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National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/TRF-362/K-Electric-2016/17914-17916
September 27, 2019

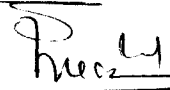
Subject: Decision of the Authority in the matter of Motion for Leave for Review filed by K-Electric Ltd. against Determination of the Authority dated 7th December 2018 in the matter of approval to utilize RLNG as alternate Fuel for its Generation Plants [Case # NEPRA/TRF-362/K-Electric-2016]

Dear Sir,

Please find enclosed herewith subject decision of the Authority (08 Pages) in the matter of Motion for Leave for Review filed by K-Electric Ltd. against Determination of the Authority dated 7th December 2018 in the matter of approval to utilize RLNG as alternate Fuel for its Generation Plants.

2. The subject Decision of the Authority is being intimated to the Federal Government for the purpose of notification in the official Gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.
3. The Order of the Authority shall be notified in the official Gazette.

Enclosure: As above


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(Syed Safer Hussain)

Secretary
Ministry of Energy (Power Division)
'A' Block, Pak Secretariat
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.



DECISION OF THE AUTHORITY IN THE MATTER OF MOTION FOR LEAVE FOR REVIEW FILED BY K-ELECTRIC LIMITED AGAINST DETERMINATION OF THE AUTHORITY DATED 7TH DECEMBER 2018 IN THE MATTER OF APPROVAL TO UTILIZE RLNG AS ALTERNATE FUEL FOR ITS GENERATION PLANTS

1. BACKGROUND

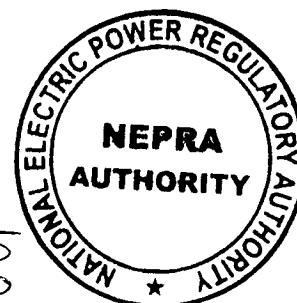
- 1.1. K-Electric Limited (hereinafter referred as the "Petitioner" or "KE") vide its letter No. KEL/BPR/NEPRA/2018/197 dated April 30, 2018, requested the Authority to allow RLNG as alternate fuel for its existing power plants in purview of the Cabinet Committee on Energy's (CCoE) directives dated April 23, 2018, wherein Sui Southern Gas Company (SSGCL) was directed to resume supply of gas to KE immediately and both parties to initiate process for signing gas sale agreement for natural gas as well as LNG within 15 days. Pursuant to the CCoE decision, SSGCL was providing 130 MMCFD of natural gas and 60 MMCFD of RLNG to meet KE's minimum gas requirement of 190 MMCFD.
- 1.2. The Authority, vide its decision dated December 7, 2018, allowed KE to use RLNG as alternative fuel for its power plants subject to the following conditions:
 - i. Utilization of RLNG as alternate fuel shall only be allowed in excess of minimum quantity of 130 MMCFD of gas in accordance with the arrangement agreed between the parties and the adjustments shall be granted accordingly;
 - ii. The dispatch shall be strictly in accordance with the economic merit order.
 - iii. KE is directed to carry out performance tests of BQPS-I on local gas/RLNG within a period of six months by an independent engineer and submit the test report to NEPRA for revision of the unit wise capacity and heat rates.
 - iv. KE is directed to implement earlier directions conveyed vide letter April 18, 2018, regarding commissioning of KCCP and BQPS-II power plants on HSD in true letter and spirit and submit the compliance report within three months of the issuance of the instant determination.

2. MOTION FOR LEAVE FOR REVIEW

- 2.1. KE, being aggrieved of the said decision of the Authority, filed a motion for leave for review on December 18, 2018, while referring to Rule 16(6) of the NEPRA Tariff (Standards & Procedure) Rules, 1998 and NEPRA (Review Procedure) Regulations, 2009. The Authority admitted the Review Motion on January 17, 2019.
- 2.2. The review was filed by KE on the following:

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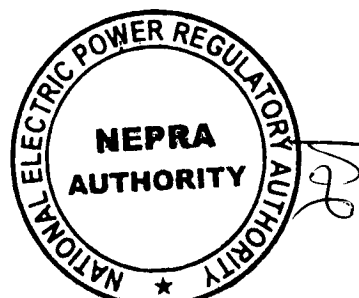
- i) Utilization of Minimum 130 MMCFD of Local Gas
- ii) Performance Test of BQPS-I on Local Gas/RLNG
- iii) Commissioning of BQPS-II and KCCPP on HSD

3. HEARING

- 3.1. The Authority decided to hold a hearing in the matter on February 13, 2019. Notices of hearing were issued on February 4, 2019, inviting stakeholders to participate in the hearing.
- 3.2. The hearing was held as per schedule and was participated by representatives of KE and SSGC.

4. COMMENTS OF SSGC

- 4.1. In response to the notice of admission/ hearing, Sui Southern Gas Company (SSGC) vide letter dated February 12, 2019, submitted its comments in the matter.
- 4.2. According to SSGC, the action points as agreed by all stakeholders with the concurrence of the then Prime Minister are listed below:
 - i. SSGC to manage the load according to the available volumes which is currently upto 130 MMCFD maximum indigenous gas for power generation to K-Electric. Any additional volumes required by K-Electric over and above these shall be met through RLNG i.e. 60 MMCFD.
- 4.3. Given the above, according to SSGC, supply of 130 MMCFD to KE is subject to management of load based on available volumes and not on "as and when available basis", as claimed by KE. According to SSGC, it has always reasonable endeavours to provide the required volume of indigenous gas to KE, based on availability and pursuant to the provision of the Natural Gas Allocation and Management Policy, 2005, which has defined the sectoral priority and in accordance with the decision of the Economic Coordination Committee of the Cabinet which has allowed the gas utility companies to manage gas load on their own according to the approved policy/ priority orders.
- 4.4. Further, according to SSGC, its license condition 39.1 does not allow it to sell gas to consumers without a contract. However, of its entire consumer base within its franchise area, SSGC has no GSA with KE and only agreements subsist between the parties for 10 MMCFD only.
- 4.5. In the light of the above, SSGC has requested the Authority to revisit its decision regarding the threshold of 130 MMCFD in light of the decision of CCoE and based on the



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undeniable fact of the ever widening gap in the supply and demand of the indigenous gas resulting in operational constraints of which not only KE is well aware but even the CCoE had taken cognizance of this fact as well explained by SSGC in the meeting of the CCoE that supply of 130 MMCFD of indigenous gas to KE will only be possible through Load Management and that this volume of 130 MMCFD will substantially fall over a period of time due to depleting gas reserves.

5. **CONSIDERATION OF THE VIEWS OF THE STAKEHOLDERS, ANALYSIS AND DECISIONS ON IMPORTANT GROUNDS**

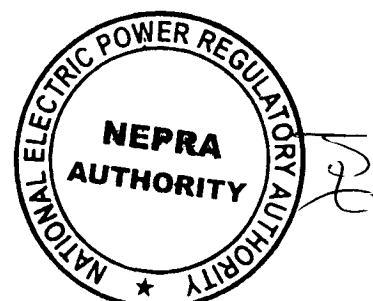
5.1. Having heard the Petitioner and after carefully going through the record, the decisions of the Authority on each of the grounds of the review motion are as under:

Utilization of minimum 130 MMCFD of local gas:

5.2. KE submitted that pursuant to CCoE decision dated 23rd April 2018, SSGC is supplying local gas up to 130 MMCFD on 'as and when available basis' and not on firm basis. While, KE has reached out to the court and there are orders in field that restrict SSGC against any reduction in the supply of local gas from 130 MMCFD, SSGC unilaterally reduces the local gas below 130 MMCFD. Accordingly, KE requested NEPRA to modify the decision and remove the requirement of utilizing minimum 130 MMCFD gas and allow RLNG after consumption of local gas on 'as and when available' basis as SSGC is not supplying on firm basis.

