

**Petition for Determination of Pooled Cost of Power Purchase
for FY 2017-18**

Submitted to

Rajasthan Electricity Regulatory Commission

By

Ajmer Vidyut Vitran Nigam Limited

Ajmer

October 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 2017-18 based on the actual accounts for FY 2016-17 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:

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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) (4th Amendment) Regulations 2017, 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.	2017-18	8.20	1.30	4.75	14.25

*Note: * As per RERC (Power Purchase and Procurement Process of Distribution Licensee) (4th Amendment) Regulations 2017 dated 7th June 2017*

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. AVVNL is submitting this petition to the Hon'ble Commission for determination of Pooled Cost of Power Purchase for FY 2017-18 based on the audited accounts for FY 2016-17.

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 AVNNL for FY 2017-18

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 2017-18, the Discom has considered the power purchase cost and quantum as per the audited accounts for FY 2016-17.
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 2016-17, Pooled cost for FY 2017-18 works out to **Rs. 3.6400 per unit**. The reconciled power purchase statement for FY 2016-17 is attached as **Annexure I**.
6. The detailed computation of Pooled cost of Power Purchase for FY 2017-18 is as follows:

Pooled Power Purchase Cost for AVNNL for FY 2017-18 based on Actual Accounts of FY 2016-17							
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	33.6569	12.2688	9.3080	21.5768	6.4108	0.0125
2	AURIYA GTPS	12.4673	7.7861	4.4027	12.1888	9.7766	0.0071
3	DADRI GTPS	54.1881	9.2343	14.4331	23.6675	4.3676	0.0138
4	FGUTTPS -I	16.7850	3.9687	4.9800	8.9487	5.3314	0.0052
5	FGUTTPS -II	36.9211	7.4396	10.6418	18.0813	4.8973	0.0105
6	FGUTPP III	24.6208	6.1266	7.1609	13.2875	5.3969	0.0077
7	F.S.T.P.S	14.8247	1.9518	3.6133	5.5651	3.7540	0.0032
8	K.H.S.T.P.S. I	31.4615	5.0835	7.3731	12.4566	3.9593	0.0072
9	K.H.S.T.P.S. & II	146.3369	24.8689	31.7376	56.6066	3.8682	0.0329
10	RHIND STPS	153.4748	16.5568	23.9473	40.5041	2.6391	0.0235
11	RIHAND II	201.6448	18.3808	30.7022	49.0830	2.4341	0.0285
12	RIHAND III	230.6876	32.9123	37.7538	70.6661	3.0633	0.0411

Pooled Power Purchase Cost for AVVNL for FY 2017-18 based on Actual Accounts of FY 2016-17							
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	592.2297	38.1822	81.1526	119.3348	2.0150	0.0693
14	KHPS-I	97.1783	23.1350	21.6820	44.8171	4.6118	0.0260
15	NCTPS 2	3.5168	0.9981	0.9827	1.9808	5.6323	0.0012
	TOTAL	1649.9946	208.8936	289.8713	498.7648	3.0228	0.2898
	Prior Period Expenses	0.0000	1.7086	-104.7280	-103.0194		
	Total (with Adjustment)	1649.9946	210.6022	185.1433	395.7454	2.3985	0.2300
B	NHPC						
1	TANAKPUR HEP	8.9501	2.1925	1.4901	3.6826	4.1145	0.0021
2	SALAL HEP	26.7228	1.6329	4.6111	6.2440	2.3366	0.0036
3	CHAMERA-I	117.5764	10.6107	15.8702	26.4810	2.2522	0.0154
4	CHAMERA-II	41.4083	4.7223	4.3075	9.0299	2.1807	0.0052
5	CHAMERA-III	29.0521	7.1847	6.1743	13.3590	4.5983	0.0078
6	URI HEP	68.5381	5.7475	9.6883	15.4358	2.2521	0.0090
7	URI HEP II	48.2712	13.2672	14.2615	27.5287	5.7029	0.0160
8	DHOLIGANGA	26.6263	4.5019	6.1561	10.6580	4.0028	0.0062
9	DULHASTI	71.3488	18.3858	23.6141	41.9998	5.8866	0.0244
10	PARBATI III	21.6110	4.8983	5.9318	10.8301	5.0114	0.0063
11	SEWA II	15.3487	4.2983	3.6135	7.9118	5.1547	0.0046
	TOTAL	475.4538	77.4421	95.7184	173.1605	3.6420	0.1006
	Prior Period Expenses	0.0000	-1.8286	4.9932	3.1647		
	Total (with Adjustment)	475.4538	75.6136	100.7116	176.3252	3.7086	0.1025
C	NEYVELI LIGNITE CORPORATION LTD	355.9142	86.5582	51.0885	137.6467	3.8674	0.0800
D	SJVNL-NATHPA-JHAKRI	155.5208	24.5490	21.8457	46.3947	2.9832	0.0270
	Rampur	43.7235	8.5613	7.2367	15.7980	3.6132	0.0092
	Total	199.2443	33.1103	29.0824	62.1927	3.1214	0.0361
	Prior Period Expenses	0.0000	0.0000	-0.0450	-0.0450		
	Total (with Adjustment)	199.2443	33.1103	29.0374	62.1477	3.1192	0.0361
E	NPCL						
E1	NAPP	91.7715	0.0000	23.6695	23.6695	2.5792	0.0138
	Prior Period Expenses	0.0000	0.0000	-0.0051	-0.0051		
	Total (with Adjustment)	91.7715	0.0000	23.6645	23.6645	2.5786	0.0138
E2	RAPP						
	RAPP-I & II	241.2911	0.0000	69.5315	69.5315	2.8816	0.0404
	RAPP-III&IV	300.5223	0.0000	86.3982	86.3982	2.8749	0.0502
	RAPP-V & VI	147.8444	0.0000	52.1929	52.1929	3.5303	0.0303
	TOTAL (RAPP)	689.6578	0.0000	208.1226	208.1226	3.0178	0.1209
	Prior Period Expenses	0.0000	0.0000	1.0226	1.0226		
	Total (with Adjustment)	689.6578	0.0000	209.1452	209.1452	3.0326	0.1215

