



JODHPUR VIDYUT VITRAN NIGAM LTD.

Corporate Identity Number (CIN) -U40109RJ2000SGC016483

Regd Office New Power House, Jodhpur- 342003

Phone No 0291-2742227 Fax No 0291-5106366

E-mail seracomm1@gmail.com Web site energy.rajasthan.gov.in/jdvvn1

No JdVVNL/MD/ACE(HQ)/SL(RA&C)/Ju/S /2k19-20/D 845 Dt 13.08.19

The Secretary,
Rajasthan Electricity Regulatory Commission,
Vidhyut Vinayamak Bhawan,
Near State Motor Garage,
Sahakar Marg,
Jaipur

**Sub.: Submission of additional submission in the matter of
ARR & Tariff Petition for FY 2019-20 for approval in
respect of Jodhpur Discom.**

Sir,

Kindly find enclosed herewith the additional submission in the matter of ARR & Tariff petition for FY 2019-20 for kind consideration as part of the petition.

Encl. As above (Six set along with soft copy)

(U. S. CHOUHAN)

SUPERINTENDING ENGINEER (RA&C)
JODHPUR DISCOM, JODHPUR

FORM-1
(Authorization-Reg 17)
BEFORE THE RAJASTHAN ELECTRICITY REGULATORY COMMISSION-
JAIPUR.

In the matter of: - Additional submission in the matter of ARR & Tariff for the FY 2019-20 as per the Rajasthan Electricity Regulatory Commission, regulation 11(1) (Terms & condition for determination of tariff) Regulation, 2019.

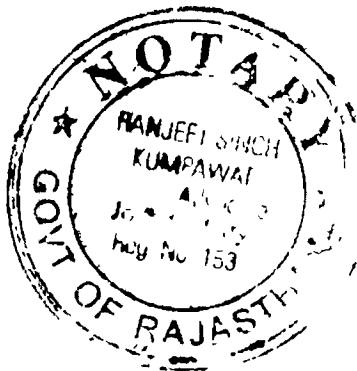
AND

In the matter of: Managing Director,
Jodhpur Vidhyut Vitran Nigam Limited,
New Power House, Industrial Estate, Jodhpur.

Affidavit verifying the application:

I, U. S. Chouhan S/o Sh. G. S. Chouhan, Age 59, years residing at 10, Man Mahal, Air Force Road, Jodhpur do solemnly confirm and say as below

1. I Superintending Engineer(RA&C) of Jodhpur Vidhyut Vitran Nigam Limited, Jodhpur, the applicant in the above matter, I am duly authorized by said applicant to make this affidavit on it behalf
2. The statement made in para 1 to of additional submission are true to my knowledge.
3. I solemnly affirm this on 13 of August, 2019 that the contents of above affidavit are true to my knowledge and no part of it is false and no material has been concealed there from



(U. S. Chouhan)
Superintending Engineer(RA&C)
Jodhpur Discom, Jodhpur

ATTESTED
13/8/2019
NOTARY, JODHPUR

Additional Submissions regarding ARR Petition FY 2019-20

1. Cross Subsidy


The petitioner submits the Cross Subsidy in the following Table

Table 1 Cross Subsidy at Existing Tariff

Category	JdVVNL	Rajasthan
Domestic Service	-12%	-18%
Non-Domestic Service	30%	12%
Public Street Lighting	15%	0%
<i>Metered supply</i>	-35%	-42%
<i>Unmetered Supply</i>	-30%	-37%
Small Industrial Service	3%	-9%
Medium Industrial Service	11%	-2%
Large Industrial Service	18%	5%
Power Intensive Industries	11%	-6%
P W W	-1%	-13%
Mixed Load supply	4%	-1%
Total	-18%	-16%

Table 2 Cross Subsidy at Proposed Tariff

Category	JdVVNL	Rajasthan
Domestic Service	-1%	-7%
Non-Domestic Service	50%	25%
Public Street Lighting	37%	13%
<i>Metered supply</i>	-23%	-29%
<i>Unmetered Supply</i>	-18%	-23%
Small Industrial Service	11%	0%
Medium Industrial Service	20%	8%
Large Industrial Service	29%	17%
Power Intensive Industries	-2%	-17%


