

For Information & n.a. Please  
AD, Gen.

Copy to:  
• DG (M&E)  
• M/F

CC: Chairman  
• M (Tariff)

Handwritten signature and stamp in Urdu.

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

Ref No. KE/BPR/NEPRA/2021/407  
February 16, 2021

**Subject: Monthly Cost Variation for the month of January 2021 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 January 2021 along with relevant supports, for Authority's approval. Please note that the calculation for the month of January 2021 is based on CPPA-G's latest fuel cost determined by NEPRA for the month of December 2020 and it is subject to adjustment based on the determination for January 2021 to be issued by NEPRA.

Moreover, fuel cost (own plants) for January 2021 includes impact of GIDC arrears monthly installments billed by SSGC for the month of January 2021 amounting to PKR 762 million (excluding taxes) as per Supreme court order dated November 2, 2020 which is to be passed on to consumers.

Summary of Cost variation for the month January 2021 is as below;

Month	Variation Amount (PKR Million)	Variation per unit (PKR / kWh)
January-21	2,053	1.978

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 determined provisional Heat rates for KE's generating plants and 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, with respect to Heat Rates of KCCP, SGTPS & KGTPS, NEPRA issued its determination on September 2, 2020 and January 18, 2021 respectively, against which KE has filed review motions. The required adjustment will be incorporated after the final heat rates are determined.

Tariff Division Record  
By No. 1202  
Dated: 18-2-21

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Moreover, Heat rate test of BQPS I Plant has 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 of BQPS I based on the test results.

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

Sincerely,

Ayaz Jaffar Ahmed  
Director – Finance & Regulations

**Enclosed:**

- Calculation sheet of monthly variation – January 2021
- Supporting Documents for January 2021

**K Electric Limited**

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

DESCRIPTION		Unit	Dec-20 Reference	Jan-21 Current
A)	Cost of fuel:			
	Cost of fuel - KE	Mill Rs.	6,201.936	6,834.763
	Cost of fuel - Power Purchases	Mill Rs.	3,346.096	4,397.395
	<b>Total</b>	Mill Rs.	<b>9,548.032</b>	<b>11,232.158</b>
B)	Units Sent Out			
	Units Sent Out - KE	GWh	461.414	447.715
	Units - Power purchases	GWh	618.292	590.225
	<b>Total</b>	GWh	<b>1,079.706</b>	<b>1,037.940</b>
	Cost per unit			
	Cost of fuel - KE	Rs./kWh	5.744	6.585
	Cost of fuel - Power Purchases	Rs./kWh	3.099	4.237
	<b>Average</b>	Rs./kWh	<b>8.843</b>	<b>10.822</b>
D)	Variation per unit			
	Cost of fuel - KE	Rs./kWh		0.841
	Cost of fuel - Power Purchases	Rs./kWh		1.138
	<b>Total Fuel Cost Adjustment</b>	Rs./kWh		<b>1.978</b>
E)	<b>Total Fuel Cost Adjustment</b>	Ps/kWh		<b>197.84</b>
F)	Variation amount			
	Cost of fuel - KE	Mill Rs.		872.736
	Cost of fuel - Power Purchases	Mill Rs.		1,180.735
	<b>Total Fuel Cost Adjustment</b>	Mill Rs.		<b>2,053.471</b>

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION	Dec-20	Jan-21
	Current	Current
<b>1 UNITS SENT OUT</b>		
<b>1a UNITS SENT OUT ON FURNACE OIL</b>		
<b>i Bin Qasim - I</b>		
Unit 1	GWh 11.456	65.288
Unit 2	GWh 24.150	69.750
Unit 3	GWh -	-
Unit 4	GWh -	-
Unit 5	GWh 70.408	8.995
Unit 6	GWh -	54.433
<b>Total units sent out on furnace oil - Bin Qasim - I</b>	<b>GWh 106.013</b>	<b>198.445</b>
<b>1b UNITS SENT OUT ON GAS</b>		
<b>i Bin Qasim - I</b>		
Unit 1	GWh -	-
Unit 2	GWh -	-
Unit 3	GWh -	-
Unit 4	GWh -	-
Unit 5	GWh -	-
Unit 6	GWh -	-
<b>Total units sent out on gas - Bin Qasim - I</b>	<b>GWh -</b>	<b>-</b>
ii Bin Qasim II - 560 MW	GWh -	-
iii Korangi Town Gas Turbine II	GWh -	-
iv Site Gas Turbine II	GWh -	-
v Korangi CCPP	GWh -	-
<b>Total units sent out on gas - KE</b>	<b>GWh -</b>	<b>-</b>
<b>1c UNITS SENT OUT ON LNG</b>		
<b>i Bin Qasim - I</b>		
Unit 1	GWh 1.849	0.924
Unit 2	GWh 1.644	10.993
Unit 3	GWh -	-
Unit 4	GWh -	-
Unit 5	GWh 8.928	0.394
Unit 6	GWh -	42.905
<b>Total units sent out on LNG - Bin Qasim - I</b>	<b>GWh 12.421</b>	<b>55.221</b>
ii Bin Qasim II - 560 MW	GWh 318.635	133.859
iii Korangi Town Gas Turbine II	GWh 1.826	19.716
iv Site Gas Turbine II	GWh 0.001	10.521
v Korangi CCPP	GWh 22.519	29.952
<b>Total units sent out on LNG - KE</b>	<b>GWh 355.401</b>	<b>249.270</b>
<b>Total units sent out KE</b>	<b>GWh 461.414</b>	<b>447.715</b>
<b>2 HEAT RATE AT BUS BAR</b>		
<b>i Bin Qasim - I</b>		
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		Dec-20	Jan-21	
		Current	Current	
3	<u>Calorific Value - Furnace Oil</u>	Btu/kg	40,351	40,351
4	<b>FUEL PRICES</b>			
4a	Fuel Price - Gas	Rs./MMBTU	857	857
4b	Fuel Price - Furnace Oil	Rs./Mton	54,463	58,864
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,350	1,459
4d	Fuel Price - LNG	Rs./MMBTU	1,312	1,362
5	<b>COST OF FUEL</b>			
5a	<u>Furnace Oil</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	167,022	1,028,801
	Unit 2	Mill Rs.	347,141	1,083,341
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	979,207	135,201
	Unit 6	Mill Rs.	-	813,842
	<b>Total Cost of Furnace Oil - Bin Qasim - I</b>	Mill Rs.	<b>1,493,370</b>	<b>3,061,185</b>
5b	<u>Gas</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	-	-
	Unit 2	Mill Rs.	-	-
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	-	-
	Unit 6	Mill Rs.	-	-
	<b>Total Cost of Gas - Bin Qasim - I</b>	Mill Rs.	-	-
	ii Bin Qasim II - 560 MW	Mill Rs.	-	-
	iii Korangi Town Gas Turbine II	Mill Rs.	-	-
	iv Site Gas Turbine II	Mill Rs.	-	-
	v Korangi CCPP	Mill Rs.	-	-
	<b>Total Cost of Gas - KE</b>	Mill Rs.	-	-
5c	<u>LNG</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	26,213	13,593
	Unit 2	Mill Rs.	22,974	159,491
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	120,722	5,531
	Unit 6	Mill Rs.	-	598,778
	<b>Total Cost of LNG - Bin Qasim - I</b>	Mill Rs.	<b>169,909</b>	<b>777,394</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	3,504,439	1,527,585
	iii Korangi Town Gas Turbine II	Mill Rs.	20,939	234,590
	iv Site Gas Turbine II	Mill Rs.	0,013	125,301
	v Korangi CCPP	Mill Rs.	251,106	346,549
	<b>Total Cost of LNG - KE</b>	Mill Rs.	<b>3,946,406</b>	<b>3,011,419</b>
	GIDC Arrears billed - Note 1		762,160	762,160
	<b>Total cost of fuel - KE</b>	a	<b>6,201,936</b>	<b>6,834,763</b>
6	<b>Variation in Cost of Fuel - KE</b>			
6a	Units Sent Out - KE	GWh	461,414	447,715
6b	Units - Power Purchases	GWh	618,292	590,225
	<b>Total Units Sent Out</b>	b	<b>1,079,706</b>	<b>1,037,940</b>
6c	Cost per unit	c = a/b	Rs./kWh	6.585
6d	<b>Variation per unit (Cost of Fuel - KE)</b>		Rs./kWh	<b>0.841</b>
6e	<b>Variation amount (Cost of Fuel - KE)</b>		Mill Rs.	<b>872,736</b>

Note 1: Installment of GIDC arrears billed by SSGC in as per Supreme court order dated November 02, 2020. The amount of GIDC will be paid to SSGC when allowed by NEPRA in tariff.

