



Registrar

National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/R/TRF-362/K-Electric-2016/23528-32

December 14, 2022

Chief Executive Officer
K-Electric Limited (KEL)s
KE House, Punjab Chowrangi,
39 – B, Sunset Boulevard, Phase-II
Defence Housing Authority,
Karachi.

Subject: **Decision of the Authority in the matter of Monthly Fuel Charges Adjustments of K-Electric Limited for the month of October 2022 and Notification (S.R.O. 2256(I)/2022 dated 14.12.2022) Thereof**

Enclosed please find herewith a copy of decision of the Authority (10 Pages) in the matter of fuel charges adjustment for the month of October 2022 in respect of K-Electric Limited, along with Notification (S.R.O. 2256(I)/2022 dated 14.12.2022) thereof. This is for information and further necessary action.

2. While effecting the Fuel Adjustment Charges, K-Electric Ltd. shall keep in view and strictly comply with the orders of the court(s), if any, notwithstanding this order.

Enclosure: As above (Decision along Notification is also available on NEPRA's website)



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(Syed Safer Hussain)
Registrar

CC:

1. Secretary, Ministry of Energy, Power Division, 'A' Block, Pak Secretariat, Islamabad.
2. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
3. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.
4. Secretary, Privatization Commission, 4th Floor, Kohsar Block, Constitution Avenue, New Secretariat, Islamabad

**DECISION OF THE AUTHORITY IN THE MATTER OF MONTHLY FUEL CHARGES
ADJUSTMENTS OF K-ELECTRIC LIMITED FOR THE MONTH OF OCTOBER 2022**

1. Pursuant to the provisions of Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997, and as per the mechanism for monthly, quarterly and annual adjustments provided in the tariff determination of K-Electric Limited (herein referred to as "K-Electric or KE") dated July 05, 2018, duly notified in the official Gazette vide SRO No. 576(I)/2019 dated May 22, 2019, the Authority has to review and revise the approved tariff on monthly, quarterly and annual adjustments.
2. As per the mechanism provided in the determination, impact of change in KE's own generation fuel cost component due to variation in fuel prices, generation mix & volume shall be passed on to the consumers directly in their monthly bills in the form of Fuel Charges Adjustment (FCA). Similarly, impact of change in the fuel component of Power Purchase Price (PPP) due to variation in fuel prices & energy mix shall also be passed on to consumers through monthly FCA.
3. However, the impact of monthly variations in million rupees in K-Electric's own generation's fuel cost component as well power purchase price to the extent of targeted T&D losses, not taken into account in the monthly FCAs, shall be adjusted on quarterly basis.
4. Pursuant to notification of the determined MYT, K-Electric filed its initial monthly FCA request for October 2022 and, later, revised as under;

Monthly FCA		
Month	Mln Rs.	Rs./kWh
Oct-22	(3,157)	(1.883)

Hearing

5. Since the impact of any adjustments has to be made part of the consumer end tariff, therefore, the Authority, in order to provide an opportunity of hearing to all the concerned and meet the ends of natural justice, decided to conduct a hearing in the matter.
6. The Authority scheduled hearing in the matter of FCAs of K-Electric for the month of October 2022 on November 30, 2022 at NEPRA Tower and through ZOOM. Notices in this regard were published in the newspaper on November 18, 2022 and also uploaded on NEPRA's website along-with adjustment requests filed by K-Electric.



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7. Following issues relevant with the monthly FCA were framed for discussion during the hearing;

- i. Whether the requested Fuel Price Variation is justified?
- ii. Whether K-Electric has followed the merit order while giving dispatch to its power plants as well as power purchases from external sources?

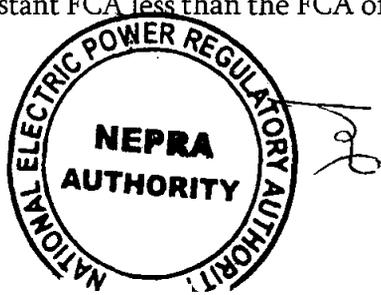
8. The hearing was attended by Representative of K-Electric along-with its financial and technical team. Representatives from Media and General Public also attended the hearing. KE in its FCA request submitted that calculation for the current month is based on CPPA-G's requested fuel cost component for the month of October 2022 and it is subject to adjustment based on the determination of XWDISCOs FCA by NEPRA. The same fact was also reiterated by K-Electric during the hearing.

