

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

**Submitted to**

**Rajasthan Electricity Regulatory Commission**

**By**

**Jaipur Vidyut Vitran Nigam Limited**

**Jaipur**



Chief Engineer (HQ)  
Jaipur Vidyut Vitran Nigam Limited (JVVNL)  
Vidyut Bhawan, Jyoti Nagar,  
Jaipur - 302005

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From,

Chief Engineer (HQ)  
Jaipur Vidyut Vitaran Nigam Limited (JVVNL) , Jaipur

To,

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

Memo No.:

Dated:

**Subject: Petition for determination of pooled cost of power purchase for FY 2017-18 based on the audited accounts for FY 2016-17**

Please find enclosed herewith a petition filed on behalf of JVVNL for determination of pooled cost of power purchase for FY 2017-18 based on the audited accounts for FY 2016-17 as per the Rajasthan Electricity Regulatory Commission (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010.

Signed/-

Chief Engineer (HQ),  
JVVNL, Jaipur

**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) (4<sup>th</sup>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 (%)**

<b>Sl. No.</b>	<b>Financial Year</b>	<b>Wind</b>	<b>Biomass</b>	<b>Solar</b>	<b>Total *</b>
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 7<sup>th</sup> 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. JVVNL 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 JVNNL 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. 3.6880 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 JVNNL for FY 2017-18 based on Actual Accounts of FY 2016-17							
S.No.	Power Purchase Station (Source Wise)	Energy Purchased (MU's)	Power Purchase Cost (Rs. Cr)				Weighted Avg Cost per unit (Rs/kWh)
			Fixed Charges	Energy Charges	Total Cost	Rate (Rs/kWh)	
<b>A</b>	<b>NTPC</b>						
1	ANTA GTPS	48.0813	15.5125	13.6400	29.1525	6.0632	0.0119
2	AURIYA GTPS	17.8104	11.4766	5.9355	17.4122	9.7764	0.0071
3	DADRI GTPS	77.4116	12.3549	21.4565	33.8114	4.3677	0.0138
4	FGUTTPS -I	23.9786	5.6716	7.1111	12.7827	5.3309	0.0052
5	FGUTTPS -II	52.7445	10.1999	15.6317	25.8316	4.8975	0.0105
6	FGUTPP III	35.1726	8.7178	10.2656	18.9834	5.3972	0.0077
7	F.S.T.P.S	21.1782	2.5339	5.4164	7.9504	3.7540	0.0032
8	K.H.S.T.P.S. I	44.9450	6.8679	10.9215	17.7894	3.9580	0.0072
9	K.H.S.T.P.S. & II	209.0527	32.8494	48.0702	80.9195	3.8708	0.0329
10	RHIND STPS	219.2498	21.8305	35.8989	57.7294	2.6330	0.0235
11	RIHAND II	288.0640	24.5476	45.5722	70.1198	2.4342	0.0285
12	RIHAND III	329.5537	48.5532	52.3888	100.9420	3.0630	0.0411