5.3. SSGC in its comments submitted that the order of NEPRA needs to be revisited in the light of the decision of CCoE and based on the undeniable fact of the ever widening gap in the supply and demand of the indigenous gas resulting in operational constraints of which not only KE is well aware, but even the CCoE had taken cognizance of this fact as was explained by the SSGC in the meeting of CCoE that supply of 130 MMCFD of indigenous gas to KE will only be possible through load management and that this volume of 130 MMCFD will substantially fall over a period of time due to depleting gas reserves. According to SSGC, it has always endeavoured to supply indigenous gas to KE even beyond 130 MMCFD, whereas there have been numerous incidences where it has supplied volume substantially lower than 130 MMCFD.

5.4. Further, SSGC submitted that it has always used its best efforts to comply with the orders of the Sindh High Court, in so far as supply of volumes of indigenous gas to KE is concerned. However, according to SSGC, the ever increasing gap between demand and supply is constraining SSGC distribution network due to several factors including but not limited to various gas fields going on annual turnaround (ATA) which inversely effect the supply stream, especially in the winter months when the consumption of indigenous gas by the domestic consumers increases many folds. Therefore, SSGC has requested the



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Authority that the threshold of 130 MMCFD should not be applicable due to supply and demand position which with the passage of time will further deteriorate.

- 5.5. In response to the above comments of SSGC, KE vide letter dated February 20, 2019, submitted that the minutes of the meeting of CCoE dated April 23, 2018, states as "SSGC to resume supply of gas to K-Electric immediately" and there is no discussion on the load management allowed to SSGC as mentioned in SSGC's comments.
- 5.6. According to KE, SSGC claims that it has provided local gas in accordance with the provisions of Natural Gas Allocation and Management Policy, 2005 (as amended) and in accordance with ECC decision dated January 29, 2013. In KE's view, SSGC is not implementing the Policy in letter and spirit. It is pertinent to note here that Gas Allocation and Management Policy, 2013 assigns power sector 2nd priority after Domestic & Commercial sector. Therefore, SSGC should demonstrate how it is complying with the stated policy through conducting load management.
- 5.7. According to KE, it has taken all possible steps for signing of GSA, however, SSGC is not willing to commit any firm local gas quantity and gas pressure within the design limits of KE's power plants, which restricts the execution of GSA. Accordingly, there is no fault of KE for non-execution of GSA and is not rightly mentioned in SSGC's comment.
- 5.8. KE further highlighted that gas allocation is governed and approved by ECC decisions and in this respect 276 MMCFD local gas was confirmed to KE through ECC decisions as mentioned in MoP&NR letters. SSGC has followed Ministry's directives/ECC allocation by supplying gas to KE almost in line with these allocations in the past and received payments from KE in respect thereof. Therefore, the same is implied from tacit understanding of both parties (SSGC and KE), which constitutes a valid/binding contract as per the Contract Act (1978) and validates the existence of a valid contract on the basis of its formation by implication. Accordingly, SSGC cannot deny or challenge the existence of a contract and unilaterally reduce the gas supply. Additionally, there are court orders in field that require SSGC to supply the allotted gas to KE. Relevant extracts from the Court Order are reproduced below for NEPRA's perusal:

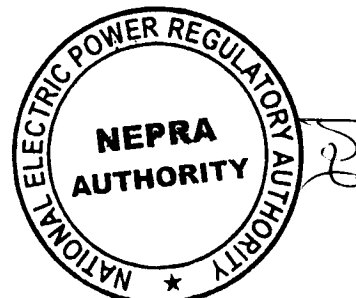
Order dated May 31, 2011 for CP 1088/2011:

"...to make endeavors and efforts to supply maximum quantity of 276 MMCFD gas as committed by the Government of Pakistan....."

Order dated June 13, 2018 for CP 4615/2018:

"...respondents shall not take any action against the petitioner in violation of the decision of the cabinet committee as referred to herein above, including reduction of Gas Supply....."

