

JHARKHAND BIJLI VITARAN NIGAM LTD, RANCHI

Summary of the Petition submitted by JBVNL for Annual Performance Review for FY 2016-17 and determination of Revised Aggregate Revenue Requirement and Tariff for FY 2017-18 and FY 2018-19

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

1. Jharkhand Urja Vikas Nigam Ltd (JUVNL) being the holding company;
2. Jharkhand Urja Utpadan Nigam Ltd (JUUNL) undertaking the generation function of the erstwhile JSEB;
3. Jharkhand Bijli Vitaran Nigam Ltd (JBVNL) undertaking the distribution function of the erstwhile JSEB; &
4. Jharkhand Urja Sancharan Nigam Ltd (JUSNL) undertaking the transmission function of the erstwhile JSEB.

In accordance with the provisions of Section 62 of the Electricity Act, 2003 and as per the provisions of the JSERC (Terms and Conditions for Determination of Distribution Tariff) Regulations, 2015, National Tariff Policy and National Electricity Policy, JBVNL has filed the Petition for Annual Performance Review for FY 2016-17 and determination of Revised Aggregate Revenue Requirement and Tariff for FY 2017-18 and FY 2018-19.

BRIEF OVERVIEW OF THE PETITION

1. ANNUAL PERFORMANCE REVIEW FOR FY 2016-17

a) Energy Sales

The details of energy sales approved by the Commission in its MYT Order dated 21.06.2017 for the FY 2016-17 vis-à-vis actual energy sales as submitted by the Petitioner now is provided in the table below:

Table 1: Sales (in MU) of JBVNL for the FY 2016-17

Category	Approved in MYT Order	Submitted now by JBVNL
Domestic	4,972.2	5,037.30
Commercial/ Non domestic	496.5	569.04
Public Lighting/SS	146.7	239.33
Irrigation & Agricultural (IAS)	247.5	148.27
MES	15.7	15.92
Industrial LT/LTIS	181.9	193.83
Industrial HT/HTS /S/ EHT	2,368.0	2,347.37
Railway Traction	222.0	170.00
Total Energy Sales	8,650.5	8,721.07

b) Energy Balance:

The energy balance details as submitted by the Petitioner for FY 2016-17 is provided in the table below:

Table 2 Energy Balance for the FY 2016-17 as submitted by the Petitioner

Particulars	Approved in MYT Order	Submitted now by JBVNL
Power Purchase from Outside JSEB Boundary (MUs)	4934.1	5721.4
Loss in External System (%)	3.00%	3.00%
Loss in External System (MUs)	148	171.6
Net Outside Power Available (MUs)	4,786.10	5,549.80
Energy Input Directly to State Transmission System (MUs)	1,428.10	766.4
State-owned Generation (MUs)	938.5	808
Energy input through renewable sources (MUs)	478.3	-
Payable (MUs)	-	399.5
UI Sale / Receivable (MUs)	-	103.6
Energy Available for Onward Transmission (MUs)	7,631.00	7,420.10
Transmission Loss (%)	5%	5%
Transmission Loss (MUs)	381.5	371
Net Energy Sent to Distribution System (MUs)	7,249.40	7,049.10
Direct Input of Energy to Distribution System (MUs)	4,924.40	4,897.60
Total Energy Available for Sales (MUs)	12,173.80	11,946.60

c) Aggregate Revenue Requirement:

The Aggregate Revenue Requirement for the FY 2016-17 as submitted by the Petitioner has been tabulated below:

Table 3 ARR (in Rs Cr) for the FY 2016-17 as submitted by the Petitioner

Particulars	Approved in MYT Order	Original Submission	Revised submission
Power Purchase cost	4,629.50	5007.5	5,025.50
Transmission Cost	141.2	161.3	185.4
O&M expenses	334.5	324.1	324.1
Depreciation	93.7	175.4	203.0
Interest on Loan	58.4	147.3	159.3
Return on Equity	66.2	133.1	143.9
Interest on Working Capital	-	22.4	24.2
Interest on security deposit	55.7	49.1	49.1
Provision for doubtful debts		196.9	196.9
Less: Non-Tariff Income	-134.3	-112.5	-112.5
Gross ARR	5,244.90	6,104.70	6,199.0
Revenue realized from sale and inter-state Sales	3339.64	2813.5	2813.5
Revenue Gap	1905.22	3291.20	3385.50
Less: RGF Considered	1200	805.9	805.9
Net Gap for the Year	705.22	2485.2	2579.5

