

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/2020/480
May 14, 2020

Subject: Monthly Cost Variation for the month of April 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 April 2020 along with relevant supports, for Authority's approval. Please note that the calculation for the month of April 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 April 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)
Apr-20	(878)	(0.621)

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 tests of other plants have been conducted and Independent Engineers' reports have been submitted to NEPRA. The working for required adjustment will be submitted to NEPRA after determination of final Heat rates for these plants based on the test results.

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

Sincerely,



Ayaz Jaffar Ahmed
Director – Finance & Regulations

Enclosed:

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

K Electric Limited

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

DESCRIPTION		Unit	Mar-20	Apr-20
			Reference	Current
A)	Cost of fuel:			
	Cost of fuel - KE	a	6,948.931	6,967.321
	Cost of fuel - Power Purchases		3,778.301	4,483.981
	Total		10,727.232	11,451.302
B)	Units Sent Out			
	Units Sent Out - KE	b	638.156	724.796
	Units - Power purchases		591.834	688.925
	Total		1,229.990	1,413.721
C)	Cost per unit			
	Cost of fuel - KE	c = a/b	5.650	4.928
	Cost of fuel - Power Purchases		3.072	3.172
	Average		8.721	8.100
D)	Variation per unit			
	Cost of fuel - KE	d		(0.721)
	Cost of fuel - Power Purchases			0.100
	Total Fuel Cost Adjustment			(0.621)
E)	Total Fuel Cost Adjustment		Ps/kWh	(62.13)
F)	Variation amount			
	Cost of fuel - KE	e = d x		(1,019.612)
	Cost of fuel - Power Purchases	b (total)		141.293
	Total Fuel Cost Adjustment			(878.319)

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-20	Apr-20
		Reference	Current
1	<u>UNITS SENT OUT</u>		
	1a <u>UNITS SENT OUT ON FURNACE OIL</u>		
	i <u>Bin Qasim - I</u>		
	Unit 1	GWh 10.241	7.606
	Unit 2	GWh 11.859	11.320
	Unit 3	GWh 4.937	3.518
	Unit 4	GWh -	-
	Unit 5	GWh 25.346	29.156
	Unit 6	GWh 26.347	14.801
	Total units sent out on furnace oil - Bin Qasim - I	GWh 78.729	66.402
	1b <u>UNITS SENT OUT ON GAS</u>		
	i <u>Bin Qasim - I</u>		
	Unit 1	GWh 3.427	2.698
	Unit 2	GWh 0.775	2.113
	Unit 3	GWh 0.547	0.650
	Unit 4	GWh -	-
	Unit 5	GWh 10.214	12.027
	Unit 6	GWh 13.177	52.956
	Total units sent out on gas - Bin Qasim - I	GWh 28.140	70.444
	ii Bin Qasim II - 560 MW	GWh 226.196	240.293
	iii Korangi Town Gas Turbine II	GWh 9.904	31.222
	iv Site Gas Turbine II	GWh 25.270	34.848
	v Korangi CCPP	GWh 54.411	80.383
	Total units sent out on gas - KE	GWh 343.922	457.190
	1c <u>UNITS SENT OUT ON LNG</u>		
	i <u>Bin Qasim - I</u>		
	Unit 1	GWh 2.076	1.152
	Unit 2	GWh 0.470	0.902
	Unit 3	GWh 0.331	0.277
	Unit 4	GWh -	-
	Unit 5	GWh 6.186	5.133
	Unit 6	GWh 7.981	22.602
	Total units sent out on LNG - Bin Qasim - I	GWh 17.043	30.066
	ii Bin Qasim II - 560 MW	GWh 146.455	106.481
	iii Korangi Town Gas Turbine II	GWh 4.833	13.754
	iv Site Gas Turbine II	GWh 14.301	15.411
	v Korangi CCPP	GWh 32.874	35.492
	Total units sent out on LNG - KE	GWh 215.505	201.204
	Total units sent out KE	GWh 638.156	724.796
2	<u>HEAT RATE AT BUS BAR</u>		
	i <u>Bin Qasim - I</u>		
	Unit 1	Btu/kWh 10,802	10,802
	Unit 2	Btu/kWh 10,650	10,650
	Unit 3	Btu/kWh 10,996	10,996
	Unit 4	Btu/kWh 10,899	10,899
	Unit 5	Btu/kWh 10,304	10,304
	Unit 6	Btu/kWh 10,249	10,249
	ii Bin Qasim II - 560 MW	Btu/kWh 8,381	8,381
	iii Korangi Town Gas Turbine II	Btu/kWh 8,738	8,738
	iv Site Gas Turbine II	Btu/kWh 8,746	8,746
	v Korangi CCPP	Btu/kWh 8,497	8,497