 S. K. Singh, FAsO
 JCO, DISCOM (UPPLR)

P W W	3%	-5%
Mixed Load supply	21%	14%
Total	-6%	-7%

2 Voltage wise Cost of Supply

- As per the Commission's directive, Discom is required to furnish details of Voltage wise Cost of Supply in accordance to Hon'ble APTEL judgment in Appeal No 102 of 2010
- In the judgment referred above, the Tribunal had recognized the difficulty in determination of cost of supply to different categories of consumers. However, instead of waiting indefinitely for availability of the entire data, the Tribunal had suggested a simple method which would take into account the major cost element. The Tribunal had suggested determination of voltage-wise cost of supply taking into account the major cost element which would be applicable to all the consumers connected at a particular voltage level.
- According to the said judgment in the absence of segregated network costs it would be prudent to work out voltage-wise cost of supply taking into account the distribution losses at different voltage levels. As power purchase cost is a major component of tariff, the power purchase cost can be apportioned at different voltage levels taking into account the distribution losses at the relevant voltage level and the upstream system.
- The system study to determine voltage wise technical losses is under process and hence voltage wise technical losses are not available at the moment.
- In the absence of voltage wise technical losses, the petitioner has considered the technical distribution losses in the distribution network approved by the Hon'ble Commission for 2006-07 in the order on determination of wheeling charges and cross subsidy surcharge for the year 2006-07 dated 19th September 2006 to work out voltage wise power purchase cost for 2006-07. For commercial losses, the APTEL judgement has suggested apportionment of difference of total and technical losses i.e. commercial losses across all voltage levels in proportion to the sales plus technical losses at the respective voltage levels. In this manner, the total losses have been apportioned at different voltage levels.
- The following table gives the details of apportionment of total losses for FY 2006-07

Table 3 Voltage wise Energy Input for FY 2006-07

Voltage Level	Sales (MU)	Voltage wise Tech Loss (%)	Transmission Loss	Sales + Tech Loss (MU)	Tech. Losses (MU)	Comm Losses (MU)	Total Loss (MU)	Energy Input (MU)
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Superintending Engineer (R&O)
JODHPUR DISCOM, JODHPUR

Voltage Level	Sales (MU)	Voltage wise Tech Loss (%)	Transmission Loss	Sales + Tech Loss (MU)	Tech. Losses (MU)	Comm Losses (MU)	Total Loss (MU)	Energy Input (MU)
132 KV	227.83	0%	5.60%	241.34	13.52	57.68	71.19	299.02
33 KV	328.83	3.80%	5.60%	362.10	33.27	86.53	119.80	448.63
11 KV	1,120.74	8.80%	5.60%	1,353.21	232.46	323.38	555.85	1,676.59
LT	4,609.31	16.55%	5.60%	6,669.10	2,059.80	1,593.75	3,653.54	8,262.85
Total	6,286.71			8,625.75	2,339.04	2,061.34	4,400.38	10,687.09

It is important to mention that the Discom has taken a number of steps to reduce AT&C losses at each voltage level. As such in order to arrive at voltage wise input energy, the total projected loss of FY 2019-20 has been apportioned between the different voltage levels in the same ratio as the voltage wise losses in FY 2006-07. Accordingly, input energy has been computed for different voltage levels for FY 2019-20 and the total power purchase cost has been apportioned between different voltages on the basis of energy input required as shown below.

Table 4 Voltage wise Power Purchase cost for FY 2018-19

Voltage Level	Sales (MU)	Total Losses (MU)	Energy Input Required (MU)	Total Power Purchase Cost (Excluding Transmission Cost) (Rs Cr)	Cost per unit sold
	A	B	C = A+B	D	E=D/A*10
132 KV	371.72	61.30	433.01	169.13	4.55
33 KV	1,173.26	247.46	1,420.73	554.93	4.73
11 KV	1,671.43	463.49	2,134.92	833.89	4.99
LT	16,288.70	6,449.15	22,737.85	8,881.27	5.45
Total	19,505.11	7,221.40	26,726.51	10,439.22	5.35

32

Superintending Engineer (RA&C)
JODHPUR DISCOM, JODHPUR

Table 5 Voltage wise Power Purchase cost for FY 2019-20

Voltage Level	Sales (MU)	Total Losses (MU)	Energy Input Required (MU)	Total Power Purchase Cost (Excluding Transmission Cost) (Rs Cr)	Cost per unit sold
	A	B	C = A+B	D	E=D/A*10
132 KV	397.23	37.47	434.70	156.13	3.93
33 KV	1,253.80	172.45	1,426.25	512.26	4.09
11 KV	1,786.16	357.07	2,143.23	769.77	4.31
LT	17,406.77	5,419.52	22,826.30	8,198.41	4.71
Total	20,843.96	5,986.51	26,830.47	9,636.57	4.62

According to the Hon'ble Tribunal's Judgment, in absence of segregated network costs, all the other costs such as Return on Equity, Interest on loan, Depreciation, interest on working capital and O&M costs can be pooled and apportioned equitably to all categories to determine the cost of supply.