2. REVISED ARR AND TARIFF FOR FY 2017-18 AND FY 2018-19

a) Energy Sales:

Energy sales (in MU) as approved by the Commission in its MYT Order dated 21.06.2017 vis-à-vis as submitted by the Petitioner now has been tabulated below:

Table 4 : Sales (in MU) as submitted by the Petitioner for the FY 2017-18 and FY 2018-19

Particulars	FY 2017-18			FY 2018-19		
	Approved in MYT Order	Original Submission	Revised submission	Approved in MYT Order	Original Submission	Revised submission
Domestic	7204.5	5,612.53	5,590.2	10078.5	6,488.97	6,459.0
Commercial/Non Domestic	535.6	842.41	792.7	562.4	991.88	991.5
Irrigation / IAS	399	136.56	154.0	550.5	261.67	261.7
Industrial Services						
<i>Industrial LT / LTIS</i>	185.5	294.52	219.5	189.2	303.64	223.6
<i>Industrial HT / HTS / S/ EHT</i>	2,398.4	2,300.84	2,357.5	2,429.10	2,468.67	2,468.7
Institutional Services						
<i>IS-I : Public Lighting / SS, Govt buildings</i>	149.9	168.62	243.6	153.2	168.67	248.7
<i>IS-II : Railways, MES</i>						
MES	15.9	16.98	119.0	16	16.98	119.0
Railway / RTS	222	151.00		222	102.00	
<i>IS-III: DS-HT *</i>	-	-	22.3	-	-	24.7
Total Sales	11,110.70	9,523.45	9498.8	14,200.80	10,802.48	10796.9

b) Energy Balance:

The energy balance details for FY 2017-18 and FY 2018-19 as submitted by the Petitioner has been tabulated below:

Table 5 Energy Balance as submitted by the Petitioner for the Company Period

Particulars	FY 2017-18		FY 2018-19	
	Approved in MYT Order	Revised submission now	Approved in MYT Order	Revised submission now
Power Purchase from Outside JSEB Boundary (MU)	6415.9	6087.5	7485.9	5940.2
Loss in External System (%)	3.00%	3.00%	3.00%	3.00%
Loss in External System (MU)	192.5	182.6	224.6	178.2
Net Outside Power Available (MU)	6,223.4	5,904.8	7,261.3	5,762.0
Energy Input Directly to State Transmission System (MU)	1,428.1	984.7	1,428.1	1,428.1
State-owned Generation (MU)	1,416.5	565.6	2,720.5	565.6
Energy Input through Renewable Sources (MU)	713.7		1,051.10	312
Payable (MU)	-	-	-	-
UI Sale / Receivable (MU)	-	-	-	-
Energy Available for Onward Transmission (MU)	9,781.60	7,455.10	12,460.90	8,067.60
Transmission Loss (%)	5%	5%	5%	5%
Transmission Loss (MU)	489.1	372.8	560.7	363.0
Net Energy Sent to Distribution System (MU)	9292.6	7082.4	11900.1	7704.6
Direct Input of Energy to Distribution System (MU)	5189.6	4971.4	5302.1	4971.4
Total Energy Available for Sales (MU)	14,482.2	12,053.7	17,202.2	12,676.0

c) Aggregate Revenue Requirement

The summary of Aggregate Revenue Requirement for FY 2017-18 and FY 2018-19 as submitted by the Petitioner has been tabulated below:

Table 6 ARR for JBVNL (in Rs Cr) for the FY 2017-18 and FY 2018-19 as submitted by the Petitioner

