

**K Electric Limited**

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

DESCRIPTION		Unit	Sep-21	Oct-21
			Current	Current
<b>A) Cost of fuel:</b>				
Cost of fuel - KE	a	Mill Rs.	18,805.681	16,617.237
Cost of fuel - Power Purchases	b	Mill Rs.	8,768.235	11,333.306
<b>Total</b>	<b>c = a + b</b>	<b>Mill Rs.</b>	<b>27,573.916</b>	<b>27,950.543</b>
<b>B) Units Sent Out</b>				
Units Sent Out - KE	d	GWh	903.393	758.139
Units - Power purchases	e	GWh	1,018.610	1,018.840
<b>Total</b>	<b>f = d + e</b>	<b>GWh</b>	<b>1,922.003</b>	<b>1,776.978</b>
<b>C) Cost per unit on respective Sent Out</b>				
Cost of fuel - KE	g = a / d	Rs./kWh	20.817	21.918
Cost of fuel - Power Purchases	h = b / e	Rs./kWh	8.608	11.124
<b>Weighted Average Cost / Total cost per unit</b>	<b>i = c / f</b>	<b>Rs./kWh</b>	<b>14.346</b>	<b>15.729</b>
<b>D) Cost per unit on total sent out - Note 1</b>				
Cost of fuel - KE on total sent out	j = a / f	Rs./kWh	9.784	9.351
Cost of fuel - Power Purchases on total sent out	k = b / f	Rs./kWh	4.562	6.378
<b>Weighted Average Cost / Total cost per unit</b>	<b>l = c / f</b>	<b>Rs./kWh</b>	<b>14.346</b>	<b>15.729</b>
<b>E) Variation per unit - Note 2</b>				
Cost of fuel - KE	m	Rs./kWh		(0.433)
Cost of fuel - Power Purchases	n	Rs./kWh		1.816
<b>Total Fuel Cost Adjustment</b>	<b>o = m + n</b>	<b>Rs./kWh</b>		<b>1.383</b>
<b>F) Total Fuel Cost Adjustment</b>		<b>Ps/kWh</b>		<b>138.28</b>
<b>G) Variation amount</b>				
Cost of fuel - KE	r = m x f	Mill Rs.		(769.465)
Cost of fuel - Power Purchases	s = n x f	Mill Rs.		3,226.676
<b>Total Fuel Cost Adjustment</b>	<b>t = r + s</b>	<b>Mill Rs.</b>		<b>2,457.211</b>

Note 1: As per mechanism given in MYT, weighted average cost for KE's fuel cost and power purchase is calculated by dividing fuel cost with total units sent out (KE+power purchase) in GWh as per Annexure II & III of MYT Decision

Note 2: Calculated as difference of current and reference month of cost per unit for the month

Work Sheet- Generation Fuel Cost Variation

DESCRIPTION		Sep-21	Oct-21
		Current	Current
<b>1</b>	<b><u>UNITS SENT OUT</u></b>		
	<b>1a <u>UNITS SENT OUT ON FURNACE OIL</u></b>		
	<b>i <u>Bin Qasim - I</u></b>		
	Unit 1	GWh 91.214	49.509
	Unit 2	GWh 91.258	54.426
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 90.608	63.123
	Unit 6	GWh 15.297	10.440
	<b>Total units sent out on furnace oil - Bin Qasim - I</b>	<b>GWh 288.377</b>	<b>177.499</b>
	<b>1b <u>UNITS SENT OUT ON GAS</u></b>		
	<b>i <u>Bin Qasim - I</u></b>		
	Unit 1	GWh 0.059	0.059
	Unit 2	GWh 0.477	0.541
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 3.418	3.791
	Unit 6	GWh 22.557	17.249
	<b>Total units sent out on gas - Bin Qasim - I</b>	<b>GWh 26.511</b>	<b>21.640</b>
	ii Bin Qasim II - 560 MW	GWh 76.853	66.096
	iii Korangi Town Gas Turbine II	GWh 6.313	4.556
	iv Site Gas Turbine II	GWh 4.798	3.725
	v Korangi CCGP	GWh 15.682	8.687
	<b>Total units sent out on gas - KE</b>	<b>GWh 130.157</b>	<b>104.704</b>
	<b>1c <u>UNITS SENT OUT ON LNG</u></b>		
	<b>i <u>Bin Qasim - I</u></b>		
	Unit 1	GWh 0.195	0.257
	Unit 2	GWh 1.580	2.348
	Unit 3	GWh -	-
	Unit 4	GWh -	-
	Unit 5	GWh 11.321	16.465
	Unit 6	GWh 74.706	74.919
	<b>Total units sent out on LNG - Bin Qasim - I</b>	<b>GWh 87.802</b>	<b>93.990</b>
	ii Bin Qasim II - 560 MW	GWh 261.780	287.615
	iii Korangi Town Gas Turbine II	GWh 21.567	18.458
	iv Site Gas Turbine II	GWh 16.343	16.131
	v Korangi CCGP	GWh 52.870	34.282
	<b>Total units sent out on LNG - KE</b>	<b>GWh 440.361</b>	<b>450.476</b>
	<b>1d <u>UNITS SENT OUT ON HSD</u></b>		
	<b>i Korangi CCGP - 220 MW</b>	GWh 44.498	25.459
	<b>Total units sent out on HSD</b>	<b>GWh 44.498</b>	<b>25.459</b>
	<b>Total units sent out KE</b>	<b>GWh 903.393</b>	<b>758.139</b>
<b>2</b>	<b><u>HEAT RATE AT BUS BAR</u></b>		
	<b>i <u>Bin Qasim - I</u></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	9,092
	iv Site Gas Turbine II	Btu/kWh 8,746	8,746
	v Korangi CCGP	Btu/kWh 8,497	8,497
	vi Korangi CCGP - HSD - Note 2	Btu/kWh 8,104	8,104

