

**Petition for Determination of Pooled Cost of Power Purchase
for FY 2016-17**

Submitted to

Rajasthan Electricity Regulatory Commission

By

Jodhpur Vidyut Vitran Nigam Limited

Jodhpur

January 2017

BEFORE THE RAJASTHAN ELECTRICITY REGULATORY COMMISSION

JAIPUR, RAJASTHAN

Filing No.:

Case No.:

In the Matter of:

Filing a Petition for determination of pooled cost of power purchase for FY 2016-17 based on the actual accounts for FY 2015-16 as per the Rajasthan Electricity Regulatory Commission (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010.

The Petitioner respectfully submits its petition in the matter as follows:

Table of Contents

Definitions.....	4
Introduction.....	5
Pooled Cost	6
Determination of Pooled cost of Power Purchase for JdVNNL for FY 2016-17.....	7
Prayer	11

Definitions

1. **Distribution Licensee'** means a licensee authorized to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply as defined in the Act.
2. **Floor Price:** The minimum price as determined by the Central Electricity Regulatory Commission in accordance with its (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 as amended from time to time, at and above which the certificate can be dealt in the power exchange;
3. **Forbearance Price:** The ceiling price as determined by the Central Electricity Regulatory Commission.
4. **Pooled Cost of Power Purchase:** The weighted average price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers, excluding short term power purchases and those based on renewable energy.
5. **Preferential Tariff:** The tariff fixed / approved by the Hon'ble Commission for sale of energy to a distribution licensee from a generating station based on renewable energy sources.
6. **Renewable Energy Sources:** Includes non-conventional renewable generation sources such as mini-hydel, wind, solar including solar component of its integration with combined cycle, bio-mass, bio-fuel cogeneration, urban or municipal waste and other such sources as approved by MNRE, excluding the nuclear power stations and hydel power stations of capacity above 25 MW.

Introduction

1. In exercise of powers conferred under sections 61, 66, 86(1)(e) and 181 of the Electricity Act, 2003 and all other powers enabling it in this behalf, the Rajasthan Electricity Regulatory Commission framed Rajasthan Electricity Regulatory Commission (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010.
2. As per RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010, and RERC (Power Purchase and Procurement Process of Distribution Licensee) (3rdAmendment) Regulations 2014, a Distribution Licensee including deemed licensee shall procure electricity generated from renewable energy sources as provided in following table:

Table 1: RPO expressed as percentage of energy consumption (%)

Sl. No.	Financial Year	Wind	Biomass	Solar	Total *
1.	2014-15	6.8	0.70	1.50	9.00
2.	2015-16	7.3	0.90	2.00	10.20
3.	2016-17	7.8	1.10	2.50	11.40

*Note: * As per RERC (Power Purchase and Procurement Process of Distribution Licensee) (3rd Amendment) Regulations 2014 dated 20th February 2014*

3. As per the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010, the effective electricity component price during the operating period for a distribution licensee(s) shall be equal to the Pooled cost of Power Purchase, which is the weighted average price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers, excluding short term power purchases and those based on renewable energy.
4. JDVVNL is submitting this petition to the Hon'ble Commission for determination of Pooled Cost of Power Purchase for FY 2016-17 based on the audited accounts for FY 2015-16.

Pooled Cost

1. As per Clause 11 of the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010, the tariff rate, tariff structure and other conditions for existing renewable energy projects for which long term PPA for purchase of renewable energy are already put in place, may participate in REC scheme after the expiry of the period of their existing PPA.
2. Provided further that such a generating company having entered into a power purchase agreement for sale of renewable energy at a preferential tariff shall not, in case of pre-mature termination of the agreement, be eligible for participating in the REC scheme for a period of three years from the date of termination of such agreement or till the scheduled date of expiry of PPA whichever is earlier.
3. All the new renewable energy projects commissioned during the Multiyear Control Period, after coming into force of RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 and which do not have PPA prior to coming into effect of these Regulations for purchase of Renewable Energy shall have the option of either following the tariff structure and other conditions as stipulated in the RERC (Terms and Conditions for Determination of Tariff) Regulations, 2014, subject to agreement of licensee or adopt pricing of the REC mechanism.
4. In case REC mechanism is repealed / expires or RE generator on his own opts out of the REC mechanism, RE generator can switch over to preferential tariff mechanism subject to scope to accommodate the same in the RPO target of the licensee at a tariff to be determined by the Commission and/or sell renewable energy at mutually agreed price to other obligated entities.