Particulars	FY 2017-18			FY 2018-19		
	Approved in MYT Order	Original Submission	Revised Submission	Approved in MYT Order	Original Submission	Revised Submission
Power Purchase cost	5,495.90	5,531.80	5,531.80	6,648.10	5,909.00	5,909.00
Transmission charges	185.5	168.2	160.4	243.5	189.4	181.4
O&M expenses	377.9	409.4	409.4	454.7	520.5	520.5
Depreciation	138.3	181.1	244.1	184.4	213.2	324.9
Interest on Loan	118.5	158.1	198.9	176.8	183.6	265.0
Return on Equity	111.7	139.6	175.0	152.5	154.3	222.7
Interest on Working Capital	-	17.9	20.7	-	8	13.4
Interest on security deposit	79.3	46.7	46.7	108.8	60.5	60.5
Provision for doubtful debts		178.6			239.1	
Less: Non-Tariff Income	-141	-126.9	-126.9	-148.1	-138.1	-138.1
Gross ARR	6,366.10	6,525.80	6,660.0	7,820.80	7,100.50	7359.4

3. REVENUE GAP/ (SURPLUS)

a) Revenue gap/ (surplus) for FY 2017-18

The Revenue Gap/(surplus) as estimated by the Petitioner for the FY 2017-18 has been tabulated below

Table 7: Treatment of Revenue Gap for FY 2017-18

Particulars	FY 2017-18 (Amount in Rs Cr)
Gross ARR	6,660.0
Less: RGF Considered	2,321.4
Less: Revenue from existing Tariff	3,572.2
Gap during the year	766.34

b) Cumulative Revenue Gap/ (surplus) till FY 2017-18 and creation of Regulatory Asset

The Petitioner has estimated the cumulative revenue gap after accounting of revenue from sale of power and resource gap funding adjusted against the power purchase cost disallowances due to non-achievement of T&D loss target.

The cumulative revenue gap as submitted by JBVNL for FY 2013-14 (6th Jan – 31st Mar) to FY 2017-18 has been tabulated below.

Table 8 Cumulative Revenue Gap (in Rs Cr) of JBVNL

Particulars	FY 2013-14 (6th Jan – 31st Mar)	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Opening Revenue Gap as on 1st April	-	657.12	1,468.39	3,479.8	6,669.8
Revenue Gap / (Surplus) created during the Year	612.84	665.28	1,671.53	2,579.5	766.3
Closing Gap at end of the Year	612.84	1,322.40	3,139.92	6,059.3	7,436.1
Rate of Interest (As per prevailing SBI PLR rate)	14.45%	14.75%	14.8%	12.8%	12.5%

Particulars	FY 2013-14 (6th Jan – 31st Mar)	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Carrying Cost on Additional Gap Created	44.28	145.99	339.86	610.5	881.6
Total Gap including carrying cost	657.12	1,468.39	3,479.79	6,669.8	8,317.8

Creation of Regulatory Asset:

The Petitioner has proposed to meet the above revenue gap of Rs. 8,317.8 Cr. till FY 2017-18 through the creation of Regulatory Asset. The Petitioner has proposed a period of 5 years to amortize the regulatory assets and pass on the same to consumers over the same period in equal tranches. During the period, the Petitioner also prayed for providing return on such regulatory asset to the tune of weighted average cost of capital i.e. 12.5%.

c) Revenue Gap for FY 2018-19 and its treatment:

The Petitioner has computed the expected revenue for FY 2018-19 from sale of power by considering the fixed charges per unit and variable charges per unit. Further, to arrive at the final gap for FY 2018-19, the Petitioner has adjusted the impact of recovery of previous cumulative revenue gap till FY 2017-18.

The Petitioner has proposed to amortize the Regulatory Asset over a five year period starting from FY 2018-19. The effect of 1st year is considered in FY 2018-19 as detailed in the table below

Table 9: Treatment of Revenue Gap for FY 2018-19 (in Rs Cr)

Particulars	FY 2018-19
Gross ARR	7,359.4
Less: Revenue at existing tariffs	4,078.68
Gap at existing tariffs	3,280.72
Add: Previous Gap treatment	2,336.1
Total Gap for FY 2018-19	5,616.82
Average Cost of Supply for FY 2018-19 (Rs/kWh)	6.82

