National Electric Power Regulatory Authority Islamic Republic of Pakistan



NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad Ph: +92-51-9206500, Fax: +92-51-2600026 Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/R/LAG-05/36655-61

September 15, 2021

Chief Executive Officer K-Electric Limited KE House, 39-B, Sunset Boulevard, Phase-II, Defence Housing Authority (DHA), Karachi

Subject: Modification Generation Licence No. GL/04/2002 - (Modification-XI) Licence Application No. LAG-05 <u>K-Electric Limited, (KEL)</u>

Reference: KEL's LPM submitted vide letter No. KE/BPR/NEPRA/2021/871 dated 15.04.2021 (received on 19.04.2021)

It is intimated that the Authority has approved Modification in Generation Licence No. GL/04/2002 dated November 18, 2002 in respect of K-Electric Limited (KEL) pursuant to Section-26 of the NEPRA Act read with Regulation 10(11)(a) of the NEPRA Licensing (Application and Modification Procedure) Regulation 1999.

2. Enclosed please find herewith determination of the Authority in the matter of Licensee Proposed Modification of KEL alongwith Modification-XI in the Generation Licence No. GL/04/2002, approved by the Authority.

Enclosure: As Above



(Syed Safeer Hussain)

Copy to:

- 1. Secretary, Power Division, Ministry of Energy, 'A' Block, Pak Secretariat, Islamabad
- 2. Secretary, Petroleum Division, Ministry of Energy, Room No. 301, 3rd Floor, A-Block, Pak Secretariat, Islamabad
- 3. Secretary, Energy Department, Government of Sindh, 3rd Floor, Start Life Building -3, Dr. Zia-ud-din Ahmed Road, Karachi
- 4. Managing Director, NTDC, 414 WAPDA House, Lahore
- 5. Chief Executive Officer, Central Power Purchasing Agency Guarantee Ltd, Shaheen Plaza, A.K. Fazl-ul-Haq Rd, Blue Area, Islamabad
- 6. Director General, Environmental Protection Agency, Government of Sindh Plot No. ST/2/1, Sector 23 Korangi Industrial Area, Karachi

National Electric Power Regulatory Authority (NEPRA)

<u>Determination of the Authority</u> <u>in the Matter of Licensee Proposed Modification in the</u> <u>Generation Licence of K- Electric Limited</u>

September / S 2021 Case No. LAG-05

(A). <u>Background</u>

(i). The Authority under Section-15 (now Section-14B) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "NEPRA Act") granted a Generation Licence (No. GL/04/2002 dated November 18, 2002 and subsequent modifications from time to time) to K-Electric Limited (KEL) for its six (06) distinctly located generation facilities/thermal power plants.

(ii). Through Modification-IX dated December 07, 2020, the 942.32 MW RLNG based CCPP at Bin Qasim (BQPS-III) was included in the generation fleet of KEL whereas Unit No.3&4 (2x210 MW) of Bin Qasim Power Station-I/BQPS-I were excluded from the Generation Licence of KEL on account of low plant availability due to frequent forced outages, high cost of fuel and low efficiencies.

(iii). According to the above mentioned Generation Licence, the installed capacity of generation fleet of KEL is 2817.114 MW consisting of (a). 840.00 MW BQPS-I; (b). 247.50 MW Combined Cycle Power Plant (CCPP) at Korangi/CCPP Korangi; (c). 107.312 MW CCPP Korangi Town Gas Engine Power Station/KTGEPS; (d). 107.312 MW CCPP at SITE Gas Turbine Power Station/SGTPS; (e). 572.67 MW CCPP at Bin Qasim Power Station-II/ BQPS-II; and (f). 942.32 MW BQPS-III.



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(B). <u>Communication of Modification</u>

(i). KEL in accordance with Regulation-10(2) of the NEPRA Licensing (Application & Modification Procedure) Regulations, 1999 (the "Licensing Regulations") communicated a Licensee Proposed Modification (LPM) in its above mentioned generation licence on April 19, 2021.

