

Mr. Syed Safeer Hussain,
Registrar,
National Electric Power Regulatory Authority,
NEPRA Tower, Attaturk Avenue (East),
Sector G-5/1,
Islamabad.

Ref No. KE/BPR/NEPRA/2020/300
March 13, 2020

Subject: Monthly Cost Variation for the month of February 2020 under Multi-Year Tariff 2017 – 2023

Dear Sir,

This is with reference to the mechanism for monthly and quarterly variations provided in the Multi-Year Tariff Determination of K-Electric Limited (KE) dated July 5, 2018 (MYT), notified vide SRO No. 576 (I)/2019 dated May 22, 2019.

In this regard, please find enclosed calculation of monthly variation for the month of February 2020 along with relevant supports, for Authority's approval. Please note that the calculation for the month of February 2020 is based on CPPA-G's latest fuel cost determined by NEPRA for the month of October 2019 and it is subject to adjustment based on the determination for February 2020 to be issued by NEPRA.

Summary of monthly variation as per the mechanism given in MYT is as follows:

Month	Variation Amount (PKR Million)	Variation per unit (PKR / kWh)
Feb-20	1,035	0.975

Economic Dispatch Order

KE dispatches as per Economic Merit Order from its own generating units (with the available fuel resources) and import from external sources. It is also certified that the cost of fuel and power purchase claim does not include any amount of late payment surcharge / mark-up / interest. All the requisite details including generation statistic sheets and invoices are enclosed.

Heat Rate

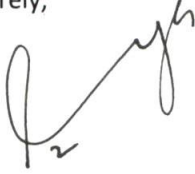
In the MYT, NEPRA has determined provisional Heat rates for KE's generating plants and has directed KE to conduct fresh Heat rate test for its plants, based on which final Heat rates will be determined by NEPRA.

In this regard, NEPRA has issued its decision on Heat rate for BQPS – II plant on January 1, 2020 and accordingly the calculations are based on Heat rates determined therein.

Further, Heat rate test of KCCP, KGTPS and SGTPS Plants have been conducted during June and July 2019, and heat rate test of BQPS-I plant has been conducted in November 2019. The working for required adjustment will be submitted to NEPRA after determination of final Heat rates for these plants based on the test results.

KE would humbly request NEPRA for expeditious processing of pending monthly variations for July 2019 to January 2020 and quarterly tariff variations for the period April 2019 to December 2019.

Sincerely,



Ayaz Jaffar Ahmed
Director – Finance & Regulations

Enclosed:

- Calculation sheet of monthly variation – February 2020
- Supporting Documents for February 2020

K Electric Limited

SUMMARY OF REQUIRED ADJUSTMENT ON ACCOUNT OF VARIATION IN COST OF FUEL AND POWER PURCHASES

DESCRIPTION		Unit	Dec-19	Feb-20
			Reference	Current
A)	Cost of fuel:			
	Cost of fuel - KE	a	4,835.576	5,979.379
	Cost of fuel - Power Purchases		3,579.172	3,809.022
	Total		8,414.748	9,788.401
B)	Units Sent Out			
	Units Sent Out - KE	b	441.728	463.118
	Units - Power purchases		579.279	598.958
	Total		1,021.007	1,062.076
C)	Cost per unit			
	Cost of fuel - KE	c = a/b	4.736	5.630
	Cost of fuel - Power Purchases		3.506	3.586
	Average		8.242	9.216
D)	Variation per unit			
	Cost of fuel - KE	d	Rs./kWh	0.894
	Cost of fuel - Power Purchases		Rs./kWh	0.081
	Total Fuel Cost Adjustment		Rs./kWh	0.975
E)	Total Fuel Cost Adjustment		Ps/kWh	97.47
F)	Variation amount			
	Cost of fuel - KE	e = d x	Mill Rs.	949.296
	Cost of fuel - Power Purchases	b (total)	Mill Rs.	85.881
	Total Fuel Cost Adjustment		Mill Rs.	1,035.176