4. TARIFF PROPOSAL TO MEET THE TOTAL GAP FOR FY 2018-19

a) Tariff Rationalization and removal of cross subsidy

In order to reduce the burden of cross subsidy on the high value consumers, JBVNL has proposed cost reflective tariff for each consumer category such that tariff for each category is within a the band of $\pm 20\%$ of average cost of supply for the Utility, in accordance with the National Tariff Policy, 2016. The average cost of supply has been proposed as Rs 7.01/kWh and Rs 6.82/kWh for FY 2017-18 and FY 2018-19 respectively.

b) Direct subsidy from State Government

The State Government (vide letter no 8743 dated 23.10.17) had intimated that they would not provide any Resource Gap to JBVNL. The subsidy will directly be given to the consumer through electricity bill. Therefore, the proposal from JBVNL is without any contribution from the State Government and reflects the actual cost of supply of the Utility.

c) Tariff Simplification

The existing tariff structure of JBVNL includes a total of 9 consumer categories, which is further divided into 22 sub-categories and further distributed into total 31 slabs. The Petitioner, has now proposed tariff simplification with total of 5 consumer categories having maximum of 3 slabs/ sub-categories. The 5 consumer categories includes, Domestic, Commercial, Industrial, Agricultural and Institutional consumers. The Petitioner has also proposed to merge the HTS and HTSS sub-categories into HTIS sub-category.

The Petitioner has introduced DS-Primitive (PTG) sub-category for Primitive Tribal Groups inhabiting the State of Jharkhand. The aim is to ensure that the PTGs are provided free of cost connections under various ongoing schemes and avail electricity at nominal rates.

d) Migration from kWh based billing to kVAh based billing

The Petitioner has proposed to migrate to kVAh based billing from existing kWh based billing for the following consumer sub-categories:

- Low Tension Industrial Service (LTIS)
- High Tension Industrial Service (HTIS) (including induction furnace/ arc)
- Railway Traction Service (RTS)
- Military Engineering Service (MES)

Also, the Petitioner has proposed the removal of power factor penalty and incentive.

e) Removal of Installation based tariff for LTIS consumer

The Petitioner has proposed to remove the installation based tariff for all LTIS consumers and to completely migrate the LTIS consumers to Demand Based Tariff. However, till the time JBVNL process the shifting of consumers having Non-MDI meters to MDI meters, the Petitioner shall provide an option for consumers having installation based tariff to come forward and declare their own load (in KVA).

f) Abolishment of Unmetered category

The Petitioner has proposed that the tariff for un-metered consumers would be applicable till December 2018, which has been set as target by the Petitioner to achieve 100% metering of all un-metered consumers. Beyond December 2018, the higher tariff of un-metered consumer may cease to exist, which shall bound JBVNL to essentially convert the un-metered consumers to metered categories.

g) Revised Tariff Schedule proposed by JBVNL

In order to partially meet the revenue gap of FY 2018-19 (viz. Rs 5,616.82 Cr), the Petitioner has proposed revision in retail tariffs for various categories of consumers. The revision in tariffs is expected to fetch the Utility a revenue of Rs. 8,045.25 Cr during FY 2018-19. The details of category wise tariff proposed by licensee is here under:

Table 10: Tariff Proposal by the Petitioner for FY 18 and FY 19

Category	EXISTING TARIFF (FY 2016-17)			PROPOSED TARIFF (FY 2017-18 & FY 2018-19)			
	Slabs	Energy Charges (Rs.)	Fixed Charges (Rs.)	Slabs	Energy Charges (Rs.)	Fixed Charges (Rs.)	
Domestic	-	-	-	Primitive Tribal Group		5.25/kWh	40/kW
	DS- I (a), Kutir Jyoti (0-50 units)	1.25/kWh	16/conn	Domestic Supply- Rural	Metered	6.25/kWh	60/kW
	DS- I (a), Kutir Jyoti (51-100 units)	1.25/kWh	16/conn		Unmetered (Upto December 2018)	NIL	700/kW
	DS-I (b), (0-200 units)	1.6/kWh	30/conn	Domestic Supply- Urban		7.00/kWh	80/kW
	DS-I (b), (above 200 units)	1.7/kWh	30/conn	Commercial Supply-Rural	Metered	6.50/kWh	100/kW
	DS-I (a),	NIL	60/conn		Unmetered (Upto December 2018)	NIL	700/kW
	DS-I (b),	NIL	170/conn	Commercial Supply- Urban		6.50/kWh	225/kW
	DS-II (0-200 units)	3/kWh	50/conn	Low Tension Industrial Supply	Demand Based	5.50/ kVAh	275/kVA
	DS-II (201 & above units)	3.6/kWh	80/conn		Installation Based	6.50 /kWh	200/HP/ Month
Commercial	0-100 Units	2.2/kWh	45/conn	High Tension Industrial Supply		6.00/ kVAh	300/kVA
	Above 100 Units	2.25/kWh	45/conn	For private tubewells & lift irrigation schemes	Metered	5.25/kWh	30/HP
	Unmetered	NIL	250/kW		Unmetered (upto December 2018)	-	650/HP
	NDS-II	6.0kWh	225/kW	For state tubewells & lift irrigation schemes	Metered	6.00/kWh	100/HP
	NDS-III	6.8/kWh	200/conn		Unmetered (upto December 2018)	-	650/HP
Industrial	LTIS- Demand based	5.50/kWh	275/kVA	Institutional- I (Street Light Service)	Metered	6.50/kWh	100/kW
	LTIS- Installation based	5.50 / kWh	160/HP/ Month		Unmetered (upto December 2018)	NIL	Rs 650 per 100 watt/ month and Rs 100 for every additional 50 Watt
	HTS - 11KV	6.25/kWh	300/kVA				
	HTS - 33KV	6.25/kWh	300/kVA				
	HTS - 132KV	6.25/kWh	300/kVA				
	HTSS - 11KV	4.00/kWh	490/kVA				
	HTSS - 33KV	4.00/kWh	490/kVA				
Irrigation and Agriculture	IAS - I Metered	0.70/kWh	-				
	IAS - I Unmetered	-	100/HP				
	IAS - II Metered	1.20/kWh	-				
	IAS - II Unmetered	-	375/HP				
Institutional	Metered	5.25/kWh	55/conn				
	Un-metered	NIL	Rs 250 per 100 watt/ month and Rs 55 for every additional 50 Watt				

	RTS	6.00/kWh	235/kVA	Institutional- II (Railway Traction Service & Military Engineering Service)	4.80/kVAh	400/kVA
	MES	4.60/kWh	260/kVA			
	DS (HT)	3.50/kWh	110/kVA	Institutional- III (Domestic connection for housing colonies for single point metered supply)	5.25/kWh	200/kVA

h) Schedule of Miscellaneous Charges

The Petitioner submitted that the miscellaneous charges have been slightly revised by Hon'ble Commission for FY 2016-17. However, these charges are not in line with considering the current inflation and the charges taken by the other States. The present charges and the charges as proposed by the Petitioner has been tabulated below.

Table 11 Revised schedule of miscellaneous charges proposed by Petitioner for FY 2017-18 and FY 2018-19

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 ¹	50	100	100	500	1000	1500
Dis-connection charges (on consumer request)	Temporary	100	200	500	1000	1500
	Permanent ²	200	400	1000	2000	5000
Re-connection charges	100	200	500	1000	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 ³)	100	500	700	1,000	2,000	5,000
Meter Testing (including combined metering unit) ⁴	100	200	1,800	6,800	6,800	9,800
Meter Rent/ meter/ month	20	50	250	400	2500	15,000
Transformer Rent- if provided by JBVNL on request of consumer	NA		Rs. 100/kVA/month of transformer capacity			

¹ Other charges related to new connection shall be applicable as per the cost estimate prepared and for consumers covered under any Central or State Government sponsored scheme, the charges will be applicable as per the scheme

² Charges are inclusive of meter removal and other allied materials

³ The charges shall not be applicable if the meter gets defective after 5 years from the date of installation and in case of burnt meters the penalty (to the tune of actual cost of meter) shall be applicable in addition to above

⁴ In case 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 charges