(ii). In the "Text of the proposed Modification" statement, KEL proposed that it be allowed to utilize Unit-3 of BQPS-I to generate power on an interim basis during summer of FY 2021 i.e. from May 2021 till July 2021 and addition of Pakistan LNG Limited (PLL) as back up RLNG supplier in its Generation Licence for BQPS-I and BQPS-II in addition to Sui Southern Gas Company Limited (SSGC), the main fuel supplier for (Natural Gas and RLNG).

(iii). In the "Reason in Support of Modification" statements regarding (a). interim power generation from Unit-3 of BQPS-I during peak summer period, KEL submitted that to ensure maximum facilitation to the consumers and to bridge the demand/supply gap during peak summer period, after considering all available options emphasizing on least cost of generation and immediate availability of power, it has made Unit-3 of BQPS-I available for power generation for a period of three (03) months. Further, in the statement of "Reason in Support of Modification" regarding (b).addition of Pakistan LNG Limited (PLL) as an alternate RLNG Fuel Supplier, KEL has stated that to ensure secure supply of RLNG at an adequate pressure, it has entered in to Heads of Agreement (HoA) with PLL for a firm supply of 150 MMCFD RLNG as primary fuel for BQPS-III pursuant to decision of CCOE dated March 27, 2020 and is also in discussions with PLL for an additional supply of 100 MMCFD RLNG for BQPS-I and BQPS-II as alternate backup fuel supply.

(iv). Regarding the impact of the proposed modification on tariff, KEL inter alia, stated that the operation of Unit-3 on Furnace Oil will result in slight increase in tariff, however, it is in the best interest of consumers as it will avoid resultant load shed during summer. Further, KEL has stated that procurement of RLNG from PLL will result in lower cost per unit at BQPS-I and BQPS-II, and the impact which will be passed on to the consumers in the form of lower tariff. The



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application of KEL containing details of impact of proposed modification on Tariff is available on NEPRA website.

(v). Regarding the impact of the proposed modification on Quality of Service and the Performance of its obligations under the Licence: KEL stated that the requested modification would benefit consumers as it would ensure that the generation capacity continue to be available and maintained. Moreover, there will be no adverse impact on the quality of service provided by KEL.

(C). <u>Processing of LPM</u>

(i). After submission of the required information by KEL, the Registrar published the communicated LPM on May 22&23, 2021 in one (01) Urdu and one (01) English newspaper ("Daily Nai Baat" and "Express Tribune"), informing the general public about the communicated LPM and inviting their comments within a period of fourteen (14) days from the date of the said publication.

(ii). Apart from the above, separate letters were also sent to government ministries, their attached departments and representative organizations etc. on May 24, 2021. Through the said letters, the stakeholders were informed about the communicated LPM and publication of notice in the press. Further, the said entities were invited to submit their views and comments in the matter for assisting the Authority.

(iii). However, despite lapse of stipulated time, this office did not receive comments from any stakeholder(s). The above response of KEL on the comments of stakeholders was examined and found plausible. Accordingly, the Authority considered it appropriate to process the LPM of KEL as stipulated in the relevant Regulations and NEPRA Licensing (Generation) Rules 2000 ("the Generation Rules).

(D). Evaluation/Findings

(i). The Authority has examined the entire case in detail including the already granted Generation Licence, earlier modifications in the Generation Licence, Multi Year Tariff (MYT) granted to KEL, information submitted along with the application of LPM and relevant rules & regulations.



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(ii). In this regard, the Authority has observed that originally it granted a Generation Licence (No. GL/04/2002, dated November 18, 2002 and subsequent modifications from time to time) to KEL for its distinctly located generation facilities/thermal power plants with accumulative install capacity of 2817.114 MW. The current generation fleet of KEL consists of (a). 840.00 MW BQPS-I/Plant-I; (b). 247.50 MW CCPP Korangi//Plant-II; (c). 107.312 MW KTGEPS/Plant-III; (d). 107.312 MW SGTPS/Plant-IV; (e). 572.67 MW BQPS-II/Plant-V; and (f). 942.32 MW BQPS-III/Plant-VI.