Work Sheet- Power Purchase O&M and Capacity Cost

DESCRIPTION		Dec-20	Jan-21		
<b>1 POWER PURCHASES</b>					
a	KANUPP	GWh	9.308	14.675	
b	TAPAL	GWh	53.559	60.263	
c	GUL AHMED	GWh	37.999	55.105	
d	CPPA-G	GWh	364.321	350.907	
e	ANOUD POWER	GWh	-	-	
f	INT IND (III)	GWh	3.850	0.643	
g	FFBL	GWh	40.107	20.471	
h	SNPC	GWh	63.747	53.102	
i	OURSUN	GWh	7.437	7.430	
j	CPPA-G - 150 MW	GWh	24.511	13.533	
k	GHARO SOLAR	GWh	7.735	8.033	
l	LOTTE	GWh	5.719	6.062	
<b>TOTAL</b>		<b>GWh</b>	<b>618.292</b>	<b>590.225</b>	
<b>2 COST OF POWER PURCHASES - FUEL COST</b>					
a	KANUPP - Note 1	Mill Rs.	112.674	205.499	
b	TAPAL	Mill Rs.	662.326	741.514	
c	GUL AHMED	Mill Rs.	489.240	679.902	
d	CPPA-G - Note 2	Mill Rs.	1,186.703	2,104.073	
e	ANOUD POWER	Mill Rs.	-	-	
f	INT IND (III)	Mill Rs.	41.044	6.851	
g	FFBL	Mill Rs.	265.488	135.508	
h	SNPC	Mill Rs.	434.139	360.826	
i	OURSUN	Mill Rs.	-	-	
j	CPPA-G - 150 MW - Note 2	Mill Rs.	79.839	81.147	
k	GHARO SOLAR	Mill Rs.	-	-	
l	LOTTE	Mill Rs.	74.643	82.075	
<b>TOTAL</b>		<b>Mill Rs.</b>	<b>3,346.096</b>	<b>4,397.395</b>	
<b>3 FUEL COST / UNIT</b>					
a	KANUPP - Note 1	Rs./kwh	12.105	14.003	
b	TAPAL	Rs./kwh	12.366	12.305	
c	GUL AHMED	Rs./kwh	12.875	12.538	
d	CPPA-G - Note 2	Rs./kwh	3.257	5.996	
e	ANOUD POWER	Rs./kwh	-	-	
f	INT IND (III)	Rs./kwh	10.662	10.657	
g	FFBL	Rs./kwh	6.620	6.620	
h	SNPC	Rs./kwh	6.810	6.795	
i	OURSUN	Rs./kwh	-	-	
j	CPPA-G - 150 MW - Note 2	Rs./kwh	3.257	5.996	
k	GHARO SOLAR	Rs./kwh	-	-	
l	LOTTE	Rs./kwh	13.052	13.539	
<b>4 VARIATION IN COST OF FUEL - POWER PURCHASES</b>					
4a	Cost of Fuel - Power Purchases	a	Mill Rs.	3,346.096	4,397.395
Units Sent out:					
	Units Sent Out - KE		GWh	461.414	447.715
	Units - Power Purchases		GWh	618.292	590.225
4b	Total Units Sent Out	b	GWh	1,079.706	1,037.940
4c	Cost per unit	c = a/b	Rs./kwh	3.099	4.237
4d	Variation per unit (Cost of Fuel - Power Purchases)		Rs./kwh	-	1.138
4e	Variation amount (Cost of Fuel - Power Purchases)		Mill Rs.	-	1,180.735

Note 1: Kanupp details are provisional for the month of January 21 as the invoice for the month is yet to be received.

Note 2: CPPA-G's fuel cost for the month of January 2021 is based on NEPRA's determination of fuel cost for the month of December 2020 (latest determined) as the fuel cost for the month of January 2020 is yet to be determined.

For information & n.a. Please

- SA (Tariff-I)
- Copy to:
- DG (MAE)
- M/F

CC: Chairman  
= M (Tariff)

Ref No. KE/BPR/NEPRA/2021/639

March 17, 2021

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

**Subject: Monthly Cost Variation for the month of February 2021 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 2021 along with relevant supports, for Authority's approval. Please note that the calculation for the month of February 2021 is based on CPPA-G's latest fuel cost determined by NEPRA for the month of January 2021 and it is subject to adjustment based on the determination for February 2021 to be issued by NEPRA.

Moreover, fuel cost (own plants) for February 2021 includes impact of GIDC arrears monthly installments billed by SSGC for the month of February 2021 amounting to PKR 762 million (excluding taxes) as per Supreme court order dated November 2, 2020 which is to be passed on to consumers.

Summary of Cost variation for the month February 2021 is as below;

Month	Variation Amount (PKR Million)	Variation per unit (PKR / kWh)
February-21	2,773	2.495

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 determined provisional Heat rates for KE's generating plants and 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, with respect to Heat Rates of KCCP, SGTPS & KGTPS, NEPRA issued its determination on September 2, 2020 and January 18, 2021 respectively, against which KE has filed review motions. The required adjustment will be incorporated after the final heat rates are determined.

Tariff Division Record  
 Dy No. 1836  
 Dated 22-3-21

REGISTRAR  
 Dy No. 1812/21  
 Dated 18/3/21

18/3/21  
 CC: Chairman  
 = M (Tariff)  
 Ref No. KE/BPR/NEPRA/2021/639  
 March 17, 2021  
 DDCT-2  
 Abdul Qadir  
 26/3/21

Moreover, Heat rate test of BQPS I Plant has 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 of BQPS I based on the test results.

Furthermore, KE would humbly request NEPRA for expeditious processing of pending monthly variations for June 2020 to January 2021 and quarterly tariff variations for the period April 2020 to December 2020.

Sincerely,



**Ayaz Jaffar Ahmed**  
Director – Finance & Regulations

**Enclosed:**

- Calculation sheet of monthly variation – February 2021
- Supporting Documents for February 2021



**K Electric Limited**

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

DESCRIPTION		Unit	Dec-20	Feb-21
			Reference	Current
<b>A)</b>	<b>Cost of fuel:</b>			
	Cost of fuel - KE	a	Mill Rs. 6,201.936	9,727.643
	Cost of fuel - Power Purchases		Mill Rs. 4,411.029	3,973.972
	<b>Total</b>		Mill Rs. <b>10,612.965</b>	<b>13,701.615</b>
<b>B)</b>	<b>Units Sent Out</b>			
	Units Sent Out - KE	b	GWh 461.414	636.809
	Units - Power purchases		GWh 618.292	474.966
	<b>Total</b>		GWh <b>1,079.706</b>	<b>1,111.775</b>
<b>C)</b>	<b>Cost per unit</b>			
	Cost of fuel - KE	c = a/b	Rs./kWh 5.744	8.750
	Cost of fuel - Power Purchases		Rs./kWh 4.085	3.574
	<b>Average</b>		Rs./kWh <b>9.829</b>	<b>12.324</b>
<b>D)</b>	<b>Variation per unit</b>			
	Cost of fuel - KE	d	Rs./kWh	3.006
	Cost of fuel - Power Purchases		Rs./kWh	(0.511)
	<b>Total Fuel Cost Adjustment</b>		Rs./kWh	<b>2.495</b>
<b>E)</b>	<b>Total Fuel Cost Adjustment</b>		Ps/kWh	<b>249.46</b>
<b>F)</b>	<b>Variation amount</b>			
	Cost of fuel - KE	e = d x b (total)	Mill Rs.	3,341.498
	Cost of fuel - Power Purchases		Mill Rs.	(568.073)
	<b>Total Fuel Cost Adjustment</b>		Mill Rs.	<b>2,773.425</b>

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Dec-20	Feb-21
		Current	Current
<b>1</b>	<b>UNITS SENT OUT</b>		
	<b>1a UNITS SENT OUT ON FURNACE OIL</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 11.456	74.151
	Unit 2	GWh 24.150	42.065
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 70.408	30.668
	Unit 6	GWh -	50.385
	<b>Total units sent out on furnace oil - Bin Qasim - I</b>	<b>GWh 106.013</b>	<b>197.269</b>
	<b>1b UNITS SENT OUT ON GAS</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh -	-
	Unit 2	GWh -	-
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh -	-
	Unit 6	GWh -	-
	<b>Total units sent out on gas - Bin Qasim - I</b>	<b>GWh -</b>	<b>-</b>
	ii Bin Qasim II - 560 MW	GWh -	-
	iii Korangi Town Gas Turbine II	GWh -	-
	iv Site Gas Turbine II	GWh -	-
	v Korangi CCPP	GWh -	-
	<b>Total units sent out on gas - KE</b>	<b>GWh -</b>	<b>-</b>
	<b>1c UNITS SENT OUT ON LNG</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 1.649	1.283
	Unit 2	GWh 1.644	0.682
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 8.928	12.353
	Unit 6	GWh -	35.649
	<b>Total units sent out on LNG - Bin Qasim - I</b>	<b>GWh 12.421</b>	<b>49.972</b>
	ii Bin Qasim II - 560 MW	GWh 318.635	329.642
	iii Korangi Town Gas Turbine II	GWh 1.826	25.827
	iv Site Gas Turbine II	GWh 0.001	10.301
	v Korangi CCPP	GWh 22.519	23.798
	<b>Total units sent out on LNG - KE</b>	<b>GWh 355.401</b>	<b>439.540</b>
	<b>Total units sent out KE</b>	<b>GWh 461.414</b>	<b>636.809</b>
<b>2</b>	<b>HEAT RATE AT BUS BAR</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	Btu/kWh 10,602	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		Dec-20	Feb-21	
		Current	Current	
3	<b>Calorific Value - Furnace Oil</b>	Btu/kg	40,351	40,351
4	<b>FUEL PRICES</b>			
4a	Fuel Price - Gas	Rs./MMBTU	857	857
4b	Fuel Price - Furnace Oil	Rs./Mton	54,463	63,777
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,350	1,581
4d	Fuel Price - LNG	Rs./MMBTU	1,312	1,496
5	<b>COST OF FUEL</b>			
5a	<b>Furnace oil</b>			
i	<b>Bin Qasim - I</b>			
	Unit 1	Mill Rs.	167.022	1,265.984
	Unit 2	Mill Rs.	347.141	708.072
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	979.207	499.461
	Unit 6	Mill Rs.	-	816.189
	<b>Total Cost of Furnace Oil - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>1,493.370</b>	<b>3,289.705</b>
5b	<b>Gas</b>			
i	<b>Bin Qasim - I</b>			
	Unit 1	Mill Rs.	-	-
	Unit 2	Mill Rs.	-	-
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	-	-
	Unit 6	Mill Rs.	-	-
	<b>Total Cost of Gas - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>-</b>	<b>-</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	-	-
	iii Korangi Town Gas Turbine II	Mill Rs.	-	-
	iv Site Gas Turbine II	Mill Rs.	-	-
	v Korangi CCP	Mill Rs.	-	-
	<b>Total Cost of Gas - KE</b>	<b>Mill Rs.</b>	<b>-</b>	<b>-</b>
5c	<b>LNG</b>			
i	<b>Bin Qasim - I</b>			
	Unit 1	Mill Rs.	26.213	20.730
	Unit 2	Mill Rs.	22.974	10.868
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	120.722	190.476
	Unit 6	Mill Rs.	-	546.518
	<b>Total Cost of LNG - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>169.909</b>	<b>768.592</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	3,504.439	4,132.392
	iii Korangi Town Gas Turbine II	Mill Rs.	20.939	337.566
	iv Site Gas Turbine II	Mill Rs.	0.013	134.759
	v Korangi CCP	Mill Rs.	251.106	302.468
	<b>Total Cost of LNG - KE</b>	<b>Mill Rs.</b>	<b>3,946.406</b>	<b>5,675.778</b>
	GIDC Arrears billed - Note 1		762.160	762.160
	<b>Total cost of fuel - KE</b>	<b>a Mill Rs.</b>	<b>6,201.936</b>	<b>9,727.643</b>
6	<b>Variation In Cost of Fuel - KE</b>			
6a	Units Sent Out - KE	GWh	461.414	636.809
6b	Units - Power Purchases	GWh	618.292	474.966
	<b>Total Units Sent Out</b>	<b>b GWh</b>	<b>1,079.706</b>	<b>1,111.775</b>
6c	Cost per unit	c = a/b Rs./kWh	5.744	8.750
6d	Variation per unit (Cost of Fuel - KE)	Rs./kWh		3.006
6e	<b>Variation amount (Cost of Fuel - KE)</b>	<b>Mill Rs.</b>		<b>3,341.498</b>

Note 1: Installment of GIDC arrears billed by SSGC in as per Supreme court order dated November 02, 2020. The amount of GIDC will be paid to SSGC when allowed by NEPRA in tariff.

