last few years. This is majorly due to increase in the availability of power, reduced load shedding, consumer addition across all category and uninterrupted supply of power. Further, JBVNL aims to provide 24X7 power to all consumers in the State, which shall be the key reason for increase in the energy sales in coming years.

4.3 As submitted in previous chapter regarding APR for FY 2019-20, the pace of consumers getting added in the billing database of JBVNL is a bit slower than the pace for release of connection. The reason behind the same is that as per the Govt. Mandate, connections must be released to the consumers with minimum requirement of essential documents. However, in order to start the billing of these new consumer, proper verification has to be done by JBVNL. This unavoidable lag in providing connection and bringing the consumer in the billing database has led to increase in number of domestic consumers from around 40 lakh to 43.5 lakh. It is also expected that JBVNL will complete its target of 1,00,000 agriculture connection by FY 2020-21 under Tilka Manjhi and DDUGJY schemes. For remaining categories, consumers would grow as per trend of previous years. The category wise projection of consumers for FY 2020-21 are detailed below.

Table 44: Projected Consumers for FY 2020-21 (Nos.)

Particulars	Projected (No.)
Domestic	43,48,770
Commercial/ Non domestic	2,54,411
Industrial LT/LTIS	16,432
Irrigation & Agricultural / IAS	1,00,000
Industrial HTS/HTSS/EHT	1,787

Particulars	Projected (No.)
IS-I: Public Lighting / SS	418
IS-II: RTS, MES	10
Total Consumer (Nos.)	**47,21,828**

4.4 Based on consumer-category wise historic average connected load, category-wise connected load is projected for FY 2020-21 as detailed in the table below.

Table 45: Connected Load (kW) of JBVNL for FY 2020-21

Particulars	Projected (kW)
Domestic	61,73,733
Commercial	5,16,889
Irrigation & Agricultural / IAS	71,032
Industrial LT/LTIS	2,95,776
Industrial HT/HTSS/EHT	7,87,471
IS-I: Public Lighting / SS	10,032
IS-II: RTS, MES	47,330
Total Connected Load	**79,02,263**

4.5 Based on the above tables, the consumer category wise energy sales have been projected, keeping in view the load factor and average load of various consumer categories. The category-wise sales for FY 2020-21 has been summarized in the table below for kind consideration of Hon'ble Commission.

Table 46: Projected Energy Sales (MUs) of JBVNL for FY 2020-21

Particulars	Projected (MUs)
Domestic	6,624.37
Commercial	837.90
Irrigation & Agricultural / IAS	334.91
Industrial LT/LTIS	220.33
Industrial HT/HTSS/EHT	2,294.80
IS-I: Public Lighting / SS	26.36
IS-II: RTS, MES	121.41
Total Energy Sales	**10,460.08**

Power Purchase

4.6 JBVNL has projected the power purchase quantum for FY 2020-21 based on following facts and assumptions:

- **Generation estimated during FY 2019-20:** Power Purchase quantum for existing power plants for FY 2020-21 has been considered equal to power purchase quantum considered for FY 2019-20. However due to commissioning of new plants having PPA with Jharkhand, it is expected that existing power plants with high variable cost would be backed down as per Merit Order Principle. Hence expected reduction in generation from power plants have been done. Additionally due to migration of HT consumers from DVC command area, equivalent deduction in power purchase from KTPS has been done for FY 2020-21.

- **Power Requirement in FY 2020-21:** Based on estimated Sales and Energy balance for FY 2020-21, excess power available for sale in open market has been calculated.
- **Banking of Power:** Banking of Power has not been considered as amount of power availed and supplied through banking mechanism are roughly the same for full year.
- **Purchase through short-term sources:** No power purchase from IEX (PTC) or UI mechanism has been projected as power supply quantum in FY 2020-21 is greater than power requirement. However due to emergency situation, like outage of a generation plant, JBVNL may be forced to purchase power from exchange.
- **Current status of upcoming Power Stations**: As per CEA Thermal Power Plant Status report for month of August 2019, JBVNL has considered following schedule for Date of Commercial Operation (COD) of upcoming plants in FY 2020-21

Table 47: Detail of Upcoming Power Plants in FY 2019-20

Particulars	Allocated Capacity (MW)	COD	Power Purchase Cost (Rs/kWh)
NTPC Barh STPSI Unit-1	67	1st July'20	4.00
NTPC Darlipalli Unit-2	62.5	1st July'20	4.00
NTPC Nabingar Unit-2	20	1st Apr'20	4.00
NTPC Nabingar Unit-3	20	1st Sep'20	4.00
NTPC Karnpura Unit-1	167	1st Oct'20	4.00
Total Allocated Capacity	**336.5**		

- Furthermore PLF of new plants have been considered in range of 50%, as they would be under stabilization mode, just after commissioning and auxiliary losses has been considered at 6%.
- **Commissioning of Renewable Plants:** As per correspondence with SECI and seasonal generation pattern, JBVNL has considered that 200 MW power from Inox Wind under 2000 MW ISTS Tench-III (wind) would be available

from 01st April 2020 and 700 MW solar power under 2000 MW ISTS (trenche-I) would be available from 1st November 2020. PLF of renewable sources have been considered at 19%.

4.7 JBVNL has estimated the power purchase Cost for FY 2020-21 based on following facts and assumptions:

- **Power Tariff during FY 2019-20:** Power Tariff for existing power plants except renewables as determined for FY 2019-20 has been escalated by 5% to arrive at power tariff for FY 2020-21. Tariff of Renewable plants having levellized tariff have been considered equal to tariff applicable in FY 2019-20.
- **Transmission and Scheduling Charges:** Actual Transmission and scheduling Charges for FY 2019-20 has been escalated by 5% to arrive at corresponding figure for FY 2020-21
- **Power Purchase Cost for new Plants:** Power Purchase cost of new NTPC plants have been considered at Rs 4.00 kWh (Energy Charge- Rs 1.75/kWh and Capacity Charge-Rs 2.25/kWh). Power
- **Sale of Excess Power**: Sale of Excess power has been considered at Average Power Purchase Cost (except transmission and scheduling charges) as per methodology adopted by Hon'ble Commission in its MYT Order dated 21st June'17.

4.8 Based on above facts and assumptions, source-wise estimated Power Purchase quantum and cost for FY 2020-21 is tabulated below-

Table 48: Power purchase quantum and cost of JBVNL for FY 2020-21

Particulars	Power Purchase Quantum		Power Purchase Cost	
	Approved (MUs)	Projected (MUs)	Approved (Rs Cr.)	Projected (Rs Cr.)
NTPC				
Farrakka	700.00	871.11	267.19	304.32
Farrakka III	100.00	376.55	51.27	162.90
Khalagaon I	184.93	174.35	66.94	58.82
Talcher	498.19	510.56	114.55	163.51
Khalagaon II	190.08	165.19	64.73	50.52
Barh STPS-II	100.00	343.98	63.02	154.77
Korba		302.13		89.40
NTPC Darlipalli STPS	742.50	453.92	193.81	181.57
Barh STPS-I		208.54		83.42
NTPC Nabinagar	367.20	114.42	97.18	51.38
NTPC North Karanpura	2,585.77	344.46	674.92	137.78

Particulars	Power Purchase Quantum		Power Purchase Cost	
	Approved (MUs)	Projected (MUs)	Approved (Rs Cr.)	Projected (Rs Cr.)
Total	**5,468.67**	**3,865.22**	**1,593.61**	**1,438.39**
NHPC				
Rangit	45.79	43.91	15.59	16.54
Teesta	329.69	315.09	88.03	67.76
Total	**375.48**	**359.00**	**103.62**	**84.30**
PTC				
Chukha	203.79	155.90	41.04	39.31
Punatsangchhu-II	533.44		190.15	
Tala	405.61	279.24	92.70	63.33
Total	**1,142.84**	**435.14**	**323.89**	**102.65**
Total Central Sector	**6,986.99**	**4,659.37**	**2,021.12**	**1,625.34**
DVC	**4,000.00**	**4,042.27**	**1,994.76**	**2,202.89**
State Sector				
PTPS	460.37		214.30	
PTPS NTPC Phase-I	2,606.00		689.75	
SHPS	55.19	8.48	24.98	2.24
TVNL	2,266.75	1,865.88	847.24	755.53
Total State Sector	**5,388.31**	**1,874.36**	**1,776.27**	**757.77**
Private				
Inland Power	422.94	387.60	162.31	198.61
APNRL	954.00	913.94	359.56	381.06
APNRL Adjustment		-		-
APNRL (Add. 66 MW)	-	491.01		207.96
Total Private Sector	**1,376.94**	**1,792.54**	**521.87**	**787.63**
Other RE				
Solar IPPs	16.87	17.92	30.30	32.18
Solar REC	13.14		4.60	
JREDA	977.52		621.70	
SECI		505.10	-	136.73
RE (Wind)	991.22	1,108.98	148.68	366.27
Total Other RE	**1,998.75**	**1,631.99**	**805.28**	**535.19**
Rungta Mines	-	35.31	-	11.54
ABCIL	-	1.54	-	0.12
KBUNL Kanti TPS	73.44	90.24	19.71	57.03

Particulars	Power Purchase Quantum		Power Purchase Cost	
	Approved (MUs)	Projected (MUs)	Approved (Rs Cr.)	Projected (Rs Cr.)
PGCIL			128.09	154.73
Posoco (ERLDC)	-	-	1.58	1.38
Posoco (Railway)				-0.11
ERLDC(APNRL)	-	-		43.23
Amount added to purchase solar REC'		-	101.84	
Revenue due to sale of Surplus power		-1,063.36		-448.10
Grand Total	**19,824.43**	**13,064.26**	**7,268.67**	**5,728.64**

4.9 After deducting PGCIL cost total power purchase cost of JBVNL for FY 2020-21, comes to be Rs 5,573.91 crore. 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.

Energy Balance

4.10 It is submitted that the energy availability for FY 2020-21 has been projected based on the actual Power purchase and sales.

4.11 JBVNL would like to submit that power purchase from various sources are segregated into different heads, while calculating the energy balance for the control period.

- Power Purchase from Outside JSEB Boundary- NTPC, NHPC, PTC, APNRL, part of TVNL, NVVNL, 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, Rungta Mines, ABCIL and Inland Power
- Direct Input of Energy to Distribution System- DVC and Solar IPPs.

4.12 Based on the information provided above, Energy Balance projection of JBVNL for FY 2020-21 is provided in the table below.

Table 49: Energy balance of JBVNL for FY 2020-21 (in MU)

Particulars	FY 2020-21	
	Approved	Projected
Power Purchase from Outside JSEB Boundary	8,853.13	8,944.14
Loss in External System (%)	3.00%	3.00%
Loss in External System	265.59	268.32
Net Outside Power Available	8,587.53	8,675.81
Energy Input Directly to State Transmission System	1,428.05	424.45
State-owned Generation	3,544.50	698.85
Energy Input through Renewables sources	1,499.06	-
Energy Available for Onward Transmission	15,059.15	9,799.11
Transmission Loss (%)	4.00%	5.00%
Transmission Loss	602.37	489.96
Net Energy Sent to Distribution System	14,456.78	9,309.16
Direct Input of Energy to Distribution System	4,499.69	4,060.18
Total Energy Available for Sales	**18,956.47**	**13,369.34**

Intra-State Transmission Charges

4.13 It is submitted that transmission charges payable to Jharkhand Urja Sanchar Nigam Limited been computed based on the approved rate in Tariff Order of JBVNL dated 24th Feb'18.

4.14 The energy wheeled through transmission network as projected in the above section of Energy Balance has been considered for calculating the Intra-State transmission charges payable to JUSNL and no transmission charges are applied on direct input of energy to distribution system. The projected Intra-state transmission charges payable to JUSNL for FY 2020-21 is provided in the table below.

Table 50: Intra-state transmission charges of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved	Projected (Rs Cr.)
Energy Wheeled at Transmission Level (MU)	14,456.78	9,799.11
Transmission Rate (Rs/unit)	0.21	0.25
Transmission Charges (Rs Cr.)	**310.77**	**244.98**

Employee Cost

4.15 The Petitioner has calculated the employee cost for FY 2020-21 by escalating the employee cost of FY 2019-20 as submitted above in Chapter for APR for FY 2019-20 by the inflation factor of 4.66% and the methodology provided under Clause 6.6 (b) and (c) of JSERC MYT Regulations, 2015.

4.16 The projected employee cost for FY 2020-21 is provided in the table below for kind consideration of Hon'ble Commission.

Table 51: Employee cost of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Total Employee Expense	252.84	322.21
Employee cost	*220.98*	301.67
Terminal Benefits	*31.86*	20.54

Administrative and General Expenses

4.17 In line with the Clause 6.6 (b) and (c), the A&G expenses for FY 2020-21 have been calculated by escalating A&G expense of FY 2019-20 by inflation factor of 4.66 %.

4.18 The A&G expenses for FY 2020-21 is provided in the table below for kind consideration of Hon'ble Commission.

Table 52: A&G expense of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
A&G Expenses	59.86	110.34

Repair & Maintenance Expenses

4.19 In line with the Regulation 6.6 (a) of JSERC MYT Regulations 2015, the R&M expenses for FY 2020-21 have been estimated by applying K-factor of 2.34% as approved by the Hon'ble Commission in Tariff Order dated 28th Feb'19 on opening value of GFA for FY 2020-21 as submitted above.

4.20 The R&M expenses for FY 2020-21 is provided in the table below for kind consideration of Hon'ble Commission.

Table 53: Repair and Maintenance expense of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
R&M Expenses	279.17	384.00

Capital Expenditure Schedule

4.21 Building upon the huge capex incurred in FY 2018-19 and FY 2019-20; JBVNL plans to continue the momentum in FY 2020-21. However since most of central funded schemes would end in FY 2019-20, capex in FY 2020-21 would be a tad less. The scheme-wise Capital expenditure schedule for FY 2020-21 is tabulated below:

Table 54: Capex schedule of JBVNL for FY 2020-21

Scheme Name	FY 2020-21	
	App. (Rs Cr.)	Projected (Rs Cr.)
R-APDRP Part-A	16.50	57.00
ADP + Misc.	900.00	804.15
JSBAY - RE	-	3,975.56
IT Schemes (WB Supported)		386.60
Total	**916.50**	**5,223.31**

4.22 Considering the above capital expenditure schedule for FY 2020-21, the Petitioner has projected revised CWIP and creation of GFA. Considering the past experience, JBVNL has proposed a capitalization period of 3 years in the ratio of 20:40:40 for all the proposed works and capital expenditure of schemes in the respective years. Further, opening CWIP has been proposed to be capitalized in the proportion of 80:20 in first and second year.

Table 55: Projected Capital work in progress of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	App. (Rs Cr.)	Projected (Rs Cr.)
Opening CWIP	2,464.47	6,177.80
Capex during the year	916.50	5,362.24
Transfer to GFA	1,117.10	5,808.32
Closing CWIP	2,263.87	5,731.72

4.23 The CCG of JBVNL for FY 2020-21, based on the closing value of FY 2019-20 is provided in the table below.

Table 56: Consumer contribution and grants of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	App. (Rs Cr.)	Projected (Rs Cr.)
Opening	3,648.90	10.453.72
Addition	218.93	4,420.46
Closing	3,867.83	14,874.18

Calculation of Normative GFA, Loan and Equity

4.24 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.

4.25 The Petitioner has bifurcated GFA and Accelerated Depreciation into component from Debt & Equity and from CCG as per approach followed in previous Tariff Orders by Hon'ble Commission. The Petitioner has thereafter applied the normative debt-equity ratio of 70:30 on GFA out of Debt & Equity to calculate Normative Equity as per Claus 6.16 of JSERC Distribution Tariff Regulation, 2015.

4.26 After netting Normative Equity from closing GFA out of Debt and Equity, the Petitioner has deducted accumulated depreciation out of Debt and Equity from the resultant to arrive at normative closing debt

4.27 Calculation of Normative GFA out of Debt and Equity, Loan and Equity is tabulated below:

Table 57: Source of Funding of GFA for FY 2020-21 (Rs. Crore)

	FY 2020-21	
Particulars	Approved (Rs Cr.)	Actual (Rs Cr.)
Closing GFA (A)	13.047.24	22,218.42
CCG towards GFA (B)	8,890.78	11,823.94
Closing GFA Out of D&E (C= A-B)	4,156.46	10,394.48
Accumulated Depreciation (D)	3,546.67	3,697.03
Accumulated Depreciation towards GFA (E)	1,129.86	1,729.59
Closing Normative Equity (F = C* 30%)	1,246.94	3,118.34
Closing Normative Loan (G = C-E-F)	1,779.66	5,546.55

Depreciation

4.28 The Petitioner has proposed the revised depreciation for FY 2020-21 in line with the approach adopted by the Hon'ble Commission in its Tariff orders dated 27th Apr'18 and 28th Feb'19.