Various elements and computation of network cost per unit has been presented in the table below.

Table 6 Element wise Network Cost for FY 2018-19 & 2019-20

Elements		FY 2018-19	FY 2019-20
O&M Cost	Rs Cr	1289.98	1674.14
Depreciation	Rs Cr	645.34	837.29
Interest and Finance Charges	Rs Cr	2763.99	3,183.97
Interest on Working Capital	Rs Cr		
RoF	Rs Cr	-	263.44
Transmission Cost	Rs Cr	1571.05	761.32

32

SUPERVISOR Engineer (KA&C)
RODHOJ-6151, M. K. P. L. R.

Elements		FY 2018-19	FY 2019-20
Prior Period Expenses	Rs Cr	265 81	16 49
Insurance Expenses	Rs Cr	19 86	23 35
Other Expenses	Rs Cr		
Less NTI	Rs Cr	540 46	371 78
Less Income from wheeling charges	Rs Cr	35 99	35 99
Total Cost	Rs Cr	5979 57	6,352 22
Units Sold	MU	19505 11	20 844
Network Cost per Unit	Rs /kWh	3.07	3.05

Based on the methodology suggested by the Hon'ble Tribunal and details provided above the voltage wise cost of supply for FY 2018-19 & 2019-20 has been computed and shown in the following table

Table 7 Total Cost of Supply per Unit for FY 2018-19

Voltage Level	Power Purchase Cost per unit sold	Network Cost per unit of sale	Cost of Supply per Unit
	F	G	H=F+G
132 KV	4 55	3 07	7 62
33 KV	4 73	3 07	7 80
11 KV	4 99	3 07	8 05
LT	5 45	3 07	8 52
Total	5 35	3 07	8 42

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Superintending Engineer (RA&C)
 JODHPUR DISC. AM. JCH PUR

Table 8 Total Cost of Supply per Unit for FY 2019-20

Voltage Level	Power Purchase Cost per unit sold F	Network Cost per unit of sale G	Cost of Supply per Unit H=F+G
132 KV	3 93	3 05	6 98
33 KV	4 09	3 05	7 13
11 KV	4 31	3 05	7 36
LT	4 71	3 05	7 76
Total	4 62	3 05	7 67

3 Trading margin of 1 Paise charged by RUVNL to Discoms

RUVNL has been formed by GoR in December 2015 to carry out power trading business of state power sector utilities. Energy cost account for 80% of the total ARR of Discoms and efficiency improvement on this front has potential to significantly benefit the financial health of discoms leading to reduction in tariff of customers. RUVNL will be leveraging technology for Day ahead demand forecasting and day ahead scheduling strengthening power purchase planning approaches and sales/purchase decision making, review of PPAs and TSAs with generators and Transmission companies, Procure power from additional sources at least cost and identifying new avenues to power procurement matching with load pattern of Rajasthan consumers. To meet these objectives of power procurement optimization and financial management RUVNL will have to invest in latest technology and tools of power procurement employ additional resources and also incur cost of setting up and running new company. Thus the coordination committee of Rajasthan energy companies in its meeting dated 31/03/2019 decided that RUVNL will charge 1 paise on the Energy purchased from "sources other than RUVNL" by it on the behalf of Discoms as trading margin. The petitioner humbly request the Hon'ble Commission to approve the same.