9. The Authority noted that the Power purchase agreement was signed between NTDCL and K-Electric on January 26, 2010 for five years for sale/purchase of 650 MW on basket rates. Subsequently, a decision was made by the Council of Common Interest (CCI) in its meeting held on November 08, 2012 with respect to the modalities for withdrawal of electric power from NTDCL by the Petitioner, wherein it was decided to reduce the supply of energy by 300MW from NTDCL to K-Electric. However, the aforementioned decision of the CCI has been impugned by way of suits /petitions by K-Electric in the Honorable High Court of Sindh at Karachi. No new agreement has been signed between K-Electric and NTDCL till date, and K-Electric is continuing to draw energy from the National Grid, which at present is around 1100 MW.

10. K-Electric, in its adjustment requests, has certified that it despatches as per Economic Merit Order from its own generation units (with the available fuel resources) and import from external sources. It also certified that the cost of fuel and power purchase claims do not include any amount of late payment surcharge/mark-up/interest.

11. K-Electric provided the plant wise generation statistics sheet, signed by K-Electric. The plant wise statistic sheets provide information in terms of Plant Capacity, Actual Units Generated, Actual Auxiliary consumption, Net Generation and Bus Bar sent outs, Actual Heat Rates, fuel consumption & cost of Fuel and Generation cost per unit. In addition K-Electric also provided copies of invoices raised by Fuel Suppliers and copies of invoices raised by IPPs.

12. Mr. Tanveer Bari, representing KCCI, submitted that if the fuel cost component for October 2022 has reduced in comparison to the fuel cost of September 2022 then why isn't the instant FCA less than the FCA of September 2022. In response, it was clarified that for the FCA



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of September 2022 the reference fuel cost component of June 2022 whereas for the FCA of October 2022 the reference fuel cost component is of September 2022.

13. In the FCA for October 2022 the Authority had directed K-Electric to KE to ensure that supply of RLNG is diverted to other plant only when it meets the criteria for economic merit order. The Authority during the hearing for the current month again reiterated the direction.

14. The Authority based on the information, data and record provided by K-Electric, has analyzed the FCA claim of K-Electric and issue wise discussion is given hereunder;

Issue: Whether the requested Fuel price variations are justified?

K-Electric Own Generation

15. K-Electric has provided information in terms of plant capacity, actual units generated, actual auxiliary consumption, net generation and bus bar sent outs, actual heat rates, fuel consumption & cost of fuel and generation cost per unit. While going through the data / information provided by K-Electric regarding fuel cost of energy from its own power plants, the Authority's observations are as under;

16. K-Electric, as required under the MYT, carried out heat rate test of KCCPP. Pursuant thereto, the Authority, in its decision dated 02.09.2020 decided as under;

"i. For the period from July 2016 to May 2019, the heat rate i.e. 8,250.06 Btu/kWh - net HHV, corresponding to 41.36% efficiency is approved with no further adjustment for degradation and partial loading allowed.

ii. For the period from June 2019 to June 2023, the heat rate i.e. 8,377.032 Btu/kWh - net HHV, corresponding to 40.732% efficiency is approved. This heat rate will be applicable for the control period on flat basis, without any additional adjustment for other parameters.

iii. KE is required to conduct maintenance including Major Overhaul of its plants / units as per prudent utility practices and recommendations of OEM.

iv. In case of non-requirement of Gas compressors - the relevant capacity and Heat rates would be adjusted. For such a scenario, relevant capacity and heat rates calculated during the present tests would be used."

17. Here it is pertinent to mention that Authority vide order dated August 4, 2022 have approved 3rd party Heat Rate Test for 248 MW KCCPP on HSD and has revised the heat rate based on Gas/RLNG as well. Based on the above heat Rate of 8,477 BTU/kWh for KCCPP operation of Gas/RLNG has been used as per the decision dated August 4, 2022



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*Decision of the Authority in the matter of Monthly Fuel Charges Adjustments
of K-Electric for October 2022*

18. The Authority observed that K-Electric has requested an amount of Rs.381.55 million for operation of KCCPP on HSD during October 2022. The Authority for the purpose of instant adjustment has considered the same amount i.e. Rs.381.55 million, as requested by K-Electric, based on heat rate of 7,921.728 btu/kWh determined by the Authority vide decision dated August 4, 2022, with same CV of HSD and auxiliaries as reported by K-Electric.