4.29 The Petitioner has first arrived at the Opening and closing GFA of 2020-21, 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 thus calculated to arrive at the total depreciation.

4.30 The depreciation expense for FY 2020-21 is provided below for kind consideration of Hon'ble Commission.

Table 58: Depreciation cost of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Opening GFA (Less CCG)		8,815.48
Closing GFA (Less CCG)		10,394.48
Average GFA	12,488.69	9,604.98
Depreciation Rate (Rs. Cr.)	5.94%	5.94%
Depreciation	741.83	**570.54**
Less: Depreciation attributable to consumer contribution, grants etc	505.50	--
Depreciation Cost	**236.32**	

Interest & Finance Charges

4.31 The opening debt for FY 2020-21 has been considered equal to closing value of FY 2019-20 as submitted above in chapter regarding APR for FY 2019-20.

4.32 Closing debt for FY 2020-21 has been calculated above in Table 57 in line with the Regulation 6.16 of the JSERC Tariff Regulations, 2015.

4.33 In line with the Regulation 6.22 of the JSERC Tariff Regulations, 2015 repayment of loan for FY 2020-21 has been considered equal to Depreciation as calculated above.

4.34 Further, the rate of interest on long-term loan, has been considered as prevailing base rate of SBI plus 200 basis points as per Regulation 6.24 of the JSERC Distribution Tariff Regulations, 2015. Interest cost thus calculated vis-à-vis as approved by the Hon'ble Commission is provided in the table below.

Table 59: Interest & finance charges of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Opening Balance	1,806.58	4,491.28
Deemed Addition during the year	209.41	1,625.80
Deemed Repayments during the year	236.32	570.54
Closing Balance	1,779.66	5,546.55
Average balance during the Year	1,793.12	5,018.92
Interest Rate	11.30%	10.45%
Interest Expense	**202.62**	**524.48**

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

Interest on Consumer Security Deposit

4.36 In order to estimate the interest on consumer security deposit for FY 2020-21, the petitioner has assumed an escalation of 5% over the accumulated consumer security of FY 2019-20 as submitted in above chapter regarding APR for FY 2019-20.

4.37 Further, the applicable interest rate as per JSERC Supply code Regulations, 2015 has been applied to estimate the Interest on consumer deposit for FY 2020-21. The interest rate considered is the SBI Base Rate prevailing as on date of filing Petition i.e. 8.45% p.a.

Table 60: Interest on consumer deposit of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Consumer Deposit	1,202.47	645.91
Interest Rate	9.30%	8.45%
Interest on Consumer Security Deposit	**111.83**	**54.58**

Interest on Working Capital

4.38 The Petitioner has estimated the working capital requirement for FY 2020-21 in line with the Regulation 6.29 and 6.30 of the JSERC Tariff Regulations, 2015.

4.39 Rate of IoWC has been considered to be equal to the Base Rate of SBI prevailing as on date of filing Petition plus 350 Basis Points as per Regulation 6.31 of the JSERC Distribution Tariff Regulations, 2015.

4.40 It is submitted that based on the expenditure for FY 2020-21, the Petitioner has estimated the working capital requirement and interest thereof, as provided in the Table below.

Table 61: Interest on working capital of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
1 month O&M	49.32	68.05
Maintenance Spares (1% of GFA)	119.30	103.94
2 months Receivables	1,349.29	1,375.26
Less: 1 month cost of power purchase	577.45	464.49
Less: Security Deposit from Customers	1,202.47	645.91
Total Working Capital requirement	**(262.00)**	**436.85**
Interest rate on WC	12.80%	11.95%
Interest on Working Capital	**0.00**	**52.20**

Return on Equity

4.41 The Petitioner has considered the opening balance of normative equity for FY 2020-21 as per the closing balance for the FY 2019-20 as submitted above in chapter regarding APR for FY 2019-20.

4.42 Closing equity in FY 2020-21 has been calculated using normative debt equity ratio (70:30) as calculated above in Table 57, as per the provisions of Regulation 6.16 of JSERC Distribution Tariff Regulations, 2015

4.43 Further, the rate of Return on Equity (RoE) is considered to be 15.50% as per the provisions of Regulation 6.17 of JSERC Distribution Tariff Regulations, 2015

4.44 The return on equity is provided in the table below for kind consideration of Hon'ble Commission

Table 62: Return on equity of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Estimated (Rs Cr.)
Opening Balance of Normative Equity	1,165.80	2,644.64
Deemed Additions	81.14	473.70
Closing Balance of Normative Equity	1,246.94	3,118.34
Average Equity	1,206.37	2,881.49
Return on Equity (%)	15.50%	15.50%
Return on Equity	**186.99**	446.63

Non- Tariff Income

4.45 The Non-Tariff Income (Other Income) of JBVNL for FY 2020-21 has been projected based on the growth trend of historical figures as provided in the table below for the kind consideration of Hon'ble Commission.

4.46 The Petitioner has already submitted the rationale behind the computation of NTI in Chapter 2 regarding True-up for FY 2018-19, which is in line with the judgement of Hon'ble ATEL dated 12.07.2011 in case No. 142 & 147 of 2009.

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

Table 63: Non-tariff income of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Projected (Rs Cr.)
D.P.S from Consumer		442.80
Meter Rent		23.19
Misc. Charges from Consumers		15.00
Total NTI		480.99
Interest rate for Receivables financing		11.95%
Corresponding Receivables against DPS		2,460.01
Interest on Receivables against DPS		293.97
Net NTI to be considered	**163.24**	**187.02**

Disallowance on account of AT&C losses

4.48 As mentioned in above chapters, the Petitioner has undertaken several administrative measures to curb the AT&C losses along with the technical measures such as increasing the metering, focusing on billing efficiency and collection efficiency improvement.

4.49 However keeping in view, the addition of large numbers of rural consumers, it has become very challenging to attain 100% collection efficiency, owing to limited paying capacity of such consumers. Moreover Hon'ble Commission has fixed T&D loss target of 13% which is even strict than UDAY target of 15%T&D loss.

4.50 The Petitioner hereby prays to Hon'ble Commission to consider the revised target of T&D loss of 15% while approving the ARR for FY 2020-21 as per UDAY benchmark. Further the Hon'ble Commission is prayed to relax normative collection efficiency to 98% for FY 2020-21 as it is an impossible target to achieve even by utilities considered to be best in the country and plying in ideal scenario, let alone by JBVNL.

4.51 The Petitioner therefore prays to Hon'ble Commission that a reasonable amount of revenue which JBVNL has not been able to collect, may be allowed as provision for bad debt. The calculation for provision for bad debt is done by considering the difference between the Commissions approved collection efficiency i.e. 100% and the submission target of 98% for FY 2020-21 as provided in the table below.

Table 64: Provision for bad & doubtful debt of JBVNL

Particulars	FY 2020-21
Receivables (Rs. Cr.)	6,660.72
Collection efficiency (%)	98.00%
Total disallowance (Bad debt) (Rs. Cr.)	**133.21**

4.52 Therefore, it is prayed to the Hon'ble Commission to approve for addition of provision of bad debt in total ARR.

Summary of ARR for FY 2020-21

4.53 Based on the components of the ARR discussed in the above sections, the final ARR for FY 2020-21 has been provided in the table below for kind consideration of Hon'ble Commission.

Table 65: Summary of ARR of JBVNL for FY 2020-21

Particulars	FY 2020-21	
	Approved (Rs Cr.)	Projected (Rs Cr.)
Power Purchase cost	6,618.57	5,573.91
Transmission charges (Inter & Intra State)	310.77	399.71
O&M expenses	591.87	816.54
Depreciation	236.32	570.54
Interest on Loan	202.62	524.48
Return on Equity	186.99	446.63
Interest on Working Capital	-	52.20
Interest on security deposit	111.83	54.58
Provision for doubtful debts	-	133.21
Less: Non-Tariff Income	163.24	187.02
Gross ARR	**8,095.74**	**8,384.78**

4.54 It is prayed to the Hon'ble Commission that the above ARR for FY 2020-21 may be allowed and impact shall be passed on to JBVNL.

5. Revenue Gap and Treatment of Revenue Gap for JBVNL

Revenue gap for JBVNL

5.1 In Previous Tariff Order dated 28th Feb'19 regarding True-up for FY 2016-17 & FY 2017-18, APR for FY 2018-19 and ARR & Tariff for FY 2019-20, Hon'ble Commission had calculated cumulative revenue surplus of Rs.179.58 crore till FY 2018-19. Thereafter it had calculated revenue gap of Rs 692.70 crore till FY 2019-20 including opening revenue surplus till FY 2018-19 and carrying cost. Hon'ble Commission in clause 8.23 of the said Order stated that it has increased and rationalized the tariff across different consumer categories so that the above gap can be recovered through revised tariff. Hence it is assumed that the Commission has not left uncovered any revenue gap till FY 2019-20 after increase in tariff.

5.2 In present Petition, the Petitioner has recalculated ARR of FY 2018-19 and FY 2019-20, based on accounts audited by the Statutory Auditor, performance in first six months of FY 2019-20 and relevant regulation of JSERC Distribution MYT Regulations, 2015 as submitted above. Since no changes are being proposed in ARR for FY 2017-18 and before, opening revenue gap for FY 2018-19 is considered to be nil.

5.3 It is pertinent to mention that as per letter sent by Energy Dept., Govt of Jharkhand vide letter no 4020 dated 20.10.17 to Hon'ble Commission which specifies that RGF shall not be provided to JBVNL and upcoming Tariff fixation shall be done without considering the impact of RGF. Therefore revenue gap for FY 2019-20 and FY 2020-21 have not been calculated without accounting for any RGF.

5.4 Furthermore, the Petitioner has filed Appeal No. 22 and 223 of 2018, against Hon'ble Commission Order dated 27th April, 2018 regarding consideration of loan restructured under UDAY scheme for reducing revenue gap. Furthermore, the Petitioner has also filed Review Petition before Hon'ble Commission in Case No. 06 of 2019 against Order dated 28th February, 2019 regarding True-up for FY 2016-17 & FY 2017-18, APR for FY 2018-19 and ARR & Tariff for FY 2019-20. The Petitioner has made following prayers to Hon'ble Commissions regarding the impugned Order:

5.4.1 To rectify the treatment of DVC Delayed payment surcharge of Rs 352.85 crore, along with the other incidental components of Annual Revenue Requirement of FY 2017-18.

5.4.2 To revise the depreciation allowed for the FY 2017-18, FY 2018-19 and FY 2019-20 along with the other incidental components of Annual Revenue Requirement.

5.4.3 To consider the arguments made by the petitioner and to recalculate the approved revenue gap at the end of FY 2019-20.

5.5 The above Appeal and Review Petition are still pending and therefore the Petitioner for purpose of present Petition has not considered impact of these items in revenue gap. However submissions made in this Petition are without prejudice to the prayers made in above Appeal and Review Petition. If in future date, Hon'ble APTEL and Hon'ble Commission dispose the Appeal and Review Petition in favor of the Petitioner (in part or full), it is requested that the effect of the same should be considered in recalculation of revenue gap either in this Tariff Petition or any future Petition.

5.6 The petitioner has calculated the Revenue Gap at the end of FY 2019-20 using the same methodology adopted by the Hon'ble Commission in its earlier Orders.

Table 66: Cumulative revenue gap of JBVNL till FY 2019-20

Particular	FY 2018-19	FY 2019-20
Opening Revenue Gap	0.00	1,591.94
Net Aggregate Revenue Requirement	6064.21	7,906.28
Revenue from Sale of Power	4,053.77	5,486.03
RGF to be adjusted from ARR	591.59	
Revenue Gap / (Surplus) created during the Year	1418.85	2420.25
Closing Gap at end of the Year	1418.85	4012.19
Rate of Interest (As per prevailing SBI PLR rate)	12.20%	12.55%
Carrying Cost on Opening Balance	0.00	199.79
Carrying cost on Additional Gap Created during the Year	173.10	303.74
Total Gap including carrying cost	**1,591.94**	**4,515.72**

5.7 The Petitioner prays to the Hon'ble Commission to approve the cumulative revenue gap until FY 2019-20 as proposed by the Petitioner.

5.8 Considering the above cumulative revenue gap until FY 2019-20, it can be seen that the revenue from proposed tariff will only provide a partial relief to the Petitioner in recovering its revenue gap. The Petitioner would like submit that given the significant amount of revenue gap, the whole impact may be not be plausible to be passed on to consumers, by way of revision in retail tariffs, as it may lead to an inexorable tariff shock. Therefore, the Petitioner would like to propose creation of Regulatory Asset, which is as per the clause 10 of JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations 2015. The related clause is reproduced below-

10.3 Provided that if such variations are large, and it is not feasible to recover in one year alone, the Commission may take a view to create a regulatory asset, as per the guidelines provided in clause 8.2.2 of the National Tariff Policy;

5.9 The Petitioner proposes and prays to the Hon'ble Commission for creation of regulatory assets of such uncovered revenue gap, as discussed in the following paragraphs.

Creation of Regulatory Asset

5.10 As discussed there is a revenue gap of Rs. 4,515.72 crore untill FY 2019-20 which the Petitioner proposes to be met through creation of Regulatory Asset.

5.11 It is most humbly requested to the Hon'ble Commission to approve the above Regulatory assets worth Rs 4,515.72 crore and provide an appropriate recovery mechanism to recover the Regulatory Assets as per the provisions of Tariff Regulations 2010 and guidelines of National Tariff Policy 2016.

5.12 A proposed period of 5 years may be considered by the Hon'ble Commission to amortize the regulatory assets and passed on to the consumers over the same period in equal tranches. During the period, the Petitioner also prays for providing return on such regulatory asset to the tune of interest on working capital i.e 12.45%

5.13 The Hon'ble Commission is humbly prayed to approve the aforementioned Regulatory Assets through the recovery mechanism suggested by the Petitioner as per the provisions of Tariff Regulations 2010 and guidelines of National Tariff Policy 2016.

Revenue Gap for FY 2020-21 and its Treatement

5.14 The Petitioner has computed the expected revenue for FY 2020-21 from sale of power by considering the fixed charges and energy charges per unit. Further, to arrive at the final gap for FY 2020-21, the Petitioner has adjusted the impact of recovery of previous cumulative revenue gap till FY 2019-20. The Petitioner has proposed to amortize the Regulatory Asset in five years period starting from FY 2021-22.

Table 67: Treatment of revenue Gap for FY 2020-21

Particular	Amount (Rs. Cr.)
ARR required for FY 2020-21	8,384.78
Revenue Gap Till FY 2018-19	4,012.19
Carrying Cost of Revenue Gap Till FY 2018-19	503.53
Total Revenue Gap for FY 2019-20 (Incl. Revenue Gap with carrying cost till FY 2018-19)	12,900.51

Particular	Amount (Rs. Cr.)
Revenue at current Tariff	6,660.72
Gap at Current Tariff	6,239.79
Revenue at Proposed Tariff	8,129.21
Revenue from tariff Increase	1,468.49
Balance Gap	4,771.30

It can be seen from the above table that after adjusting the revenue and ARR for FY 2020-21, the Petitioner is still left with the revenue gap uncovered to the tune of Rs. 4,771.30 crore. The Petitioner thus humbly prays to the Hon'ble Commission to approve the revenue gap for FY 2020-21 as proposed by the Petitioner and to be allowed in subsequent tariff orders.

6. Proposal for One State-One Tariff

Introduction

6.1 Jharkhand State has a total of five distribution licensees- JBVNL, DVC, Tata Steel Limited (TSL), Jamshedpur Utilities & Services Company Limited (JUSCO) and Steel Authority of India Limited (SAIL), Bokaro, with multiple Licensees operating in common geographic areas The sales mix of all five utilities as per latest approved figures by Hon'ble Commission is tabulated below:

Table 68: Category wise Sales Mix of Various Discoms of Jharkhand

Category	Domestic	Non Domestic	HT Industrial/ Licensee	LT Industrial	Irrigation	Others	Total Sales (MU)
JBVNL	61%	9%	25%	2%	2%	2%	11,010.88
DVC	0%	0%	96%	0%	0%	3%	7,188.06
SAIL	23%	3%	68%	0%	0%	7%	761.46
JUSCO	4%	1%	93%	2%	0%	0%	508.74
TSL	10%	2%	75%	0%	0%	13%	2,999.62

6.2 From above table it is quite clear that except JBVNL, rest of the distribution utilities are primarily focused on serving HT Industrial consumers. Broadly JBVNL sells 50% of power in whole Jharkhand, however 93% of domestic sales in Jharkhand is being done by JBVNL. This skewed sales mix has raised various commercial and socio-economic issues as discussed in subsequent sections.