Pooled Power Purchase Cost for JVVNL for FY 2017-18 based on Actual Accounts of FY 2016-17							
S.No.	Power Purchase Station (Source Wise)	Energy Purchased (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	846.0425	50.5596	121.5786	172.1383	2.0346	0.0700
14	TALCHAR STPS	0.0000	0.0000	0.0000	0.0000		
15	KHPS-I	138.8262	34.4741	29.5504	64.0246	4.6119	0.0260
16	NCTPS 1	0.0000	0.0000	0.0000	0.0000		
17	NCTPS 2	5.0240	1.2570	1.5736	2.8306	5.6342	0.0012
	<b>TOTAL</b>	<b>2357.1352</b>	<b>287.4066</b>	<b>425.0111</b>	<b>712.4177</b>	<b>3.0224</b>	<b>0.2898</b>
	Prior Period Expenses	0.0000	8.0932	-98.5677	-90.4744		
	<b>Total (with Adjustment)</b>	<b>2357.1352</b>	<b>295.4998</b>	<b>326.4434</b>	<b>621.9432</b>	<b>2.6386</b>	<b>0.2530</b>
<b>B</b>	<b>NHPC</b>						
1	TANAKPUR HEP	12.7859	6.0080	2.1287	8.1367	6.3638	0.0033
2	SALAL HEP	38.1755	2.3327	6.5873	8.9200	2.3366	0.0036
3	CHAMERA-I	167.9663	15.1582	19.5898	34.7480	2.0688	0.0141
4	CHAMERA-II	59.1547	6.7012	6.2001	12.9012	2.1809	0.0052
5	CHAMERA-III	41.5029	10.2620	8.8204	19.0824	4.5978	0.0078
6	URI HEP	97.9116	8.2101	13.8402	22.0504	2.2521	0.0090
7	URI HEP II	68.9589	18.9509	20.3735	39.3244	5.7026	0.0160
8	DHOLIGANGA	38.0375	6.0896	9.1357	15.2253	4.0027	0.0062
9	DULHASTI	101.9269	26.2678	33.7346	60.0024	5.8868	0.0244
10	PARBATI III	30.8728	6.9954	8.4740	15.4694	5.0107	0.0063
11	SEWA II	21.9267	6.1406	5.1621	11.3027	5.1548	0.0046
	<b>TOTAL</b>	<b>679.2197</b>	<b>113.1164</b>	<b>134.0466</b>	<b>247.1630</b>	<b>3.6389</b>	<b>0.1005</b>
	Prior Period Expenses	0.0000	-1.6337	7.1077	5.4740		
	<b>Total (with Adjustment)</b>	<b>679.2197</b>	<b>111.4827</b>	<b>141.1542</b>	<b>252.6370</b>	<b>3.7195</b>	<b>0.1028</b>
<b>C</b>	<b>NEYVELI LIGNITE CORPORATION LTD</b>	<b>508.4488</b>	<b>123.6545</b>	<b>78.9098</b>	<b>202.5644</b>	<b>3.9840</b>	<b>0.0824</b>
<b>D</b>	<b>SJVNL-NATHPA-JHAKRI</b>	<b>222.1768</b>	<b>35.0740</b>	<b>31.2083</b>	<b>66.2823</b>	<b>2.9833</b>	<b>0.0270</b>
	Rampur	62.4622	12.2332	10.3380	22.5712	3.6136	0.0092
	<b>Total</b>	<b>284.6390</b>	<b>47.3072</b>	<b>41.5463</b>	<b>88.8535</b>	<b>3.1216</b>	<b>0.0361</b>
	Prior Period Expenses	0.0000	0.0000	-0.0641	-0.0641		
	<b>Total (with Adjustment)</b>	<b>284.6390</b>	<b>47.3072</b>	<b>41.4822</b>	<b>88.7894</b>	<b>3.1194</b>	<b>0.0361</b>
<b>E</b>	<b>NPCIL</b>						
E1	NAPP	131.1022	0.0000	33.8136	33.8136	2.5792	0.0138
	Prior Period Expenses	0.0000	0.0000	0.5838	0.5838		
	<b>Total (with Adjustment)</b>	<b>131.1022</b>	<b>0.0000</b>	<b>34.3974</b>	<b>34.3974</b>	<b>2.6237</b>	<b>0.0140</b>
E2	RAPP						
	RAPP-I & II	344.7015	0.0000	99.3306	99.3306	2.8816	0.0404
	RAPP-III&IV	429.3168	0.0000	123.4302	123.4302	2.8750	0.0502
	RAPP-V & VI	211.2063	0.0000	74.5572	74.5572	3.5301	0.0303

Pooled Power Purchase Cost for JVVNL for FY 2017-18 based on Actual Accounts of FY 2016-17							
S.No.	Power Purchase Station (Source Wise)	Energy Purchased (MU's)	Power Purchase Cost (Rs. Cr)				Weighted Avg Cost per unit (Rs/kWh)
			Fixed Charges	Energy Charges	Total Cost	Rate (Rs/kWh)	
	RAPP-V	0.0000	0.0000	0.0000	0.0000		
	<b>TOTAL (RAPP)</b>	<b>985.2246</b>	<b>0.0000</b>	<b>297.3180</b>	<b>297.3180</b>	<b>3.0178</b>	<b>0.1209</b>
	Prior Period Expenses	0.0000	0.0000	11.1163	11.1163		
	<b>Total (with Adjustment)</b>	<b>985.2246</b>	<b>0.0000</b>	<b>308.4343</b>	<b>308.4343</b>	<b>3.1306</b>	<b>0.1255</b>
<b>F</b>	<b>State Generation &amp; Others</b>						
	KTPS(1 to 7)	2651.3031	191.8640	801.6363	993.5003	3.7472	0.4041
	STPS(1 to 6)	1609.3132	335.8400	563.5233	899.3633	5.5885	0.3658
	DCCPP	37.9422	20.6745	12.9311	33.6055	8.8570	0.0137
	CTPP (1&2))	1223.7857	196.7400	282.6941	479.4341	3.9176	0.1950
	CTPP (3)	606.1424	116.8200	143.1445	259.9645	4.2888	0.1057
	CTPP (4)	623.5855	103.8432	147.2118	251.0549	4.0260	0.1021
	RGTP(1&2)	172.7097	11.0695	37.1155	48.1849	2.7899	0.0196
	RGTP(3)	374.4600	57.3113	113.9089	171.2202	4.5725	0.0696
	KaTPP#1	1366.1810	353.3907	345.1336	698.5243	5.1130	0.2841
	KaTPP#2	846.3513	188.0259	215.6279	403.6538	4.7693	0.1642
	MAHI	83.4201	16.4534	2.5026	18.9560	2.2724	0.0077
	Others	0.0000	0.0000	91.7421	91.7421		
	GPTPP	-3.6712	8.0527	4.2879	12.3406	-33.6145	0.0050
	RAJWEST POWER LIMITED	2330.5386	521.1919	486.3436	1007.5355	4.3232	0.4098
	<b>Total</b>	<b>11922.0617</b>	<b>2121.2771</b>	<b>3247.8031</b>	<b>5369.0802</b>	<b>4.5035</b>	<b>2.1839</b>
<b>G</b>	<b>Coastal Gujarat</b>	<b>1011.4422</b>	<b>96.4054</b>	<b>145.8172</b>	<b>242.2226</b>	<b>2.3948</b>	<b>0.0985</b>
<b>H</b>	<b>Total Shared Projects/Others</b>						
	Tehri	97.9030	27.8671	22.3565	50.2236	5.1299	0.0204
	Koteshwar	42.5649	8.4008	8.0662	16.4670	3.8687	0.0067
	<b>Total</b>	<b>140.4679</b>	<b>36.2679</b>	<b>30.4227</b>	<b>66.6906</b>	<b>4.7477</b>	<b>0.0271</b>
	Prior Period Expenses	0.0000	0.0000	-8.0291	-8.0291		
	<b>Total THDC (with Adjustment)</b>	<b>140.4679</b>	<b>36.2679</b>	<b>22.3935</b>	<b>58.6615</b>	<b>4.1761</b>	<b>0.0239</b>
	TALA THROUGH PTC (BHUTAN)	19.4482	0.0000	3.9398	3.9398	2.0258	0.0016
	Prior Period Expenses	0.0000	0.0000	0.0000	0.0000		
	<b>Total (with Adjustment)</b>	<b>19.4482</b>	<b>0.0000</b>	<b>3.9398</b>	<b>3.9398</b>	<b>2.0258</b>	<b>0.0016</b>
	BBMB(BHAKRA,DEHAR&PONG)	863.7006	0.0000	41.3485	41.3485	0.4787	0.0168
	CHAMBAL/SATPURA	302.3652	0.0000	0.0000	0.0000	0.0000	0.0000
	<b>Total</b>	<b>1325.9819</b>	<b>36.2679</b>	<b>67.6818</b>	<b>103.9498</b>	<b>0.7839</b>	<b>0.0423</b>
<b>I</b>	<b>NVVN Bundled Power (Thermal)</b>	<b>776.9104</b>	<b>85.5347</b>	<b>147.2110</b>	<b>232.7457</b>	<b>2.9958</b>	<b>0.0947</b>
<b>J</b>	<b>Aravali Power Limited</b>	<b>3.4388</b>	<b>5.5946</b>	<b>2.4592</b>	<b>8.0537</b>	<b>23.4199</b>	<b>0.0033</b>