Work Sheet- Power Purchase O&M and Capacity Cost

DESCRIPTION		Dec-20	Feb-21
<b>1 POWER PURCHASES</b>			
a	KANUPP	GWh 9.308	-
b	TAPAL	GWh 53.559	61.926
c	GUL AHMED	GWh 37.999	51.696
d	CPPA-G	GWh 364.321	235.422
e	ANOUD POWER	GWh -	-
f	INT IND (IIL)	GWh 3.850	2.387
g	FFBL	GWh 40.107	36.674
h	SNPC	GWh 63.747	53.036
i	OURSUN	GWh 7.437	7.332
j	CPPA-G - 150 MW	GWh 24.511	12.998
k	GHARO SOLAR	GWh 7.735	8.316
l	LOTTE	GWh 5.719	5.179
<b>TOTAL</b>		<b>GWh</b>	<b>618.292 474.966</b>
<b>2 COST OF POWER PURCHASES - FUEL COST</b>			
a	KANUPP - Note 1	Mill Rs. 112.674	-
b	TAPAL	Mill Rs. 662.326	826.895
c	GUL AHMED	Mill Rs. 489.240	685.682
d	CPPA-G - Note 2	Mill Rs. 2,184.505	1,566.263
e	ANOUD POWER	Mill Rs. -	-
f	INT IND (IIL)	Mill Rs. 41.044	25.458
g	FFBL	Mill Rs. 265.488	345.238
h	SNPC	Mill Rs. 434.139	360.915
i	OURSUN	Mill Rs. -	-
j	CPPA-G - 150 MW - Note 2	Mill Rs. 146.970	86.475
k	GHARO SOLAR	Mill Rs. -	-
l	LOTTE	Mill Rs. 74.643	77.046
<b>TOTAL</b>		<b>Mill Rs.</b>	<b>4,411.029 3,973.972</b>
<b>3 FUEL COST / UNIT</b>			
a	KANUPP - Note 1	Rs./kwh 12.106	-
b	TAPAL	Rs./kwh 12.366	13.353
c	GUL AHMED	Rs./kwh 12.875	13.264
d	CPPA-G - Note 2	Rs./kwh 5.996	6.653
e	ANOUD POWER	Rs./kwh -	-
f	INT IND (IIL)	Rs./kwh 10.662	10.665
g	FFBL	Rs./kwh 6.620	9.414
h	SNPC	Rs./kwh 6.810	6.805
i	OURSUN	Rs./kwh -	-
j	CPPA-G - 150 MW - Note 2	Rs./kwh 5.996	6.653
k	GHARO SOLAR	Rs./kwh -	-
l	LOTTE	Rs./kwh 13.052	14.877
<b>4 VARIATION IN COST OF FUEL - POWER PURCHASES</b>			
4a	Cost of Fuel - Power Purchases	a Mill Rs.	4,411.029 3,973.972
Units Sent out:			
	Units Sent Out - KE	GWh	461.414 636.809
	Units - Power Purchases	GWh	618.292 474.966
4b	Total Units Sent Out	b GWh	<u>1,079.706 1,111.775</u>
4c	Cost per unit	c = a/b Rs./kwh	4.085 3.574
4d	Variation per unit (Cost of Fuel - Power Purchases)	Rs./kwh	(0.511)
4e	Variation amount (Cost of Fuel - Power Purchases)	Mill Rs.	<u>(568.073)</u>

Note 1: Kanupp details are provisional for the month of February-21 as the invoice for the month is yet to be received.

Note 2: CPPA-G's fuel cost for the month of February 2021 is based on NEPRA's determination of fuel cost for the month of January 2021 (latest determined) as the fuel cost for the month of February 2021 is yet to be determined. Further, CPPA-G's cost for the month of December 2020 has been updated based on NEPRA's determination

For information & n.a. Please

19/4/21

SA (Tariff-1)  
Copy to:  
- DG (MAE)  
- MUE

CC: Chairman  
M (Tariff)



هم آفيس

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

Ref No. KE/BPR/NEPRA/2021/855  
April 14, 2021

*Handwritten signatures and notes:*  
- A large signature  
- 22/4/21  
- DDF  
- MUE  
- 29/4/21

**Subject: Monthly Cost Variation for the month of March 2021 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 March 2021 along with relevant supports, for Authority's approval. Please note that the calculation for the month of March 2021 is based on CPPA-G's latest fuel cost determined by NEPRA for the month of February 2021 and it is subject to adjustment based on the determination for March 2021 to be issued by NEPRA.

Moreover, fuel cost (own plants) for March 2021 includes impact of GIDC arrears monthly installments for the month of March 2021 amounting to PKR 762 million (excluding taxes) as per Supreme court order dated November 2, 2020 which is to be passed on to consumers.

Summary of Cost variation for the month March 2021 is as below;

Month	Variation Amount (PKR Million)	Variation per unit (PKR / kWh)
March-21	2,348	1.497

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 determined provisional Heat rates for KE's generating plants and 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, with respect to Heat Rates of KCCP, SGTPS & KGTPS, NEPRA issued its determination on September 2, 2020 and January 18, 2021 respectively, against which KE has filed review motions. The required adjustment will be incorporated after the final heat rates are determined.

Tariff Division Record

Dy No. 2394  
Dated 21-4-21

REGISTRAR

Dy. No. 6900  
Dated 18/4/21

Moreover, Heat rate test of BQPS I Plant has 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 of BQPS I based on the test results.

Furthermore, KE would humbly request NEPRA for expeditious processing of pending monthly variations for June 2020 to February 2021 and quarterly tariff variations for the period April 2020 to December 2020.

Sincerely,



**Ayaz Jaffar Ahmed**  
Director – Finance & Regulations

**Enclosed:**

- Calculation sheet of monthly variation – March 2021
- Supporting Documents for March 2021

**K Electric Limited**

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

DESCRIPTION		Unit	Dec-20	Mar-21
			Reference	Current
<b>A)</b>	<b>Cost of fuel:</b>			
	Cost of fuel - KE	a	6,201.936	12,467.377
	Cost of fuel - Power Purchases		4,411.029	5,299.675
	<b>Total</b>		<b>10,612.965</b>	<b>17,767.052</b>
<b>B)</b>	<b>Units Sent Out</b>			
	Units Sent Out - KE	b	461.414	843.050
	Units - Power purchases		618.292	725.620
	<b>Total</b>		<b>1,079.706</b>	<b>1,568.671</b>
<b>C)</b>	<b>Cost per unit</b>			
	Cost of fuel - KE	c = a/b	5.744	7.948
	Cost of fuel - Power Purchases		4.085	3.378
	<b>Average</b>		<b>9.829</b>	<b>11.326</b>
<b>D)</b>	<b>Variation per unit</b>			
	Cost of fuel - KE	d		2.204
	Cost of fuel - Power Purchases			(0.707)
	<b>Total Fuel Cost Adjustment</b>			<b>1.497</b>
<b>E)</b>	<b>Total Fuel Cost Adjustment</b>		<b>Ps/kWh</b>	<b>149.67</b>
<b>F)</b>	<b>Variation amount</b>			
	Cost of fuel - KE	e = d x b (total)		3,456.783
	Cost of fuel - Power Purchases			(1,108.969)
	<b>Total Fuel Cost Adjustment</b>			<b>2,347.814</b>