6.3 Earlier also in Case No. 10 of 2016, JBVNL and DVC had filed a joint petition on 24.8.2016 praying to provide a roadmap/mechanism to create a level playing field between the petitioners in order to promote free and fair competition in distribution of electricity in their common area of supply so as to serve the larger consumer interest. Hon'ble Commission in its Order dated 18th July, 2018 passed following judgement:

"7. We verified from the records and found that DVC as well as JBVNL were directed to deliberate and suggest mutually acceptable and workable methodology for consideration of the Commission and for further orders. From the record we find that no concrete suggestions have been brought by the petitioners –DVC as well as JBVNL which are mutually acceptable and workable methodology for consideration of the Commission despite several adjournments even after a lapse of about two years.

8. In view of the said admitted position and the facts and circumstances appearing *on record, we are of the view that no purpose would be served in keeping the case pending for decision in the absence of any concrete suggestions mutually acceptable and workable methodology. The petitioners are at liberty to approach this Commission after arriving at concrete suggestions and formulate workable methodology, which are mutually acceptable to them and are legally tenable.*

9. With the above observations, the petition is disposed off accordingly."

6.4 In view of above, JBVNL is proposing a mechanism in this chapter for creating a level playing field between various distribution licensees of Jharkhand, which may kindly be considered by the Hon'ble Commission to address the looming issue.

6.5 Moreover, JBVNL has recently filed a Petition with Hon'ble Commission for obtaining approval for the Proposal of M/s JUSCO and TSL for right to use of 11 kV feeders, DTs and LT lines (currently with JBVNL) for providing power to LT consumers. This is a testimony to the fact that the anomaly of adversarial consumer mix is well recognized and calls for an urgent solution by the Hon'ble Commission.

Higher Average Cost of Supply for JBVNL

6.6 Promoting free and fair competition is one of the primary objectives of EA 2003. In Order to ensure the same there should be a level playing field between distribution licenses which are operating in same area. Tariff as determined by Hon'ble Commission as per Clause 62(d) of EA 2003, for different distribution licensees depends on various factors such as sales mix, power procurement sources, network requirement, loss level etc. These input factors are different for various distribution licensees, hence Average cost of Supply (ACoS) for various Discoms are also different.

6.7 If there is a vide variation in these input factors for different Discoms, cost structure of Discoms would be highly unbalanced. ACoS of Discoms having favorable input factors would be much lower than Discoms having unfavorable input factors. In such case Discom having unfavorable input factors cannot compete against Discoms having favorable input factor. This would not lead to competition and efficiency as envisaged by EA, 2003.

6.8 JBVNL would like to submit that in state of Jharkhand, JBVNL and other parallel licensee including DVC, JUSCO and TSL are distribution licensees having widely different input factors such as consumer mix, network length etc.

6.9 As per Universal Supply Obligation (USO), JBVNL is required to cater to LT consumers as well as HT consumers. Domestic, Commercial and Agriculture category consumers, which are primarily given power at LT level, form bulk of around 39 lakh of consumers of JBVNL and have much more spread than HT consumers. JBVNL is required to construct and maintain extensive LT network to supply power to such consumers. Consequently JBVNL has to incur considerable capital cost (Depreciation, Interest on Loan and Return on Equity) on erection of the network and also Repair & Maintenance (R&M) expenditure for maintaining the network. However DVC has no such network as it provides power primarily to HT consumers and hence no cost component related to either capital cost or R&M expenditure in their tariff order as approved by Hon'ble Commission.

6.10 Losses in the extensive LT network are also at much higher level than that in a purely HT network due to technical and commercial reasons. As per tariff order approved by Hon'ble JSERC for FY 2019-20, 99.4% of total sales of DVC is to HT consumers, where-as the corresponding figure for JBVNL stands at 26%. Considering the same, Hon'ble Commission has approved T&D loss of 14% for JBVNL (FY 2019-20) as compared to 3.23% for DVC, 2.0% for JUSCO and 10% for SAIL, Bokaro.

6.11 Due to significant difference in above mentioned factors, there is wide discrepancy in tariff as determined for JBVNL and DVC consumers by Hon'ble JSERC. For example, tariff determined for HTIS and HTSS consumers of JBVNL are considerably higher than corresponding tariff for DVC. Considering a load factor of 72%, the average power purchase cost for an HTIS/HTSS consumer from JBVNL would be 50% costlier than that from DVC (Rs 4.11/kVAh for DVC as compared to Rs 6.18/kVAh for JBVNL). Below table shows high tariff differential between JBVNL and other distribution licensees:

Table 69: Approved Industrial Tariff of Various Discoms of Jharkhand

<table>
<tr><th rowspan="2">Category</th><th colspan="2">JBVNL</th><th colspan="2">DVC</th><th colspan="2">SAIL Bokaro</th><th colspan="2">JUSCO</th><th colspan="2">TSL</th></tr>
<tr><th>EC (Rs)</th><th>FC (Rs/ Month)</th><th>EC (Rs)</th><th>FC (Rs/ Month)</th><th>EC (Rs)</th><th>FC (Rs/ Month)</th><th>EC (Rs)</th><th>FC (Rs/ Month)</th><th>EC (Rs)</th><th>FC (Rs/ Month)</th></tr>
<tr><td rowspan="2">LTIS</td><td rowspan="2">5.75/ kVAh</td><td rowspan="2">100/ kVA</td><td rowspan="2">4.20/ kVAh</td><td rowspan="2">150/ kVA</td><td>4.50/ kWh</td><td>210/ kVA</td><td>4.05/ kWh</td><td>170/ kVA</td><td rowspan="2">5.00/ kWh</td><td rowspan="2">100/ kVA</td></tr>
<tr><td>4.50/ kWh</td><td>110/ HP</td><td>4.05/ kWh</td><td>125 /HP</td></tr>
<tr><td>HTS</td><td rowspan="2">5.50/ kVAh</td><td rowspan="2">350/ kVA</td><td rowspan="2">2.95/ kVAh</td><td rowspan="2">600/ kVA</td><td rowspan="2">5.40/ kWh</td><td rowspan="2">230/ kVA</td><td>5.15/ kWh</td><td>195/ kVA</td><td rowspan="2">6.30/ kWh</td><td rowspan="2">320/ kVA</td></tr>
<tr><td>HTSS</td><td>3.75/ kWh</td><td>365 /kVA</td></tr>
</table>

6.12 Due to such high tariff differential, HT consumers migrate from JBVNL to other distribution licensees further skewing input factors in favor of those licensees and forming a viscous circle.

Non Compliance of Universal Supply Obligation and Conditions of License by Other Licensees

6.13 As per Section 43 (1) of EA, 2003 distribution licensees are required to comply with Universal Supply Obligation (USO). The clause is reproduced below:

"43 (1) Every distribution licensee, shall, on an application by the owner or occupier of any premises, give supply of electricity to such premises, within one month after receipt of the application requiring such supply: Provided that where such supply requires extension of distribution mains, or commissioning of new sub-stations, the distribution licensee shall supply the electricity to such premises immediately after such extension or commissioning or within such period as may be specified by the Appropriate Commission"

6.14 However other distribution licensees of Jharkhand have selectively weaned away Industrial consumers in their license area, leaving the subsidized Domestic consumers for JBVNL. This practice is against principal of USO.

6.15 Further many of these distribution licensees have not expanded their network as required by condition for grant of license provided by Hon'ble Commission.

6.16 JBVNL would like to submit specific example of JUSCO, wherein Hon'ble Commission had provided following conditions for grant of license in its Order dated 05th May, 2006

"7. Network rollout

The Second Distribution Licensee shall adhere to the network rollout plan as approved by the Commission. The Second Distribution licensee shall submit to the Commission, Annual capital Expenditure plan every year, three months before the commencement of every financial year. The network rollout plan committed by the Second Distribution Licensee is as given below:

YEAR	*FY 2006-07*	*FY 2007-08*	*FY 2008-09*	*FY2009-10*
Rs. in CRORES	*3*	*35*	*35*	*27*

The Second Distribution Licensee shall provide electrical Connection to all categories of consumers of the areas where network has been energized within 24 month and subject to the entire area being covered between 48 to 60 Months."

6.17 As can be seen from the above, though the parallel license to JUSCO was awarded by the Hon'ble Commission to improve competition in the area, offering improved services to 'ALL CAEGORIES OF CONSUMERS' the actual beneficiaries have remained limited to HT categories only. Further, JUSCO has neither adhered to the capital investment/ network roll-out plan as provided above nor has it complied with the condition of providing connections to all categories of consumers.

6.18 Further in Case No. 10/2007-08 regarding "Non-providing of electric connection to the residents of Housing Co-operative colony, Bokaro Steel Plant, by the distribution licensee SAIL/Bokaro Steel Plant", Hon'ble Commission had observed following regarding conduct of SAIL Bokaro in providing electricity connection to household consumers

"Respondent licensee is charging the Housing Co-operative arbitrary tariff Page 11 of 11 determined by itself and not charging tariff approved by the Commission putting the applicants of the Housing Co-operating colony to monetary loss by every passing day. As such, therefore, the respondent licensee has deliberately in a blatant way contravened and continues to contravene one of the most basic and main provisions of the Act with respect to the duties and obligations licensee regarding supply of electricity to any person on application in his area of supply i.e. the provisions of Section 43 of the Electricity Act, 2003 and has disobeyed and continues to disobey the orders of the Commission dated 04.12.2007 and therefore the respondent distribution licensee SAIL/Bokaro Steel Plant shall pay under provisions of the Section 142 of The Electricity Act, 2003 a penalty of Rs. 50,000=00 (Rupees Fifty Thousand) only and additional penalty of Rs. 5,000=00 (Rupee Five Thousand) only per day from the date of this order till providing individual electricity supply to all the applicants of the Housing Cooperative colony as per order dated 04.12.2007 of the Commission."

6.19 From the above Order it is quite clear that SAIL Bokaro and other distribution licensees in state of Jharkhand actively discourages consumers in their licensee areas to seek power from them. Every consumer who is denied connection from such licensee, doesn't take legal and regulatory recourse available to him/her. Resultantly such consumers remain with JBVNL leading to issues as mentioned in above section 'Higher Average Cost of Supply for JBVNL'.

6.20 JBVNL is not arguing for cancel of license of these Discoms under Section 19 (1) of EA, 2003 as it is in favor of competition in Power distribution domain and availability of choices to consumers. However in view of flagrant violation of terms of license by these distribution licensee, Hon'ble Commission under power vested to it under Clause 19(4) of EA, 2003 may impose extra terms and conditions on these licensees. Section 19 (4) of EA, 2003 is reproduced below:

"19 (4) The Appropriate Commission may, instead of revoking a licence under sub-section (1), permit it to remain in force subject to such further terms and conditions as it thinks fit to impose, and any further terms and conditions so

imposed shall be binding upon and be observed by the licensee and shall be of like force and effect as if they were contained in the licence."

6.21 In view of same, JBVNL request Hon'ble Commission to impose terms and conditions on other distribution licensee as per Prayers of JBVNL. It is submitted that such an anomaly has promoted adversity in the State in terms of socio-economic status, as discussed in section below.

Socio-Economic Disparity between Industrialized and Non-Industrialized Districts

6.22 Due to higher Industrialization in DVC Command Area, East Singhbhum and Saraikela-Kharsawan districts, they are much ahead in all economic and social indicators than Jharkhand as an average. This has led to regional imbalance in Socio-Economic development within the state which is not an ideal scenario.

6.23 The per-capita income of Jharkhand for 2011-12 as estimated by Central Statistical Organization (CSO) and Census of India, 2011 was Rs. 22,697. In comparison, East Singhbhum has per-capita income of Rs. 32,294 and for Saraikela Kharsawan has per-capita income of Rs. 24,639. Similarly DVC districts have average per capita income of Rs 24,000 per annum

6.24 Human Development Index is a statistical tool used to measure overall achievements of a geography in its social and economic dimensions. As per "HUMAN DEVELOPMENT INDEX: encapsulation of indicators of well- being of Jharkhand"[1], East Singhbhum has highest HDI in the state, where-as Saraikela-Kharsawan has 9th rank out of 24 districts. Seven out of nine districts of Jharkhand having high to medium HDI fall under districts having parallel distribution licensees.

6.25 Lower Electricity tariff have a huge impact on Industrialization as they increase competitiveness of industries located in a particular licensee area. Hence lower tariff for Industrial consumers of other distribution licensees has led to higher industrialization in such districts, thereby widening the socio-economic gap across state.

Practice Followed in Other States regarding Uniform Tariff

[1] Published in Jharkhand Journal of Development and Management Studies by Shiv Kumar

6.26 It is pertinent to mention here that a uniform tariff across various consumer categories is levied by all the government owned electricity distribution utilities operating within the periphery of a state.

6.27 The tables below presents the approved annual revenue requirement, sales, power purchase cost, no of consumers, average cost of supply and LT and HT Consumer Tariffs, of various state utilities for the state of Gujrat, Madhya Pradesh, Delhi and Uttar Pradesh.

Table 70: Approved Sales, Power Purchase Cost and ARR of Discoms of Gujrat for FY19-20

State Discoms in Gujrat				
Particulars	**UGVCL**	**DGVCL**	**MGVCL**	**PGVCL**
No of Consumers	34,27,816	31,13,551	30,70,072	50,66,808
Domestic	26,72,013	24,87,569	25,58,658	35,18,261
Non-Domestic & LTIS	3,46,316	4,04,515	3,03,531	6,42,631
HTIS	3,755	3,704	2,067	5,229
Sales (Mus)	22968	19297	10,446	29668
Cost of Power Purchase (Rs Cr)	11128.5	11929.92	5460.22	14573.28
Aggregate Revenue Requirement (Rs Cr)	12342.83	12921.37	6461.09	17182.47
Average Cost of Supply (Rs/Unit)	5.37	6.70	6.19	5.79
State-Wide ACOS(Rs/Unit)	**5.94**			

Table 71: HT & LT Consumer Tariff in Gujrat FY19-20

Industrial Tariff for All 4 Discoms of Gujrat				
Consumer Category	**Fixed**		**Energy Charges**	
LTMD	For first 40 kW of billing demand	Rs. 90/- per kW per month	For the entire consumption during the month	460 Paise per Unit
	Next 20 kW of billing demand	Rs. 130/- per kW per month	For the entire consumption during the month	460 Paise per Unit
	Above 60 kW of billing demand	Rs. 195/- per kW per month	For the entire consumption during the month	460 Paise per Unit
HTIS	For first 500 kVA of billing demand	Rs. 150/- per kVA per month	Up to 500 kVA of billing demand	400 Paise per Unit

Industrial Tariff for All 4 Discoms of Gujrat				
Consumer Category	**Fixed**		**Energy Charges**	
	For next 500 kVA of billing demand	Rs. 260/- per kVA per month	For billing demand above 500 kVA and up to 2500 kVA	420 Paise per Unit
	For billing demand in excess of 1000 kVA	Rs. 475/- per kVA per month	For billing demand above 2500 kVA	430 Paise per Unit

Table 72: Approved Sales, Power Purchase Cost and ARR of Discoms of Madhya Pradesh for FY19-20

State Discoms in Madhya Pradesh			
Particulars	**East**	**West**	**Central**
Sales (MU's)	17,634	21,365	16,639
Cost of Power Purchase (Rs Cr)	7010.13	8892.29	5815.11
Aggregate Revenue Requirement (Rs Cr)	11593.91	13949.49	11127.66
Average Cost of Supply (Rs/Unit)	6.57	6.53	6.69
State-Wide ACOS(Rs/Unit)	**6.59**		

Table 73: HT & LT Consumer Tariff in Madhya Pradesh FY19-20

Industrial Tariff for All 3 Discoms of Madhya Pradesh				
Consumer Category	**Fixed**		**Energy Charges**	
LTMD	Contract demand up to 150 HP/112kW	320 per kW or 256 per kVA of billing demand	For the entire consumption during the month	660 Paise per Unit
HTIS	11 kV supply	Rs. 340/- per kVA per month	For the entire consumption during the month	600 Paise per Unit
	33 kV supply	Rs. 560/- per kVA per month	For the entire consumption during the month	590 Paise per Unit
	132 kV supply	Rs. 650/- per kVA per month	For the entire consumption during the month	550 Paise per Unit
	220/400 kV supply	Rs. 650/- per kVA per month	For the entire consumption during the month	510 Paise per Unit