Determination of Pooled cost of Power Purchase for JdVNNL for FY 2016-17

1. The RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 requires the Distribution licensee to purchase renewable energy and/ or renewable energy certificates (RECs) for discharge of the above specific mandatory obligation.
2. The Distribution licensee can purchase the renewable energy and/ or certificate as per REC Mechanism as follows:
 - a. The effective electricity component price shall be equal to the Pooled Cost of Power Purchase.
 - b. The Certificate could be purchased at price discovered in the Power Exchanges.
3. For the determination of Pooled cost of Power Purchase for FY 2016-17, the Discom has considered the power purchase cost and quantum as per the audited accounts for FY 2015-16.
4. Further, while determining the Final Pooled cost of Power Purchase, the Discom has not considered the short-term power purchase and renewable energy, while the power purchased from nuclear power stations, hydel power stations of capacity above 25 MW and thermal component of bundled power purchased through NVVN has been considered.
5. On the basis of power purchase cost and quantum available for FY 2015-16, Pooled cost for FY 2016-17 works out to **Rs. 3.4332 per unit**. The reconciled power purchase statement for FY 2015-16 is attached as **Annexure I**.
6. The detailed computation of Pooled cost of Power Purchase for FY 2016-17 is as follows:

Pooled Power Purchase Cost for JDVVNL for FY 2016-17 based on Actual Accounts of FY 2015-16							
S.No	Power Purchase Station (Source Wise)	Energy Purchased (in MU's)	Power Purchase Cost (Rs. Cr)				Weighted Avg Cost per unit (Rs/kWh)
			Fixed Charges	Energy Charges	Total Cost	Rate (Rs/kWh)	
A	NTPC						
1	ANTA GTPS	53.6126	12.8523	19.0480	31.9003	5.9502	0.0154
2	AURIYA GTPS	36.9548	7.4542	14.7186	22.1728	6.0000	0.0107
3	DADRI GTPS	69.1716	9.5218	24.8193	34.3411	4.9646	0.0166
4	FGUTTPS -I	18.1956	2.8891	4.9250	7.8141	4.2945	0.0038
5	FGUTTPS -II	44.4584	5.7050	11.9805	17.6854	3.9780	0.0085
6	FGUTPP III	25.3682	5.6542	7.9601	13.6143	5.3667	0.0066
7	F.S.T.P.S	14.5934	1.8552	3.9469	5.8021	3.9758	0.0028
8	K.H.S.T.P.S. I	26.5122	5.0483	6.1438	11.1921	4.2215	0.0054
9	K.H.S.T.P.S. & II	143.6784	27.0704	34.2968	61.3672	4.2711	0.0296
10	RHIND STPS	162.7783	14.9998	28.1905	43.1904	2.6533	0.0208
11	RIHAND II	170.6925	18.4049	27.4066	45.8115	2.6839	0.0221
12	RIHAND III	199.9579	36.1448	33.2534	69.3981	3.4706	0.0335