19. For KGTPS and SGTPS plants, pursuant to the heat rate tests conducted by K-Electric, the Authority approved the following Heat Rates for these plants vide decisions dated 18.01.2021, against the already allowed Heat Rates of 8,738 for KGTPS and 8,746 for SGTPS in the MYT;

Heat Rate for July 2016 – June 2019

Requested by KE:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC	Corresponding Efficiency
KGTPS	9276 ¹	36.78%

1. Average of 7 year Heat Rate (FY 2017-23) corresponding to 50% loading (2 sections in CC mode)

Allowed:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC		Corresponding Efficiency
KGTPS	100% loading	9041.66	37.74%
	75% loading	9092.66	37.527%

Heat Rate for July 2019 – June 2023

Requested by KE:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC	Corresponding Efficiency
KGTPS	9276 ¹	36.78%

1. Average of 7 year Heat Rate (FY 2017-23) corresponding to 50% loading (2 sections in CC mode)

Allowed:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC		Corresponding Efficiency
KGTPS	100% loading	9048.22	37.71%
	75% loading	9099.212	37.499%

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*Decision of the Authority in the matter of Monthly Fuel Charges Adjustments
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Heat Rate for July 2016 ~ June 2019

Requested by KE:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC	Corresponding Efficiency
SGTPS	9264 ¹	36.83%

1. Average of 7 year Heat Rate (FY 2017-23) corresponding to 50% loading (2 sections in CC mode)

Allowed:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC		Corresponding Efficiency
	100% loading	9045.93	
SGTPS	75% loading	9064.794	37.642%

Heat Rate for July 2019 ~ June 2023

Requested by KE:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC	Corresponding Efficiency
SGTPS	9264 ¹	36.83%

1. Average of 7 year Heat Rate (FY 2017-23) corresponding to 50% loading (2 sections in CC mode)

Allowed:

Plant	Net HHV Heat Rate (Btu/kWh) at RSC		Corresponding Efficiency
	100% loading	9077	
SGTPS	75% loading	9095.92	37.512%

20. K-Electric filed review motions against the above decisions for both KGTPS and SGTPS. The Authority vide decision dated 05.11.2021 dismissed the review Motion in the matter of KGTPS. In view thereof, and keeping in view the loading position of KGTPS in the current month, the heat rate of 9,099.212 BTU/kWh is allowed to KGTPS.

21. For SGTPS, the Review Motion has been decided, based on which, KE in its request has used a heat rate of 9,147.761 BTU/kWh, in line with the Authority's decision. The same has been considered for the purpose of instant adjustment.

22. For BQPS-I, K-Electric has conducted the heat rate test, which has been decided by the Authority, the adjustment has been made based on the approved Heat Rate.

23. Regarding GIDC, K-Electric submitted that installment of GIDC arrears amounting to Rs.762 million per month in being billed by SSGC as per Supreme Court order dated 02.11.2020. However, NEPRA in its FCA decision for the month of June 2021 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. K-Electric accordingly stated that GIDC for the current month will be claimed as per the final decision of the honorable SHC in the matter.



24. During the month of October 2022 K-Electric has claimed energy based on One Gas Compressors & Two Gas Compressor. Following is the energy sent out, auxiliaries & heat rates used by K-Electric.

Description	Units Generated	Requested	
		Aux %	Heat Rate BTU/kWh
Bin Qasim II - 560 MW with one compressor (SSGC)	8	4.54%	8,238
Bin Qasim II - 560 MW with two compressors (SSGC)	190	6.11%	8,381
Bin Qasim II - 560 MW with one compressor (PLL)	9	4.54%	8,238
Bin Qasim II - 560 MW with two compressors (PLL)	111	6.11%	8,381

25. KE's submissions regarding BQPS-II have been considered by the Authority on provisional basis, subject to adjustment if any.

26. The generation reported by K-Electric in its adjustment requests have been checked from the plant wise generation statistics sheet; the units sent out have been worked out based on the Authority's allowed Auxiliaries. The units sent out so worked out are in agreement with the sent outs claimed by K-Electric in its adjustment requests.

Power Purchase Price- Fuel Cost

27. While going through the data / information provided by K-Electric regarding fuel cost of energy purchased from external sources, the Authority's observations are as under;

28. The Authority observed that K-Electric has been directed to provide CV test reports for both Tapal and Gul Ahmed. KE has submitted summary in terms of Supplier CV & Own Lab CV, which were reviewed and considered by the Authority. In view thereof, for the purpose of current month FCA, the supplier's CVs have been considered for adjustment of Tapal and Gul Ahmed. This has resulted in provisional negative adjustment of Rs.3.31 million for Tapal.