Table 74: Approved Sales, Power Purchase Cost and ARR of Discoms of Delhi for FY19-20

Discoms of Delhi				
Particulars	**BRPL**	**BYPL**	**TPDDL**	**NDMC**
No of Consumers	27,42,805	17,53,895	16,71,288	
Domestic	23,33,995	13,36,484	13,71,214	
Non-Domestic & LTIS	3,60,184	3,98,447	2,34,616	
HTIS	6,233	7,473	33,937	
Sales (MU's)	12,746	6,768	9,495	1,253
Cost of Power Purchase (Rs Cr)	7158	3271	5619	904.21

Discoms of Delhi				
Particulars	**BRPL**	**BYPL**	**TPDDL**	**NDMC**
Aggregate Revenue Requirement (Rs Cr)	9060	4640	6950	1142.08
Average Cost of Supply (Rs/Unit)	7.11	6.86	7.32	9.11
State-Wide ACOS(Rs/Unit)	**7.20**			

Table 75: HT Consumer Tariff in Delhi FY19-20

Industrial Tariff for 4 Discoms of Delhi				
Consumer Category	**Fixed**		**Energy Charges**	
Industrial	At all Supply levels	250 Rs./kVA/month	For Entire Consumption	7.75 Rs./kVAh

Table 76: Approved Sales, Power Purchase Cost and ARR of Discoms of U.P for FY19-20

Discoms of Uttar Pradesh					
Particulars	**DVVNL**	**MVVNL**	**PVVNL**	**PuVVNL**	**KESCO**
No of Consumers	**55,41,910**	**77,63,591**	**64,64,743**	**89,12,241**	**6,66,018**
Domestic	49,27,214	70,76,938	54,62,375	80,79,127	5,62,665
Non-Domestic & LTIS	2,80,478	3,96,076	4,91,366	4,49,950	94,430
HTIS	2,323	1,792	5,692	1,220	630
Sales (MU's)	19861	18893	29,826	22648	3290
Cost of Power Purchase (Rs Cr)	10826.23	10263.49	16202.34	12359.22	1787.02
Aggregate Revenue Requirement (Rs Cr)	**14385.35**	**14589.5**	**20849.61**	**17337.11**	**2327.21**
Average Cost of Supply (Rs/Unit)	7.24	7.72	6.99	7.66	7.07
State-Wide ACOS(Rs/Unit)	**7.35**				

Table 77: HT & LT Consumer Tariff in U.P FY19-20

Industrial Tariff for All 5 Discoms				
Consumer Category	**Fixed**		**ENERGY CHARGES**	
LTMD	All Load	Rs 290/kW/Month	Up to 1000 kWh/Month	Rs 7.3/kWh on entire consumption
			Up to 2000 kWh/Month	Rs 7.4/kWh on entire consumption
			Above 2000 kWh/Month	Rs 7.9/kWh on entire consumption
HTIS	Up to 11 kV supply	Rs 300/- per kVA per month	For the entire consumption during the month	Rs 7.1/kVAh
	Above 11 kV and up to 66 kV supply	Rs. 290/- per kVA per month	For the entire consumption during the month	Rs 6.8/kVAh

Industrial Tariff for All 5 Discoms				
Consumer Category	**Fixed**		**ENERGY CHARGES**	
	Above 66 kV and up to 132 kV supply	Rs. 270/- per kVA per month	For the entire consumption during the month	Rs 6.4/kVAh

6.28 As can be witnessed above, even though the various utilities in a particular state vary remarkably in terms of size, consumer mix, energy sales and average cost of supply of power, the tariff approved for various consumer categories by the respective regulatory commissions is same, thereby maintaining level playing field among the various electricity distribution utilities operating in the state.

6.29 It is also to be noticed that in case of Gujrat, Madhya Pradesh and Uttar Pradesh, the respective commission of the state estimates the consolidated revenue gap of all the state utilities at existing tariff and then approves a common tariff structure for various consumer categories to meet the consolidated revenue gap.

It is also to be noted, that in case of Gujrat and Uttar Pradesh, apart from state electricity utilities some private electricity distribution licensees (Torrent Power Limited in Gujrat- Ahmedabad & Surat and Noida Power Company Limited in Noida, U.P) also operate within the periphery of the two states and have different Tariff structure. However, in these cases, the distribution licensees operate exclusively in their respective demarcated areas. However, in case of Jharkhand, electricity distribution licensees operate in overlapping areas, wherein some high voltage consumers of JBVNL have migrated to DVC network on account of differential tariff structure.

6.30 Based upon above submissions, the petitioner requests the Hon'ble Commission to consider uniform tariff structure for the entire state of Jharkhand thereby creating level playing field for all the existing electricity distribution licensees in the state
Conclusion and Prayer

6.31 As mentioned in above clauses it is clear that distribution licensees of Jharkhand other than JBVNL have been gradually expanding their consumer base in the lucrative consumer categories who have good paying capacity. Those licensees enjoy lower cost of supply. Due to shifting of the subsidized consumers of JBVNL to other licensees, the consumer mix of JBNL has worsened affecting its ability to sustain supply of electricity to the marginal and rural consumers in the state. Such practice is also not in line with USO as per EA, 2003 as well as conditions for grant of License for some of the licensees. This has also led to socio-economic disparity between different districts of Jharkhand.

6.32 As submitted in Clause 6.20 and 6.21, JBVNL requests Hon'ble Commission to impose additional terms and conditions to remove violation of terms of grant of license. Also in view of Hon'ble JSERC Order in Case No. 10 of 2016, as discussed above, JBVNL is required to submit a practical and commercially tenable methodology to ensure level playing field for distribution licensees in the state.

6.33 In view of above facts, JBVNL proposes concept of Uniform Cost of Supply through-out the state of Jharkhand for every Distribution Licensee.

6.34 In order to maintain uniform tariff through-out the state, having different distribution licensees, various SERC's have adopted different strategy in their respective Tariff Orders as elucidated above. However in Jharkhand, JBVNL and other Discoms neither receive subsidy from common source nor have common power purchase pool, which are utilized as cost adjusting measure by respective SERCs for equating Average Cost of Supply for different distribution licensees.

6.35 Therefore JBVNL proposes following mechanism for adoption of uniform Cost of Supply through-out the state of Jharkhand.

i. Hon'ble Commission may estimate a single Cost of Supply for state as a whole by following formula:

Uniform Cost of Supply = $\sum ACOS_i \times Sales_i$

Where

$ACOS_i$–Average Cost of Supply for i^{th} Distribution Licensee as calculated for subsequent FY including previous year gaps/surplus and regulatory assets

$Sales_i$ –Estimated sales for i^{th} Distribution Licensee to all consumer categories in subsequent FY

ii. Thereafter each distribution licensee will either receive or provide fund to a common pool depending whether its ACOS is greater than or less than Uniform Cost of supply for whole Jharkhand. The amount would be calculated for each Discom of Jharkhand as per following formulae:

(Uniform Cost of Supply- $ACOS_i$) x $Sales_i$ (Negative value imply that Distribution Licensee will receive fund from the pool and vice-versa)

The above annual amount would be payable/receivable in 12 equal monthly installments in subsequent year.

iii. Thereafter Hon'ble JSERC would determine Tariff for each category of consumer for various Discoms considering Uniform Cost of Supply and level of cross subsidy.

7. Segregation into Wheeling and Retail Supply business

7.1 The Regulation 5.7 of the JSERC Tariff Regulations 2015, requires the distribution licensee to segregate its ARR into wheeling and retail supply business, as reproduced hereunder:

> *"5.7 The Business Plan shall be filed separately for the Retail Supply and Wheeling Business. As specified in clause 5.5 of these regulations, in absence of segregated accounts for the two businesses, the Licensee shall prepare an allocation statement and submit the same with the business plan;"*

7.2 The ARR has been segregated for FY 2020-21, as per JSERC Power Regulatory Accounting Regulations, 2016 and considering the nature of expenditure and its attribution to the different businesses.

7.3 The summary of segregation of various components of ARR into wheeling and retail supply business is provided in the table below.

Table 78: ARR Components into Wheeling and retail business

Particulars (Rs. Cr.)	Share of Retail Supply	Share of Wheeling Business
	%age	%age
O&M Cost		
Employee cost	40%	60%
A&G Expense	50%	50%
R&M Cost	10%	90%
Power purchase (Inc. PGCIL & RLDC)	100%	0%
Interest Cost	10%	90%
Interest on working capital	90%	10%
Depreciation	10%	90%
Return on Equity	10%	90%
Provision for bad debts	100%	0%
Less: Other income	90%	10%

7.4 Considering the general principles of segregation of above heads into wheeling and retail supply business as provided in JSERC Power Regulatory Accounting Regulations, 2016, JBVNL has considered different ratio to Wheeling Business and retail supply business based on the nature of heads. Based on above, the segregated ARR of Retail supply business and wheeling business has been provided below:

Table 79: ARR Components into Retail business for FY 2020-21

Particulars	FY 2020-21 (Rs. Cr.)
Power purchase (Inc. PGCIL & RLDC)	5,973.62
O&M Cost	-
Employee cost	128.88
A&G Expense	55.17
R&M Cost	38.40
Interest Cost	57.91
Interest on working capital	46.98
Depreciation	57.05
Return on Equity	44.66
Provision for bad debts	133.21
Less: Other income	168.32
Total ARR required	**6,367.57**

Table 80: ARR Components into Wheeling business for FY 2020-21

Particulars	FY 2020-21 (Rs. Cr.)
Power purchase (Inc. PGCIL & RLDC)	-
O&M Cost	-
Employee cost	193.33
A&G Expense	55.17
R&M Cost	345.60
Interest Cost	521.15
Interest on working capital	5.22
Depreciation	513.48
Return on Equity	401.97
Provision for bad debts	-
Less: Other income	18.70
Total ARR required	**2,017.21**

8. Tariff Proposal

Key highlights and changes in Tariff Proposals

1. **Voltage Wise Cost of Supply:** As per direction of Hon'ble Commission, JBVNL has conducted voltage wise Cost of Supply (COS). The voltage-wise COS as per the report for FY 2017-18 and their re-appropriation for FY 2020-21 is tabulated below:

Table 81: Summary of Tariff Proposal

Voltage Level	Voltage-Wise Cost of Supply	
	2017-18 (Actual)	2020-21 (proportioned)
33 kV	4.82	5.91
11kV	4.97	6.09
LT	7.16	8.78
Average CoS	**6.54**	**8.02**

JBVNL has proposed tariff for various categories in line with cost of supply at their voltage level.

2. **Simplification and Rationalization of Tariff:** As per Clause 8.3 of National Tariff Policy, the tariffs need to be simplified and the consumer categories and slabs need to be reduced. In order to further simply the tariff structure and in accordance with the National Tariff Policy 2016, the Petitioner has removed the unit-wise slabs among the tariff categories and sub-categories. And the same has been approved by Hon'ble Commission in its Tariff Order dated 28th February, 2019. However, in order to reduce the financial burden on the low income and needy consumers segments, the Petitioner would propose the subsidy from the State Govt. to be given in slab-wise manner. This would ensure that overall burden over the consumers would not be impacted with the removal of slabs among the categories and sub-categories.
3. **KW based Fixed Charge for Commercial Services:** Currently commercial category consumers are being charged fixed cost in terms of 'per connection' basis. Commercial installation (Urban) vary from small shops to big hotels and offices. Fixed charge on 'per connection' basis leads to overcharging from consumers with less load and undercharging from consumers with more load. The same principle is also followed in states like Delhi and Gujarat. Hence the Petitioner requests Hon'ble Commission to approve fixed charge of commercial category consumers in terms of 'Rs/KW/Month' where KW is connected load of the consumer.
4. **Contract Demand Limit for Consumer Categorization:** As per Hon'ble Commission Order dated 28th February, 2019 regarding Tariff for FY 2019-20, rate of domestic service would be applicable for all consumers having connected load

below '5 kW' irrespective of any usage of power. The Petitioner would like to submit that as per Clause 4.3 of Electricity Supply Code Regulation, all installations below 5 kW contract load would be supplied power at single phase, 230 Volts. Further Commercial Service (rural) have to be supplied power at single phase (230 V) only. This implies that all Commercial Service (rural) category consumers would fall under domestic rural category, hence no consumer would be charged tariff for Commercial (Rural) category and the tariff approved by Hon'ble Commission for the category would be redundant. This also leads to inference that no commercial category consumer in rural area can be given connection with contracted capacity above 5 kW. Therefore Hon'ble Commission is requested to provide clarification on the matter.

5. **Unmetered category:** As per Hon'ble Commission Order dated 28th February, 2019 regarding Tariff for FY 2019-20, tariff for unmetered connections as per the Order dated April 27, 2018 shall be applicable until June 30, 2019.However from July 2019 onwards, Hon'ble Commission directed metering of all consumers all billing would have to be done as per the meter readings only. In compliance with the directives of the Hon'ble Commission, the Petitioner is trying level best to meter all un-metered consumers. However due to resistance from consumers for installation of meters and also due to large number of un-metered consumers in far-flung areas, the Petitioner hasn't succeeded in its endeavour in FY 2019-20. However from FY 2020-21, the Petitioner proposes removal of all unmetered consumers and billing would be done as per the meter readings or assessment basis where meters get damaged. However JBVNL may be constraint to bill some of the consumers without meter for reasons beyond its control. Hon'ble Commission is requested to approve tariff for unmetered consumers as approved in T.O dated 27th April, 2018 regarding Tariff Order for FY 2017-18 and FY 2018-19.

Summary of Tariff Proposals

8.1 The table below presents the existing and proposed tariff for various categories.

Table 82: Summary of Tariff Proposal

Category/ Sub-Category	Sub-Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
		Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
Domestic	Rural	5.75 / kWh	20 / Conn./ Month	7.00 / kWh	75 / Conn./ Month
	Urban	6.25 / kWh	75 / Conn./ Month	7.50 / kWh	150 / Conn./ Month
	HT	6.00 / kVAh	100 / kVA / Month	5.00 / kVAh	300 / kVA / Month
Commercial	Less than 5 kW (Rural)	6.00 / kWh	40 / Conn./ Month	7.00 / kWh	75 / Conn./ Month
	Less than 5 kW (Urban)			7.50 / kWh	150 / Conn./ Month
	Urban (More than 5 kW)	6.25 / kWh	150 / Conn./ Month	7.50 / kWh	300 / kW/ Month
Irrigation and Agriculture		5.00 / kWh	20 / HP/ Month	6.50 / kWh	20 / HP / Month
Industrial	Low Tension Industrial Supply	5.75 / kVAh	100 / kVA / Month	6.50 / kVAh	300 / kVA / Month
	High Tension Industrial Supply	5.50 / kVAh	350 / kVA / Month	5.00 / kVAh	500 / kVA / Month
	High Tension Special Service	5.50 / kVAh	350 / kVA / Month	4.25 / kVAh	500 / kVA / Month
Institutional	Streetlight Service	6.25 / kWh	100 / kW/ Month	7.00/ kWh	100 / kW / Month
	Railway Traction Services	5.50 / kVAh	350 / kVA / Month	4.25 / kVAh	500 / kVA / Month
	Military Engineering Services	5.50 / kVAh	350 / kVA / Month	4.25 / kVAh	500 / kVA / Month
	Other Distribution Licensees	5.50 / kVAh	350 / kVA / Month	5.00 / kVAh	500 / kVA / Month

8.2 Category wise tariff proposals along with explanations are provided in this chapter for consideration of the Hon'ble Commission.

8.3 It is important to bring to the notice of Hon'ble Commission that the Petitioner is in the process of installing smart meters in town areas targeting the consumers other than DS Rural. Since, the smart meters have the feature of running as a prepaid meter, it is planned that the consumer may be provided the option to migrate towards prepaid metering. Meter reading, preparation of bills its distribution and collection of payments takes away a considerable amount of time and efforts for the utility which can be eliminated by the prepayment metering system. Further, it is envisaged that that smart meter will be instrumental in improving the revenue cycle. Thus, it is prayed to Hon'ble Commission to provide a suitable tariff for consumers opting for pre-paid meters.

I. Domestic Services (DS)

Applicability

Domestic Service–Rural, Domestic Service–Urban and Domestic Service-HT

8.4 This schedule shall apply to private residential premises for domestic use for household electric appliances such as Radios, Fans, Televisions, Desert Coolers, Air Conditioner, etc. and including Motors pumps for lifting water up to 1 HP for domestic purposes and other household electrical appliances not covered under any other schedule.

8.5 This rate is also applicable for supply to religious institutions such as Temples, Gurudwaras, Mosques, Church and Burial/Crematorium grounds and other recognized charitable institutions (including Govt. Educational Institutions), where no rental or fees is charged whatsoever (duly certified by the Income Tax Authorities). If any fee or rentals are charged, such institution will be charged under Commercial Category.

