

Fuel Surcharge for First Quarter of FY 2019-20

(April'19-June'19)

FINAL REPORT

Jodhpur Vidyut Vitran Nigam Limited

Jodhpur

May- 2019

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Background

1. In term of the Regulation 88 of the RERC Tariff Regulation 2019, JdVVNL 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 JdVVNL 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

(1) 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 maybe 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 calculation for January 2019 to 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. 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:

Table: 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 JdVVNL for FY 2018-19			Power Purchase (Jan '19- Mar'19)		
		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	15.00	7.00	4.67	6.05	2.06	3.40
	AURIYA GTPS	10.00	7.00	7.00	0.36	0.13	3.77
	DADRI GTPS	46.00	16.00	3.48	9.99	3.82	3.82
	FARAKKA STPS	13.00	4.00	3.08	3.44	0.92	2.68
	KAHALGAON II (U 1)	33.00	8.00	2.42	10.78	2.42	2.24
	KAHALGAON-2 STPS	160.00	38.00	2.38	48.79	10.46	2.14
	RIHAND STPS (unit 1 & 2)	245.00	30.00	1.22	43.27	5.83	1.35
	RIHAND 2 STPS	260.00	31.00	1.19	62.39	7.45	1.19
	RIHAND STPS III	300.00	37.00	1.23	58.45	7.95	1.36
	SINGRAULI STPS	670.00	88.00	1.31	159.10	21.99	1.38
	Unchahar I	31.00	8.00	2.58	7.96	2.53	3.18
	Unchahar II	58.00	13.00	2.24	7.40	2.77	3.74
	Unchahar III (unit 5)	36.00	8.00	2.22	5.32	1.54	2.89
	Unchahar IV	9.00	2.00	2.22	17.42	4.93	2.83
	NCTPS II	12.00	1.00	0.83	0.00	0.76	0.00
	Bhadla II	132.00	44.67	3.38	33.08	11.03	3.33
	NSM Bundled	562.00	158.00	2.81	267.90	80.71	3.01
	Prior Period			0.00	0.00	0.07	0.00
	Sub-Total (A)	2592.00	500.67	1.93	741.69	167.37	2.26
B	Lignite Based plant						
	Barsingsar (Neyveli Lignite Power)	464.00	57.00	1.23	93.09	10.00	1.07

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
S. No.	Sources of Power Purchase	Approved Power Purchase for JdVVNL for FY 2018-19			Power Purchase (Jan '19- Mar'19)		
		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
	Rajwest Total	1939.00	417.00	2.15	424.23	93.30	2.20
	Prior Period			0.00	0.00	24.09	0.00
	Sub-Total (B)	2403.00	474.00	1.97	517.32	127.39	2.46
C	NPCIL						
	NAPP 1&2	108.00	18.67	1.73	19.16	4.09	2.13
	RAPP-I &II	430.00	84.00	1.95	38.90	9.04	2.32
	RAPP-III& IV	350.00	68.67	1.96	82.29	19.13	2.32
	RAPP-V & VI	217.00	52.00	2.40	56.73	15.33	2.70
	RAPP-VII & VIII	1325.00	268.00	2.02			0.00
	Prior Period				0.00	0.00	
	Sub-Total (C)	2430.00	491.33	2.02	197.08	47.59	2.41
D	State Gen. & Others						
	KTPS (Unit 1 to 7) Total	2012.00	561.00	2.79	631.00	192.20	3.05
	STPS (Unit 1 to 6) Total	1412.00	485.00	3.43	435.57	138.18	3.17
	Ramgarh TPS	118.00	26.00	2.20	51.60	14.36	2.78
	Dholpur GTPP (U-1, U-2, U-3)	76.00	38.00	5.00	0.00	1.22	0.00
	Chhabra-I&II	882.00	204.00	2.31	239.05	53.99	2.26
	Chhabra-III	363.00	84.00	2.31	142.16	31.44	2.21
	Chhabra-IV	501.00	116.00	2.32	145.39	37.30	2.57
	Chhabra-V	696.00	148.00	2.13	714.67	250.42	3.50
	Chhabra-VI	696.00	148.00	2.13	97.91	40.70	4.16
	Kalisind Unit 1	995.00	270.00	2.71	335.52	77.99	2.32
	Kalisind Unit 2	945.00	256.00	2.71	312.42	78.05	2.50
	Ramgarh project stage 3 unit 4	323.00	94.00	2.91	1.21	1.44	11.84
	Others			0.00	0.00	31.10	0.00
	Sub-Total (D)	9019.00	2430.00	2.69	3106.50	948.39	3.05
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	
F	COASTAL GUJARAT (MUNDRA)	756.00	113.00	1.49	195.31	41.01	2.10
	Prior Period				0.00	0.00	
	Total				195.31	41.01	2.10
G	ADANI POWER RAJASTHAN LTD.	1692.00	353.00	2.09	720.58	194.30	2.70
	Prior Period				0.00	45.86	
	Total				720.58	240.16	3.33

Weighted Avg variable Cost of all sources of power purchase (Rs/kWh)							
S. No.	Sources of Power Purchase	Approved Power Purchase for JdVVNL for FY 2018-19			Power Purchase (Jan '19- Mar'19)		
		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
H	SASAN POWER LTD.	858.00	114.00	1.33	238.67	30.12	1.26
	Prior Period				0.00	0.00	
	Total				238.67	30.12	1.26
I	NVVN Bundled Power	723.00	257.00	3.55	181.48	55.73	3.07
	Prior Period				0.00	0.00	
	Total				181.48	55.73	3.07
J	PTC (DB Power)	592.00	104.00	1.76	215.09	60.43	2.81
	Prior Period				0.00	8.83	
	Total				215.09	69.27	3.22
K	PTC (Maruti)	582.00	104.00	1.79	84.45	27.09	3.21
	Prior Period				0.00	0.00	
	Total				84.45	27.09	3.21
L	Tanda STPP	189.00	51.00	2.70			
M	NCES						
	Wind Farms	1908.00	627.33	3.29	353.51	109.60	3.10
	Solar	1472.00	478.00	3.25	239.92	53.72	2.24
	Bio-Mass	327.00	148.67	4.55	31.19	14.55	4.66
	Sub-Total (E)	3707.00	1254.00	3.38	624.62	177.86	2.85
	TOTAL	25544.00	6246.00	2.45	6822.79	1931.98	2.83
	Weighted Avg Variable Cost (Rs./kWh)		2.45			2.83	

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 (January'19 to March'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:

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

Where,

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

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 0.24 Rs/kWh, which was recoverable during the desired period. The weighted average variable cost as approved by the Hon'ble Commission was 2.45 Rs/kWh in its tariff order for FY 2018-19, which was lesser than the weighted average variable cost of Rs. 2.65/kWh for the months Oct'18-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	2.83
2	Base weighted avg. variable cost as approved	Rs/kWh	2.45
3	Power Purchase during Previous Quarter (Jan'19 - Mar'19)	MU	6822.79
4	Energy Sold during Previous Quarter (Jan'19 - Mar'19)	MU	5068.67
5	FSA for 1st Quarter of FY 2019-20	Rs/kWh	0.52

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)	28013
Total Variable Cost (Rs Cr)	7474
Total Fixed Cost (Rs Cr)	2828
Total Power Purchase Cost (Rs Cr)	10302
Weighted avg Power Purchase Cost (Rs/kWh)	3.68

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. 0.52/ 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 0.52 Rs/kWh will be recoverable for first quarter of FY 2019-20 (April'19 to June'19).