(iii). It is relevant to mention that initially the installed capacity of BQPS-I/Plant-I of KEL was 1260 MW consisting of 4x210 MW Steam Turbines of Hitachi, Japan (i.e. Unit No. 1,2,5&6) and 2x210 MW Steam Turbines of Ercole, China (i.e. Unit No.3&4). However, the current licensed installed capacity of BQPS-I/Plant-I is 840 MW, as the Authority through its Determination No. NEPRA/R/LAG-05/48352-56 dated December 07, 2020 *inter alia*, excluded Unit No.3&4 of BQPS-I/Plant-I from the Generation Licence of KEL, on account of their frequent forced outages, low availability, low efficiency, high fuel cost and higher per unit generation cost.

(iv). Through the instant LPM, KEL has proposed that it be allowed to utilize Unit-3 of BQPS-I to generate power on an interim basis during summer of FY 2021 i.e. from May 2021 till July 2021. KEL has also proposed that in addition to SSGC, the main fuel supplier for (Natural Gas and RLNG) for BQPS-I/Plant-I & BQPS-II/Plant-V located at Bin Qasim Karachi, PLL may be added as back up RLNG supplier. In this regard, it is clarified that PLL is already included in the Generation Licence of KEL, as the primary fuel (RLNG) supplier for BQPS-III/Plant-VI.

(v). Regarding LPM in the Generation Licence, it is relevant to mention that Regulation-10(2) of the Licensing Regulations stipulates that a licensee may, at any time during the term of a licence, communicate to the Authority an LPM setting out (a). the text of the proposed modification; (b). a statement of the reasons in support of the modification; and (c). a statement of the impact on $\frac{1}{200}$ NER REGUL



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the tariff, quality of service and the performance by the licensee of its obligations under the licence.

(vi). In this regard, the Authority in terms of Section-26 of the NEPRA Act read with Regulation-10(5) of the Licensing Regulations, is empowered to modify an existing licence of a licensee subject to and in accordance with such further changes as the Authority may deem fit, in the opinion of the Authority such modification (a). does not adversely affect the performance by the licensee of its obligations; (b). does not cause the Authority to act or acquiesce in any act or omission of the licensee in a manner contrary to the provisions of the NEPRA Act or the rules or regulations made pursuant to it; (c). is or is likely to be beneficial to the consumers; (d). is reasonably necessary for the licensee to effectively and efficiently perform its obligations under the licence; and (e). is reasonably necessary to ensure the continuous, safe and reliable supply of electric power to the consumers keeping in view the financial and technical viability of the licensee.

(vii). Regarding interim utilization of Unit No. 3 (1x210 MW) of BQPS-I, the Authority has observed that KEL initially proposed to utilize the said unit for three (03) summer months (i.e. May, June and July) of 2021. However, the same was not operated in the month of May 2021 instead it was utilized from June 01, 2021 to August 15, 2021. In this regard, the Authority also noted that there is no specific provision in the relevant regulations regarding allowing/adding of a generating unit in a licence on short term interim basis.

(viii). Regarding financial impact of operation Unit No. 3 of BQPS-I, KEL submitted that based on average loading of the said unit to around 100 MW, there will be an increase of Rs. 0.47/kWh and Rs. 0.56/kWh in the fuel cost of KEL for the month of June and July 2021 respectively. In this regard, the Authority has observed that the fuel cost of generation from Unit-3 of BQPS-I is around Rs. 20.6/kWh based on Furnace Oil rate of May 2021.i.e. 75,710/MT. Further, as per decision of the Authority dated October 09, 2017 regarding review motion of KEL on the MYT determination, the first phase of the BQPS-III/Plant-VL was required to be on line by July 2019 and the second phase



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(combined cycle) was required to be achieved by December 2019. Accordingly, keeping in view these timelines, cost of BQPS-III/Plant-VI was built in the MYT tariff of KEL. If the BQPS-III/Plant-VI had been completed timely, its fuel cost would have to be around Rs. 9/kWh. However, KEL failed to achieve this milestone, compelling itself to operate inefficient and de-licensed unit (i.e. Unit-3 of BQPS-I), resulting in additional cost of around Rs. 11.6/kWh. Therefore the inefficiencies of KEL cannot be passed on to the consumers. However, in view of the demand supply situation in the area of KEL and to avoid load shedding during the hot summer months, the Authority considers it prudent to allow operation of Unit-3 of BQPS-I for the interim period (i.e. May to August 15, 2021). Further, the Authority decides that the cost of interim operation of Unit-3 of BQPS-I be passed on to the consumers to the extent of Fuel Cost Component (FCC) of BQPS-III/Plant-VI and any incremental/additional cost incurred should be borne by KEL itself.