8.6 Rural drinking water schemes which are managed by Panchayats and User's Co-operatives are also included under this Category and corresponding Tariff would be charged depending upon the load of Pumping motors as applicable to the DS category.

8.7 This rate is also applicable for all consumers with contracted demand of upto 5 kW mixed, commercial, industrial, educational institutions, drinking water schemes or for any other purpose, except streetlight connections and agriculture/allied connections.

Category of Services

a) Domestic Service – Rural: - For rural areas (including rural drinking water schemes) not covered by area indicated under DS-Urban.

b) Domestic Service – DS-Urban: For Urban areas covered by Nagar Nigam, Nagar Parishad, Nagar Panchayat.

c) Domestic service – HT (DS – HT): - This Schedule shall apply for Domestic Connection in Housing Colonies / Housing Complex / Houses of multi storied buildings purely for residential use for single point metered supply, with power supply at 33KV or 11KV voltage level. The tariff applicable for individual households in the housing colonies/ multi-storeyed buildings/ housing complexes would be the same as applicable for this category.

Service Character

1. For DS- Rural: AC, 50 Cycles, Single Phase at 230 Volts and less than 5 kW
2. For DS- Urban: AC, 50 Cycles, Single Phase at 230 Volts, Three phase at 400 Volts.
3. For DS- HT: AC, 50 Cycles, at 11 kV or 33 kV.

Table 83: Existing and Proposed Tariff - DS

Category/ Sub-Category	Sub-Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
		Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
Domestic	Rural	5.75 / kWh	20 / Conn./ Month	7.00 /kWh	75 /Conn./ Month
	Urban	6.25 / kWh	75 / Conn./ Month	7.50 /kWh	150 /Conn./ Month
	HT	6.00 / kVAh	100 / kVA / Month	5.00/kVAh	300 / kVA / Month

Delayed Payment Surcharge

For Domestic Service category, the delayed payment surcharge shall be at the rate of 1.5% per month and part thereof.

Summary of tariff proposal for Domestic Service (DS tariff) and Rationale for Change in Tariff

8.8 The Petitioner has retained single tariff for the domestic category and has not opted for telescopic tariff. This would provide a simplified tariff which would not only be easy for the domestic consumers to understand but for the utility as well for the purpose of billing. However, in order to reduce the financial burden on the low income and needy consumers, the Petitioner would propose the subsidy from the State Govt. to be given in slabs. Thus, the overall burden over the domestic consumers would not be impacted with the removal of slabs.

8.9 **Fixed Charges based on per connection basis:** The Petitioner has retained fixed charges for domestic consumers on per connection basis. This has been done in order to reduce the human intervention in the establishment of fixed charges on a consumer since most of these consumers does not have smart meters installed at their premise and it requires physical verification to verify the actual load and demand of the consumer. Moreover, this shall prevent the need for inspecting officer to regularly inspect the consumers premise for regularization of excess load and avoid unnecessary hassles for both Utility and consumers.

8.10 **Unmetered category:** In compliance with the directives of the Hon'ble Commission, the Petitioner has removed the domestic unmetered category and has not proposed any such tariff for unmetered consumers for FY 2020-21. The Petitioner is already installing meters for un-metered consumers. However JBVNL may be constraint to bill some of the consumers without meter for reasons beyond its control. Hon'ble Commission is requested to approve tariff for unmetered consumers as approved in T.O dated 27th April, 2018 regarding Tariff Order for FY 2017-18 and FY 2018-19. The Petitioner would reiterate its commitment towards 100% metering.

8.11 Tariff hike has been proposed in order to move the retail tariffs for the category closer to the Voltage-Wise Cost of Supply at LT level and for reducing the overall revenue gap for the JBVNL. In line with same principle tariff for Domestic-HT category has been reduced.

8.12 JBVNL submits below a comparison of tariff for domestic category with Bihar, which illustrates the lower levels of tariffs in the State for the information of the Hon'ble Commission:

Table 84: Comparison of existing domestic urban metered tariffs with approved tariffs in other States as per the applicable recent tariff orders

State	Applicable Fixed Charge (Domestic)	Applicable Energy Charge (Domestic)
Bihar	**Kutir Jyoti (Unmetered) (BPL):** Rs.350/month/ connection **Kutir Jyoti (metered) (BPL):** Rs.10/month/ Connection **DS-I Rural (Unmetered):** Rs.500/month/ connection **DS-I Rural (Metered):** Rs.20/kW or part/ month **DS-II (Urban Demand based):** Rs.40/kW or part/ month	**Kutir Jyoti (metered) (BPL):** 0-50 Unit - Rs.6.15/ Unit Above 50 Units – As per DS-I metered **DS-I Rural (Metered):** 0-50 Unit - Rs.6.15/ Unit 51-100 Units – Rs.6.40/ Unit Above 100 - Rs.6.70/ Unit Above 200 - Rs.7.05/ Unit **DS-II (Urban Demand based):**

State	Applicable Fixed Charge (Domestic)	Applicable Energy Charge (Domestic)
	DS-III (Group Demand based): Rs.40/kW or part/ month	**1-100 Unit** - Rs.6.15/ Unit **101-200 Unit** - Rs.6.95/ Unit **201-300** - Rs.7.80/ Unit **Above 300** - Rs.8.60/ Unit **DS-III (Group based):** Rs 7.50/Unit

II. Commercial Services (CS)

Applicability

This schedule shall apply to all consumers, using electrical energy for light, fan and power loads for non-domestic purposes like shops, hospitals (govt. or private), nursing homes, clinics, dispensaries, restaurants, hotels, clubs, guest houses, marriage houses, public halls, show rooms, workshops, central air-conditioning units, offices (govt. or private), commercial establishments, cinemas, X-ray plants, schools and colleges (govt. or private), boarding/lodging houses, libraries (govt. or private), research institutes (govt. or private), railway stations, fuel-oil stations, service stations (including vehicle service stations), All India Radio/T.V. installations, printing presses, commercial trusts/societies, Museums, poultry farms, banks, theatres, common facilities in multi-storied commercial office/buildings, Dharmshala, and such other installations not covered under any other tariff schedule.

This schedule shall also applicable to electricity supply availed through separate (independent) connections for the purpose of advertisements, hoardings and other conspicuous consumption such as external flood light, displays, neon signs at public places (roads, railway stations, airports etc.), departmental stores, commercial establishments, malls, multiplexes, theatres, clubs, hotels and other such entertainment/ leisure establishments.

Category of Services

a) Commercial Services Less than 5 kW (Rural): For Rural Area not covered by area indicated for CS Urban - Same as Domestic rural tariff

   Commercial Services Less than 5kW (Urban) – For Urban Areas covered by Nagar Nigam, Nagar Parishad, Nagar Panchayat and below 5 kW connected load – Same as Domestic Urban Tariff

b) Commercial Service – Urban: For Urban Areas covered by Nagar Nigam, Nagar Parishad, Nagar Panchayat and more than 5 kW connected load.

Service Character

1. CS- Less than 5 kW (urban/ rural): - AC 50 Cycles, Single phase at 230 Volts
2. CS - Urban: - AC 50 Cycles, Single phase at 230 Volts or Three Phase at 400

Volts

Table 85: Existing and Proposed Tariff - CS

Category/ Sub-Category	Sub-Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
		Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
Commercial	Less than 5 kW Rural	6.00 / kWh	40 / Conn./ Month	7.00 / kWh	75 / Conn./ Month
	Less than 5 kW Urban			7.50 / kWh	150 / Conn./ Month
	Urban	6.25 / kWh	150 / Conn./ Month	7.50 / kWh	300 / kVA/ Month

Delayed Payment Surcharge

8.13 For Commercial Service category, the delayed payment surcharge shall be at the rate of 1.5% per month and part thereof.

Installation of shunt capacitors for CS

8.14 All CS - Urban consumers having aggregate inductive load greater than 3 HP and, shall install capacitors of required KVAR in accordance with the table shown below:

Table 86: Ratings of Capacitors for Inductive Load

Rating of Individual Inductive Load in HP	kVAR Rating of LT capacitors
3 HP to 5 HP (2.24 kW to 3.73 kW)	1
5 HP to 7.5 HP (3.73 kW to 5.59 kW)	2
7.5 HP to 10 HP (5.59 kW to 7.46 kW)	3
10 HP to 15 HP (7.46 kW to 11.19 kW)	4
15 HP to 20 HP (11.19 kW to 14.91 kW)	6
20 HP to 30 HP (14.91 kW to 22.37 kW)	7
30 HP to 40 HP (22.37 kW to 29.82 kW)	10
40 HP to 50 HP (29.82 kW to 37.28 kW)	10 – 15
50 HP to 100 HP (37.28 kW to 74.57 kW)	20 – 30

The utility shall not release any new LT connections having aggregate inductive load greater than 5 HP/ 4 KW unless the capacitors of suitable rating are installed.

Summary of tariff proposal for Commercial Service (CS tariff) and Rationale for Change in Tariff

8.15 The Petitioner has retained single tariff for the Commercial category and has not opted for telescopic tariff. This would provide a simplified tariff which would not only be easy for the consumers to understand but for the utility as well for the purpose of billing.

8.16 **Fixed Charges based on connected load basis for CS (Urban):** Currently CS (Urban) subcategory falling under commercial category are being charged fixed cost in terms of 'per connection' basis. Commercial installation under CS (Urban) vary from small shops to big hotels and offices. Fixed charge on 'per connection' basis leads to overcharging from consumers with less load and undercharging from consumers with more load. The same principle is also followed in states like Delhi and Gujarat. Hence the Petitioner requests Hon'ble Commission to approve fixed charge of commercial category consumers in terms of 'Rs/KW/Month' where KW is connected load of the consumer. However for CS (Rural) fixed charges have been retained on per-connection basis.

8.17 Tariff hike has been proposed in order to move the retail tariffs for the category closer to the Voltage-Wise Cost of Supply at LT level and for reducing the overall revenue gap for the JBVNL.

8.18 JBVNL submits below a comparison of commercial category which illustrates the lower levels of tariffs in the State for the information of the Hon'ble Commission:

Table 87: Comparison of existing Commercial tariffs with approved tariffs in other States as per the applicable recent tariff orders

State	Applicable Fixed Charge (Commercial)	Applicable Energy Charge (Commercial)
Bihar	**NDS-I Rural (Metered) -** Rs.30/kW or part/ month **NDS-II Contract demand upto 0.5 kW -** Rs.100/month/ connection **NDS-II Contract demand above 0.5kW and upto 70 kW -** Rs.180/kW or part/ month	**NDS-I Rural (Metered) –** 1-100 Units - Rs.6.40/Unit 101-200 Units - Rs.6.95/Unit Above 200 Units - Rs.7.50/Unit **NDS-II Contract demand upto 0.5 kW -** Rs.6.40/Unit for all units **NDS-II Contract demand above 0.5 kW –** 1-100 Units - Rs.6.40/ Unit 101-200 Units - Rs.6.95/ Unit Above 200 Units - Rs.7.50/ Unit
Delhi	**Non-Domestic –** Rs. 250/ kVA/ month	**Non-Domestic –** Upto 3 kVA Rs. 6.00/kVAh Above 3 kVA Rs. 8.50/kVAh

III. Irrigation & Agriculture Service (IAS)

Applicability

This schedule shall apply to all consumers for use of electrical energy for Agriculture purposes including tube wells and processing of the agricultural produce, confined to Chaff-Cutter, Thresher, Cane crusher and Rice-Hauler, when operated by the agriculturist in the field or farm and does not include Rice mills, Flour mills, Oil mills, Dal mills, Rice-Hauler or expellers and equipment for organic farming.

Service Character:

AC 50 Cycles, Single Phase at 230 volts / 3 Phase at 400 volts

Table 88: Existing and Proposed Tariff - IAS

Category/ Sub-Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
	Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
Irrigation and Agriculture	5.00 / kWh	20 / HP/ Month	6.50 / kWh	20 / HP / Month

Delayed Payment Surcharge

8.19 For Irrigation and agriculture service category, the delayed payment surcharge shall be at the rate of 1.5% per month and part thereof.

Summary of changes proposed to IAS tariff and rationale for change in tariff

8.20 Tariff hike has been proposed in order to move the retail tariffs for the category closer to the Voltage-Wise Cost of Supply and for reducing the overall revenue gap for the JBVNL.

8.21 JBVNL submits below a comparison of tariff for Agriculture Category consumers which illustrates the lower levels of tariffs in the State for the information of the Hon'ble Commission:

Table 89: Comparison of existing IAS tariffs with approved tariffs in other States as per the applicable recent tariff orders

State	Applicable Fixed Charge	Applicable Energy Charge
Bihar	**IAS-I (Unmetered)** - Rs.800/HP or part/month **IAS-I (Metered)** - Rs.30/HP or part/ month **IAS-II (Unmetered)** - abolished and consumers merged under IAS-II metered category **IAS-II (Metered)** - Rs.200/HP or part/ month	**IAS-I (Metered)** - Rs.5.60/Unit **IAS-II (Metered)** - Rs. 6.65/ Unit

IV. Industrial Services

Applicability

- Low Tension Industrial Service (LTIS)
- High Tension Industrial Service (HTS)
- High Tension Special Service (HTSS)

Low Tension Industrial Service (LTIS): This schedule shall apply to all industrial units applying for a load of more than 5.88 kVA (~6kVA) and less than or equal to 100 kVA (or equivalent in terms of HP or kW). The equivalent HP for 100 kVA shall be 114 HP and the equivalent kW for 100 kVA shall be 85.044 kW.

Note: *Any LTIS consumer who is found to have more than 100 kVA load shall be treated as HTS consumer.*

High Tension Industrial Service (HTS): The schedule shall apply for consumers having contract demand above 100 kVA.

High Tension Special Service (HTSS): This tariff schedule shall apply to all consumers who have a contracted demand of 300 KVA and more for induction/arc Furnace. In case of induction/arc furnace consumers (applicable for existing and new consumers), the contract demand shall be based on the total capacity of the induction/arc furnace and the equipment as per manufacturer technical specification and not on the basis of measurement. This tariff schedule will not apply to casting units having induction furnace of melting capacity of 500 Kg or below.

Service Character

Low Tension Industrial Service (LTIS): AC, 50 Cycles, Single Phase supply at 230 Volts or 3 Phase Supply at 400 volts. Demand Based tariff for sanctioned load above 5.88 upto 85.044 kW.

High Tension Industrial Service (HTS): 50 Cycles, 3 Phase at 6.6 kV / 11 kV / 33 kV / 132 kV / 220 kV / 400 kV

High Tension Special Service (HTSS): 50 Cycles, 3 Phase at 11 kV / 33 kV / 132 kV / 220 kV / 400 kV.

Table 90: Existing and Proposed Tariff – Industrial Services

Category/ Sub-Category	Sub-Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
		Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
Industrial	Low Tension Industrial Supply-Demand	5.75 / kVAh	100 / kVA / Month	6.50 / kVAh	300/ kVA / Month

Category/ Sub-Category	Sub-Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
		Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
	Based				
	High Tension Industrial Supply	5.50 / kVAh	350 / kVA / Month	5.00 / kVAh	500 / kVA / Month
	High Tension Special Service	5.50 / kVAh	350 / kVA / Month	4.25 / kVAh	500 / kVA / Month

LTIS- Demand Based: The billing demand will be the maximum demand recorded during the month or 75% of the sanctioned load, whichever is higher. In case actual demand is recorded at more than 100 kVA in any month, the same shall be treated as the new contract demand for the purpose of billing of future months and the consumer will have to get into a new Agreement under the HTS category for the revised contracted demand with the Petitioner as per the terms and conditions of HT supply.

HTS & HTSS- For billing demand shall be the maximum demand recorded during the month or 85% of contract demand whichever is higher.

The penalty on exceeding contract demand shall be 1.5 times the normal charges for actual demand exceeding 110% of the contracted demand; the penal charges shall be applicable on exceeded demand w.r.t. the Contract demand only.