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Dec-20	Mar-21
		Reference	Current
<b>1</b>	<b>UNITS SENT OUT</b>		
	<b>1a UNITS SENT OUT ON FURNACE OIL</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 11.456	81.139
	Unit 2	GWh 24.150	63.802
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 70.408	84.178
	Unit 6	GWh -	63.433
	<b>Total units sent out on furnace oil - Bin Qasim - I</b>	<b>GWh 106.013</b>	<b>292.551</b>
	<b>1b UNITS SENT OUT ON GAS</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh -	0.339
	Unit 2	GWh -	0.300
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh -	3.726
	Unit 6	GWh -	10.748
	<b>Total units sent out on gas - Bin Qasim - I</b>	<b>GWh -</b>	<b>15.114</b>
	ii Bin Qasim II - 560 MW	GWh -	93.123
	iii Korangi Town Gas Turbine II	GWh -	10.053
	iv Site Gas Turbine II	GWh -	5.178
	v Korangi CCPP	GWh -	17.167
	<b>Total units sent out on gas - KE</b>	<b>GWh -</b>	<b>140.635</b>
	<b>1c UNITS SENT OUT ON LNG</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 1.849	0.724
	Unit 2	GWh 1.644	0.641
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 8.928	7.957
	Unit 6	GWh -	22.950
	<b>Total units sent out on LNG - Bin Qasim - I</b>	<b>GWh 12.421</b>	<b>32.272</b>
	ii Bin Qasim II - 560 MW	GWh 318.635	270.711
	iii Korangi Town Gas Turbine II	GWh 1.826	29.572
	iv Site Gas Turbine II	GWh 0.001	16.622
	v Korangi CCPP	GWh 22.519	60.688
	<b>Total units sent out on LNG - KE</b>	<b>GWh 355.401</b>	<b>409.864</b>
	<b>Total units sent out KE</b>	<b>GWh 461.414</b>	<b>843.050</b>
<b>2</b>	<b>HEAT RATE AT BUS BAR</b>		
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		Dec-20	Mar-21	
		Reference	Current	
3	<u>Calorific Value - Furnace Oil</u>	Btu/kg	40,351	40,351
4	<b>FUEL PRICES</b>			
4a	Fuel Price - Gas	Rs./MMBTU	857	857
4b	Fuel Price - Furnace Oil	Rs./Mton	54,463	72,507
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,350	1,797
4d	Fuel Price - LNG	Rs./MMBTU	1,312	1,461
5	<b>COST OF FUEL</b>			
	<b>5a Furnace oil</b>			
	<b>i Bin Qasim - I</b>			
	Unit 1	Mill Rs.	167.022	1,574.918
	Unit 2	Mill Rs.	347.141	1,220.980
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	979.207	1,558.572
	Unit 6	Mill Rs.	-	1,168.205
	<b>Total Cost of Furnace Oil - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>1,493.370</b>	<b>5,522.676</b>
	<b>5b Gas</b>			
	<b>i Bin Qasim - I</b>			
	Unit 1	Mill Rs.	-	3.139
	Unit 2	Mill Rs.	-	2.742
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	-	32.907
	Unit 6	Mill Rs.	-	94.406
	<b>Total Cost of Gas - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>-</b>	<b>133.194</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	-	668.839
	iii Korangi Town Gas Turbine II	Mill Rs.	-	75.279
	iv Site Gas Turbine II	Mill Rs.	-	38.809
	v Korangi CCPP	Mill Rs.	-	125.008
	<b>Total Cost of Gas - KE</b>	<b>Mill Rs.</b>	<b>-</b>	<b>1,041.129</b>
	<b>5c LNG</b>			
	<b>i Bin Qasim - I</b>			
	Unit 1	Mill Rs.	26.213	11.424
	Unit 2	Mill Rs.	22.974	9.979
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	120.722	119.749
	Unit 6	Mill Rs.	-	343.550
	<b>Total Cost of LNG - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>169.909</b>	<b>484.702</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	3,504.439	3,313.769
	iii Korangi Town Gas Turbine II	Mill Rs.	20.939	377.425
	iv Site Gas Turbine II	Mill Rs.	0.013	212.332
	v Korangi CCPP	Mill Rs.	251.106	753.186
	<b>Total Cost of LNG - KE</b>	<b>Mill Rs.</b>	<b>3,946.406</b>	<b>5,141.413</b>
	GIDC Arrears billed - Note 1		762.160	762.160
	<b>Total cost of fuel - KE</b>	<b>a Mill Rs.</b>	<b>6,201.936</b>	<b>12,467.377</b>
6	<b>Variation in Cost of Fuel - KE</b>			
6a	Units Sent Out - KE	GWh	461.414	843.050
6b	Units - Power Purchases	GWh	618.292	725.620
	<b>Total Units Sent Out</b>	<b>b GWh</b>	<b>1,079.706</b>	<b>1,568.671</b>
6c	Cost per unit	c = a/b Rs./kWh	5.744	7.948
6d	<b>Variation per unit (Cost of Fuel - KE)</b>	<b>Rs./kWh</b>		<b>2.204</b>
6e	<b>Variation amount (Cost of Fuel - KE)</b>	<b>Mill Rs.</b>		<b>3,456.783</b>

Note 1: Installment of GIDC arrears as per Supreme court order dated November 02, 2020. The amount of GIDC will be paid to SSGC when allowed by NEPRA in tariff.

Work Sheet- Power Purchase O&M and Capacity Cost

DESCRIPTION		Dec-20	Mar 21		
<b>1 POWER PURCHASES</b>					
a	KANJPP	GWh	9,308	15,835	
b	TAPAL	GWh	53,559	70,936	
c	GULAHMED	GWh	37,999	62,407	
d	CPPA-G	GWh	364,321	421,762	
e	ANOJD POWER	GWh	-	-	
f	INT IND (IL)	GWh	2,850	6,355	
g	FFBL	GWh	40,107	40,611	
h	SNPC	GWh	62,747	64,529	
i	OURSUN	GWh	7,437	8,820	
j	CPPA-G - 150 MW	GWh	24,511	16,768	
k	GHARO SOLAR	GWh	1,735	10,561	
l	LOTTE	GWh	5,719	4,087	
	<b>TOTAL</b>	<b>GWh</b>	<b>616,292</b>	<b>725,620</b>	
<b>2 COST OF POWER PURCHASES - FUEL COST</b>					
a	KANJPP - Note 1	Mill Rs.	112,674	221,628	
b	TAPAL	Mill Rs.	662,226	1,068,069	
c	GULAHMED	Mill Rs.	489,240	952,481	
d	CPPA-G - Note 2	Mill Rs.	2,184,505	2,017,388	
e	ANOJD POWER	Mill Rs.	-	-	
f	INT IND (IL)	Mill Rs.	41,044	67,740	
g	FFBL	Mill Rs.	265,488	382,300	
h	SNPC	Mill Rs.	434,139	441,122	
i	OURSUN	Mill Rs.	-	-	
j	CPPA-G - 150 MW - Note 2	Mill Rs.	146,970	89,789	
k	GHARO SOLAR	Mill Rs.	-	-	
l	LOTTE	Mill Rs.	74,643	59,079	
	<b>TOTAL</b>	<b>Mill Rs.</b>	<b>4,411,029</b>	<b>5,299,675</b>	
<b>3 FUEL COST / UNIT</b>					
a	KANJPP - Note 1	Rs./kwh	12,106	14,035	
b	TAPAL	Rs./kwh	12,366	15,057	
c	GULAHMED	Rs./kwh	12,875	15,092	
d	CPPA-G - Note 2	Rs./kwh	5,996	4,783	
e	ANOJD POWER	Rs./kwh	-	-	
f	INT IND (IL)	Rs./kwh	10,562	10,659	
g	FFBL	Rs./kwh	6,520	9,414	
h	SNPC	Rs./kwh	6,810	6,836	
i	OURSUN	Rs./kwh	-	-	
j	CPPA-G - 150 MW - Note 2	Rs./kwh	5,996	4,783	
k	GHARO SOLAR	Rs./kwh	-	-	
l	LOTTE	Rs./kwh	13,052	14,325	
<b>4 VARIATION IN COST OF FUEL - POWER PURCHASES</b>					
4a	Cost of Fuel - Power Purchases	a	Mill Rs.	4,411,029	5,299,675
	Units Sent out:				
	Units Sent Out - KE		GWh	461,414	843,050
	Units - Power Purchases		GWh	616,292	725,620
4b	Total Units Sent Out	b	GWh	<u>1,079,706</u>	<u>1,568,671</u>
4c	Cost per unit	c = a/b	Rs./kwh	4,085	3,378
4d	Variation per unit (Cost of Fuel - Power Purchases)		Rs./kwh		(0,707)
4e	Variation amount (Cost of Fuel - Power Purchases)		Mill Rs.		<u>(1,108,969)</u>

Note 1: Kanupp details are provisional for the month of March-21 as the invoice for the month is yet to be received

Note 2: CPPA-G's fuel cost for the month of March 2021 is based on NEPRA's determination of fuel cost for the month of February 2021 (latest determined) as the fuel cost for the month of March 2021 is yet to be determined. Further, CPPA-G's cost for the month of December 2020 has been updated based on NEPRA's determination

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For information & n.a. Please

• SA(Tariff-I)

Copy to:

- DG (M&E)

- M/F

CC: Chairman/KE/BPR/NEPRA/2021/1022

- M (Tariff)

May 7, 2021

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

**Subject: Monthly Cost Variation for the month of April 2021 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 2021 along with relevant supports, for Authority's approval. Please note that the calculation for the month of April 2021 is based on CPPA-G's latest fuel cost determined by NEPRA for the month of February 2021 and it is subject to adjustment based on the determination for April 2021 to be issued by NEPRA.

Moreover, fuel cost (own plants) for April 2021 includes impact of GIDC arrears monthly installments for the month of April 2021 amounting to PKR 762 million (excluding taxes) as per Supreme court order dated November 2, 2020 which is to be passed on to consumers.

Summary of Cost variation for the month April 2021 is as below;

Month	Variation Amount (PKR Million)	Variation per unit (PKR / kWh)
April-21	(1,606)	(0.869)

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

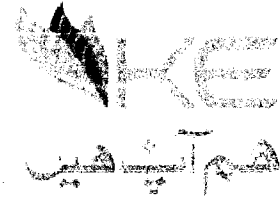
In the MYT, NEPRA determined provisional Heat rates for KE's generating plants and directed KE to conduct fresh Heat rate test for its plants, based on which final Heat rates will be determined by NEPRA.

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, with respect to Heat Rates of KCCP, SGTPS & KGTPS, NEPRA issued its determination on September 2, 2020 and January 18, 2021 respectively, against which KE has filed review motions. The required adjustment will be incorporated after the final heat rates are determined.

Tariff Division No. 2939  
Dy No. 19-5-21  
Dated 19-5-21

8573  
18-5-2021



Moreover, Heat rate test of BQPS I Plant has 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 of BQPS I based on the test results.

Furthermore, KE would humbly request NEPRA for expeditious processing of pending monthly variations for June 2020 to March 2021 and quarterly tariff variations for the period April 2020 to March 2021.

