

**Fuel Surcharge for Fourth Quarter of FY 2020-
21 (January '21 – March '21)**

FINAL REPORT

Submitted to

Jaipur Vidyut Vitran Nigam Limited

Ajmer Vidyut Vitran Nigam Limited

Jodhpur Vidyut Vitran Nigam Limited

Rajasthan

March - 2021

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Background

1. In term of the Regulation 88 of the RERC Tariff Regulation 2019, Rajasthan Discoms, namely JVVNL, AVVNL & JdVVNL, are allowed to recover the variation in the approved and actual variable cost of power purchased. The variation allowed has to be passed on to the consumers of the Discoms on quarterly basis as fuel surcharge.
2. The said provision under the RERC Tariff Regulations, 2019 with respect to the fuel surcharge is reproduced as below:

“88. Fuel Surcharge

“The Fuel Surcharge (FS) chargeable by the distribution licensee from its consumers for any quarter shall be computed as per the following formula:

$$FS = (C + Ip) / E \text{ (Rs. / kWh)}$$

Where

C (in Rs. Lakh) = {(Weighted Average Variable Cost of all sources of power purchase during previous quarter in Rs/kWh – Base Weighted Average Variable Cost of all sources of power purchase as approved under Tariff Order for the year under operation in Rs/kWh) x Corresponding Power Purchase from all sources during previous quarter in LU}

E (in Lakh Units) = Energy sold (metered plus estimated) during previous quarter.

Ip (In Rs. Lakh) = Under-recovery of fuel surcharge in the previous quarter.

Note:

(i) Quarter referred under this formula shall correspond to financial quarter (s) viz. Q1 (Apr. to Jun), Q2 (Jul to Sept), Q3 (Oct to Dec), and Q4 (Jan to Mar).

(ii) The variation in power purchase cost due to Charges for Deviations incurred by Distribution Licensee as per Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 as amended from time to time and Hydro based generation and other unapproved purchases shall not be covered under fuel surcharge adjustment.

(iv) For the generation stations/power purchase sources, which have single part tariff, 1/3 of the tariff shall be considered as fixed charge and 2/3 of the tariff shall be considered as energy charge for adjustment under this formula.

(v) The cost and quantum of power purchase shall be based on bills paid/credits received during the previous quarter irrespective of period to which it pertains and shall include arrears or refunds, if any, for previous period, not considered earlier.

(2) The rate of Fuel Surcharge shall be worked out in Rs./kWh rounded off to the next second decimal place.

(3) The Fuel Surcharge per unit for any quarter shall not exceed 15% of weighted average power purchase cost per unit approved by the Commission, or such other ceiling as may be stipulated by the Commission from time to time:

Provided that Distribution Licensee may file a separate Petition before the Commission for approval of recovery of the Fuel Surcharge over and above ceiling limit as specified above.

(4) The total Fuel Surcharge recoverable, as per the formula specified above, shall be recovered from the actual sales and in case of un-metered consumers, it shall be recoverable based on estimated sales to such consumers, calculated in accordance with such methodology as may be stipulated by the Commission.

Description

1. The Tariff Order for FY 2019-20 was issued by the Hon'ble Commission on 6th February 2020 and was applicable from February 2020 onwards until the next tariff order. Hence, the approved figures from the Tariff Order for FY 2019-20 have been considered for October, November and December 2020.
2. In terms of the Regulation 88 of the RERC Tariff Regulations 2019, the variation in power purchase cost due to UI and Hydro based generation and other unapproved purchases shall not be covered under fuel surcharge adjustment. Further, where the Generating Station/ Power purchase source has a single part tariff the tariff would be bifurcated into one-third as fixed charges and two-thirds as variable charges.
3. The calculation of actual weighted average variable cost for the third quarter of FY 2020-21 (October'20-December'20) which is used to determine the Fuel Surcharge for fourth quarter of FY 2020-21 (period from January '21 to March '21), against the RERC approved weighted average variable cost in the Tariff Order for FY 2019-20 is tabulated below:

Weighted Average Variable Cost:

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
S. No.	Sources of Power Purchase	Approved Power Purchase for Rajasthan for FY 2019-20			Power Purchase (Oct-Dec'20)		
		Net Generation	Total variable Cost	Variable Cost/Unit	Net Generation	Total Variable Cost	Variable Cost/Unit
		(MU)	(Rs. Cr.)	Rs./Unit	(MU)	(Rs Cr)	Rs./Unit
A	NTPC						
	ANTA GTPS	30	12	4.00	1	0	2.58
	AURIYA GTPS	28	12	4.29	0	0	0.00
	Bhadla II	434	145	3.33	101	34	3.33
	DADRI GTPS	116	49	4.22	24	8	3.30
	Unchahar I	47	21	4.47	15	5	3.53
	Unchahar II	35	19	5.43	26	9	3.58
	Unchahar III (unit 5)	29	15	5.17	24	8	3.42
	Unchahar IV	128	58	4.53	86	26	3.05
	FARAKKA STPS	43	15	3.49	12	3	2.77
	KAHALGAON II (U 1)	109	23	2.11	34	8	2.52
	KAHALGAON-2 STPS	465	95	2.04	97	24	2.46
	RIHAND STPS (unit 1 & 2)	595	80	1.34	105	16	1.48
	RIHAND 2 STPS	553	74	1.34	187	29	1.55
	RIHAND STPS III	805	110	1.37	223	35	1.55
	SINGRAULI STPS	1662	231	1.39	441	63	1.42
	NCTPS II	5	4	8.00	0	1	0.00
	NSM Bundled	3466	1007	2.91	794	233	2.93
	Talchar STPS	0	0	0.00	54	14	2.70
	Meja	37	12	3.24	0	0	0.00
	Prior Period				0	-1	0.00
	Sub-Total (A)	8587	1982	2.31	2224	516	2.32
B	Lignite Based plant						
	Barsingsar (Neyveli Lignite Power)	1251	156	1.25	279	30	1.09
	Rajwest Total	5231	1308	2.50	1693	423	2.50

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
S. No.	Sources of Power Purchase	Approved Power Purchase for Rajasthan for FY 2019-20			Power Purchase (Oct-Dec'20)		
		Net Generation	Total variable Cost	Variable Cost/Unit	Net Generation	Total Variable Cost	Variable Cost/Unit
		(MU)	(Rs. Cr.)	Rs./Unit	(MU)	(Rs Cr)	Rs./Unit
	Prior Period				0	0	
	Sub-Total (B)	6482	1464	2.26	1973	454	2.30
C	NPCIL						
	NAPP 1&2	335	71	2.13	83	17	2.01
	RAPP-I & II	1013	235	2.32	0	0	0.00
	RAPP-III& IV	1088	253	2.33	261	57	2.19
	RAPP-V & VI	689	187	2.71	175	45	2.57
	Prior Period				0	5	0.00
	Sub-Total (C)	3125	747	2.39	519	124	2.39
D	State Gen. & Others						
	KTPS (Unit 1 to 7) Total	5940	1842	3.10	1275	484	3.79
	STPS (Unit 1 to 6) Total	4938	1776	3.60	325	152	4.66
	Ramgarh TPS	839	234	2.79			
	Ramgarh project stage 3 unit 4				94	25	2.64
	Dholpur GTPP (U-1, U-2, U-3)	9	6	6.67	0	-36	0.00
	Chhabra-I-IV	6429	1534	2.39	1454	470	3.23
	Chhabra-V&VI	5684	1211	2.13	1913	467	2.44
	Kalisind Unit 1&2	4945	1340	2.71	1824	525	2.88
	Others				0	69	0.00
	Sub-Total (D)	28784	7943	2.76	6885	2155	3.13
E	Indira Ghandi (jhajjar -unit 1& 2) (Aravali Power)	0	0	0.00	0	0	0.00
	Prior Period				0	0	
	Total				0	0	
F	COASTAL GUJARAT (MUNDRA)	1967	372	1.89	532	99	1.87
	Prior Period				0	0	
	Total				532	99	1.87
G	ADANI POWER RAJASTHAN LTD.	7421	1914	2.58	2361	629	2.66
	Prior Period				0	0	
	Total				2361	629	2.66
H	SASAN POWER LTD.	2855	360	1.26	757	98	1.30
	Prior Period				0	5	
	Total				757	103	1.36
I	NVVN Bundled Power	2314	785	3.39	534	206	3.86
	Prior Period				0	0	
	Total				534	206	3.86
J	PTC (DB Power)	2085	365	1.75	557	93	1.67
	Prior Period				0	30	
	Total				557	123	2.20