(ix). In view of the above, the Authority considers that the LPM will not have any adverse effect on the performance of the Licensee of its obligations as it will enable the Licensee/KEL to provide continuous power supply to the consumers. Further, the LPM will not cause the Authority to act or acquiesce in any act or omission of the Licensee in a manner contrary to the provisions of the NEPRA Act or the rules or regulations made pursuant to the NEPRA Act. The LPM will be beneficial to the consumers in general as it would result availability/continuity and reduction in cost of supply in future. The LPM is reasonably necessary for the Licensee to perform its obligations under the Licence. The LPM is necessary to ensure the continuous, safe and reliable supply of electric power to the consumers keeping in view the financial and technical viability of the Licensee;

(F). Approval of LPM

(i). In view of the above, the Authority is satisfied that the Licensee has complied with all the requirements of the Licensing Regulations pertaining to the modification. Therefore, the Authority in terms of Section-26 of the NEPRA Act read with Regulation-10(11)(a) of the Licensing Regulations approves the communicated LPM in the Generation Licence of KEL, with changes.



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(ii). Accordingly, the Generation Licence (No. GL/04/2002, dated November 18, 2002 and subsequently modified from time to time) of KEL is hereby modified. The changes made in the Generation Licence are attached as annexure to this determination. The approval of the LPM is subject to the provisions contained in the NEPRA Act, relevant rules framed there under, terms & conditions of the Generation Licence and other applicable documents.

Authority

Engr. Maqsood Anwar Khan (Member)

Rehmatullah Baloch (Member)

Rafique Ahmed Shaikh (Member)

Tauseef H. Farooqi (Chairman)

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National Electric Power Regulatory Authority (NEPRA)

Islamabad – Pakistan

GENERATION LICENCE

No. GL/04/2002

In exercise of the Powers conferred under Section-26 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the Authority hereby modifies the Generation Licence (No. GL/04/2002 dated November 18, 2002 as modified from time to time) granted to K-Electric Limited, to the extent of changes mentioned hereunder:

 (a). Changes made in Schedule-I of the Generation Licence regarding addition of Pakistan LNG Limited (PLL) as RLNG supplier for BQPS-I and BQPS-II are attached as Annexure-A;

This <u>Modification-XI</u> is given under my hand on this $\frac{1}{5}^{\pi}$ day of <u>September Two Thousand & Twenty One.</u>

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Registrar



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Generation Licence K-Electric Limited-KEL Karachi In the province of Sindh

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<u>Modification-XI</u> <u>in the Generation Licence (No. GL/04/2002, dated</u> <u>November 18, 2002 and subsequently modified from time</u> <u>to time) of K-Electric Limited (KEL)¹</u>

(A). <u>Details of Generation Facility/Bin Qasim Power Station-II BQPS-II/</u> <u>Power Plant-I:</u>

At Serial No. B(v), under the heading of "Fuel Details" the information related to fuel supplier has been revised/modified by including Pakistan LNG Limited (PLL) in the list of RLNG suppliers:

(v)	Fuel Supplier for each of the fuel	Natural Gas	SSGC
		RLNG	SSGC/PLL
		RFO	PSO/BYCO
		LDO	PSO

(B). <u>Details of Generation Facility/Bin Qasim Power Station-II BQPS-II/</u> <u>Power Plant-II:</u>

At Serial No. B(v), under the heading of "Fuel Details" the information related to fuel supplier has been revised/modified by including Pakistan LNG Limited (PLL) in the list of RLNG suppliers:

		Fuel Supplier	Natural Gas	SSGC
	(v)	(v) the fuel	RLNG	SSGC/PLL
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¹ In order to manage the demand supply situation in KEL service area, the Authority has also allowed operation of Unit-3 of BQPS-I (1x210 MW) on interim basis for the period from May 01, 2021 to August 15, 2021.

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