Sincerely,

**Ayaz Jaffar Ahmed**  
Director – Finance & Regulations

**Enclosed:**

- Calculation sheet of monthly variation – April 2021
- Supporting Documents for April 2021

**K Electric Limited**

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

DESCRIPTION		Unit	Mar-21	Apr-21
			Reference	Current
<b>A) Cost of fuel:</b>				
Cost of fuel - KE	a	Mill Rs.	12,467.377	13,234.430
Cost of fuel - Power Purchases		Mill Rs.	5,299.675	6,099.751
<b>Total</b>		<b>Mill Rs.</b>	<b>17,767.052</b>	<b>19,334.181</b>
<b>B) Units Sent Out</b>				
Units Sent Out - KE	b	GWh	843.050	953.764
Units - Power purchases		GWh	725.620	895.041
<b>Total</b>		<b>GWh</b>	<b>1,568.671</b>	<b>1,848.804</b>
<b>Cost per unit</b>				
Cost of fuel - KE	c = a/b	Rs./kWh	7.948	7.158
Cost of fuel - Power Purchases		Rs./kWh	3.378	3.299
<b>Average</b>		<b>Rs./kWh</b>	<b>11.326</b>	<b>10.458</b>
<b>D) Variation per unit</b>				
Cost of fuel - KE	d	Rs./kWh		(0.789)
Cost of fuel - Power Purchases		Rs./kWh		(0.079)
<b>Total Fuel Cost Adjustment</b>		<b>Rs./kWh</b>		<b>(0.869)</b>
<b>E) Total Fuel Cost Adjustment</b>		<b>Ps/kWh</b>		<b>(86.85)</b>
<b>F) Variation amount</b>				
Cost of fuel - KE	e = d x	Mill Rs.		(1,459.376)
Cost of fuel - Power Purchases	b (total)	Mill Rs.		(146.342)
<b>Total Fuel Cost Adjustment</b>		<b>Mill Rs.</b>		<b>(1,605.718)</b>

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-21	Apr-21
		Reference	Current
<b>1</b>	<b>UNITS SENT OUT</b>		
	<b>1a UNITS SENT OUT ON FURNACE OIL</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 81.139	40.677
	Unit 2	GWh 63.802	23.494
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 84.178	41.813
	Unit 6	GWh 63.433	17.905
	<b>Total units sent out on furnace oil - Bin Qasim - I</b>	<b>GWh 292.551</b>	<b>123.889</b>
	<b>1b UNITS SENT OUT ON GAS</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 0.339	16.253
	Unit 2	GWh 0.300	21.384
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 3.726	20.090
	Unit 6	GWh 10.748	25.836
	<b>Total units sent out on gas - Bin Qasim - I</b>	<b>GWh 15.114</b>	<b>83.564</b>
	ii Bin Qasim II - 560 MW	GWh 93.123	95.042
	iii Korangi Town Gas Turbine II	GWh 10.053	10.334
	iv Site Gas Turbine II	GWh 5.178	6.601
	v Korangi CCPP	GWh 17.167	24.245
	<b>Total units sent out on gas - KE</b>	<b>GWh 140.635</b>	<b>219.785</b>
	<b>1c UNITS SENT OUT ON LNG</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 0.724	49.232
	Unit 2	GWh 0.641	64.775
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 7.957	60.857
	Unit 6	GWh 22.950	78.262
	<b>Total units sent out on LNG - Bin Qasim - I</b>	<b>GWh 32.272</b>	<b>253.127</b>
	ii Bin Qasim II - 560 MW	GWh 270.711	248.168
	iii Korangi Town Gas Turbine II	GWh 29.572	26.971
	iv Site Gas Turbine II	GWh 16.622	17.022
	v Korangi CCPP	GWh 60.688	62.322
	<b>Total units sent out on LNG - KE</b>	<b>GWh 409.864</b>	<b>607.609</b>
	<b>1d UNITS SENT OUT ON HSD</b>		
i	Korangi CCPP - 220 MW	GWh -	2.481
	<b>Total units sent out on HSD</b>	<b>GWh -</b>	<b>2.481</b>
	<b>Total units sent out KE</b>	<b>GWh 843.050</b>	<b>953.764</b>
<b>2</b>	<b>HEAT RATE AT BUS BAR</b>		
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
	vi Korangi CCPP - HSD - Note 2	Btu/kWh -	9,330

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-21	Apr-21	
		Reference	Current	
3	<u>Calorific Value - Furnace Oil</u>	Btu/kg	40,351	40,351
4	<b>FUEL PRICES</b>			
4a	Fuel Price - Gas	Rs./MMBTU	857	857
4b	Fuel Price - Furnace Oil	Rs./Mton	72,507	75,791
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,797	1,878
4d	Fuel Price - LNG	Rs./MMBTU	1,461	1,457
4e	Fuel Price - HSD	Rs./MMBTU		2,720
5	<b>COST OF FUEL</b>			
5a	<u>Furnace oil</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	1,574.918	825.321
	Unit 2	Mill Rs.	1,220.980	469.966
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	1,558.572	809.260
	Unit 6	Mill Rs.	1,168.205	344.677
	<b>Total Cost of Furnace Oil - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>5,522.676</b>	<b>2,449.224</b>
5b	<u>Gas</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	3.139	150.458
	Unit 2	Mill Rs.	2.742	195.173
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	32.907	177.409
	Unit 6	Mill Rs.	94.406	226.930
	<b>Total Cost of Gas - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>133.194</b>	<b>749.970</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	668.839	682.616
	iii Korangi Town Gas Turbine II	Mill Rs.	75.279	77.382
	iv Site Gas Turbine II	Mill Rs.	38.809	49.479
	v Korangi CCPP	Mill Rs.	125.008	176.549
	<b>Total Cost of Gas - KE</b>	<b>Mill Rs.</b>	<b>1,041.129</b>	<b>1,735.996</b>
5c	<u>LNG</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	11.424	774.814
	Unit 2	Mill Rs.	9.979	1,005.083
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	119.749	913.606
	Unit 6	Mill Rs.	343.550	1,168.622
	<b>Total Cost of LNG - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>484.702</b>	<b>3,862.125</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	3,313.769	3,030.186
	iii Korangi Town Gas Turbine II	Mill Rs.	377.425	343.356
	iv Site Gas Turbine II	Mill Rs.	212.332	216.901
	v Korangi CCPP	Mill Rs.	753.186	771.518
	<b>Total Cost of LNG - KE</b>	<b>Mill Rs.</b>	<b>5,141.413</b>	<b>8,224.086</b>
5d	<u>HSD</u>			
i	Korangi CCPP - note 2	Mill Rs.	-	62.964
	<b>Total Cost of HSD - KE</b>	<b>Mill Rs.</b>	<b>-</b>	<b>62.964</b>
	GIDC Arrears billed - Note 1		762.160	762.160
	<b>Total cost of fuel - KE</b>	<b>a Mill Rs.</b>	<b>12,467.377</b>	<b>13,234.430</b>
6	<b>Variation in Cost of Fuel - KE</b>			
6a	Units Sent Out - KE	GWh	843.050	953.764
6b	Units - Power Purchases	GWh	725.620	895.041
	<b>Total Units Sent Out</b>	<b>b GWh</b>	<b>1,568.671</b>	<b>1,848.804</b>
6c	Cost per unit	c = a/b Rs./kWh	7.948	7.158
6d	<b>Variation per unit (Cost of Fuel - KE)</b>	<b>Rs./kWh</b>		<b>(0.789)</b>
6e	<b>Variation amount (Cost of Fuel - KE)</b>	<b>Mill Rs.</b>		<b>(1,459.376)</b>

Note 1: Installment of GIDC arrears billed by SSGC in as per Supreme court order dated November 02, 2020. The amount of GIDC will be paid to SSGC when allowed by NEPRA in tariff.

Note 2: KE has commissioned HSD fuel on Korangi CCPP plant. In this regard, NEPRA is requested to allow fuel cost incurred during commissioning of plant on HSD on actual basis. Moreover, it is further requested to provisionally allow cost of generation on HSD at actual, till the heat rate test is conducted and any adjustment pursuant to final determination will be made with effect from May 2021.

Work Sheet- Power Purchase O&M and Capacity Cost

DESCRIPTION		Mar-21	Apr-21		
		Reference	Current		
<b>1 POWER PURCHASES</b>					
a	KANUPP	GWh	15.805	17.145	
b	TAPAL	GWh	70.936	62.760	
c	GUL AHMED	GWh	63.407	55.510	
d	CPPA-G	GWh	421.762	597.902	
e	ANOUD POWER	GWh	-	-	
f	INT IND (IIL)	GWh	6.355	5.309	
g	FFBL	GWh	40.611	39.300	
h	SNPC	GWh	64.528	68.370	
i	OURSUN	GWh	8.820	8.675	
j	CPPA-G - 150 MW	GWh	18.768	21.554	
k	GHARO SOLAR	GWh	10.561	10.976	
l	LOTTE	GWh	4.067	7.540	
<b>TOTAL</b>		<b>GWh</b>	<b>725.620</b>	<b>895.041</b>	
<b>2 COST OF POWER PURCHASES - FUEL COST</b>					
a	KANUPP - Note 1	Mill Rs.	221.828	227.563	
b	TAPAL	Mill Rs.	1,068.069	1,006.868	
c	GUL AHMED	Mill Rs.	952.481	899.267	
d	CPPA-G - Note 2	Mill Rs.	2,017.288	2,859.765	
e	ANOUD POWER	Mill Rs.	-	-	
f	INT IND (IIL)	Mill Rs.	67.740	56.596	
g	FFBL	Mill Rs.	382.300	369.958	
h	SNPC	Mill Rs.	441.122	467.387	
i	OURSUN	Mill Rs.	-	-	
j	CPPA-G - 150 MW - Note 2	Mill Rs.	89.769	103.091	
k	GHARO SOLAR	Mill Rs.	-	-	
l	LOTTE	Mill Rs.	59.079	109.255	
<b>TOTAL</b>		<b>Mill Rs.</b>	<b>5,299.675</b>	<b>6,099.751</b>	
<b>3 FUEL COST / UNIT</b>					
a	KANUPP - Note 1	Rs./kwh	14.035	13.273	
b	TAPAL	Rs./kwh	15.057	16.043	
c	GUL AHMED	Rs./kwh	15.022	16.200	
d	CPPA-G - Note 2	Rs./kwh	4.783	4.783	
e	ANOUD POWER	Rs./kwh	-	-	
f	INT IND (IIL)	Rs./kwh	10.659	10.661	
g	FFBL	Rs./kwh	9.414	9.414	
h	SNPC	Rs./kwh	6.836	6.836	
i	OURSUN	Rs./kwh	-	-	
j	CPPA-G - 150 MW - Note 2	Rs./kwh	4.783	4.783	
k	GHARO SOLAR	Rs./kwh	-	-	
l	LOTTE	Rs./kwh	14.526	14.490	
<b>4 VARIATION IN COST OF FUEL - POWER PURCHASES</b>					
<b>4a</b>	<b>Cost of Fuel - Power Purchases</b>	<b>a</b>	<b>Mill Rs.</b>	<b>5,299.675</b>	<b>6,099.751</b>
Units Sent out:					
	Units Sent Out - KE		GWh	843.050	953.764
	Units - Power Purchases		GWh	725.620	895.041
<b>4b</b>	<b>Total Units Sent Out</b>	<b>b</b>	<b>GWh</b>	<b>1,568.671</b>	<b>1,848.804</b>
<b>4c</b>	<b>Cost per unit</b>	<b>c = a/b</b>	<b>Rs./kwh</b>	<b>3.378</b>	<b>3.299</b>
<b>4d</b>	<b>Variation per unit (Cost of Fuel - Power Purchases)</b>		<b>Rs./kwh</b>		<b>(0.079)</b>
<b>4e</b>	<b>Variation amount (Cost of Fuel - Power Purchases)</b>		<b>Mill Rs.</b>		<b>(146.342)</b>