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-20	Apr-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	56,988	52,019
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,412	1,289
4d	Fuel Price - LNG	Rs./MMBTU	1,811	1,579
5	<u>COST OF FUEL</u>			
	<u>5a Furnace oil</u>			
	<u>i Bin Qasim - I</u>			
	Unit 1	Mill Rs.	156.230	105.922
	Unit 2	Mill Rs.	178.370	155.423
	Unit 3	Mill Rs.	76.672	49.875
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	368.839	387.298
	Unit 6	Mill Rs.	381.362	195.568
	Total Cost of Furnace Oil - Bin Qasim - I	Mill Rs.	1,161.473	894.085
	<u>5b Gas</u>			
	<u>i Bin Qasim - I</u>			
	Unit 1	Mill Rs.	30.507	24.016
	Unit 2	Mill Rs.	6.805	18.546
	Unit 3	Mill Rs.	4.956	5.887
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	86.718	102.115
	Unit 6	Mill Rs.	111.283	447.224
	Total Cost of Gas - Bin Qasim - I	Mill Rs.	240.268	597.787
	ii Bin Qasim II - 560 MW	Mill Rs.	1,562.050	1,659.399
	iii Korangi Town Gas Turbine II	Mill Rs.	71.313	224.799
	iv Site Gas Turbine II	Mill Rs.	182.116	251.138
	v Korangi CCPP	Mill Rs.	380.957	562.805
	Total Cost of Gas - KE	Mill Rs.	2,436.704	3,295.928
	<u>5c LNG</u>			
	<u>i Bin Qasim - I</u>			
	Unit 1	Mill Rs.	40.598	19.645
	Unit 2	Mill Rs.	9.056	15.171
	Unit 3	Mill Rs.	6.595	4.816
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	115.404	83.532
	Unit 6	Mill Rs.	148.095	365.839
	Total Cost of LNG - Bin Qasim - I	Mill Rs.	319.748	489.003
	ii Bin Qasim II - 560 MW	Mill Rs.	2,222.326	1,409.352
	iii Korangi Town Gas Turbine II	Mill Rs.	76.465	189.808
	iv Site Gas Turbine II	Mill Rs.	226.461	212.869
	v Korangi CCPP	Mill Rs.	505.753	476.276
	Total Cost of LNG - KE	Mill Rs.	3,350.753	2,777.307
	Total cost of fuel - KE	a Mill Rs.	6,948.931	6,967.321
6	Variation in Cost of Fuel - KE			
	6a Units Sent Out - KE	GWh	638.156	724.796
	6b Units - Power Purchases	GWh	591.834	688.925
	Total Units Sent Out	b GWh	1,229.990	1,413.721
	6c Cost per unit	c = a/b Rs./kWh	5.650	4.928
	6d Variation per unit (Cost of Fuel - KE)	Rs./kWh		(0.721)
	6e Variation amount (Cost of Fuel - KE)	Mill Rs.		(1,019.612)

Work Sheet- Power Purchase Cost Variation

DESCRIPTION			Mar-20	Apr-20	
1 POWER PURCHASES					
a	KANUPP	GWh	29.730	19.762	
b	TAPAL	GWh	25.553	48.992	
c	GUL AHMED	GWh	10.307	31.277	
d	CPPA-G	GWh	369.721	425.861	
e	ANOUD POWER	GWh	5.349	5.576	
f	INT IND (IIL)	GWh	6.207	3.015	
g	FFBL	GWh	39.058	39.315	
h	SNPC	GWh	62.857	65.785	
i	OURSUN	GWh	8.613	8.815	
j	CPPA-G - 150 MW	GWh	24.162	29.313	
k	GHARO SOLAR	GWh	10.277	11.215	
TOTAL		GWh	591.834	688.925	
2 COST OF POWER PURCHASES - FUEL COST					
a	KANUPP - Note 1	Mill Rs.	330.281	194.918	
b	TAPAL	Mill Rs.	332.585	588.503	
c	GUL AHMED	Mill Rs.	136.396	413.354	
d	CPPA-G - Note 2	Mill Rs.	1,968.210	2,267.071	
e	ANOUD POWER	Mill Rs.	61.409	51.727	
f	INT IND (IIL)	Mill Rs.	62.148	30.192	
g	FFBL	Mill Rs.	295.353	297.296	
h	SNPC	Mill Rs.	463.291	484.873	
i	OURSUN	Mill Rs.	-	-	
j	CPPA-G - 150 MW - Note 2	Mill Rs.	128.629	156.047	
k	GHARO SOLAR	Mill Rs.	-	-	
TOTAL		Mill Rs.	3,778.301	4,483.981	
3 FUEL COST / UNIT					
a	KANUPP - Note 1	Rs./kwh	11.110	9.863	
b	TAPAL	Rs./kwh	13.016	12.012	
c	GUL AHMED	Rs./kwh	13.233	13.216	
d	CPPA-G - Note 2	Rs./kwh	5.324	5.324	
e	ANOUD POWER	Rs./kwh	11.480	9.277	
f	INT IND (IIL)	Rs./kwh	10.013	10.014	
g	FFBL	Rs./kwh	7.562	7.562	
h	SNPC	Rs./kwh	7.371	7.371	
i	OURSUN	Rs./kwh	-	-	
j	CPPA-G - 150 MW - Note 2	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.	3,778.301	4,483.981
Units Sent out:					
	Units Sent Out - KE		GWh	638.156	724.796
	Units - Power Purchases		GWh	591.834	688.925
4b	Total Units Sent Out	b	GWh	1,229.990	1,413.721
4c	Cost per unit	c = a/b	Rs./kwh	3.072	3.172
4d	Variation per unit (Cost of Fuel - Power Purchases)		Rs./kwh		0.100
4e	Variation amount (Cost of Fuel - Power Purchases)		Mill Rs.		141.293

Note 1: Kanupp details are provisional as the invoice for the month is yet to be received.

Note 2: CPPA-G's fuel cost for the month of April 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 April 2020 is yet to be determined.