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Dec-19	Feb-20
		Reference	Current
1	<u>UNITS SENT OUT</u>		
	<u>1a UNITS SENT OUT ON FURNACE OIL</u>		
	<u>i Bin Qasim - I</u>		
	Unit 1	GWh	50.083
	Unit 2	GWh	36.693
	Unit 3	GWh	8.314
	Unit 4	GWh	7.228
	Unit 5	GWh	24.633
	Unit 6	GWh	1.148
	Total units sent out on furnace oil - Bin Qasim - I	GWh	128.098
		18.452	
	<u>1b UNITS SENT OUT ON GAS</u>		
	<u>i Bin Qasim - I</u>		
	Unit 1	GWh	3.924
	Unit 2	GWh	3.986
	Unit 3	GWh	0.250
	Unit 4	GWh	0.204
	Unit 5	GWh	2.810
	Unit 6	GWh	0.777
	Total units sent out on gas - Bin Qasim - I	GWh	11.951
		1.073	
	ii Bin Qasim II - 560 MW	GWh	113.740
	iii Korangi Town Gas Turbine II	GWh	-
	iv Site Gas Turbine II	GWh	3.908
	v Korangi CCPP	GWh	3.085
	Total units sent out on gas - KE	GWh	132.684
		197.646	
	<u>1c UNITS SENT OUT ON LNG</u>		
	<u>i Bin Qasim - I</u>		
	Unit 1	GWh	6.546
	Unit 2	GWh	6.650
	Unit 3	GWh	0.416
	Unit 4	GWh	0.340
	Unit 5	GWh	4.688
	Unit 6	GWh	1.296
	Total units sent out on LNG - Bin Qasim - I	GWh	19.936
		1.357	
	ii Bin Qasim II - 560 MW	GWh	174.904
	iii Korangi Town Gas Turbine II	GWh	-
	iv Site Gas Turbine II	GWh	4.798
	v Korangi CCPP	GWh	2.698
	Total units sent out on LNG - KE	GWh	202.336
		225.630	
	Total units sent out KE	GWh	463.118
		441.728	
2	<u>HEAT RATE AT BUS BAR</u>		
	<u>i Bin Qasim - I</u>		
	Unit 1	Btu/kWh	10,802
	Unit 2	Btu/kWh	10,650
	Unit 3	Btu/kWh	10,996
	Unit 4	Btu/kWh	10,899
	Unit 5	Btu/kWh	10,304
	Unit 6	Btu/kWh	10,249
	ii Bin Qasim II - 560 MW	Btu/kWh	8,381
	iii Korangi Town Gas Turbine II	Btu/kWh	8,738
	iv Site Gas Turbine II	Btu/kWh	8,746
	v Korangi CCPP	Btu/kWh	8,497

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Dec-19	Feb-20	
		Reference	Current	
3	<u>Calorific Value - Furnace Oil</u>	Btu/kg	40,351	40,351
4	<u>FUEL PRICES</u>			
4a	Fuel Price - Gas	Rs./MMBTU	824	824
4b	Fuel Price - Furnace Oil	Rs./Mton	57,777	59,616
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,432	1,477
4d	Fuel Price - LNG	Rs./MMBTU	1,682	1,733
5	<u>COST OF FUEL</u>			
	<u>5a Furnace oil</u>			
	<u>i Bin Qasim - I</u>			
	Unit 1	Mill Rs.	-	799.297
	Unit 2	Mill Rs.	-	577.354
	Unit 3	Mill Rs.	13.263	135.064
	Unit 4	Mill Rs.	14.757	116.383
	Unit 5	Mill Rs.	211.143	375.009
	Unit 6	Mill Rs.	34.530	17.376
	Total Cost of Furnace Oil - Bin Qasim - I	Mill Rs.	273.692	2,020.483
	<u>5b Gas</u>			
	<u>i Bin Qasim - I</u>			
	Unit 1	Mill Rs.	-	34.929
	Unit 2	Mill Rs.	-	34.981
	Unit 3	Mill Rs.	1.178	2.261
	Unit 4	Mill Rs.	1.555	1.828
	Unit 5	Mill Rs.	5.095	23.861
	Unit 6	Mill Rs.	1.434	6.563
	Total Cost of Gas - Bin Qasim - I	Mill Rs.	9.262	104.423
	ii Bin Qasim II - 560 MW	Mill Rs.	1,194.326	785.454
	iii Korangi Town Gas Turbine II	Mill Rs.	8.429	-
	iv Site Gas Turbine II	Mill Rs.	21.509	28.162
	v Korangi CCPP	Mill Rs.	136.326	21.603
	Total Cost of Gas - KE	Mill Rs.	1,369.851	939.642
	<u>5c LNG</u>			
	<u>i Bin Qasim - I</u>			
	Unit 1	Mill Rs.	-	122.551
	Unit 2	Mill Rs.	-	122.733
	Unit 3	Mill Rs.	3.042	7.934
	Unit 4	Mill Rs.	4.017	6.415
	Unit 5	Mill Rs.	13.160	83.717
	Unit 6	Mill Rs.	3.702	23.026
	Total Cost of LNG - Bin Qasim - I	Mill Rs.	23.921	366.376
	ii Bin Qasim II - 560 MW	Mill Rs.	2,846.352	2,540.422
	iii Korangi Town Gas Turbine II	Mill Rs.	15.339	-
	iv Site Gas Turbine II	Mill Rs.	39.863	72.728
	v Korangi CCPP	Mill Rs.	266.557	39.727
	Total Cost of LNG - KE	Mill Rs.	3,192.033	3,019.253
	Total cost of fuel - KE	a Mill Rs.	4,835.576	5,979.379
6	Variation in Cost of Fuel - KE			
	6a Units Sent Out - KE	GWh	441.728	463.118
	6b Units - Power Purchases	GWh	579.279	598.958
	Total Units Sent Out	b GWh	1,021.007	1,062.076
	6c Cost per unit	c = a/b Rs./kWh	4.736	5.630
	6d Variation per unit (Cost of Fuel - KE)	Rs./kWh		0.894
	6e Variation amount (Cost of Fuel - KE)	Mill Rs.		949.296