Note 1: Kanupp details are provisional for the month of April-21 as the invoice for the month is yet to be received.

Note 2: CPPA-G's fuel cost for the month of April 2021 is based on NEPRA's determination of fuel cost for the month of February 2021 (latest determined) as the fuel cost for the month of April 2021 is yet to be determined.



KE Clerk

For n/a  
- ADG/Inf,  
- m

15/6/21  
cc. m.c.i.



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

Ref No. KE/BPR/NEPRA/2021/1279  
June 14, 2021

17/06/21  
17/06/21

**Subject: Monthly Cost Variation for the month of May 2021 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 May 2021 along with relevant supports, for Authority's approval. Please note that the calculation for the month of May 2021 is based on CPPA-G's latest fuel cost determined by NEPRA for the month of April 2021 and it is subject to adjustment based on the determination for May 2021 to be issued by NEPRA.

Moreover, fuel cost (own plants) for May 2021 includes impact of GIDC arrears monthly installments for the month of May 2021 amounting to PKR 762 million (excluding taxes) as per Supreme court order dated November 2, 2020 which is to be passed on to consumers.

Summary of Cost variation for the month May 2021 is as below;

Month	Variation Amount (PKR Million)	Variation per unit (PKR / kWh)
May-21	(1,297)	(0.646)

DDCT (T)  
Kath  
18/6/21

Tariff Division Record  
By 3529  
Dated 16-6-21

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 determined provisional Heat rates for KE's generating plants and 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, with respect to Heat Rates of KCCP, SGTPS & KGTPS, NEPRA issued its determination on September 2, 2020 and January 18, 2021 respectively, against which KE has filed review motions. The required adjustment will be incorporated after the final heat rates are determined.

10583  
15-06-2021



Moreover, Heat rate test of BQPS I Plant has 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 of BQPS I based on the test results.

Furthermore, KE would humbly request NEPRA for expeditious processing of pending monthly variations for January 2021 to April 2021 and quarterly tariff variations for the period April 2020 to March 2021.

Sincerely,

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**Ayaz Jaffar Ahmed**  
Director – Finance & Regulations

**Enclosed:**

- Calculation sheet of monthly variation – May 2021
- Supporting Documents for May 2021

K Electric Limited

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

DESCRIPTION		Unit	Mar-21	May-21
			Reference	Current
<b>A)</b>	<b>Cost of fuel:</b>			
	Cost of fuel - KE	a	12,467.377	13,600.847
	Cost of fuel - Power Purchases		5,299.675	7,826.949
	<b>Total</b>		<b>17,767.052</b>	<b>21,427.797</b>
<b>B)</b>	<b>Units Sent Out</b>			
	Units Sent Out - KE	b	843.050	970.672
	Units - Power purchases		725.620	1,035.706
	<b>Total</b>		<b>1,568.671</b>	<b>2,006.378</b>
	<b>Cost per unit</b>			
	Cost of fuel - KE	c = a/b	7.948	6.779
	Cost of fuel - Power Purchases		3.378	3.901
	<b>Average</b>		<b>11.326</b>	<b>10.680</b>
<b>D)</b>	<b>Variation per unit</b>			
	Cost of fuel - KE	d		(1.169)
	Cost of fuel - Power Purchases			0.523
	<b>Total Fuel Cost Adjustment</b>			<b>(0.646)</b>
<b>E)</b>	<b>Total Fuel Cost Adjustment</b>		<b>Ps/kWh</b>	<b>(64.63)</b>
<b>F)</b>	<b>Variation amount</b>			
	Cost of fuel - KE	e = d x		(2,345.315)
	Cost of fuel - Power Purchases	b (total)		1,048.501
	<b>Total Fuel Cost Adjustment</b>			<b>(1,296.815)</b>

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-21	May-21
		Reference	Current
<b>1</b>	<b>UNITS SENT OUT</b>		
1a	<b>UNITS SENT OUT ON FURNACE OIL</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 81.139	31.968
	Unit 2	GWh 63.802	13.545
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 84.178	20.080
	Unit 6	GWh 63.433	-
	<b>Total units sent out on furnace oil - Bin Qasim - I</b>	<b>GWh 292.551</b>	<b>65.593</b>
1b	<b>UNITS SENT OUT ON GAS</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 0.339	19.338
	Unit 2	GWh 0.300	22.807
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 3.726	25.533
	Unit 6	GWh 10.748	31.621
	<b>Total units sent out on gas - Bin Qasim - I</b>	<b>GWh 15.114</b>	<b>99.299</b>
ii	Bin Qasim II - 560 MW	GWh 93.123	91.096
iii	Korangi Town Gas Turbine II	GWh 10.053	10.284
iv	Site Gas Turbine II	GWh 5.178	8.533
v	Korangi CCPP	GWh 17.167	25.001
	<b>Total units sent out on gas - KE</b>	<b>GWh 140.635</b>	<b>234.213</b>
1c	<b>UNITS SENT OUT ON LNG</b>		
i	<u>Bin Qasim - I</u>		
	Unit 1	GWh 0.724	53.643
	Unit 2	GWh 0.641	63.266
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 7.957	70.826
	Unit 6	GWh 22.950	87.214
	<b>Total units sent out on LNG - Bin Qasim - I</b>	<b>GWh 32.272</b>	<b>275.450</b>
ii	Bin Qasim II - 560 MW	GWh 270.711	259.768
iii	Korangi Town Gas Turbine II	GWh 29.572	29.217
iv	Site Gas Turbine II	GWh 16.622	24.164
v	Korangi CCPP	GWh 60.688	71.211
	<b>Total units sent out on LNG - KE</b>	<b>GWh 409.864</b>	<b>659.810</b>
1d	<b>UNITS SENT OUT ON HSD</b>		
I	Korangi CCPP - 220 MW	GWh -	11.057
	<b>Total units sent out on HSD</b>	<b>GWh -</b>	<b>11.057</b>
	<b>Total units sent out KE</b>	<b>GWh 843.050</b>	<b>970.672</b>
<b>2</b>	<b>HEAT RATE AT BUS BAR</b>		
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
vi	Korangi CCPP - HSD - Note 2	Btu/kWh -	8,748

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-21	May-21	
		Reference	Current	
3	<u>Calorific Value - Furnace Oil</u>	Btu/kg	40,351	40,351
4	<b>FUEL PRICES</b>			
4a	Fuel Price - Gas	Rs./MMBTU	857	857
4b	Fuel Price - Furnace Oil	Rs./Mton	72,507	75,710
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,797	1,876.29
4d	Fuel Price - LNG	Rs./MMBTU	1,461	1,534
4e	Fuel Price - HSD	Rs./MMBTU		2,712
5	<b>COST OF FUEL</b>			
5a	<u>Furnace oil</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	1,574,918	647,913
	Unit 2	Mill Rs.	1,220,980	270,663
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	1,558,572	388,211
	Unit 6	Mill Rs.	1,168,205	-
	<b>Total Cost of Furnace Oil - Bin Qasim - I</b>	Mill Rs.	<b>5,522,676</b>	<b>1,306,787</b>
5b	<u>Gas</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	3,139	179,021
	Unit 2	Mill Rs.	2,742	208,165
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	32,907	225,468
	Unit 6	Mill Rs.	94,406	277,737
	<b>Total Cost of Gas - Bin Qasim - I</b>	Mill Rs.	<b>133,194</b>	<b>890,391</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	668,839	654,279
	iii Korangi Town Gas Turbine II	Mill Rs.	75,279	77,010
	iv Site Gas Turbine II	Mill Rs.	38,809	63,956
	v Korangi CCPP	Mill Rs.	125,008	182,053
	<b>Total Cost of Gas - KE</b>	Mill Rs.	<b>1,041,129</b>	<b>1,867,689</b>
5c	<u>LNG</u>			
i	<u>Bin Qasim - I</u>			
	Unit 1	Mill Rs.	11,424	888,631
	Unit 2	Mill Rs.	9,979	1,033,293
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	119,749	1,119,181
	Unit 6	Mill Rs.	343,550	1,378,640
	<b>Total Cost of LNG - Bin Qasim - I</b>	Mill Rs.	<b>484,702</b>	<b>4,419,744</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	3,313,769	3,338,634
	iii Korangi Town Gas Turbine II	Mill Rs.	377,425	391,516
	iv Site Gas Turbine II	Mill Rs.	212,332	324,100
	v Korangi CCPP	Mill Rs.	753,186	927,925
	<b>Total Cost of LNG - KE</b>	Mill Rs.	<b>5,141,413</b>	<b>9,401,920</b>
5d	<u>HSD</u>			
i	Korangi CCPP - note 2	Mill Rs.	-	262,291
	<b>Total Cost of HSD - KE</b>	Mill Rs.	-	<b>262,291</b>
	GIDC Arrears billed - Note 1		762,160	762,160
	<b>Total cost of fuel - KE</b>	a	Mill Rs.	<b>12,467,377</b>
6	<b>Variation in Cost of Fuel - KE</b>			
6a	Units Sent Out - KE	GWh	843,050	970,672
6b	Units - Power Purchases	GWh	725,620	1,035,706
	<b>Total Units Sent Out</b>	b	GWh	<b>1,568,671</b>
6c	Cost per unit	c = a/b	Rs./kWh	7.948
6d	Variation per unit (Cost of Fuel - KE)		Rs./kWh	[1.169]
6e	Variation amount (Cost of Fuel - KE)		Mill Rs.	<b>[2,345,315]</b>

Note 1: Installment of GIDC arrears billed by SSGC in as per Supreme court order dated November 02, 2020. The amount of GIDC will be paid to SSGC when allowed by NEPRA in tariff.