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State of Rajasthan
 Under RA20
 10/11/2019
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4 Compliance of Directives

S. No.	Directives of RERC	RERC Order dated	Nodal Officer for compliance	Present Status
1	Waste to Energy Discom are directed to purchase 100% power generated from waste to energy power plants		Rajasthan Urja Vikas Nigam Limited (RUVNL)	As on 31 March 2019 there is one plant named as Keru Dump Site, Jodhpur of 6 MW which uses RDF as fuel. Plant was developed by Jindal Urban Waste Management Limited
2	Changing Nature of Grid Explore the options of Smart Grid i.e. an electricity grid with communications, automation & IT systems for enabling real time monitoring & control of power flow		CE (M&P-IT)	Real Time Data Acquisition System (RT-DAS) The project covers installation of FRTUs for 787 nos 11kV Feeders emanating from 179 Nos 33/11kV sub-stations of IPDS towns (other than SCADA town). The objective is to improve SAIDI and SAIFI by obtaining / measuring outage data (i.e. planned / unplanned - OC / EF) of these sub-stations. The tender document vide TN-IT-19 was published on 29 July 2019. Pre-bid conference was held on 6 August 2019. Due date of bid opening is 30 th August 2019.
3	Day time Supply of Electricity to Rural Consumer Possibilities of providing day time supply to agriculture consumers through day time solar power generations should be explored	ARR & Tariff Order dated 28 05 2018	CE (T&S-CSS)	Distributed generation and micro-grids working in tandem with the Grid supply is a great way to improve duration and reliability of supply. The option being explored is of funding the replacement of existing pump-sets with solar pump-sets to agriculture consumers. This will not only allow the consumers to get free day time power but may also lead to substantial savings in terms of power purchase cost for the Discom. Further, the excess energy can also be fed back into the grid allowing the consumers to earn a nominal incentive on the same and thereby ensuring that the water level is also not adversely affected. Other possible options are putting up large centralised solar plants each with a capacity of a few hundred MW or having distributed mini solar plants each with a capacity of 1-2 MW. Action is already initiated on this under KUSUM scheme.
4	Electrical Vehicle (EV) The applicability of tariff for EV charging units should be under Domestic category		ACE (HQ)	As per directions of the Hon'ble Commission the EV charging stations have been covered under Domestic Category. The SE (RA&C) JdVVNL Jodhpur vide order No. 824 dated 08/08/19 has been designated as the Nodal Officer for setting up of charging infrastructure for EVs in Jodhpur Discom. As per information gathered from all SEs (RASD) of JdVVNL, no EV charging station connection is existing in JdVVNL as on 30/06/2019.

32

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JODHPUR DISCOM

S. No.	Directives of RERC	RERC Order dated	Nodal Officer for compliance	Present Status
5	<u>RERC (Open Access) Regulation, 2016</u> With provision of timely & uniform schedule to be provided by Open Access consumers, as stipulated in OA regulations, 2016 the Discom can now predict their energy requirement with more certainty & may minimize the deviation charges applicable		RUVNL	The Rajasthan Urja Vikas Nigam Limited had been formed by the Government of Rajasthan to carry out Power trading business for the distribution companies RUVNL is also entrusted with the responsibility of monitoring and controlling the power purchase expense RUVNL on day to day basis ensures that the power is procured on the basis of merit order over drawal and under drawal is controlled, commercially sound decisions are taken with respect to purchase/sale of energy from exchange It is also undertaking review of long term PPAs to identify possibility of reduction in costs of power purchase for the Rajasthan Discoms
6	<u>Release of pending connections</u> All out efforts should be taken to release pending agriculture connections		SE (Plan)	The Discom is undertaking all efforts to release pending agriculture connection at the earliest As on 8 August 2019, 16368 pending connections have been released By the end of FY 2019-20, 34175 agriculture connections are to be released
7	<u>Saubhagya Scheme</u> The connections envisaged under the scheme should be released on priority basis The Panchayat Samities, Primary Schools, Primary Health sub centres situated in rural areas may be provided day time power through solar PV	ARR & Tariff Order dated 28 05 2018	CE (I&S-CSS)	The works under Saubhagya scheme is expected to be completed by 31 08 2019
8	<u>Standards of Performance (SoP) for Discom</u> It is to be ensured that provisions of SoP for Distribution licensee should be adhered to by the Discom & its Franchise in their respective areas of Jurisdictions	ARR & Tariff Order dated 28 05 2018	ACE (HQ)	The Discom adheres to the Standards of Performance (SoP) strictly The half yearly SoP report of the period Oct-18 to March-19 submitted to RERC