Installation of shunt capacitors

8.22 All LTIS consumers having aggregate inductive load greater than 3 HP and above, shall install capacitors of required KVAR rating provided in the following table:

Table 91: Ratings of Capacitors for Inductive Load

Rating of Individual Inductive Load in HP	kVAR Rating of LT capacitors
3 HP to 5 HP (2.24 kW to 3.73 kW)	1
5 HP to 7.5 HP (3.73 kW to 5.59 kW)	2
7.5 HP to 10 HP (5.59 kW to 7.46 kW)	3
10 HP to 15 HP (7.46 kW to 11.19 kW)	4
15 HP to 20 HP (11.19 kW to 14.91 kW)	6
20 HP to 30 HP (14.91 kW to 22.37 kW)	7
30 HP to 40 HP (22.37 kW to 29.82 kW)	10
40 HP to 50 HP (29.82 kW to 37.28 kW)	10 – 15
50 HP to 100 HP (37.28 kW to 74.57 kW)	20 – 30

Penalty for exceeding Billing/ Contract Demand

8.23 Penalty for exceeding Billing/ Contract Demand shall be applicable as per Clause-I of Terms and Conditions of Supply

Voltage Rebate

8.24 Voltage rebate to the HTS & HTSS consumers shall be applicable as per Clause IV of Terms and Conditions of Supply.

Delayed Payment Surcharge

8.25 Delayed Payment Surcharge will be charged in accordance with Clause III of Terms and Conditions of Supply.

8.26 Power factor rebate shall not be allowed to consumers with outstanding arrears.

Summary of changes proposed to Industrial Services tariff and rationale for change in tariff

8.27 The Petitioner has proposed to decrease energy charge of HTS and HTSS category Industrial consumers in order to bring the same in line with voltage-wise cost of supply and to provide tariff parity for such consumers with other parallel distribution licensees of Jharkhand. Currently Industries through-out India are reeling under generic economic slowdown and many industries in Jharkhand have either shutdown or are at verge of shut-down. These industries are also huge employment generator and hence their closure would affect a large number of families. Electricity tariff constitutes a large part of overall cost structure of industries (especially energy-intensive HTSS sub-category where they can constitute 70% of total expenditure) and hence any decrease in tariff would lead to increase in viability of their operation. Therefore JBVNL is proposing reduction in tariff for HT Industries.

Table 92: Comparison of existing Industrial Services tariffs with approved tariffs in other States

State	Applicable Fixed Charge	Applicable Energy Charge
Bihar	**LTIS-I:** Rs.144/kVA or part/month **LTIS-II:** Rs 180/kVA or part/month **HTS-I (11 KV):** Rs.300/kVA/Month **HTS-II (33 kV):** Rs.300/kVA/Month **HTS-III (Min. demand of 7.5 MVA & 132 kV):** Rs.300/kVA/Month **HTS- IV**: Rs.300/kVA/Month **HTSS (33 kV):** Rs.700/kVA/Month	**LTIS-I:** Rs.6.50/kVAh **LTIS-II:** Rs.6.50/kVAh **HTS-I (11 KV):** Rs.6.65/kVAh **HTS-II (33 kV):** Rs.6.60/kVAh **HTS-III (Min. demand of 7.5 MVA & 132 kV):** Rs.6.55/kVAh **HTS- IV**: Rs.6.50/kVAh **HTSS (33 kV):** Rs.4.15/kVAh
Delhi	**Industrial:** Rs.250/kVA/month	**Industrial:** Rs.7.75/kVAh

V. Institutional Services

This tariff schedule shall apply for use of Street Lighting system, Railway Traction, Military Engineering Services and Other Distribution Licensees.

Applicability

Street Light Service (SS): This tariff schedule shall apply for use of Street Lighting system, including single system in corporation, municipality, notified area committee, panchayats etc. and also in areas not covered by municipalities and Notified Area Committee provided the number of lamps served from a point of supply is not less than 5.

Railway Traction (RTS) and Military Engineering Services (MES): This tariff schedule shall apply for use of railway traction and Military Engineering Services (MES) for a mixed load in defence cantonment and related area.

Other distribution licensees: This tariff schedule shall apply to other distribution licensees procuring power from JBVNL.

Service Character:

Street Light Service (SS): AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts.

Railway Traction Service (RTS): AC, 50 cycles, Single phase at 132 kV.

Military Engineering Services (MES): AC, 50 cycles, three phase at 11 KV/ 33 KV/ 132 kV

Other Distribution Licensees: AC, 50 cycles, three phase at 11 KV/ 33 KV/ 132 kV

Table 93: Existing and Proposed Tariff – Institutional Services

Category/ Sub-Category	Sub-Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
		Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
Institutional	Streetlight Service	6.25 / kWh	100 / kW / Month	7.00 / kWh	100 / kW / Month
	Railway Traction Services	5.50 / kVAh	350 / kVA / Month	4.25 / kVAh	500/ kVA / Month
	Military Engineering Services	5.50 / kVAh	350 / kVA / Month	4.25 / kVAh	500/ kVA / Month
	Other distribution licensee/ Deemed Licensee	5.50 / kVAh	350 / kVA / Month	5.00 / kVAh	500/ kVA / Month

The billing demand shall be the maximum demand recorded during the month or 85% of contract demand whichever is higher. The penalty on exceeding billing demand will be applicable in accordance with Clause I of Terms & Conditions of Supply

Summary of changes proposed to Institutional Services

Tariff as per Voltage-Wise Cost of Supply: JBVNL has proposed tariff for various sub-categories falling under institutional services in line with voltage-wise CoS. Hence tariff proposed for Street-light categories availing supply at LT voltage have increased, at the same time tariff for all other sub-categories under institutional services have been proposed to be decreased.

Maximum Demand for Railway Traction Services

8.28 The demand charge shall be applied on maximum demand recorded or contract demand whichever is higher at any fifteen minutes time block for which the meter installed should have 15 minutes integration time.

Delayed Payment Surcharge

8.29 The delayed payment surcharge shall be applicable in accordance with Clause III of Terms & Conditions of Supply.

Voltage Rebate

8.30 Voltage rebate to the RTS, MES and Other Distribution Licensee consumers shall be applicable as per Clause IV of Terms and Conditions of Supply.

VI. Temporary Connections

Applicability:

The Temporary tariff shall be applicable as per the following conditions:

a) Temporary tariff is proposed to be equivalent to 1.5 times of the applicable fixed and energy charges for temporary connections falling in each prescribed tariff category with all other terms and conditions of tariff remaining the same.

b) Temporary connections shall be given prepaid meters with prepaid balance equivalent to 45 days of sale of power which shall be based on the assessment formula (LDHF) prescribed by the Commission.

c) Temporary connections shall initially be provided for a period of up to 30 days which can be extended on month to month basis upto six months.

Table 94: Existing and Proposed Tariff – Temporary Supply

Category	Existing Component of Tariff (FY 2019-20)		Proposed Component of Tariff (FY 2020-21)	
	Energy Charges	Fixed Charges	Energy Charges	Fixed Charges
All Units	1.5 times of the applicable energy charges	1.5 times of the applicable fixed charges	1.5 times of the applicable energy charges	1.5 times of the applicable fixed charges

9. Schedule of Charges

Background

9.1 Hon'ble commission has notified the first supply code as JSERC (Electricity Supply Code), Regulations, 2005 for JSEB which was constituted on March 10, 2001 under the Electricity (Supply) Act, 1948 as a result of the bifurcation of the erstwhile State of Bihar.

9.2 The miscellaneous charges have been slightly revised by Hon'ble Commission for 2018-19 and 2019-20. However the Petitioner requests the Hon'ble Commission that these charges are not in line with considering the current inflation and the charges taken by the other States. The present charges and proposed charges are discussed in the following sections.

Rationale for increase of Miscellaneous charges

a) Inflation last few years

9.3 As discussed in the above section, that there has not been much increase in miscellaneous charges in last 10 years. Though the miscellaneous charges have been slightly revised by Hon'ble Commission for FY 2018-19 and 2019-20, these charges are not in line with considering the current inflation and the charges taken by the other States.

9.4 The Petitioner in line with the JSERC Regulations 2015, has estimated the inflation factor based on the actual Wholesale Price Index (WPI) and Consumer Price Index (CPI) for the last few years. The table below provides the average of Inflation indices of CPI and WPI:

Table 95: Inflation of last few Years

Index	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
CPI	236.0	250.8	265.0	275.9	284.2	299.9	317.2
WPI	112	114	110	112	115	120	121

Period	WPI	CPI	Total
Weightage	0.45	0.55	1.00
Avg Indexation for FY19-20	121.38	317.17	
Avg Indexation n-1 (Index * Wt.)	54.62	174.44	229.06
Avg Indexation for FY18-19	119.79	299.92	
Avg Indexation n (Index * Wt.)	53.91	164.95	218.86
Combined Inflation (Indexation/Indexation-1)	**4.66%**		

b) Labour rates

9.5 It can be noted that the labour charges for a skilled worker is Rs. 355/day as per the Department of Labour, employment & Training, Government of Jharkhand. However charges for works related to testing of meter/installation for single/three phase consumers have been kept at Rs. 100 and charges for work relating to removing/refixing of Meter/Changing of Meter or Meter Equipment has been kept at only Rs. 200. Hence, it is noteworthy that the current miscellaneous charges are not complying with the industry standards and need to be revised to bring them to a realistic level.

c) Miscellaneous charges in other neighbour states

9.6 JBVNL is the distribution utility with one of the lowest miscellaneous charges in the country. Even neighboring States like Bihar, Odisha, Chhattisgarh and West Bengal have significantly higher charges.

9.7 It is noteworthy that Jharkhand was constituted as a result of the bifurcation of the erstwhile State of Bihar on 15 November 2000. However, both the state share the same demography and geography. It can be seen in the below sub-sections that Bihar being the neighboring state of Jharkhand has comparatively high miscellaneous charges. However, if prevailing labour charges are compared for both the states, Bihar has similar labour charges as of Jharkhand which is depicted in the table below.

Table 96: Minimum wages in Jharkhand and Bihar

Class of employee	Jharkhand	Bihar
Unskilled	257.29	277.00
Semi-skilled	269.54	289.00
Skilled	355.30	352.00
Highly-skilled	410.44	429.00

* *Labour rates for contractual labour as effective from 1st Oct'19*

9.8 In line with the prevalent miscellaneous charges applicable in state of Bihar, JBVNL has proposed its schedule of miscellaneous charges. A detailed comparison of JBVNL rates with other states are provided in the following sub-sections.

Revised schedule of charges

9.9 Considering the above factors like inflation and present labour rates and in line with miscellaneous charges applicable in other neighbor, JBVNL would like to propose revised schedule of miscellaneous charges.

9.10 The Petitioner has proposed charges under 7 nos. heads as following-

1. New Connection application charges,
2. Disconnection charges,

3. Reconnection charges,
4. Consumer Service Charges,
5. Meter testing charges,
6. Meter rent and
7. Transformer rent.

9.11 The new connection application fees includes the application fees for new connection which is exclusive of other charges related to new connection (applicable as per the cost estimate). It is pertinent to mention that free of cost/ installment basis electricity connections are being provided under various Central and State sponsored schemes. Therefore, the charges shall be applicable as per the scheme guidelines for the consumers covered under any Central or State Government sponsored scheme. It is pertinent to mention that significantly higher effort is required for processing connection at 11 kV and higher, hence the charge for them should be increased.

9.12 The Petitioner has also revised the charges for Temporary and Permanent disconnection charges. It is noteworthy that significant effort is being required for permanent disconnection as the job includes removal of meter, metering units, cables & wires and other allied materials, transportation charges, labour charges, etc. Therefore, a higher amount as compared to temporary charges is being proposed for Permanent disconnection. Also, reconnection charges have been proposed which is in line with the temporary disconnection charges.

9.13 As part of the simplification of miscellaneous charges, the Petitioner has proposed a single charge related to consumer services which includes- re-sealing, fuse replacement, modification in connection layout/ meter shifting, meter fixing/ removal, service line replacement, name change, load modification, subsequent installation testing, Replacement of Defective or Burnt meters. It is submitted that considering the average life of 5 years of meters, the burnt meter charges shall not be applicable, if the meter gets defective after 5 years from the date of installation. It is also submitted that the consumer has to bear the actual cost of meter as the penalty in case of burnt meters and defective meters (in case of consumers' fault).

9.14 It is submitted that the Petitioner has not proposed any increase in the charges related to meter rent. However, the charges related to meter testing is being proposed which is inclusive of metering unit in case CT operated and Tri-vector meter. It is submitted that in case where the consumer opts for meter testing through a third party/ external agency, the charges of external agency shall be borne by the consumer itself, in addition to the above applicable service charges.

9.15 It is pertinent to mention that industrial consumers have to make a separate arrangement of required capacity transformer for availing electricity. However, in some special cases, JBVNL has provided a temporary arrangement of transformer to Industrial consumers or in some cases of temporary supply. Therefore, the approved charges pertaining to transformer rent is inevitable to bring clarity among consumer as well as to utility. However the Petitioner would like to submit that charge for the transformer should be levied on per kilowatt basis.

9.16 To discourage the consumer for opting transformer on rent and to make self-arrangement of the same, the Petitioner has proposed for slightly higher transformer rent. It is also submitted that transformer rent shall only be applicable for maximum of 3 months.

9.17 The summary of miscellaneous charges proposed by JBVNL is detailed in the table below. It is humbly prayed to Hon'ble Commission to approved the below mentioned miscellaneous charges:

Table 97: Summary of Proposed Schedule of charges

Types of Charges		Single phase	3 Phase (whole-current)	3 Phase (CT operated)	Meter at 11kV	Meter at 33kV	132/220 kV
New Connection application fees[4]		100	100	100	500	1000	1500
Dis-connection charges (on consumer request)	Temporary	200	200	500	1500	1500	1500
	Permanent[5]	200	400	1000	2000	5000	5000
Re-connection charges		200	200	500	1500	1500	1500
Consumer service for each incidence (including, re-sealing, fuse replacement, modification in connection layout/ meter shifting, meter fixing/ removal, service line replacement, name change, load modification, subsequent installation testing, Replacement of Defective or Burnt meters[6])		200	500	700	1,000	2,000	5,000
Meter Testing (including combined metering unit)		100	200	300/ 1800 (Tri- Vector Meter)	5,000	5,000	8,000
Meter Rent/ meter/ month		20	50	250	400	2500	15,000
Transformer Rent- if provided by JBVNL on request of consumer		NA	NA	Rs. 100/kVA/month of transformer capacity			

Comparison of charges with other states

9.18 The Petitioner has provided a detailed comparison of miscellaneous charges of JBVNL with charges prevailing in other state distribution utilities.

Table 98: Charges related service connection

S No.	Particulars	Scale of Charges		
		JBVNL (Present)	JBVNL (Proposed)	Bihar
1	Application fee			
	LT Single Phase	Rs 100	Rs 100	Rs. 20 for KJY, Rs. 75 for Others
	LT Three Phase	Rs. 100	Rs. 100	Rs. 300 for LT Industrial Rs. 200 for Others
	LT Three Phase (CT Operated)	Rs. 100	Rs. 100	Rs. 300 for LT Industrial Rs. 200 for Others
	11kV	Rs. 500	Rs. 500	Rs. 750
	33 kV	Rs. 500	Rs. 1,000	Rs. 750
	132 kV/220 kV	Rs. 500	Rs. 1,500	Rs. 750
2	Disconnection (Dis)/ Reconnection (Re)			
	Single phase	Dis: Rs. 200 Re- Rs. 200	Dis: Rs. 200 Re- Rs. 200	Rs. 100
	3-ph LT	Dis: Rs. 200 Re- Rs. 200	Temp Dis: Rs. 200 Perm Dis: Rs. 400 Re- Rs. 200	Rs. 900 for LT Industrial Rs. 200 for Others
	3- ph LT with CT		Temp Dis: Rs. 500 Perm Dis: Rs. 1,000 Re- Rs. 500	
	11kV	Dis: Rs. 1,500 Re- Rs. 1,500	Temp Dis: Rs. 1,500 Perm Dis: Rs. 2,000 Re- Rs. 1,500	Rs. 3000
	33 kV	Dis: Rs. 1,500 Re- Rs. 1,500	Temp Dis: Rs. 1,500 Perm Dis: Rs. 5,000 Re- Rs. 1,500	Rs. 3000
	132/220 kV	Dis: Rs. 1,500 Re- Rs. 1,500	Temp Dis: Rs. 1,500 Perm Dis: Rs. 5,000 Re- Rs. 1,500	Rs. 3000

Table 99: Charges related to meter

S No.	Particulars	Scale of Charges		
		JBVNL (Present)	JBVNL (Proposed)	Bihar
1	Meter test when accuracy disputed by consumer			
	Single phase	Rs. 100	Rs. 100	Rs. 100
	Three phase	Rs. 100	Rs. 200	Rs. 200
	Three phase (CT)	Rs. 100	Rs. 300	Rs. 300
	Tri vector/ special type meter	Rs. 1,000	Rs. 1,800	Rs. 1,800
	33/11 kV metering equipment	Rs. 1,000	Rs 5,000	Rs 5,000
	132/220 kV metering equipment	Rs. 1,000	Rs 8,000	Rs 8,000
2	Removing/ Fixing / Re-fixing of meter			
	Single phase	Rs. 200	Rs.200	Rs.200
	Three phase	Rs. 200	Rs.500	Rs.400
	Tri vector/ special type meter	Rs. 1,000	Rs.700	Rs.600
	Three Phase meter with CT	Rs. 1,000	Rs 700	Rs.500
	11 kV metering equipment	Rs. 1,000	Rs. 1,000	Rs. 1,200
	33 kV metering equipment	Rs. 1,000	Rs. 2,000	Rs. 1,200
	132/220 kV metering equipment	Rs. 1,000	Rs. 5,000	Rs. 1,200

Table 100: Charges related meter rent

S No.	Particulars	Scale of Charges	
		JBVNL (Existing and Proposed)	Bihar
1	Meter Rent/ Month		
	LT Single Phase	Rs. 20	Rs. 20
	LT Three Phase	Rs.50	Rs. 50
	LT meter with CT	Rs. 250	Rs. 500
	11 kV Voltage	Rs. 400	Rs. 1,000
	33 kV	Rs. 2,500	Rs. 3,000

S No.	Particulars	Scale of Charges	
		JBVNL (Existing and Proposed)	Bihar
	220/132 kV	Rs.15,000	Rs.15,000
	RTS or 220 KV	Rs. 15,000	Rs. 4,000
2	Replacement of Burnt Meter		
	Replacement of Burnt Meter	Cost of meter	Cost of meter

10.Terms and Condition of Supply

10.1 The Petitioner is hereby submitting following terms and conditions of supply besides terms and conditions provided in the JSERC (Electricity Supply Code), Regulations, 2015, for kind perusal of the Hon'ble Commission.