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
S. No.	Sources of Power Purchase	Approved Power Purchase for Rajasthan for FY 2019-20			Power Purchase (Oct-Dec'20)		
		Net Generation	Total variable Cost	Variable Cost/Unit	Net Generation	Total Variable Cost	Variable Cost/Unit
		(MU)	(Rs. Cr.)	Rs./Unit	(MU)	(Rs Cr)	Rs./Unit
K	PTC (Maruti)	1243	181	1.46	289	99	3.44
	Prior Period				0	0	
	Total				289	99	3.44
L	NCES						
	Wind Farms	5694	1905	3.35	750	250	3.33
	Solar	4116	1177	2.86	548	133	2.42
	Bio-Mass	480	228	4.75	101	51	4.98
	Sub-Total (M)	10290	3310	3.22	1400	434	3.10
	TOTAL	75153	19422	2.58	18029	4941	2.74
	Weighted Avg Variable Cost (Rs./kWh)		2.58			2.74	

4. As it can be inferred from the table above that the weighted average power purchase cost as approved by the Commission in the Tariff Order for FY 2019-20 is lower than the actual weighted average cost for the third quarter of FY 2020-21 (October'20 to December'20). Hence, fuel surcharge is recoverable in the fourth quarter (January'21 to March'21) of FY 2020-21.

Calculation of Fuel Surcharge:

5. As per the regulation "The Fuel Surcharge (FS) chargeable by the distribution licensee from its consumers for any quarter shall be computed as per the following formula:

$$FS = (C + Ip) / E \text{ (Rs. / kWh)}$$

Where

C (in Rs. Lakh) = {(Weighted Average Variable Cost of all sources of power purchase during previous quarter in Rs/kWh – Base Weighted Average Variable Cost of all sources of power purchase as

approved under Tariff Order for the year under operation in Rs/kWh) x Corresponding Power Purchase from all sources during previous quarter in LU}

E (in Lakh Units) = Energy sold (metered plus estimated) during previous quarter. Ip (In Rs. Lakh) = Under-recovery of fuel surcharge in the previous quarter.

Based on the above-mentioned formula, fuel surcharge is computed.

6. The fuel surcharge for the 4th quarter of FY 2020-21 (Jan '21 to March'21) is computed as follows:

S. No.	Fuel Surcharge for Quarter 4 (Jan'21-March'21)	Units	Oct-Dec'20
1	Weighted Avg variable cost of all sources of power purchase during previous Quarter	Rs/kWh	2.74
2	Base weighted avg variable cost as approved	Rs/kWh	2.58
3	Power Purchase during Previous Quarter (Oct'20 - Dec'20)	MU	18029
4	Energy Sold during Previous Quarter (Oct'20 - Dec'20)	MU	17589
5	Under Recovery of FS during the previous quarter	Rs Lakhs	0
6	FSA for Quarter 4 of FY 2020-21	Rs/kWh	0.16

7. The power purchase quantum and cost approved by the Hon'ble Commission in Tariff Order for FY 2019-20 is as follows:

Approved by RERC	FY 2019-20
Total Quantum (MU)	84479
Total Variable Cost (Rs Cr)	22738
Total Fixed Cost (Rs Cr)	11245
Total Power Purchase Cost (Rs Cr)	33983
Weighted avg. Power Purchase Cost (Rs/kWh)	4.02

Conclusion:

8. According to the calculations presented, the fuel surcharge for the fourth quarter (Jan'21 to March'21) of FY 2020-21 is computed as Rs. 0.16/unit. This is less than the average ceiling limit of Rs. 0.60/kWh approved by the Hon'ble commission (i.e. 15% of the weighted average power purchase cost approved by the Hon'ble Commission in its Tariff Order for FY 2019-20).
9. Accordingly, the fuel surcharge of Rs. 0.16/kWh will be recoverable for fourth quarter of FY 2020-21.