29. Regarding cost of energy purchased from CPPA-G during the current month, K-Electric has used the rate of Rs.9.4162/kWh, however, the Authority's approved fuel cost component, in the matter of XWDISCOs for the current month is Rs.8.8492/kWh. In view thereof, while working out the instant FCA of K-Electric, rate approved by the Authority for XWDISCOs for the month under review has been incorporated for the energy purchased by K-Electric from CPPA-G during the month under review. This has resulted in decrease in total fuel cost by around Rs.438 million.

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30. The Authority vide decision dated 04.06.2021, based on the Heat Rate tests conducted for SNPC and SNPC-II, revised their net capacities and Heat Rates. The Authority revised the net capacity and Heat Rate of SNPC-I as 51.154 MW and 8194.25 Btu/kWh - net HHV equivalent to 41.90% efficiency. Similarly, net capacity and Heat Rate of SNPC-II have been revised as 51.526 MW and 8,143.699 Btu/kWh - net HHV equivalent to 41.64% efficiency. The Authority afterwards vide decision dated 21.09.2021, granted interim relief to SNPC and SNPC-II, in relevant tariff components i.e. Fuel Cost components and Capacity charge components of generation tariff, on account of revision in heat rates and net capacities. As per the decision dated 21.09.2021, FCC of both SNPC and SNPC-II have been revised as Rs.4.0971/kWh and Rs.4.0718/kWh respectively, based on the revised heat rates and reference gas price of Rs.500/MMBTU.

31. Here it is also pertinent to mention that the Authority determines the FCC of SNPC and SNPC-II, as & when required, owing to change in gas prices. KE in its request has claimed FCCs of Rs.7.0224/kWh for SNPC I & Rs. 6.9791/kWh for SNPC II, in line with the decision dated 20.06.2022 for both for SNPC and SNPC-II. The same has been considered in the instant adjustment on provisional basis.

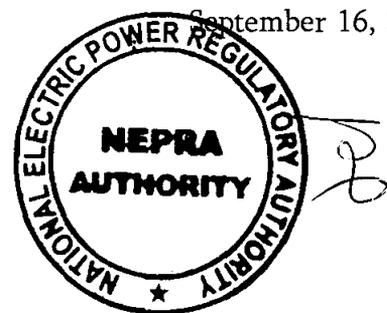
32. In view of the above, the cost of BQPS-III has been worked out using an auxiliary of 2.047% based on HHV combined cycle efficiency 6,381 BTU/kWh, at 100% load. This has resulted in a total cost of Rs.34.65 million for operation of BQPS-III in the current month which is accordingly being allowed. The cost is being allowed strictly on provisional basis, subject to final determination of price etc.

Issue: Whether K-Electric has followed the merit order while giving dispatch to its power plants as well as power purchases from external sources?

33. The Authority carried out an in-house analysis of the data provided by K-Electric for the month, to work out the financial impact due to deviation from EMO.

34. The Authority observed that KE had operated Unit 1 of BQPS-I at a minimum load of 90 MW instead of 100 MW. On query, KE informed that it had reconfigured the steam head of the other Units to supply steam to the Steam Coil Air Heater (SAH) of Unit 1. As a result, KE was able to reduce the minimum load of Unit 1 to 90 MW.

35. Regarding the financial impact due to underutilization of efficient plants namely KCCP, SGTPS & KGTPS on account of lower gas pressure, a letter was issued to KE on September 16, 2021, whereby, it was directed to resolve its gas pressure/lower gas quantity



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issues within thirty (30) days. In response, KE has informed that it is in the process of resolving the lower gas pressure issue, however, there are certain meetings with stakeholders that will take place in due course of time. Subsequently, K-Electric has shared details of communication with SSGC and Ministry of Energy (Petroleum Division) regarding the finalization of GSA. However, during the FCA hearing for the month of January 2022, K-Electric's representatives submitted that the draft GSA between KE and SSGC does not guarantee the Gas Pressure or Quantity and the Gas/RLNG will be available with KE on "As and When" available basis even after the GSA is signed. As of now, no GSA has been finalized between KE and SSGC despite the directions of the Authority.

36. It is pertinent to mention here that KE vide its FCA claim for October 2022 had requested for the release of Rs. 700 million, withheld on account of EMO violations over the period June 2021 to August 2022. The Authority after detailed deliberation has decided to release a total of Rs. 184.63 million on account of previous adjustments and shortage of HSD.