Clause I: Penalty for exceeding Billing/ Contract Demand

10.2 In case the consumer's actual recorded demand exceeds 110% of the contract demand, then normal demand charge will be applicable up to 110% of contract demand. However, once the consumer surpasses the 110% threshold, then penal tariff shall be applicable @ 1.5 times of existing charges for the demand over and above the contract demand (i.e 100%) and NOT on the demand exceeding 110%.

10.3 Further, in case any consumer exceeds the Contract Demand on more than three occasions in a calendar year, the highest demand so recorded would be treated as the revised contract demand.

10.4 In case actual demand is higher than the contract demand for three continuous months, the maximum demand of the last three months shall be treated as the new contract demand for the purpose of billing of future months and the consumer will have to get into a new agreement for the revised contract demand with the licensee within the period defined by the Licensee and communicated to the consumer failing which the consumer will be charged @ 2 times of the demand charges as long as the consumer does not enter the agreement.

10.5 Once the actual demand is recorded to be higher than contract demand for two continuous months, the licensee would serve notice to the consumer after the end of the second month for enhancement of the contract demand. The consumer would be liable to respond within 15 days of receipt of such notice and submit application for enhancement of contract demand to the licensee. The licensee would, within 15 days of receipt of response from the consumer, finalize the new agreement after making necessary changes at consumer's installations.

10.6 In case the consumer fails to respond within 15 days, the licensee would have the right to initiate enhancement of load as per the last recorded contract demand. While, in case the consumer provides an undertaking that the actual demand shall not exceed the contract demand again for a period of at least six months from the last billing, the licensee shall continue to bill the consumer as per the existing contract demand and billing demand.

10.7 Provided that if the consumer fails to adhere to the undertaking and the actual demand exceeds the contract demand within the subsequent six months of the undertaking, the consumer shall have to pay a penal charge of 2 times the normal tariff for a period of three consecutive months and the licensee shall, after serving 7 days' notice to the consumer, enhance the contract demand of the consumer as per the last recorded actual demand.

Clause II: Electricity Duty

10.8 The charges in this tariff schedule do not include charges on account of Electricity Duty/ Surcharge to the consumers under the State Electricity Duty Act, 1948 and the rules framed there under and as amended from time to time and any other Statutory levy which may take effect from time to time after making corrections for the loss in the distribution system.

Clause III: Delayed Payment Surcharge

10.9 In case the electricity bills are not paid within the due date mentioned on the bill, delayed payment charges of 1.5% percent per month or part thereof on the total electricity bill (including Taxes and Duties) shall be levied on the bill amount. The due date for making payment of energy bills or other charges shall be fifteen days from the date of issuance of bill for LT Domestic, Commercial and Agricultural and twenty one days from issuance of bill for all other categories. In case, the licensee defaults in generating and delivering bills on timely basis, DPS will not be charged for the period of default by licensee.

Clause IV: Voltage Rebate

10.10Voltage rebate will be applicable on energy charges as given below:

Table 101: Voltage Rebate

Consumer Category	Voltage Rebate
HTS/HTSS – 33 kV/66 kV	2.00%
HTS & HTSS – 132KV	3.00%

Note: *The above rebate will be available only on monthly basis and consumer with arrears shall not be eligible for the above rebates. However, the applicable rebates shall be allowed to consumers with outstanding dues, wherein such dues have been stayed by the appropriate authority/Courts.*

Clause V: Load Factor Rebate

10.11The Petitioner proposes to remove the load factor rebate as under the two part tariff regime, the fixed charges per unit are reduced for every improvement in load factor. This results in overall per unit reduction in cost of electricity to the consumer and results in double counting of benefits of higher consumption to the consumer, whereas, the lower load factor on the other hand is not being penalized. It is submitted that the Load Factor rebate is being approved by the Commission in previous Tariff Orders with a view to encourage better load utilization by HT consumers having above 70% utilization, lower system losses and better system operation. The Load factor rebate had been introduced earlier in large and heavy consumers to curb the theft of electricity. But, now licensees have installed high precision meters to monitor the trend and other parameters and as such it appears that there is no need to provide incentive for consumption. It is further submitted that no such rebate in given to consumers in most of the other States in the country. Hence it is prayed to the Hon'ble Commission to remove the load factor rebate for all consumer categories.

Clause VI: TOD Tariff

10.12TOD tariff proposed shall be applicable as follows-

- Off Peak Hours: 10:00 PM to 06:00 AM: 85% of normal rate of energy charge.
- Normal Hours: 10:00 AM to 6:00 PM: 100% of normal rate of energy charge
- Peak Hours: 06:00 AM to 10:00 AM & 06:00 PM to 10:00 PM: 120% of normal rate of energy charge.

Clause VII: Rebate for prompt online payment

10.13The due date for making payment of energy bills or other charges shall be 21 days after issue date of the bill. Rebate of 0.5% on the billed amount for timely payment of the full amount of the bills through online web portal or digital methods shall be allowed for all categories of consumers. .

Other Terms and Conditions

Point of Supply

10.14The Power supply shall normally be provided at a single point for the entire premises. In certain categories like coal mines power may be supplied at more than one point on request of consumer subject to technical feasibility. But in such cases metering and billing shall be done separately for each point.

Dishonored Cheques

10.15In the event of dishonored cheque for payment against a particular bill, the Licensee shall charge a minimum of Rs. 300 or 0.5% of the billed amount, whichever is higher. The DPS shall be levied extra as per the applicable terms and conditions of DPS for the respective category.

Sale of energy

10.16 No consumer shall be allowed to sell the electricity purchased from the Licensee to any other person/ entity.

Release of new connections

10.17 No new connections shall be provided without appropriate meter.

Conversion factors

10.18 The following shall be the conversion factors, as and where applicable: (PF=0.85):

1 Kilowatt (KW) = 1.176 Kilovolt ampere (kVA)

1 Kilowatt (KW) = 1 / 0.746 Horse Power (HP)

1 Horse Power (1 HP) = 0.878 Kilovolt ampere (KVA)

Disputed Bills

10.19 In case of disputed bill, the consumer would be liable to pay their dues based on last 3 month's consumption pattern which will be subsequently adjusted if found erroneous against future bills.

Stopped/ defective meters

10.20 In case of existing consumers with previous consumption pattern, the provisional average bill shall be issued on the basis of average of previous three months consumption. In case of meter being out of order from the period before which no pattern of consumption is available, the provisional average bill shall be issued on the basis of sanctioned/ contract load on following load factor applicable to respective categories, as shown below:

Table 102: Consumer wise Load Factor

Consumer Category	Load Factor
Domestic & Religious Institution	0.10
Non-Domestic	0.20
LTIS/ PHED LT	0.15
DS-HT	0.15
HTS	0.25
11 KV	0.30
33 KV	0.50
132/200 KV/400 kV	0.50
HTSS	0.25
RTS	0.10

The Consumer should furnish usage details of their continuous load/shift wise load/otherwise.

Temporary Supply

Applicability

10.21 This tariff shall apply for connections being temporary in nature for period of less than one year. The applicability shall be as given in the respective category tariff rate schedule. Temporary supply cannot be claimed by a prospective consumer as a matter of right but will normally be arranged by JBVNL when a requisition is made giving due notice subject to technical feasibility and in accordance with electricity supply code issued by the Commission.

10.22 Temporary tariff is proposed to be equivalent to 1.5 times of the applicable fixed and energy charges for temporary connections falling in each prescribed tariff category with all other terms and conditions of tariff remaining the same.

10.23 Temporary connections shall be given prepaid meters with prepaid balance equivalent to 45 days of sale of power which shall be based on the assessment formula (LDHF) prescribed by the Commission.

10.24 Temporary connections shall initially be provided for a period of up to 45 days which can be extended on month to month basis up to six months.

Metering facility:

10.25 It is proposed that all HTS consumers should have demand recording facility @ 15 minutes time integration. This will enable utility to manage its load profile during power restrictions. This will also enable Petitioner to match the profile/ scheduling with the SLDC/ ERLDC and assist in energy accounting. It may be noted that Regional Energy Accounting (REA) and other power drawal & scheduling are done on 15 minutes time block.

11. Directives

11.1 The Petitioner humbly submits that it is committed to follow the directives of the Hon'ble Commission to become a regulatory compliant distribution utility. Hon'ble Commission had given various directives in its Order dated 28th February'19. JBVNL to the best of its ability has complied and communicated status of compliance with directives issued by Hon'ble Commission. In present Petition, JBVNL submits status on directives issued by Hon'ble Commission in its Order dated 28th February'19.

Sl.	Directive	Details	Response from Petitioner
1.	**Abolishment of unmetered category**	The Commission observes that the Petitioner has not been able to comply with its self- declared target of December 2018 and takes serious note of the same. The Commission however, provides final opportunity to the Petitioner to complete the metering of by June 2019 and submit the completion report by July 2019.	The Petitioner vide letter no. 1096/CE(C&R) dated 12th Sep'19 and Petition in Case No. 20 of 2019 has sought an extension of the timeline for metering of un-metered consumers as provided in Tariff Order dated 28th February, 2019. Vide above communication, the Petitioner had informed the Hon'ble Commission that despite its best efforts, there were still ~4.75 lakh consumers which remained to be metered. JBVNL also requested the Hon'ble Commission to allow Tariff for the unmetered consumers which has been abolished from July 2019 as per the clause 16.1 of the Tariff Order dated 28.02.2019.
2.	**Power purchase cell**	The Commission directs the Petitioner to form a dedicated power purchase cell with a high qualified team so that short	As submitted in previous tariff petition in Case (Tariff) No.: 08 of 2018, JBVNL has already formed a Centralized

Sl.	Directive	Details	Response from Petitioner
		term as well as long term power procurement of the Discom can be continuously monitored and the power procurement cost of the Utility can be optimised. The Commission also observes that the Petitioner has paid UI charges, which may indicate non-optimum forecasting and planning on behalf of the Utility. Such power purchase cell shall aid the Utility in effective demand forecasting and planning. The Petitioner should finalize the agency and submit the compliance report by June 2019.	Power Purchase Cell which is fully functional. The Power purchase cell has dedicated officers headed by General Manager (Commercial), 2-Dy. General Managers (ESEs), 2-Senior Managers (EEEs) and 4-Managers (AEEs). Further, in order to strengthen the Power Purchase Cell, the Petitioner is in process of procuring of specialized services with an integrated software based solution for forecasting, planning and procurement of power, under the World Bank Technical Assistance program. JBVNL had floated tender for the same, however none of the bidder was found to be eligible with respect to qualification requirement of the RFP document and the tender had to be cancelled in April, 2018. Thereafter two stage tendering process for the same has been re-initiated with an aim of optimum competition between available organizations rendering their services to utilities for power purchase optimization. The EOI and RFP stages have been completed. JBVNL has opened and evaluated the bids and has submitted its evaluation report to the World Bank. Upon approval, finalization and selection of consultants shall be completed.
3.	**RPO Obligation**	The Commission direct the Petitioner to comply the RPO Obligation by March 2019 for period till FY 2018-19 and submit the report by April 2019. The Petitioner is required	**Present status of Renewable Power Purchase** JBVNL is getting power from solar plants having capacity of 26 MW since FY 2012-13. (10 MW from SECI and 16

<table>
<tr><th>Sl.</th><th>Directive</th><th>Details</th><th>Response from Petitioner</th></tr>
<tr><td></td><td></td><td>to submit the quarterly report on RPO compliance for FY 2019-20.
The Commission, in this Order has not imposed a penalty for non-fulfilment of RPO. The Commission may be constrained to levy penalty in future, if the Petitioner do not comply with the same. A monetary penalty may also be imposed on the Managing Director and/ or senior management of the Discoms, if the Commission deems so.</td><td>MW from solar plants situated in state). JBVNL is also getting power from wind plants having capacity of 295 MW from August, 2018 onwards as per following schedule:
<table>
<tr><th>Name of wind Generator</th><th>Capacity Operationalized (MW)</th><th>Start date of Power flow</th></tr>
<tr><td rowspan="3">Ostro Kutch Wind Pvt. Ltd</td><td>25.2</td><td>21.08.18</td></tr>
<tr><td>10</td><td>31.10.18</td></tr>
<tr><td>10</td><td>29.12.18</td></tr>
<tr><td>Green Infra Wind Energy Ltd</td><td>50</td><td>08.10.18</td></tr>
<tr><td rowspan="3">Mytrah Energy India Pvt. Ltd</td><td>25.74</td><td>30.01.19</td></tr>
<tr><td>11.66</td><td>16.04.19</td></tr>
<tr><td>12.6</td><td>11.05.19</td></tr>
<tr><td>Wind Three Renergy Ltd (Inox)</td><td>50</td><td>July, 2019</td></tr>
<tr><td>SECI (Green Infra Wind Energy Ltd)</td><td>100</td><td>June, 2019</td></tr>
<tr><td>Total</td><td>295.2</td><td></td></tr>
</table>
As it can be seen from above table that only 121 MW renewable capacity was operationalized in FY 2018-19. The operationalized capacity may not suffice for meeting solar RPO of 5.50% and non-solar RPO of 4.50% as per JSERC (Renewable Energy Purchase Obligation and its compliance) Regulations, 2016 in FY 2018-19. JBVNL has</td></tr>
</table>

Sl.	Directive	Details	Response from Petitioner
			only been able to purchase 0.3% of its power (excluding hydro power) from solar plants and 1% of its power (excluding hydro power) from non-solar renewable plants in FY 2018-19. **Steps taken for Complying with RPO** JBVNL is taking serious steps to comply with the RPO targets set as per the Regulations and directives of Hon'ble JSERC. As submitted in previous tariff petition in Case (Tariff) No.: 08 of 2018, JBVNL has tied up solar capacity of 700 MW from existing and upcoming solar parks of SECI, against the 520 MW capacity required to fulfil the RPO requirement (JBVNL is in process of filing Petition for approval of PPA). The capacity is expected to be operationalized by October, 2020. Besides above, floating solar plant of 150 MW (100 MW Getalsud Dam +50MW Dhurwa Dam) is presently under development. To comply with non-solar RPO, JBVNL has tied up capacity of 500 MW against 355 MW capacity required to comply with RPO. The details of renewables capacity tied up is tabulated below

S.N	Generator / Nodal Agency	Capacity (MW)	Remarks
1	PTC	200	195.2 MW Capacity Operationalized
2	SECI	100	Operationalized in

Sl.	Directive	Details	Response from Petitioner
			<table><tr><td></td><td></td><td></td><td>June'19</td></tr><tr><td>3</td><td>SECI</td><td>200</td><td>Capacity expected to be operationalized from April 2020 onwards</td></tr></table> As Hon'ble Commission would appreciate that due to overcapacity (with respect to RPO trajectory) of renewable capacity being contracted/constructed, JBVNL would be in a position to clear its backlog of RPO for previous years including FY 2018-19 along with fulfillment of RPO of future years. The Petitioner hereby submits RPO compliance report of Q1 and Q2 of FY 2019-20 at Annexure-2. The Petitioner would also be hence-forth submitting quarterly RPO compliance status to Hon'ble Commission.
4.	**Quality of power/ Reliability Indices and Standard of Performance (SOP)**	The Commission directs the Petitioner to continue implementing SoP as per Standards of Performance as per the JSERC (Standards of Performance) Regulations, 2015 and report to the Commission as per Regulation. The Commission directs the Petitioner to ensure that the toll free number is available round the clock. It is the duty of the Petitioner to deploy adequate and qualified manpower in shift to attend consumers' complaints.	The Petitioner has tried in its best capacity to resolve consumer complaints as per timelines given in SoP Regulations. JBVNL has already submitted compliance with SoP as per formats given in JSERC SoP Regulations for first quarter of FY 2019-20 vide letter dated 1170 dated 30th Sep, 2019. The Petitioner hereby submits SoP in format as per given format for Q2 of FY 2019-20 at Annexure-3. The Petitioner would also be hence-forth submitting quarterly SoP compliance status to Hon'ble Commission regularly.