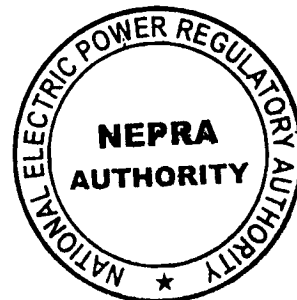
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- 5.9. According to KE, currently SSGC is not supplying the local gas allocated to KE as per ECC's decision and Gas Management and Allocation Policy, 2013. In view of the above and the fact that SSGC is not supplying firm quantity of 130 MMCFD of local gas, KE has once again requested to remove the requirement of utilizing minimum 130 MMCFD local gas until the matter is decided by the Court and SSGC agrees to supply the firm quota of local gas to KE.
- 5.10. The Authority has considered the request of KE in the light of the response of SSGC and decided that KE must strive to achieve a target utilization of indigenous gas of 130 MMCFD prior to utilizing RLNG. The Authority believes that utilization of RLNG instead of natural gas will adversely affect the consumers in the form of higher fuel price charges, therefore, the Authority directs KE to make best efforts for achieving the targeted supply of 130 MMCFD of indigenous gas before utilizing RLNG. However, the Authority is cognizant of the fact that there may be situations where SSGC might not be able to supply the requisite amount of indigenous gas to KE or SSGC might be able to supply indigenous gas in excess of 130 MMCFD, therefore, in such situations, the Authority has decided to allow consumption of indigenous gas to KE on actual basis.

Performance Test of BQPS – I on Local Gas/RLNG:

- 5.11. According to KE, in line with the directions of NEPRA as stipulated in the Multi Year Tariff Determination of KE (Determined MYT 2017), it is in the process of carrying out performance (capacity & heat rate) tests at BQPS I as well as other generating plants. However, regarding directions of NEPRA to conduct performance test of BQPS I solely on local gas/RLNG, KE submitted that as per the technical limitation, Unit 3 and 4 can only operate up to a maximum of 25% on local gas/RLNG. Accordingly, in view of aforementioned, KE stated that it is only possible to conduct the performance test on 100% Local Gas/RLNG firing on Units 1, 2, 5 and 6 of BQPS I, whereas performance tests on 100% Furnace Oil can be carried out on all six (06) units of BQPS I. Therefore, in view of aforementioned, KE requested NEPRA to review and amend its decision in light of facts narrated herein.
- 5.12. The Authority has considered the request of the Petitioner regarding testing of Unit 3 and 4 of BQPS- I power plant and accepted the same subject to the condition that KE must submit a report by the independent engineer verifying that there is a technical limitation of operating unit 3 and unit 4 of BQPS – I on 100% on Local Gas/RLNG. Further, the Authority has decided not to completely wave off the requirement of performance tests of unit 3 and 4 of BQPS – I on local gas/RLNG. Rather, in the light of technical limitation, the Authority hereby directs KE to carry out performance test of Units 3&4 on mix fuel i.e. gas (minimum 25%) and RFO while ensuring the maximum utilization of Local Gas/RLNG and submit the test report to NEPRA for revision of the unit wise capacity and heat rates.



Commissioning of BQPS – II and KCCP on HSD:

- 5.13. According to KE, post availability of RLNG, the redundancy of BQPS-II and KCCPP has been avoided and therefore in their view, adding HSD as an alternative fuel will lead to increase in tariff and burden the GOP/consumer unnecessarily. According to KE, the aforementioned statement duly corroborates with the fact that even other plants who have HSD enlisted as an additional alternate fuel in their generation licenses are seeking addition of RLNG being cheaper as another alternate fuel in their generation licenses. Accordingly, in view of aforementioned facts, KE requested the Authority to reassess and re-evaluate the decision.
- 5.14. To support its stance, KE also submitted the following investment required to be incurred for commissioning KCCPP and BQPS – II on HSD and an analysis of per unit cost on HSD as compared to other fuels:

PARTICULARS	PLANT	QUANTITY	HSD RATE (PKR/MT)	TOTAL COST (PKR MILLIONS)
Commissioning Cost	KCCPP	-	-	580
	BQPS-II	-	-	970
Total Commissioning Cost				1,550
Fuel Cost				
Fuel cost - Mandatory running of plants	KCCPP	No minimum requirement to run on HSDO	-	-
	BQPS-II	2,787,571 Liters / Year / 3 GT	110.94	309 / year
Total Fuel Cost				309 / year
Inventory cost				
HSDO Storage - Minimum Inventory to be kept	KCCPP	9,500,000 Liters (5.5 Days Storage)	110.94	1,054
	BQPS-II	10,000,000 Liters (4 days Storage)		1,109
Total Inventory Cost				2,163

* Including GST

* These are estimated amounts based on exchange rate of PKR 145 / USD and are subject to change





Comparison of per unit cost on different fuels

Plant name	Local gas	RLNG	HSD
Cost per unit sent out* - PKR/ kWh			
BQPS 2	5.03	14.12	21.54
KCCP	5.34	15.01	22.91

* Cost per unit is based on heat rates given by NEPRA in MYT review decision. For comparative purpose, same heat rates & auxiliary consumption has been used for all fuel types. Actual efficiencies on HSD can be ascertained at commissioning, however, these are usually less efficient than on Gas

- 5.15. KE in its letter dated 12th June 2019 submitted that in pursuit of arranging RLNG from private fuel supplier, KE has initiated Gas Infrastructure Grid Project at its Bin Qasim Power Complex, in order to fulfil its gas requirements. The infrastructure design allows receiving of RLNG not only for BQPS-II, but it also encompasses provision of receiving RLNG for BQPS-I and BQPS-III into a common header. The integrated gas infrastructure grid is being designed in a fashion, which will allow utilization of RLNG at BQPS-I, in case of any outages at BQPS-II or BQPS-III, in order to minimize "Take or Pay" penalties.
- 5.16. Keeping in view the above submissions, the Authority hereby directs KE to convey its firm commitment of RLNG from public/private fuel suppliers. KE is also directed to provide gas supply agreements with firm quantities of local gas and or RLNG along-with detailed specifications so that a clear plan is always available for continuity of supply of electricity to consumers of KE.
- 5.17. Given the above, if KE is of the view that the requirement of HSD as alternate/backup fuel in the case of BQPS-II and KCCP has become redundant, KE may file Licensee Proposed Modification (LPM) and the matter shall be decided keeping in view all the aspects of the case and after completion of due process of law.

6. ORDER

- 6.1. K-Electric is allowed to use RLNG as alternative fuel for its power plants subject to the following conditions:
 - i. The dispatch shall be strictly in accordance with the economic merit order.
 - ii. KE must strive to achieve a target utilization of indigenous gas of 130 MMCFD prior to utilizing RLNG. However, in such situations where it is not possible, the consumption of indigenous gas on actual basis will be allowed.




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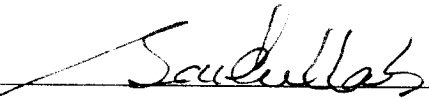
- iii. KE must submit a report by the independent engineer verifying that there is a technical limitation of operating unit 3 and unit 4 of BQPS – I on 100% on Local Gas/RLNG. Further, KE must carry out performance test of Units 3 & 4 on mix fuel i.e. gas (minimum 25%) and RFO while ensuring the maximum utilization of Local Gas/RLNG.


7. NOTIFICATION

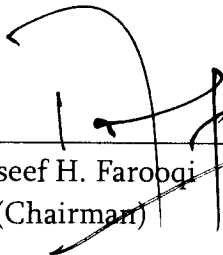
- 7.1. The above Order of the Authority shall be notified in the official gazette in terms of Section 31(7) of the Regulations of Generation, Transmission and Distribution of Electric Power Act, 1997.

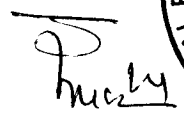

13/9/19
Rehmatullah Baloch
(Member)


18/9/19
Rafique Ahmed Shaikh
(Member)


13.9.2018
Saif Ullah Chattha
(Member)


Engr. Bahadur Shah
(Vice Chairman)


Tauseef H. Farooqi
(Chairman)


27.09.19