37. In view of the above, an amount of Rs. 184.63 million has been released to KE as previous adjustments for the period from June 2021 to September 2022.

38. In view of the aforementioned discussion and after incorporating the above adjustments, the Authority has decided to allow the following negative FCA for the month of October 2022, to be passed on to the consumers in their monthly bills of December 2022;



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Description		Unit	Sep-22	Oct-22
Fuel Cost	Own Generation	Rs. Mln	25,064	21,866
	External Purchases	Rs. Mln	13,249	12,163
	Deviation from EMO	Rs. Mln	(32)	-
	Previous Adjustment	Rs. Mln	-	185
	Total	Rs. Mln	38,282	34,213
Total Units	Own Generation	GWh	664	663
	External Purchases	GWh	1,010	1,013
	Total	GWh	1,675	1,677
Fuel Cost Component (FCC)	Own Generation	Rs./kWh	14.9666	13.0411
	External Purchases	Rs./kWh	7.9114	7.2541
	Deviation from EMO	Rs./kWh	(0.0191)	-
	Previous Adjustment	Rs./kWh	-	0.1101
	Total	Rs./kWh	22.8589	20.4053
Fuel Charges Adjustment (FCA)	Own Generation	Rs./kWh		(1.9255)
	External Purchases	Rs./kWh		(0.6573)
	Deviation from EMO	Rs./kWh		0.0191
	Previous Adjustment	Rs./kWh		0.1101
	Total	Rs./kWh		(2.4536)
Variation in Fuel Cost	Total	Rs. Mln		(4,114)

39. Here it is pertinent to mention that the impact of monthly FCA, which is not passed on to certain categories of consumers, would be accounted for in the quarterly adjustments.

40. In the light of above, the Authority hereby directs K-Electric that the negative FCA of October 2022 as worked out above;

- a. Shall be applicable to all the consumer categories except lifeline consumers, domestic consumers consuming up-to 300 units, Agriculture Consumers and EVCS (Electric Vehicle Charging Station) consumers of K-Electric. It is hereby clarified that negative adjustment on account of monthly FCA is also applicable to the domestic consumers having Time of Use (ToU) meters irrespective of their consumption level.
- b. Shall be shown separately in the consumers' bills on the basis of units billed to the consumers in the respective month to which the adjustment pertains.
- c. K-Electric shall reflect the fuel charges adjustment in respect of October 2022, in the billing month of December 2022.



- d. While effecting the Fuel Adjustment Charges, K-Electric shall keep in view and strictly comply with the orders of the courts notwithstanding this order.

AUTHORITY

Mathar Niaz Rana (nsc)
Member

Rafique Ahmed Shaikh
Member

Engr. Maqsood Anwar Khan
Member

Tauseef H. Farooqi
Chairman



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To Be Published in
Official Gazette of Pakistan Part-II

National Electric Power Regulatory Authority



NOTIFICATION

Islamabad, the 14th day of December 2022

S.R.O. ²²⁵⁶ (I)/2022.- Pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 as amended through Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act 2011 and as per the mechanism for monthly, quarterly and annual adjustments provided in the Tariff Determination of K-Electric Ltd. dated October 05, 2018 duly notified in the official Gazette vide SRO No. 576(I)/2019 dated October 22, 2019, National Electric Power Regulatory Authority (NEPRA) makes and notifies the following adjustment in the approved tariff on account of variation in fuel charges for the month of October 2022 in respect of K-Electric Limited:

FCA to be calculated on the basis of billing for the Month of	Rs./kWh	Charged in Consumer Bills to be issued in the Billing Month of
October 2022	(2.4536)	December 2022

2. The negative FCA of October 2022:

- Shall be applicable to all the consumer categories except lifeline consumers, domestic consumers consuming up-to 300 units, Agriculture Consumers and Electric Vehicle Charging Station (EVCS) consumers of K-Electric. It is hereby clarified that negative adjustment on account of monthly FCA is also applicable to the domestic consumers having Time of Use (ToU) meters irrespective of their consumption level.
- Shall be shown separately in the consumers' bills on the basis of units billed to the consumers in the respective month to which the adjustment pertains.
- K-Electric shall reflect the fuel charges adjustment in respect of October 2022, in the billing month of December 2022.

3. While effecting the Fuel Adjustment Charges, K-Electric Ltd. shall keep in view and strictly comply with the orders of the courts notwithstanding this order.

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(Syed Safer Hussain)
Registrar