Note 2: KE has commissioned HSD fuel on Korangi CCPP plant. In this regard, NEPRA is requested to provisionally allow cost of generation on HSD at actual, till the heat rate test is conducted and any adjustment pursuant to final determination will be made with effect from May 2021.

Work Sheet- Power Purchase O&M and Capacity Cost

DESCRIPTION		Mar-21	May-21		
		Reference	Current		
<b>1 POWER PURCHASES</b>					
a	KANUPP	GWh	15.805	20.424	
b	TAPAL	GWh	70.936	59.030	
c	GUL AHMED	GWh	63.407	56.010	
d	CPA-G	GWh	421.762	711.686	
e	ANOUD POWER	GWh	-	-	
f	INT IND (IIL)	GWh	6.355	3.453	
g	FFBL	GWh	40.611	40.273	
h	SNPC	GWh	64.528	71.014	
i	OURSUN	GWh	8.820	8.521	
j	CPA-G - 150 MW	GWh	18.768	47.020	
k	GHARO SOLAR	GWh	10.561	10.940	
l	LOTTE	GWh	4.067	7.336	
<b>TOTAL</b>		<b>GWh</b>	<b>725.620</b>	<b>1,035.706</b>	
<b>2 COST OF POWER PURCHASES - FUEL COST</b>					
a	KANUPP - Note 1	Mill Rs.	221.828	271.083	
b	TAPAL	Mill Rs.	1,068.069	948.111	
c	GUL AHMED	Mill Rs.	952.481	913.492	
d	CPA-G - Note 2	Mill Rs.	2,017.288	4,392.170	
e	ANOUD POWER	Mill Rs.	-	-	
f	INT IND (IIL)	Mill Rs.	67.740	36.834	
g	FFBL	Mill Rs.	382.300	377.724	
h	SNPC	Mill Rs.	441.122	485.463	
i	OURSUN	Mill Rs.	-	-	
j	CPA-G - 150 MW - Note 2	Mill Rs.	89.769	290.182	
k	GHARO SOLAR	Mill Rs.	-	-	
l	LOTTE	Mill Rs.	59.079	111.889	
<b>TOTAL</b>		<b>Mill Rs.</b>	<b>5,299.675</b>	<b>7,826.949</b>	
<b>3 FUEL COST / UNIT</b>					
a	KANUPP - Note 1	Rs./kwh	14.035	13.273	
b	TAPAL	Rs./kwh	15.057	16.062	
c	GUL AHMED	Rs./kwh	15.022	16.309	
d	CPA-G - Note 2	Rs./kwh	4.783	6.172	
e	ANOUD POWER	Rs./kwh	-	-	
f	INT IND (IIL)	Rs./kwh	10.659	10.669	
g	FFBL	Rs./kwh	9.414	9.379	
h	SNPC	Rs./kwh	6.836	6.836	
i	OURSUN	Rs./kwh	-	-	
j	CPA-G - 150 MW - Note 2	Rs./kwh	4.783	6.172	
k	GHARO SOLAR	Rs./kwh	-	-	
l	LOTTE	Rs./kwh	14.526	15.252	
<b>4 VARIATION IN COST OF FUEL - POWER PURCHASES</b>					
4a	Cost of Fuel - Power Purchases	a	Mill Rs.	5,299.675	7,826.949
Units Sent out:					
	Units Sent Out - KE		GWh	843.050	970.672
	Units - Power Purchases		GWh	725.620	1,035.706
4b	Total Units Sent Out	b	GWh	<u>1,568.671</u>	<u>2,006.378</u>
4c	Cost per unit	c = a/b	Rs./kwh	3.378	3.901
4d	Variation per unit (Cost of Fuel - Power Purchases)		Rs./kwh		0.523
4e	Variation amount (Cost of Fuel - Power Purchases)		Mill Rs.		<u>1,048.501</u>

Note 1: Kanupp details are provisional for the month of May-21 as the invoice for the month is yet to be received.

Note 2: CPA-G's fuel cost for the month of May 2021 is based on NEPRA's determination of fuel cost for the month of April 2021 (latest determined) as the fuel cost for the month of May 2021 is yet to be determined.

For n/a  
 - ADG (T/F)  
 - MF

Head  
 N. 13/7/21  
 ex: chairman  
 - VC/m (MKE)  
 - m (T/CA)  
 - m (IC)

KE  
 July 9, 2021

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

Ref No. KE/BPR/NEPRA/2021/1549  
 July 9, 2021

**Subject: Monthly Cost Variation for the month of June 2021 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 June 2021 along with relevant supports, for Authority's approval. Please note that the calculation for the month of June 2021 is based on CPPA-G's latest fuel cost determined by NEPRA for the month of April 2021 and it is subject to adjustment based on the determination for June 2021 to be issued by NEPRA.

Moreover, fuel cost (own plants) for June 2021 includes impact of GIDC arrears monthly installments for the month of June 2021 amounting to PKR 762 million (excluding taxes) as per Supreme court order dated November 2, 2020 which is to be passed on to consumers.

Summary of Cost variation for the month June 2021 is as below;

Month	Variation Amount (PKR Million)	Variation per unit (PKR / kWh)
June-21	442	0.211

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 determined provisional Heat rates for KE's generating plants and 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, with respect to Heat Rates of KCCP, SGTPS & KGTPS, NEPRA issued its determination on September 2, 2020 and January 18, 2021 respectively, against which KE has filed review motions. The required adjustment will be incorporated after the final heat rates are determined.

REGISTRAR

Dy. No: 11786  
 Dated: 13-7-2021

*[Signature]*



Moreover, Heat rate test of BQPS I Plant has 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 of BQPS I based on the test results.

Furthermore, KE would humbly request NEPRA for expeditious processing of pending monthly variations for January 2021 to May 2021 and quarterly tariff variations for the period April 2020 to March 2021.

Sincerely,

**Ayaz Jaffar Ahmed**  
Director - Finance & Regulations

**Enclosed:**

- Calculation sheet of monthly variation - June 2021
- Supporting Documents for June 2021



**K Electric Limited**

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

DESCRIPTION		Unit	Mar-21 Reference	Jun-21 Current
<b>A)</b>	<b>Cost of fuel:</b>			
	Cost of fuel - KE	a	Mill Rs. 12,467.377	15,316.524
	Cost of fuel - Power Purchases		Mill Rs. 5,299.675	8,879.741
	<b>Total</b>		<b>Mill Rs. 17,767.052</b>	<b>24,196.265</b>
<b>B)</b>	<b>Units Sent Out</b>			
	Units Sent Out - KE	b	GWh 843.050	960.489
	Units - Power purchases		GWh 725.620	1,136.789
	<b>Total</b>		<b>GWh 1,568.671</b>	<b>2,097.278</b>
<b>C)</b>	<b>Cost per unit</b>			
	Cost of fuel - KE	c = a/b	Rs./kWh 7.948	7.303
	Cost of fuel - Power Purchases		Rs./kWh 3.378	4.234
	<b>Average</b>		<b>Rs./kWh 11.326</b>	<b>11.537</b>
<b>D)</b>	<b>Variation per unit</b>			
	Cost of fuel - KE	d	Rs./kWh	(0.645)
	Cost of fuel - Power Purchases		Rs./kWh	0.855
	<b>Total Fuel Cost Adjustment</b>		Rs./kWh	<b>0.211</b>
<b>E)</b>	<b>Total Fuel Cost Adjustment</b>		<b>Ps/kWh</b>	<b>21.08</b>
<b>F)</b>	<b>Variation amount</b>			
	Cost of fuel - KE	e = d x	Mill Rs.	(1,352.084)
	Cost of fuel - Power Purchases	b (total)	Mill Rs.	1,794.193
	<b>Total Fuel Cost Adjustment</b>		Mill Rs.	<b>442.109</b>