**Work Sheet- Generation Fuel Cost Variation**

DESCRIPTION		Sep-21	Oct-21	
		Current	Current	
<b>3</b>	<b>Calorific Value - Furnace Oil</b>	Btu/kg	40,351	40,351
<b>4</b>	<b>FUEL PRICES</b>			
4a	Fuel Price - Gas	Rs./MMBTU	857	857
4b	Fuel Price - Furnace Oil	Rs./Mton	92,313	98,558
4c	Fuel Price - Furnace Oil	Rs./MMBTU	2,288	2,443
4d	Fuel Price - LNG	Rs./MMBTU	2,545	2,676
4e	Fuel Price - HSD	Rs./MMBTU	2,739	2,967
<b>5</b>	<b>COST OF FUEL</b>			
5a	<b>Furnace oil</b>			
i	<b>Bin Qasim - I</b>			
	Unit 1	Mill Rs.	2,254.114	1,306.252
	Unit 2	Mill Rs.	2,223.459	1,415.773
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	2,135.903	1,588.665
	Unit 6	Mill Rs.	358.660	261.357
	<b>Total Cost of Furnace Oil - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>6,972.136</b>	<b>4,572.047</b>
5b	<b>Gas</b>			
i	<b>Bin Qasim - I</b>			
	Unit 1	Mill Rs.	0.545	0.548
	Unit 2	Mill Rs.	4.353	4.935
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	30.185	33.476
	Unit 6	Mill Rs.	198.125	151.508
	<b>Total Cost of Gas - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>233.207</b>	<b>190.467</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	551.982	474.724
	iii Korangi Town Gas Turbine II	Mill Rs.	47.272	35.496
	iv Site Gas Turbine II	Mill Rs.	35.965	27.919
	v Korangi CCGP	Mill Rs.	114.193	63.259
	<b>Total Cost of Gas - KE</b>	<b>Mill Rs.</b>	<b>982.619</b>	<b>791.864</b>
5c	<b>LNG</b>			
i	<b>Bin Qasim - I</b>			
	Unit 1	Mill Rs.	5.355	7.435
	Unit 2	Mill Rs.	42.808	66.938
	Unit 3	Mill Rs.	-	-
	Unit 4	Mill Rs.	-	-
	Unit 5	Mill Rs.	296.854	454.071
	Unit 6	Mill Rs.	1,948.453	2,055.075
	<b>Total Cost of LNG - Bin Qasim - I</b>	<b>Mill Rs.</b>	<b>2,293.471</b>	<b>2,583.519</b>
	ii Bin Qasim II - 560 MW	Mill Rs.	5,583.017	6,451.299
	iii Korangi Town Gas Turbine II	Mill Rs.	479.562	449.139
	iv Site Gas Turbine II	Mill Rs.	363.743	377.603
	v Korangi CCGP	Mill Rs.	1,143.204	779.614
	<b>Total Cost of LNG - KE</b>	<b>Mill Rs.</b>	<b>9,862.996</b>	<b>10,641.174</b>
5d	<b>HSD</b>			
i	Korangi CCGP - note 2	Mill Rs.	987.930	612.153
	<b>Total Cost of HSD - KE</b>	<b>Mill Rs.</b>	<b>987.930</b>	<b>612.153</b>
	GIDC Arrears billed - Note 1			
	<b>Total cost of fuel - KE</b>	<b>a</b>	<b>Mill Rs.</b>	<b>18,805.681</b>
				<b>16,617.237</b>
<b>6</b>	<b>Variation in Cost of Fuel - KE</b>			
6a	Units Sent Out - KE	GWh	903.393	758.139
6b	Units - Power Purchases	GWh	1,018.610	1,018.840
	<b>Total Units Sent Out</b>	<b>b</b>	<b>GWh</b>	<b>1,922.003</b>
				<b>1,776.978</b>
6c	Cost per unit	c = a/b	Rs./kWh	9.784
				9.351
6d	<b>Variation per unit (Cost of Fuel - KE)</b>		<b>Rs./kWh</b>	<b>(0.433)</b>
6e	<b>Variation amount (Cost of Fuel - KE)</b>		<b>Mill Rs.</b>	<b>(769.465)</b>