## Pooled Power Purchase Cost for JVVNL for FY 2017-18 based on Actual Accounts of FY 2016-17

S.No.	Power Purchase Station (Source Wise)	Energy Purchased (MU's)	Power Purchase Cost (Rs. Cr)				Weighted Avg Cost per unit (Rs/kWh)
			Fixed Charges	Energy Charges	Total Cost	Rate (Rs/kWh)	
K	ADANI Power Rajasthan	3148.3934	477.2106	710.5559	1187.7664	3.7726	0.4831
L	Sasan Power Ltd	1036.7648	17.8264	154.7083	172.5347	1.6642	0.0702
M	KarchamWangtoo	164.6924	0.0000	140.3592	140.3592	8.5225	0.0571
N	PTC (DB)	200.3380	52.4737	32.3922	84.8659	4.2361	0.0345
O	PTC (Maruti)	49.3150	8.6091	8.0521	16.6612	3.3785	0.0068
	<b>Grand Total</b>	<b>24585.1081</b>	<b>3479.1437</b>	<b>5587.8614</b>	<b>9067.0050</b>	<b>3.6880</b>	<b>3.6880</b>

## ***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. **3.6880** 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	Cost (Rs. Crore)
Purchase of energy	27,333.69	11,829.00
Less : Sale of energy through power exchange	113.98	31.89
<b>Net availability before transmission loss</b>	<b>27,219.71</b>	<b>11,797.10</b>
Power Purchase Reconciliation		
Particulars	Power Purchase (MU)	Cost (Rs. Crore)
<b>Total power purchase and cost as furnished by Discom (A)</b>	<b>27,333.69</b>	<b>11,829.00</b>
<b>Less: Transmission Charges</b>		
PGCIL	--	623.83
MARU		15.07
RVPNL		791.24
SLDC		(6.75)
ARAVALI	--	9.91
NRLDC POSCO	--	1.02
<b>Transmission Charges (B)</b>	<b>--</b>	<b>1,434.32</b>
<b>Less: the following</b>		
Short Term Purchase	340.72	110.18
RE Power	2,357.79	1,242.28
NVVN Solar	185.32	197.00
Inter Discom	(1,008.54)	(448.00)
UI	832.17	183.10
RVUN Hydel Stations below 25 MW	3.41	1.29
Service Charge to RUVNL	--	4.08
Banking	37.72	37.73
<b>Total (C)</b>	<b>2,748.58</b>	<b>1,327.65</b>
<b>Power Purchase considered for Pooled cost =(A)-(B)-(C)</b>	<b>24,585.11</b>	<b>9,067.02</b>
<b>Power purchase (MU)</b>	<b>Total cost (Rs. Crore)</b>	<b>Weighted average price (Rs./kwh)</b>
<b>24,585.11</b>	<b>9,067.02</b>	<b>3.6880</b>