

Fuel Surcharge for First Quarter of FY 2019-20

(April'19-June'19)

FINAL REPORT

Submitted to

Ajmer Vidyut Vitran Nigam Limited

Ajmer

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Table of Contents

Background	3
Description.....	5
Conclusion	9

Background

1. In term of the Regulation 88 of the RERC Tariff Regulation 2019, AVVNL is 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 AVVNL 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 2018-19 was issued by the Hon'ble Commission on 28th May 2018 and was applicable from June 2018 onwards. Hence, the approved figures from the Tariff Order for FY 2018-19 have been considered for January, February and March 2019.
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 fourth quarter of FY 2018-19 (Jan'19-Mar'19) which is used to determine the Fuel Surcharge for first quarter of FY 2019-20 (period from Apr'19 to June'19), against the RERC approved weighted average variable cost in the Tariff Order for FY 2018-19 is tabulated below:

Weighted Average Variable Cost

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
Sl. No.	Sources of Power Purchase	Approved Power Purchase for AVVNL for FY 2018-19			Power Purchase (Jan'19-Mar'19)		
		Net Generation	Total variable Cost	Approved Variable Cost/Unit	Net Generation	Total Variable Cost	Actual Variable Cost/Unit
		(MU)	(Rs Cr)	Rs./Unit	(MU)	(Rs Cr)	Rs./Unit
A	NTPC						
	ANTA GTPS	13.00	6.00	4.62	5.04	1.71	3.40
	AURIYA GTPS	9.00	6.00	6.67	0.30	0.11	3.77
	Bhadla	116.00	39.33	3.39	27.55	9.18	3.33
	DADRI GTPS	40.00	14.00	3.50	8.32	3.18	3.82
	FARAKKA STPS	12.00	4.00	3.33	2.87	0.77	2.68
	KAHALGAON II (U 1)	29.00	7.00	2.41	8.98	2.01	2.24
	KAHALGAON-2 STPS	140.00	33.00	2.36	40.63	8.71	2.14
	RIHAND STPS (unit 1 & 2)	214.00	27.00	1.26	36.03	4.85	1.35
	RIHAND 2 STPS	228.00	27.00	1.18	51.96	6.20	1.19
	RIHAND STPS III	262.00	32.00	1.22	48.68	6.62	1.36
	NSM Bundled	491.00	139.00	2.83	223.09	67.22	3.01
	SINGRAULI STPS	586.00	77.00	1.31	132.49	18.31	1.38
	Unchahar I	27.00	7.00	2.59	6.63	2.11	3.18
	Unchahar II	51.00	12.00	2.35	6.16	2.31	3.74
	Unchahar III (unit 5)	31.00	7.00	2.26	4.43	1.28	2.89
	NCTPS II	11.00	1.00	0.91	0.00	0.42	0.00
	Prior Period				0.00	0.06	
	Sub-Total (A)	2260.00	438.33	1.94	603.15	135.06	2.24
B	Lignite Based plant						
	Barsingsar (Neyveli Lignite Power)	406.00	50.00	1.23	77.52	8.33	1.07
	Rajwest Total	1697.00	365.00	2.15	353.29	88.32	2.50
	Prior Period				0.00	21.08	

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
Sl. No.	Sources of Power Purchase	Approved Power Purchase for AVVNL for FY 2018-19			Power Purchase (Jan'19-Mar'19)		
		Net Generation (MU)	Total variable Cost (Rs Cr)	Approved Variable Cost/Unit Rs./Unit	Net Generation (MU)	Total Variable Cost (Rs Cr)	Actual Variable Cost/Unit Rs./Unit
	Sub-Total (B)	2103.00	415.00	1.97	430.81	117.73	2.73
C	NPCIL						
	NAPP 1&2	95.00	16.67	1.75	15.95	3.40	2.13
	RAPP-I & II	377.00	74.00	1.96	32.39	7.53	2.32
	RAPP-III& IV	306.00	60.00	1.96	68.53	15.93	2.32
	RAPP-V & VI	190.00	45.33	2.39	47.24	12.77	2.70
	Prior Period				0.00	0.00	
	Sub-Total (C)	968.00	196.00	2.02	164.12	39.63	2.41
D	State Gen. & Others						
	STPS (Unit 1 to 6)	1235.00	425.00	3.44	362.73	115.07	3.17
	KTPS (Unit 1 to 7)	1761.00	491.00	2.79	525.48	160.06	3.05
	Ramgarh TPS	103.00	23.00	2.23	42.97	11.96	2.78
	Dholpur GTPP	67.00	33.00	4.93	0.00	1.02	0.00
	Chhabra-I & II	772.00	178.00	2.31	199.07	44.96	2.26
	Chhabra-III	318.00	74.00	2.33	118.39	26.19	2.21
	Chhabra Phase 3 Unit IV	439.00	102.00	2.32	121.08	31.06	2.57
	Kalisind Unit 1	871.00	236.00	2.71	279.41	64.95	2.32
	Kalisind Unit II	826.00	224.00	2.71	260.18	65.00	2.50
	Ramgarh project stage 3 unit 4	283.00	82.00	2.90	1.01	1.20	11.84
	Others				0.00	-50.83	0.00
	Sub-Total (D)	6675.00	1868.00	2.80	1910.31	470.63	2.46
E	Indira Ghandi (jhajjar -unit 1& 2) (Aravali Power)	1.00	0.00	0.00	0.00	0.00	0.00
	Prior Period				0.00	0.00	
	Total				0.00	0.00	0.00
F	COASTAL GUJARAT (MUNDRA) unit 1, 2 and 3	661.00	99.00	1.50	166.47	34.15	2.05
	Prior Period				0.00	0.00	
	Total				166.47	34.15	2.05
G	ADANI POWER RAJASTHAN LTD.	1481.00	309.00	2.09	600.08	161.81	2.70
	Prior Period				0.00	37.37	
	Total				600.08	199.18	3.32
H	SASAN POWER LTD.	751.00	100.00	1.33	198.76	25.09	1.26
	Prior Period				0.00	0.00	
	Total				198.76	25.09	1.26
J	NVVN Bundled Power	633.00	225.00	3.55	151.13	45.04	2.98
	Prior Period				0.00	0.00	