Note 1: Installment of GIDC arrears amounting to PKR 762 million per month is being billed by SSGC as per Supreme court order dated November 02, 2020. However, NEPRA in its FCA decision for the month of June 2021 has stated "considering the fact that K-Electric has obtained stay order from the Honorable SHC in the matter, decided not to allow any amount on account of GIDC till final decision by the Honorable SHC in the matter". Accordingly, GIDC for the month of October 2021 will be claimed as per the final decision of Honorable SHC in the matter.

Note 2: NEPRA vide its letter dated June 29, 2021 approved the provisional cost of generation of KCCP at HSD at actual till August 2021, subject to final determination of heat rate on HSD. KE has submitted IE's report of HSD heat rate test to NEPRA and has requested to provisionally allow HSD Heat rates as per IE's test result & degradation table, for September 2021 and onwards till determination by NEPRA, subject to adjustment based on final determination.

Work Sheet- Power Purchase

DESCRIPTION		Sep-21	Oct-21
		Current	Current
<b>1 POWER PURCHASES</b>			
a	KANUPP	GWh	-
b	TAPAL	GWh	59.175
c	GUL AHMED	GWh	62.015
d	CPPA-G	GWh	773.176
e	ANOUD POWER	GWh	-
f	INT IND (IIL)	GWh	4.461
g	FFBL	GWh	37.676
h	SNPC	GWh	63.198
i	OURSUN	GWh	7.504
j	CPPA-G - 150 MW	GWh	-
k	GHARO SOLAR	GWh	8.691
l	LOTTE	GWh	2.722
m	LUCKY	GWh	0.222
	CPPA-G	<b>GWh</b>	<b>1,018.610</b>
<b>2 COST OF POWER PURCHASES - FUEL COST</b>			
a	KANUPP	Mill Rs.	-
b	Cost of fuel - KE on total sent out	Mill Rs.	1,286.140
c	Cost of fuel - Power Purchases on total sent out	Mill Rs.	1,339.096
d	CPPA-G - Note 1	Mill Rs.	7,667.200
e	ANOUD POWER	Mill Rs.	-
f	INT IND (IIL)	Mill Rs.	47.532
g	FFBL	Mill Rs.	507.454
h	SNPC	Mill Rs.	411.308
i	OURSUN	Mill Rs.	-
j	CPPA-G - 150 MW - Note 1	Mill Rs.	32.214
k	GHARO SOLAR	Mill Rs.	-
l	LOTTE	Mill Rs.	72.454
m	LUCKY	Mill Rs.	2.121
	<b>TOTAL</b>	<b>Mill Rs.</b>	<b>8,768.235</b>
<b>3 FUEL COST / UNIT</b>			
a	KANUPP	Rs./kwh	-
b	TAPAL	Rs./kwh	21.735
c	GUL AHMED	Rs./kwh	21.593
d	CPPA-G - Note 1	Rs./kwh	9.917
e	ANOUD POWER	Rs./kwh	-
f	INT IND (IIL)	Rs./kwh	10.655
g	FFBL	Rs./kwh	13.469
h	SNPC	Rs./kwh	6.508
i	OURSUN	Rs./kwh	-
j	CPPA-G - 150 MW - Note 1	Rs./kwh	6.686
k	GHARO SOLAR	Rs./kwh	-
l	LOTTE	Rs./kwh	26.618
m	LUCKY	Rs./kwh	9.5563
<b>4 VARIATION IN COST OF FUEL - POWER PURCHASES</b>			
<b>4a</b>	<b>Cost of Fuel - Power Purchases</b>	<b>a</b> Mill Rs.	<b>8,768.235</b>
	<b>Units Sent out:</b>		
	Units Sent Out - KE	GWh	758.139
	Units - Power Purchases	GWh	1,018.840
<b>4b</b>	<b>Total Units Sent Out</b>	<b>b</b> GWh	<b>1,776.978</b>
<b>4c</b>	<b>Cost per unit</b>	<b>c = a/b</b> Rs./kwh	4.562
<b>4d</b>	<b>Variation per unit (Cost of Fuel - Power Purchases)</b>	Rs./kwh	1.816
<b>4e</b>	<b>Variation amount (Cost of Fuel - Power Purchases)</b>	Mill Rs.	<b>3,226.676</b>

Note 1: CPPA-G's fuel cost for the month of October 2021 is based on the rate presented by NEPRA during FCA hearing of XW-DISCOs for the month of October 2021. KE would request NEPRA to adjust CPPA-G's rate for October 2021 based on final determination.