Pooled Power Purchase Cost for AVVNL for FY 2017-18 based on Actual Accounts of FY 2016-17							
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)	
F	State Generation & Others						
	KTPS(1 to 7)	1855.9122	134.3048	561.1454	695.4502	3.7472	0.4041
	STPS(1 to 6)	1126.5192	235.0880	394.4663	629.5543	5.5885	0.3658
	DCCPP	26.5595	14.4721	9.0517	23.5239	8.8570	0.0137
	CTPP (1&2))	856.6500	137.7180	197.8859	335.6039	3.9176	0.1950
	CTPP (3)	424.2997	81.7740	100.2012	181.9752	4.2888	0.1057
	CTPP (4)	436.5098	72.6902	103.0482	175.7385	4.0260	0.1021
	RGTP(1&2)	120.8968	7.7486	25.9808	33.7295	2.7899	0.0196
	RGTP(3)	262.1220	40.1179	79.7362	119.8542	4.5725	0.0696
	KaTPP#1	956.3267	247.3551	241.5763	488.9314	5.1126	0.2841
	KaTPP#2	592.4459	131.6182	150.9395	282.5577	4.7693	0.1642
	MAHI	58.3941	11.5174	1.7518	13.2692	2.2724	0.0077
	Others	0.0000	0.0000	67.3326	67.3326		
	GPTPP	-2.5698	5.6262	3.0032	8.6294	-33.5797	0.0050
	RAJWEST POWER LIMITED	1631.3770	364.8343	340.5063	705.3406	4.3236	0.4099
	Total	8345.4432	1484.8649	2276.6256	3761.4904	4.5072	2.1857
G	Coastal Gujarat	708.0095	67.4838	105.9778	173.4616	2.4500	0.1008
H	Total Shared Projects/Others						
	Tehri	68.5321	19.5054	15.6496	35.1550	5.1297	0.0204
	Koteshwar	29.7954	5.8809	5.6476	11.5286	3.8692	0.0067
	Total	98.3275	25.3863	21.2972	46.6835	4.7478	0.0271
	Prior Period Expenses	0.0000	0.0000	-5.8255	-5.8255		
	Total THDC (with Adjustment)	98.3275	25.3863	15.4717	40.8581	4.1553	0.0237
	TALA THROUGH PTC (BHUTAN)	13.6138	0.0000	2.7578	2.7578	2.0258	0.0016
	Prior Period Expenses	0.0000	0.0000	0.0000	0.0000		
	Total (with Adjustment)	13.6138	0.0000	2.7578	2.7578	2.0258	0.0016
	BBMB(BHAKRA,DEHAR&PONG)	604.5904	0.0000	28.9440	28.9440	0.4787	0.0168
	CHAMBAL/SATPURA	211.6556	0.0000	0.0000	0.0000	0.0000	0.0000
	Total	928.1873	25.3863	47.1736	72.5599	0.7817	0.0422
I	NVVN Bundled Power (Thermal)	543.8373	59.8112	103.1880	162.9992	2.9972	0.0947
J	Aravali Power Limited	2.4072	3.9562	1.7460	5.7022	23.6880	0.0033
K	ADANI Power Rajasthan	2203.8754	334.0474	497.3891	831.4365	3.7726	0.4831
L	Sasan Power Ltd	725.7354	12.4785	103.8609	116.3394	1.6031	0.0676

Pooled Power Purchase Cost for AVVNL for FY 2017-18 based on Actual Accounts of FY 2016-17							
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)	
M	Karcham Wangtoo	115.2847	0.0000	64.3775	64.3775	5.5842	0.0374
N	PTC (DB)	140.2368	36.7316	22.7923	59.5239	4.2445	0.0346
O	PTC (Maruti)	34.5205	6.0264	5.6909	11.7173	3.3943	0.0068
	Grand Total	17209.5734	2436.6704	3827.6121	6264.2825	3.6400	3.6400

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 2017-18 as per the Discom's submission and allow Discom to recover pooled cost of power purchase at Rs. **3.6400** 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 2016-17		
Figures shown in audited accounts		
Particulars	Units in MU	Rs. Crore
Purchase of energy	18,504.86	8,117.18
Less : Sale of energy through power exchange	79.79	22.32
Net availability before transmission loss	18,425.07	8,094.86
Power Purchase Reconciliation		
Particulars	Power Purchase (MU)	Cost (Rs. Crore)
Total power purchase and cost as furnished by Discom (A)	18,504.86	8,117.18
Less: Transmission Charges		
PGCIL	--	438.55
MARU		10.55
RVPNL		553.87
SLDC		(4.73)
ARAVALI	--	6.94
NRLDC POSCO	--	0.71
Transmission Charges (B)	--	1,005.90
Less: the following		
Short Term Purchase	153.10	43.05
RE Power	1,483.49	748.32
NVVN Solar	129.72	136.80
Inter Discom	(76.05)	(33.78)
UI	(423.76)	(77.19)
RVUN Hydel Stations below 25 MW	2.38	0.90
Service Charge to RUVNL		2.50
Banking	26.41	26.40
Total (C)	1,295.29	847.00
Power Purchase considered for Pooled cost =(A)-(B)-(C)	17,209.57	6,264.28
Power purchase (MU)	Total cost (Rs. Crore)	Weighted average price (Rs./kwh)
17,209.57	6,264.28	3.6400