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
Sl. No.	Sources of Power Purchase	Approved Power Purchase for AVVNL for FY 2018-19			Power Purchase (Jan'19-Mar'19)		
		Net Generation (MU)	Total variable Cost (Rs Cr)	Approved Variable Cost/Unit Rs./Unit	Net Generation (MU)	Total Variable Cost (Rs Cr)	Actual Variable Cost/Unit Rs./Unit
	Total				151.13	45.04	2.98
K	PTC (DB Power)	518.00	91.00	1.76	179.12	50.33	2.81
	Prior Period				0.00	7.36	
	Total				179.12	57.68	3.22
L	PTC (Maruti)	510.00	91.00	1.78	70.33	22.56	3.21
	Prior Period				0.00	0.00	
	Total				70.33	22.56	3.21
M	Chhabra TPS St - 1 Ph -3 (Unit - 5)	609.00	130.00	2.13	589.90	206.62	3.50
	Prior Period						
	Total				589.90	206.62	3.50
N	Chhabra TPS St - 1 Ph -3 (Unit - 6)	609.00	130.00	2.13	81.54	33.89	4.16
O	RAPP Unit 7&8 (2*700) NPCIL	1159.00	234.00	2.02			
P	Tnda STPP Stage II (2*660 MW)	165.00	45.00	2.73			
Q	Unchahar IV (1*1500 MW) NTPC	145.00	41.00	2.83	14.50	4.10	2.83
R	NCES						
	Wind Farms	1670.00	548.67	3.29	213.64	70.50	3.30
	Bio-Mass	286.00	130.00	4.55	26.08	12.16	4.66
	Solar	1288.00	418.67	3.25	129.84	27.80	2.14
	CPPs				0.00	0.00	0.00
	Sub-Total (E)	3244.00	1097.33	3.38	369.57	110.46	2.99
	Prior Period				0.00	0.00	
	Total				369.57	110.46	2.99
	TOTAL (without bilateral trading)	22492.00	5509.67	2.45	5529.78	1501.82	2.72
S	Other Short term source						
	Bilateral Trading	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total (F)	0.00	0.00	0.00	0.00	0.00	0.00
	GRAND TOTAL	22492.00	5509.67	2.45	5529.78	1501.82	2.72

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
Sl. No.	Sources of Power Purchase	Approved Power Purchase for AVVNL for FY 2018-19			Power Purchase (Jan'19-Mar'19)		
		Net Generation	Total variable Cost	Approved Variable Cost/Unit	Net Generation	Total Variable Cost	Actual Variable Cost/Unit
		(MU)	(Rs Cr)	Rs./Unit	(MU)	(Rs Cr)	Rs./Unit
	Weighted Avg Variable Cost (Rs./kWh)		2.45			2.72	

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 2018-19 is lower than the actual weighted average cost for the Fourth quarter of FY 2018-19 (Jan'19 to Mar'19). Hence, fuel surcharge is recoverable in the first quarter (April'19-June'19) of FY 2019-20.

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 fourth quarter of FY 2018-19 (Jan'19 to Mar'19) was 0.23 Rs/kWh, which was recoverable during the desired period. The weighted average variable cost as approved by the Hon'ble Commission was 2.44 Rs/kWh in its tariff order for FY 2018-19, which was lesser than the actual variable cost of Rs. 2.66/kWh for the months of Oct'18 to Dec'18.
7. The fuel surcharge for the first quarter of FY 2019-20 (April'19-June'19) is computed as follows:

Sl. No.	Fuel Surcharge for 1st Quarter (April'19 - June'19)	Units	Jan'19-Mar'19
1	Weighted Avg variable cost of all sources of power purchase during previous Quarter	Rs/kWh	2.72
2	Base weighted avg variable cost as approved	Rs/kWh	2.45
3	Power Purchase during Previous Quarter (Jan'19 - Mar'19)	MU	5529.78
4	Energy Sold during previous quarter (Jan'19 - Mar'19)	MU	4220.00
5	FSA for 1st Quarter of FY 2019-20	Rs/kWh	0.35

8. The power purchase quantum and cost approved by the Hon'ble Commission in Tariff Order for FY 2018-19 is as follows:

Approved by RERC	FY 2018-19
Total Quantum (MU)	24511
Total Variable Cost (Rs Cr)	6540
Total Fixed Cost (Rs Cr)	2474
Total Power Purchase Cost (Rs Cr)	9014

Conclusion:

9. According to the calculations presented, the fuel surcharge for the first quarter (April'19 to June'19) of FY 2019-20 is computed as Rs. 0.35/ unit. This is less than the average ceiling limit of Rs. 0.55/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 2018-19).
10. Accordingly, the fuel surcharge of 0.35 Rs/kWh will be recoverable for first quarter of FY 2019-20 (April'19 to June'19).