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-21	Mar-21
		Reference	Current
<b>1 UNITS SENT OUT</b>			
<b>1a UNITS SENT OUT ON FURNACE OIL</b>			
<b>i Bin Qasim - I</b>			
Unit 1	GWh	81.139	102.152
Unit 2	GWh	63.802	94.886
Unit 3	GWh	-	51.556
Unit 4	GWh	-	-
Unit 5	GWh	84.178	70.375
Unit 6	GWh	63.433	26.786
Total units sent out on furnace oil - Bin Qasim - I	GWh	292.551	345.755
<b>1b UNITS SENT OUT ON GAS</b>			
<b>i Bin Qasim - I</b>			
Unit 1	GWh	0.339	0.160
Unit 2	GWh	0.300	2.619
Unit 3	GWh	-	1.519
Unit 4	GWh	-	-
Unit 5	GWh	3.726	13.255
Unit 6	GWh	10.748	22.693
Total units sent out on gas - Bin Qasim - I	GWh	15.114	40.246
ii Bin Qasim II - 560 MW	GWh	93.123	74.593
iii Korangi Town Gas Turbine II	GWh	10.053	4.562
iv Site Gas Turbine II	GWh	5.178	4.130
v Korangi CCGP	GWh	17.167	15.830
Total units sent out on gas - KE	GWh	140.635	139.362
<b>1c UNITS SENT OUT ON LNG</b>			
<b>i Bin Qasim - I</b>			
Unit 1	GWh	0.724	0.471
Unit 2	GWh	0.641	7.726
Unit 3	GWh	-	4.481
Unit 4	GWh	-	-
Unit 5	GWh	7.957	39.101
Unit 6	GWh	22.950	66.941
Total units sent out on LNG - Bin Qasim - I	GWh	32.272	118.720
ii Bin Qasim II - 560 MW	GWh	270.711	259.621
iii Korangi Town Gas Turbine II	GWh	29.572	14.333
iv Site Gas Turbine II	GWh	16.622	13.015
v Korangi CCGP	GWh	60.688	49.693
Total units sent out on LNG - KE	GWh	409.864	455.383
<b>1d UNITS SENT OUT ON HSD</b>			
<b>i Korangi CCGP - 220 MW</b>			
	GWh	-	19.989
Total units sent out on HSD	GWh	-	19.989
Total units sent out KE	GWh	843.050	960.489
<b>2 HEAT RATE AT BUS BAR</b>			
<b>i Bin Qasim - I</b>			
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 CCGP	Btu/kWh	8,497	8,497

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Mar-21	Jun-21		
		Reference	Current		
3	Calorific Value - Furnace Oil	Btu/lb	40,351	40,351	
<b>FUEL PRICES</b>					
4a	Fuel Price - Gas	Rs./MMBTU	857	857	
4b	Fuel Price - Furnace Oil	Rs./Mton	72,507	72,507	
4c	Fuel Price - Furnace Oil	Rs./MMBTU	1,797	1,799	
4d	Fuel Price - LNG	Rs./MMBTU	1,461	1,577	
4a	Fuel Price - HSD	Rs./MMBTU		2,710	
<b>COST OF FUEL</b>					
<b>5a Furnace Oil</b>					
<b>i Bin Qasim - I</b>					
	Unit 1	MWh Rs.	1,374,918	1,984,980	
	Unit 2	MWh Rs.	1,220,980	1,817,834	
	Unit 3	MWh Rs.	-	1,019,401	
	Unit 4	MWh Rs.	-	-	
	Unit 5	MWh Rs.	1,558,572	1,304,438	
	Unit 6	MWh Rs.	1,168,205	493,847	
	Total Cost of Furnace Oil - Bin Qasim - I	MWh Rs.	5,523,676	6,620,879	
<b>5b Gas</b>					
<b>i Bin Qasim - I</b>					
	Unit 1	MWh Rs.	3,139	1,477	
	Unit 2	MWh Rs.	2,742	23,906	
	Unit 3	MWh Rs.	-	14,315	
	Unit 4	MWh Rs.	-	-	
	Unit 5	MWh Rs.	32,907	117,053	
	Unit 6	MWh Rs.	94,406	199,323	
	Total Cost of Gas - Bin Qasim - I	MWh Rs.	133,194	356,073	
	ii Bin Qasim II - 560 MW	MWh Rs.	668,839	535,751	
	iii Korangi Town Gas Turbine II	MWh Rs.	75,279	34,163	
	iv Site Gas Turbine II	MWh Rs.	38,809	30,956	
	v Korangi CCPP	MWh Rs.	125,008	115,276	
	Total Cost of Gas - KE	MWh Rs.	1,041,129	1,072,220	
<b>5c LNG</b>					
<b>i Bin Qasim - I</b>					
	Unit 1	MWh Rs.	11,424	8,015	
	Unit 2	MWh Rs.	9,979	129,722	
	Unit 3	MWh Rs.	-	77,676	
	Unit 4	MWh Rs.	-	-	
	Unit 5	MWh Rs.	119,749	635,173	
	Unit 6	MWh Rs.	343,550	1,081,602	
	Total Cost of LNG - Bin Qasim - I	MWh Rs.	484,702	1,932,189	
	ii Bin Qasim II - 560 MW	MWh Rs.	3,313,769	3,430,177	
	iii Korangi Town Gas Turbine II	MWh Rs.	377,425	197,449	
	iv Site Gas Turbine II	MWh Rs.	212,332	179,452	
	v Korangi CCPP	MWh Rs.	753,186	665,666	
	Total Cost of LNG - KE	MWh Rs.	5,141,419	8,404,928	
<b>5d HSD</b>					
<b>i Korangi CCPP - note 2</b>					
	Total Cost of HSD - KE	MWh Rs.	-	456,338	
<b>GIDC Arrears billed - Note 1</b>					
			762,160	762,160	
	Total cost of fuel - KE	a	MWh Rs.	12,467,877	18,316,524
<b>6 Variation in Cost of Fuel - KE</b>					
6a	Units Sent Out - KE	GWh	843,050	960,489	
6b	Units - Power Purchases	GWh	725,820	1,136,789	
	Total Units Sent Out	b	GWh	1,568,871	2,097,278
6c	Cost per unit	c = a/b	Rs./kWh	7.948	7.303
6d	Variation per unit (Cost of Fuel - KE)		Rs./kWh		(0.645)
6e	Variation amount (Cost of Fuel - KE)		MWh Rs.		(1,352,684)

Note 1: Installment of GIDC arrears billed by SSGC in as per Supreme court order dated November 02, 2020. The amount of GIDC will be paid to SSGC when allowed by NEPRA in tariff.

Note 2: NEPRA vide its letter dated June 29, 2021 approved the provisional cost of generation of KCCP at HSD, subject to final determination of heat rate on HSD. Accordingly, actual cost of HSD consumption has been used.

Work Sheet- Power Purchase O&M and Capacity Cost

DESCRIPTION		Mar-21	Jun-21		
		Reference	Current		
<b>1 POWER PURCHASES</b>					
a	KANUPP	GWh	15.805	19.020	
b	TAPAL	GWh	70.936	74.622	
c	GUL AHMED	GWh	63.407	80.024	
d	CPPA-G	GWh	421.762	776.622	
e	ANOUD POWER	GWh	-	-	
f	INT IND (IIL)	GWh	6.355	2.813	
g	FFBL	GWh	40.611	39.284	
h	SNPC	GWh	64.528	61.098	
i	OURSUN	GWh	8.820	7.405	
j	CPPA-G - 150 MW	GWh	18.768	60.107	
k	GHARO SOLAR	GWh	10.561	9.002	
l	LOTTE	GWh	4.067	6.778	
m	LUCKY	GWh	-	0.014	
<b>TOTAL</b>		<b>GWh</b>	<b>725.620</b>	<b>1,136.789</b>	
<b>2 COST OF POWER PURCHASES - FUEL COST</b>					
a	KANUPP - Note 1	Mill Rs.	221.828	297.299	
b	TAPAL	Mill Rs.	1,068.069	1,195.751	
c	GUL AHMED	Mill Rs.	932.481	1,300.288	
d	CPPA-G - Note 2	Mill Rs.	2,017.288	4,792.923	
e	ANOUD POWER	Mill Rs.	-	-	
f	INT IND (IIL)	Mill Rs.	67.740	29.997	
g	FFBL	Mill Rs.	382.300	368.449	
h	SNPC	Mill Rs.	441.122	417.678	
i	OURSUN	Mill Rs.	-	-	
j	CPPA-G - 150 MW - Note 2	Mill Rs.	89.769	370.950	
k	GHARO SOLAR	Mill Rs.	-	-	
l	LOTTE	Mill Rs.	59.079	106.272	
m	LUCKY	Mill Rs.	-	0.134	
<b>TOTAL</b>		<b>Mill Rs.</b>	<b>5,299.675</b>	<b>8,879.741</b>	
<b>3 FUEL COST / UNIT</b>					
a	KANUPP - Note 1	Rs./kwh	14.035	15.631	
b	TAPAL	Rs./kwh	15.057	16.024	
c	GUL AHMED	Rs./kwh	15.022	16.249	
d	CPPA-G - Note 2	Rs./kwh	4.783	6.172	
e	ANOUD POWER	Rs./kwh	-	-	
f	INT IND (IIL)	Rs./kwh	10.659	10.663	
g	FFBL	Rs./kwh	9.414	9.379	
h	SNPC	Rs./kwh	6.836	6.836	
i	OURSUN	Rs./kwh	-	-	
j	CPPA-G - 150 MW - Note 2	Rs./kwh	4.783	6.172	
k	GHARO SOLAR	Rs./kwh	-	-	
l	LOTTE	Rs./kwh	14.526	15.679	
m	LUCKY	Rs./kwh	-	9.5563	
<b>4 VARIATION IN COST OF FUEL - POWER PURCHASES</b>					
4a	Cost of Fuel - Power Purchases	a	Mill Rs.	5,299.675	8,879.741
Units Sent out:					
	Units Sent Out - KE		GWh	843.050	960.489
	Units - Power Purchases		GWh	725.620	1,136.789
4b	Total Units Sent Out	b	GWh	<u>1,568.671</u>	<u>2,097.278</u>
4c	Cost per unit	c = a/b	Rs./kwh	3.378	4.234
4d	Variation per unit (Cost of Fuel - Power Purchases)		Rs./kwh	-	0.855
4e	Variation amount (Cost of Fuel - Power Purchases)		Mill Rs.	-	<u>1,794.193</u>

Note 1: Kanupp details are provisional for the month of June-21 as the invoice for the month is yet to be received.

Note 2: CPPA-G's fuel cost for the month of June 2021 is based on NEPRA's determination of fuel cost for the month of April 2021 (latest determined) as the fuel cost for the month of June 2021 is yet to be determined.