Sl.	Directive	Details	Response from Petitioner
			The Petitioner would like to submit that toll free consumer helpline number is available round the clock for registering complaint and is adequately staffed.
5.	**Strengthening of Distribution Network**	The Commission has noted the submission made by the Petitioner on the Safety Manual. The Commission directs the Petitioner to follow the same to reduce accidents and also follow the continuous routine maintenance schedule for improved services to the consumers.	The Petitioner would like to submit that it is committed to ensure 100% safety for its employees at all levels and avoid any unfortunate events. To this effect, the Petitioner has implemented the safety manual rigorously. The Petitioner also submits that it is making best endeavour to follow continuous routine maintenance schedule. Further, in order to ensure the maintenance standards are enhanced the Petitioner is in process of appointment of dedicated agencies for maintenance contract of 33/11 kV PSS and 33KV Lines at Circle Level. Work shall be awarded in following 2 packages: • Maintenance work of 33/11KV PSS & 33KV Lines. • Maintenance work of 11/0.4KV DSS, 11KV Lines, LT lines & Disposal of Fuse Calls. Following Key activities shall be covered in scope of work of allotted Vendors: a) Preventive and Routine Maintenance b) Breakdown Maintenance c) Quick Restoration and Disposal of power Complaints For Above activities material manpower, vehicle and

Sl.	Directive	Details	Response from Petitioner
			other miscellaneous cost (PPE/Store, etc) has been considered in proposed O&M budget for FY 2019-20. After implementing the above activities, following key advantages shall come as outcome: • Improvement in Power Quality • Quick Restoration and Disposal of Complaints & Breakdown by maintaining SOPs • Healthy Monitoring of Infrastructure • Direct impact in improvement against Billing Collection Compliance of O&M Cum Safety Manual to avoid Accidents
6.	**Energy Audit & T&D Loss Reduction Plan**	The Commission directs the Petitioner in its earlier Order to conduct division-wise Energy Audit & prepare circle-wise T&D Reduction Plan and submit the same along with its progress to the Commission within six months of issue of this Tariff Order. The Commission also directs the Petitioner to submit sample energy audit report for transformers having different consumer mix along with action taken, if any, for reducing losses within six months from the date of issuance of the order.	In accordance with the directive issued the Hon'ble Commission, the Petitioner is hereby submitting the sample energy audit report for transformers having different consumer mix with this Petition as Annexure 4. Further, it is submitted that the Petitioner has prepared a detailed action plan for implementation of smart meters with capability of pre-paid mode across the State and the tender for Phase – I (Ranchi Circle, excluding Khunti Sub-division covering nearly 3.65 Lac consumers) has been completed under the World Bank funding program and award process is underway. Once the smart meters are

Sl.	Directive	Details	Response from Petitioner
		The Commission infers that there is a huge gap in billing and collection efficiency based on the sample audit data submitted by the Petitioner. The Commission directs to submit the verified audit report on sample basis within 3 months from the date of issuance of this Order without any fail. The Commission also directs the Petitioner to move towards prepaid meters to improve the collection efficiency.	installed, the dual objectives of installing pre-paid as well as smart meters shall be achieved. It is submitted that Phase II and Phase III of the program shall cover additional ~10 Lac consumers.
7.	**Interest on Consumer Security Deposit**	The Commission takes note of the steps taken by the Petitioner. However, the Petitioner is yet to ensure that the interest is paid to all the consumers on the security deposits. The Commission directs the Petitioner to continuously update its data bases and submit the monthly compliance report to the Commission. The Petitioner is required to submit data related to total amount of consumer security received by the Petitioner, interest payable on consumer security deposit and actual amount paid till date on quarterly basis to Commission.	The Petitioner has already submitted data related to total amount of consumer security received, interest payable on consumer security deposit and actual amount paid for FY 2019-20 till September 2019, during the State Advisory Committee Meeting held on 5th Nov'19. The Petitioner would further submit data related to consumer security received, interest payable on consumer security deposit and actual amount paid for quarter ending December 2019 in January 2020.
8.	**Segregation into Retail & wheeling supply of business**	According to the Regulation 5.4 of the JSERC Distribution Tariff Regulations 2015, separate accounting has to be done for Wheeling & Retail supply of Business which has not been the case till now. As per Regulation 5.5 of JSERC Distribution Tariff Regulations 2015, until the time accounts are not segregated an Allocation Statement shall be prepared and	It is submitted that the Petitioner has submitted the segregated ARR towards wheeling and retail business as per the JSERC Power Regulatory Accounting Regulations 2016 and the segregated accounts based on appropriate assumptions and duly approved by the Board of Director shall be submitted subsequently. It is understood that

Sl.	Directive	Details	Response from Petitioner
		submitted to apportion the costs and revenues after the approval of the Board of Directors. The Commission strictly directs the Petitioner and directed to prepare the FAR and submit the same before Commission. The Commission directs the Petitioner to submit the same within six months from the date of this Order.	segregation of accounts into wheeling and retail would require the drawing of Fixed Asset Register, without which 100% accuracy in such segregation may not be feasible. Hence Petitioner is in process of appointment of agency for preparation of FAR. It is expected that consultant for preparation of FAR would be appointed by end of January 2020 and the work shall initiate from Feb'2020 onwards, with a completion target timeline of 18 months.
9.	**Actual Supply Hours in Rural Areas**	The Petitioner is directed to comply with the SOP and submit the monthly report in the prescribed formats.	The Petitioner here-by submits SoP in format as per given format for Q2 of FY 2019-20 at Annexure-3.
10	**Voltage wise-Cost of Supply**	The Commission directs the Petitioner to carry out a detailed technical study on voltage wise losses on Distribution network and furnish a report within 3 months from the date of issuance of this Order.	As per the directive of Hon'ble Commission, JBVNL has conducted Voltage-Wise Cost of Supply. The consultant has submitted report on the same. Detailed Technical study on voltage wise losses on Distribution network is submitted as Annexure 6.
11	**Wheeling Charges**	The Commission directs the Petitioner to prepare the FAR and submit detailed calculation for voltage wise wheeling charge in the next tariff petition.	JBVNL in compliance of the directive has issued NIT No. 127/PR/JBVNL/18-19 regarding consultancy services for preparation of FAR For JBVNL. Techno-commercial Bids received against the said Tender have been opened and are undergoing evaluation. It is expected that consultant for preparation of FAR would be appointed by end of

Sl.	Directive	Details	Response from Petitioner
			January 2020 and the work shall initiate from Feb'2020 onwards, with a completion target timeline of 18 months.
12	**Theft of Electricity**	The Commission directs the Petitioner to develop web based application where anyone can upload a picture or provide information about power theft. The Petitioner may also develop a suitable scheme for rewarding the people who provide credible/actionable information of power theft.	JBVNL has been committed to ensure that the incidence of theft and pilferages are contained. Massive raids are being conducted regularly and FIRs are being lodged against theft of electricity. It is further mentioned the Petitioner has provided several modes for the consumers to report cases related to theft like • Written complaints • Jan Samwad • JBVNL website • Customer Care Centres • Social Media platforms like Facebook and Twitter. Additionally, JBVNL has also made a provision of award of Rs 100/ to Urja Mitras, appointed by Billing agencies for reporting of Theft cases detected by them. In FY 2019-20 (Till September, 2019) total 10,910 nos. raids have been conducted which has resulted in 2018 FIRs being lodged for theft or improper use of electricity. Further a fine of Rs 5.86 crore have been imposed for such cases.

Sl.	Directive	Details	Response from Petitioner
13	**Employee Performance Appraisal**	The Commission observes that the Petitioner has made some interim arrangement. The Commission directs the Petitioner to develop an arrangement whether the quality of supply can be objectified into performance indicators and for an area is linked to respective Officers. The Petitioner to submit the compliance report in 3 months from the date of issue of this order.	JBVNL would like to submit that a revamped organization structure of JBVNL was approved by the Board of Directors in June 2018. In line with the revised organization structure, JBVNL is in process of revising the HR policies for its organization, keeping the long term organizational goal in view. The proposed Policies are also being developed to address the issue of legacy Employee Performance Management System, which shall be replaced with performance driven parameters/KPIs such as service quality, AT&C loss reduction and revenue enhancement for monitoring the performance of the employees. Further to operationalize the organizational structure and Performance Management System, JBVNL is in process of appointment of consultancy agency. The project is funded by World Bank as part of Jharkhand Power System Improvement Project.
14	**Capacity Building of Employees**	The Commission takes notes of the training and capacity program carried out by the Petitioner. The Commission directs the Petitioner to ensure such capacity building program should be conducted on regular basis and submit details of such workshops undertaken along with the next Tariff Petition.	JBVNL has conducted intensive workshop for AEE level employees at it's headquarter from 5th Aug'19 to 9th Aug'19. In the workshop, the employees were given training on JSERC Terms and Conditions of determination of distribution tariff, 2015 JSERC Supply Code Regulations, 2015. An evaluation test was also conducted to assess understanding of the employees. Going

Sl.	Directive	Details	Response from Petitioner
			forward, several such workshops are being planned and it shall also be instituted as part of performance management system for employees.
15	**Monitoring of Compliance to Directives**	The Commission observes that the Petitioner has not been prompt in complying with the directions of the Commission and several directions are yet to be complied with even after repeated reminders. The Commission directs the Petitioner to strictly comply with the directions of the Commission and regularly apprise the Commission on the compliances.	The Petitioner has been prompt in complying with all directives of Hon'ble Commission. However in wake of some constraints it has not been able to fully comply with all directives of Hon'ble Commission, but its making effort in that direction. The Petitioner would further also endeavour towards fulfilling all directives of Hon'ble Commission.
16	**Investment in Cyber Security Solutions**	The Commission takes note of the compliance of the directive. The Petitioner is required to submit the implementation and completion report of ERP Implementation. The Petitioner should further submit the quarterly status report of implementation of Integrated Technology Roadmap - IT/OT Feasibility.	It is submitted that the Petitioner is currently undergoing major reforms using Information Technology as the key enabler for improving revenue collection, Optimizing Utility operations, minimizing AT&C losses, proper energy accounting and efficient consumer services. Further, in order to implement the cyber security solutions in IT, Petitioner has already prepared an IT Roadmap which summarizes the "Integrated Technology Roadmap - IT/OT Feasibility" study conducted by the TATA Power Delhi Distribution Ltd. for Jharkhand Bijli Vitran Nigam Limited (JBVNL). The IT Roadmap has already been submitted at Annexure 10 of previous tariff Petition.

Sl.	Directive	Details	Response from Petitioner
			Further, JBVNL is currently exploring the below mentioned steps for building and scaling of its cyber-defence capabilities: •Investigate a platform approach to cybersecurity capabilities •Integrate resilience into asset and process design •Share threat information •Develop Security and Emergency management governance models.
17	**Quarterly forecast of the Quantum of Short Term Power to be purchased**	The Commission directs the Petitioner to submit the rolling quarterly forecast of the quantum of short term power to be purchased in FY 2019-20 as per Regulation 5.20 of the Distribution Tariff Regulations, 2015.	The Petitioner would like to submit that there has been no agreement with any generator or trader for purchase of short term power. The purchase of power from IEX through PTC (as a client member) is the Spot Power procured on day-ahead basis or term-ahead basis to meet the immediate requirement arising out of demand and supply imbalances such as forced shut down of any generating unit or spike/fall in demand due to weather conditions. Since it is not possible to predict such scenarios (shutdown of any power plant, spike/fall in power demand etc) in advance, it may not be possible to submit rolling forecast of short term power to be purchased. JBVNL has already submitted detail of short-term power procured from IEX through PTC on day-ahead basis or

Sl.	Directive	Details	Response from Petitioner
			term-ahead basis till 15.06.2019. Detail of short-term power purchase from 01st July 2019 to 30th September, 2019 is attached as Annexure-5 to this Petition
18	**Submission of PPA**	The Petitioner needs to optimise its power purchase cost. It is required to get all PPAs approved by the Commission. The Commission has noticed that the PPA with DVC is yet to be approved by the Commission. The therefore Commission directs the Petitioner to apply for approval of the PPA with DVC to the Commission within 1 month of the issue of this Order. The Commission has considered the power purchase from DVC (Koderma) as a Generator provisionally and shall approve the same subject to approval of the PPA.	The petition for approval of PPA with DVC has been submitted to Hon'ble Commission vide letter no. 778/CE (C&R) dated 25.06.2019. The same has been listed as case no. 13 of 2019 in Hon’ble JSERC.
19	**Computation of SAIDI**	The Petitioner shall compute SAIDI on quarterly basis starting from the first quarter of FY 2019-20 and submit the report before the Commission by first week of the following quarter and also publish it on its website as it indicates the average hours of supply available to the consumers The Commission has considered 20 hours of supply for recovery of the entire fixed charges. Considering 20 hours of supply the SAIDI should not exceed 4 hrs per day on an average basis. If SAIDI exceeds 4 hrs for the quarter on average basis, the fixed charges for the consumers shall be pro-rata reduced in the following manner. FCr = FC x (20-Y)/20	The Petitioner has calculated SAIDI for Q1 and has already submitted to Hon’ble Commission in State Advisory Committee meeting held on 5th November, 2019. Since the SAIDI for the whole state is greater than 20 hours; there has been no requirement for reduction in fixed charges for the consumers.

12. Prayers to Hon’ble Commission

12.1 The Petitioner JBVNL respectfully prays to the Hon’ble Commission:

1) To admit the True-up Petition of JBVNL for FY 2018-19 in accordance with Regulation 9.3 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015

2) To admit the APR Petition of JBVNL for FY 2019-20 in accordance with Regulation 9.2 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015

3) To admit the ARR Petition of JBVNL for FY 2020-21 in accordance with Regulation 6 of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015

4) To convert the accumulated revenue gap of JBVNL till FY 2020-21 after suitable revision in tariff, into regulatory asset and allow the realization of the same over the period of next 5 years starting from FY 2021-22.

5) To approve single ACoS for all distribution Utilities in Jharkhand, as prayed in Chapter-6 and approve suitable tariff for all categories of consumers

Or

To approve the proposed tariff to meet the revenue gap and to minimise the gap between ARR and ACS

6) To provide clarification regarding applicability of tariff for Commercial Services in rural areas and tariff for commercial consumers having contracted capacity above 5 kW

7) To approve tariff for unmetered consumers as approved in T.O dated 27th April, 2018 regarding Tariff Order for FY 2017-18 and FY 2018-19

8) To approve revised schedule of charges

9) To approve the terms and conditions of tariff as proposed by the Petitioner

10) To allow the Petitioner to submit supplementary/additional submissions, if any.

11) To pass any other order as the Hon’ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

12) To condone any error/omission and to give opportunity to rectify the same.

13.Annexures

Annexure-1 Accounts of JBVNL for FY 2018-19 audited by the Statutory Auditor

The Annual Accounts for FY 2018-19 audited by statutory auditors are attached herewith.

Annexure-2 RPO Compliance Report for Q1 and Q2 of FY 2019-20

RPO compliance status of JBVNL in Q1 and Q2 of FY 2019-20 is attached here-with.

Annexure-3 Standard of Performance Format for Q2 FY 2019-20

The report on Standard of Performance in format as provided in JSERC SoP Regulations is attached herewith.

Annexure-4 Sample DT wise Energy Audit for FY 2018-19

The sample DT wise energy audit report of DT's representing varied consumer mix is attached herewith.

Annexure-5 Detail of short-term power purchase for FY 2019-20

The details of short term power purchase from Q1 and Q2 FY 19-20 is attached herewith

Annexure-6 Voltage-Wise Cost of Supply Report

The draft report on Voltage wise cost of supply, prepared and submitted by third party agency is attached herewith.