 Superintendent (R&C)
 JODHPUR
 JODHPUR

S. No.	Directives of RERC	RERC Order dated	Nodal Officer for compliance	Present Status
9	Arrears Special campaign to ensure recover of all arrears specially from Government offices & medium & large industries, at first instance, should be launched Discoms should ensure that arrears show reducing trend	ARR & Tariff Order dated 28 05 2018	CAO (ERB)	Discom is putting in its best efforts for the collection of outstanding arrears. The same is reflected in the lower level of outstanding as compared to the previous year. The outstanding on Government connections at the end of December-2018 stood at Rs 252.23 Cr which was reduced to Rs 230.50 Cr at the end of March-19. The total arrears of Discom at the end of December-2018 stood at Rs 1568.85 Cr which was reduced to Rs 1136.72 Cr at the end of March-19.
10	Power Purchase requirement Allocations of existing PPA(s) among Discoms may be reviewed by State Govt. In view of consumer misc Profile of each Discom. All future requirement of power purchases should be done through competitive bidding only so as to ensure most competitive process for power.	ARR & Tariff Order dated 28 05 2018	RUVNL	The Rajasthan Urja Vikas Nigam Limited had been formed by the Government of Rajasthan to carry out Power trading business for the distribution companies. Cost of power purchase constitutes majority of the expenses of the Discoms. To overcome the natural disadvantage that Discoms face in case of own generation costs i.e. lack of own coal and cheap hydro resources, it is necessary to take steps to optimize power purchase and reduce the associated costs. The first step taken in this direction was regular assessment of power procurement portfolio of the Discoms and identification of sources with highest cost of power per unit. Simultaneously it was decided that all power purchase agreements be reviewed periodically and re-negotiations be carried out wherever the scope for the same exists. Discoms also identified cheaper sources of power available and took necessary steps to modify the portfolio. Cost optimization model is now being used for assessing the benefit of backing down costly generating stations and procuring power from short or medium term sources through Case I or Case II competitive bidding.
11	IT Implementation Discom is to furnish quarterly report in respect of IT & ERP implementation as they lagging in this aspect from other Commercial organization.	ARR & Tariff Order dated 28 05 2018	CE (M&P-IT)	Smart Metering / AMI The project covers installation of smart meters for approx 1.02 Lac LT consumer of 53 municipalities. Also to be planned to install smart meters on all Street Light consumers of all municipal towns of Discom area. LoA for this work has been awarded to M/s EESL, New Delhi on 01-08-19. AMR based DT/Consumer Metering The project covers AMR based DT and consumer metering for 2963 IPDS towns and 4903 RAPDRP towns having 3757 high value consumers of the Discom area. The tender IN-44 for this purpose has been floated. Earlier JdVVNL has installed 6824 nos. AMR based DT Metering system under TN-33 through implementing agency M/s HCI. ERP Work order for ERP implementation has been awarded to RISL (DoIT).

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S. No.	Directives of RERC	RERC Order dated	Nodal Officer for compliance	Present Status
				<p>at a very nominal cost of Rs 1 24 Cr</p> <p>The ERP project for Jodhpur Discom covers the following modules</p> <ul style="list-style-type: none"> (i) HRMS with Payroll (ii) Material Management with inventory management (iii) Finance and Accounts (iv) Works and Project Management <p>Considerable progress has been made in HRMS module and salary for all employees is being prepared through this module MM Module has also been developed to an extent and expected completion shortly Work on other modules has also started and expected to be completed by April 2020</p> <p><u>OTHER IT INITIATIVES</u></p> <p><u>Mobile app having online payment facility</u></p> <p>The Mobile App 'Uija Saarthi' was launched by the Chairman Discoms on 30th June 2018</p> <p>Mobile app tender general scrutiny is going on and will be completed by 30th August, 2019</p> <p>The mobile App is having various features for consumer use including online payment facility and complaint registration at the CCC</p>
12	<p><u>Private Sector Participation</u></p> <p>Discom should ensure that Franchises shall make requisite investments in the network as contemplated in franchisee agreement & shall adhere to SoP</p>	ARR & Tariff Order dated 28 05 2018	CI (I&S-CSS)	<p>The Discom has already introduced the Distribution Franchisee model in one of its circle namely Jodhpur City Circle The performance of the same is being scrutinized through monthly monitoring meetings and accordingly the possibility of implementing the same with added parameters in other circles is also being looked into Further independent auditor has also been appointed to ensure that the DF is working as per the provisions of the Distribution Franchisee Agreement</p>

32

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