Work Sheet- Power Purchase Cost Variation

DESCRIPTION		Dec-19	Feb-20		
		Reference	Current		
1 POWER PURCHASES					
a	KANUPP	GWh	19.538	17.099	
b	TAPAL	GWh	23.585	34.225	
c	GUL AHMED	GWh	12.750	14.635	
d	CPPA-G	GWh	373.535	404.986	
e	ANOUD POWER	GWh	4.262	5.086	
f	INT IND (IIL)	GWh	6.372	5.994	
g	FFBL	GWh	34.734	30.024	
h	SNPC	GWh	55.842	46.995	
i	OURSUN	GWh	6.684	7.813	
j	CPPA-G - 150 MW	GWh	37.341	23.469	
k	GHARO SOLAR	GWh	4.635	8.633	
	TOTAL	GWh	579.279	598.958	
2 COST OF POWER PURCHASES - FUEL COST					
a	KANUPP	Mill Rs.	213.970	227.234	
b	TAPAL	Mill Rs.	263.722	435.474	
c	GUL AHMED	Mill Rs.	144.433	181.641	
d	CPPA-G - Note 1	Mill Rs.	1,988.514	2,155.943	
e	ANOUD POWER	Mill Rs.	45.044	60.944	
f	INT IND (IIL)	Mill Rs.	63.808	60.000	
g	FFBL	Mill Rs.	251.387	217.299	
h	SNPC	Mill Rs.	409.509	345.551	
i	OURSUN	Mill Rs.	-	-	
j	CPPA-G - 150 MW - Note 1	Mill Rs.	198.786	124.936	
k	GHARO SOLAR	Mill Rs.	-	-	
	TOTAL	Mill Rs.	3,579.172	3,809.022	
3 FUEL COST / UNIT					
a	KANUPP	Rs./kwh	10.951	13.290	
b	TAPAL	Rs./kwh	11.182	12.724	
c	GUL AHMED	Rs./kwh	11.328	12.411	
d	CPPA-G	Rs./kwh	5.324	5.324	
e	ANOUD POWER	Rs./kwh	10.570	11.984	
f	INT IND (IIL)	Rs./kwh	10.013	10.011	
g	FFBL	Rs./kwh	7.238	7.238	
h	SNPC	Rs./kwh	7.333	7.353	
i	OURSUN	Rs./kwh	-	-	
j	CPPA-G - 150 MW	Rs./kwh	5.324	5.324	
k	GHARO SOLAR	Rs./kwh	-	-	
4 VARIATION IN COST OF FUEL - POWER PURCHASES					
4a	Cost of Fuel - Power Purchases	a	Mill Rs.	3,579.172	3,809.022
	Units Sent out:				
	Units Sent Out - KE		GWh	441.728	463.118
	Units - Power Purchases		GWh	579.279	598.958
4b	Total Units Sent Out	b	GWh	1,021.007	1,062.076
4c	Cost per unit	c = a/b	Rs./kwh	3.506	3.586
4d	Variation per unit (Cost of Fuel - Power Purchases)		Rs./kwh		0.081
4e	Variation amount (Cost of Fuel - Power Purchases)		Mill Rs.		85.881

Note 1: CPPA-G's fuel cost for the month of February 2020 is based on NEPRA's determination of fuel cost for the month of October 2019 (latest determined) as the fuel cost for the month of February 2020 is yet to be determined.