Pooled Power Purchase Cost for JDVVNL for FY 2016-17 based on Actual Accounts of FY 2015-16							
S.No	Power Purchase Station (Source Wise)	Energy Purchased (in MU's)	Power Purchase Cost (Rs. Cr)				Weighted Avg Cost per unit (Rs/kWh)
			Fixed Charges	Energy Charges	Total Cost	Rate (Rs/kWh)	
13	SINGUARLI	715.8358	34.7811	99.0463	133.8274	1.8695	0.0645
14	TALCHAR STPS	0.0000	0.0000	0.0000	0.0000		0.0000
15	KHPS-I	60.2033	17.9037	16.3907	34.2943	5.6964	0.0165
16	NCTPS 1	0.0000	0.0000	0.0000	0.0000		
17	NCTPS 2	7.1696	0.6545	2.5394	3.1939	4.4548	
	TOTAL	1749.1827	200.9393	334.6658	535.6051	3.0620	0.2583
	Prior Period Expenses	0.0000	13.5972	-7.3526	6.2446		
	Total (with Adjustment)	1749.1827	214.5365	327.3132	541.8496	3.0977	0.2613
B	NHPC						
1	TANAKPUR HEP	11.9822	2.4211	1.9313	4.3524	3.6324	0.0021
2	SALAL HEP	32.3267	1.7914	5.3209	7.1123	2.2001	0.0034
3	CHAMERA-I	160.3661	11.4701	15.9483	27.4184	1.7097	0.0132
4	CHAMERA-II	48.5930	6.7333	6.8035	13.5368	2.7858	0.0065
5	CHAMERA-III	36.8868	9.3735	7.8489	17.2225	4.6690	0.0083
6	URI HEP	91.4818	7.2651	11.5677	18.8328	2.0586	0.0091
7	URI HEP II	42.5454	11.4605	13.0915	24.5520	5.7708	0.0118
8	DHOLIGANGA	33.2352	5.1330	5.8417	10.9747	3.3021	0.0053
9	DULHASTI	83.3831	22.8684	26.5849	49.4533	5.9309	0.0238
10	PARBATI III	22.7374	4.3708	6.2610	10.6318	4.6759	0.0051
11	SEWA II	20.2519	4.8615	4.7250	9.5866	4.7337	0.0046
	TOTAL	583.7896	87.7489	105.9247	193.6736	3.3175	0.0934
	Prior Period Expenses	0.0000	0.0406	12.0849	12.1256		
	Total (with Adjustment)	583.7896	87.7895	118.0096	205.7991	3.5252	0.0992
C	NEYVELI LIGNITE CORPORATION LTD	352.9002	85.5399	43.0053	128.5452	3.6425	0.0620
D	SJVNL-NATHPA-JHAKRI	179.5702	27.7920	24.8503	52.6423	2.9316	0.0254
	Rampur	49.3758	9.4774	7.9948	17.4722	3.5386	0.0084
	Total	228.9460	37.2694	32.8451	70.1145	3.0625	0.0338
	Prior Period Expenses	0.0000	0.0000	0.0000	0.0000		
	Total (with Adjustment)	228.9460	37.2694	32.8451	70.1145	3.0625	0.0338
E	NPCL						
	NAPP	105.1871	0.0000	26.3710	26.3710	2.5071	0.0127
	Prior Period Expenses	0.0000	0.0000	-0.0076	-0.0076		
	Total (with Adjustment)	105.1871	0.0000	26.3634	26.3634	2.5063	0.0127
	RAPP-I & II	305.3217	0.0000	85.2200	85.2200	2.7912	0.0411

Pooled Power Purchase Cost for JDVVNL for FY 2016-17 based on Actual Accounts of FY 2015-16							
S.No	Power Purchase Station (Source Wise)	Energy Purchased (in MU's)	Power Purchase Cost (Rs. Cr)				Weighted Avg Cost per unit (Rs/kWh)
			Fixed Charges	Energy Charges	Total Cost	Rate (Rs/kWh)	
	RAPP-III&IV	350.0125	0.0000	98.0765	98.0765	2.8021	0.0473
	RAPP-V & VI	221.2965	0.0000	76.5193	76.5193	3.4578	0.0369
	RAPP-V	0.0000	0.0000	0.0000	0.0000		
	TOTAL (RAPP)	876.6307	0.0000	259.8158	259.8158	2.9638	0.1253
	Prior Period Expenses	0.0000	0.0000	-0.0409	-0.0409		
	Total (with Adjustment)	876.6307	0.0000	259.7750	259.7750	2.9633	0.1253
F	State Generation & Others						
	KTPS(1 to 7)	2227.9431	151.1072	621.4838	772.5910	3.4677	0.3725
	STPS(1 to 6)	1688.1759	221.9438	612.0606	834.0045	4.9403	0.4021
	DCCPP	90.4646	26.2680	29.9023	56.1703	6.2091	0.0271
	CTPP (1&2))	473.1979	68.7857	93.8962	162.6819	3.4379	0.0784
	CTPP (4)	424.4430	68.0075	88.6303	156.6379	3.6904	0.0755
	CTPP (3)	379.6430	73.3036	78.8826	152.1862	4.0087	0.0734
	GLTPP 2 (prior period expenses)	0.0000	16.2997	-1.1221	15.1777		
	RGTP(1&2)	152.8416	4.8552	51.8068	56.6619	3.7072	0.0273
	KaTTP#1	1063.1680	233.7053	252.2442	485.9495	4.5708	0.2343
	KaTTP#2	784.7517	107.5959	202.5680	310.1638	3.9524	0.1496
	RGTP 3	314.1663	46.4452	103.9521	150.3973	4.7872	0.0725
	MAHI	53.5469	4.9382	4.2995	9.2377	1.7252	0.0045
	GPTPP	62.2329	20.6029	8.3353	28.9383	4.6500	0.0140
	RAJWEST POWER LIMITED	2046.8696	465.3948	370.8455	836.2403	4.0855	0.4032
	Total	9761.4444	1509.2532	2517.7851	4027.0383	4.1255	2.0144
G	Coastal Gujarat	802.9187	90.0257	101.1707	191.1964	2.3813	0.0922
H	Total Shared Projects/Others						
	Tehri	77.0418	22.1450	21.5410	43.6860	5.6704	0.0211
	Koteshwar	34.5505	6.4735	6.6487	13.1222	3.7980	0.0063
	Total	111.5923	28.6185	28.1897	56.8082	5.0907	0.0274
	Prior Period Expenses	0.0000	0.0000	0.7612	0.7612		
	Total THDC (with Adjustment)	111.5923	28.6185	28.9509	57.5694	5.1589	0.0278
	TALA THROUGH PTC (BHUTAN)	15.4026	0.0000	3.1113	3.1113	2.0200	0.0015
	Prior Period Expenses	0.0000	0.0000	0.0000	0.0000		
	Total (with Adjustment)	15.4026	0.0000	3.1113	3.1113	2.0200	0.0015

Pooled Power Purchase Cost for JDVVNL for FY 2016-17 based on Actual Accounts of FY 2015-16							
S.No	Power Purchase Station (Source Wise)	Energy Purchased (in MU's)	Power Purchase Cost (Rs. Cr)				Weighted Avg Cost per unit (Rs/kWh)
			Fixed Charges	Energy Charges	Total Cost	Rate (Rs/kWh)	
	BBMB(BHAKRA,DEH AR&PONG)	820.6235	0.0000	38.1216	38.1216	0.4645	0.0184
	CHAMBAL/SATPURA	276.6288	0.0000	0.0000	0.0000	0.0000	0.0000
	Total	1224.2472	28.6185	70.1839	98.8023	0.8070	0.0476
I	NVVN Bundled Power (Thermal)	587.4404	60.8097	113.5659	174.3756	2.9684	0.0872
J	Aravali Power Limited	2.6272	2.1381	0.0226	2.1607	8.2244	0.0010
K	ADANI Power Rajasthan	2645.3803	409.2298	526.4903	935.7201	3.5372	0.4512
L	Sasan Power Ltd	929.0616	13.6607	139.8652	153.5259	1.6525	0.0740
M	Kharcham Wangtoo	141.9073	0.0000	48.2485	48.2485	3.4000	0.0233
	Grand Total	19991.6634	2538.8710	4324.6438	6863.5148	3.4332	3.4332

Prayer

In view of the above submission, the Discom prays as under:

1. The Hon'ble Commission to accept this petition as submitted by the Discom
2. The Hon'ble Commission may kindly determine the Pooled cost of Power Purchase for FY 2016-17 as per the Discom's submission and allow Discom to recover pooled cost of power purchase at Rs. **3.4332** per unit.
3. The Hon'ble Commission may kindly condone any inadvertent omission/ errors/ shortcomings and permit the Discom to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date
4. The Hon'ble Commission pass such further and other orders, as it may deem fit and proper keeping in view the facts and circumstances of the case.

Annexure-I

FY 2015-16		
As per audited accounts		
Particulars	Units in MU	Rs. Crore
Purchase of energy	22,933.94	9,461.98
Less : Sale of energy through power exchange	131.77	33.50
Net availability before transmission loss	22,802.17	9,428.48
Power Purchase Reconciliation		
Particulars	Power Purchase (MU)	Cost (Rs. Crore)
Total power purchase and cost as furnished by Discom (A)	22,933.94	9,461.98
Less: Transmission Charges		
PGCIL	--	417.16
MARU		12.26
RVPNL		678.37
SLDC		5.46
ARAVALI	--	7.65
NRLDC POSCO	--	0.88
Transmission Charges (B)	--	1,121.79
Less: the following		
Short Term Purchase	811.49	281.56
RE Power	2,073.62	961.79
NVVN Solar	125.66	133.45
Inter Discom	697.73	283.91
UI	(275.22)	(6.03)
RVUN Hydel Stations below 25 MW	2.10	0.79
Banking	(493.09)	(178.80)
Total (C)	2,942.28	1,476.68
Power Purchase considered for Pooled cost =(A)-(B)-(C)	19,991.66	6,863.51
Power purchase (MU)	Total cost (Rs. Crore)	Weighted average price (Rs./kwh)
19,991.66	6,863.51	3.4332