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ISLAMABAD, FRIDAY, OCTOBER 14, 2022

PART II

Statutory Notifications (S.R.O.)

GOVERNMENT OF PAKISTAN
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

NOTIFICATION

Islamabad, the 11th October, 2022

S. R. O. 1899(I)/2022.— In pursuance of Sub-Section 7 of Section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), NEPRA hereby notifies the Order/Decision of the Authority in the matter of Review Motion on Decision of the Authority on Heat Rate for 97 MW SGTPS of K-Electric Limited.

2. While effecting the Order, the concerned entities including K-Electric shall keep in view and strictly comply with the orders of the courts notwithstanding this Decision.

[No. NEPRA/R/LAG-5/19427-29.]

SYED SAFEER HUSSAIN,
Registrar.

(4495)

Price: Rs. 10.00

[9525(2022)/Ex. Gaz.]

National Electric Power Regulatory Authority
(NEPRA)

July 14, 2022

**Order of the Authority in the matter of Review Motion on Decision of the
Authority on Heat Rate for 97MW SGTPS of K-Electric (KE)**

The Authority in the matter of "Approval of Heat Rate for 97MW Site Gas Engine Power Station (SGTPS) of K-Electric Limited" issued its decision on January 18, 2021. K-Electric ('KE') being aggrieved by the decision of the Authority, filed the application for Review before the Authority and requested for an opportunity of being heard.

2. The Authority allowed admission of the review petition and provided an opportunity of Hearing to KE. Accordingly, the hearing in the matter was held on May 7, 2021.

3. It is important to highlight that the Heat Rate & Capacity test was conducted in July 2019, however since the control period of the Multi Year Tariff (MYT) was seven years, i.e. FY 2017-23, accordingly the Authority determined the Heat Rate numbers as per the following periods:

- July 2016 to June 2019 (before the conduct of Test)
- July 2019 till June 2023 (after the conduct of Test)

GROUND'S FOR REVIEW

4. K-Electric has sought the review against the decision of the Authority based on the following:

PART LOAD FACTOR:

5. The Authority in its decision dated Jan. 18, 2021 had allowed KE part load adjustments at '75% or below' loading levels. KE in its review request has sought an additional part load adjustment for operations at 50% or below loading levels.

6. KE has stated that '... historic data suggests that plant has to be operated at around 50% or even lower load due to inevitable conditions relating to gas supply. Accordingly, KE would request that at plant operation of 50% or below, IE's tested Heat Rate numbers corresponding to 50% load should be allowed...'



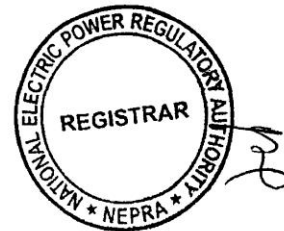
7. While reviewing the submissions of KE in the instant matter the Authority took note of its decision in the matter of Heat Rate number for SGTPS dated January 18, 2021, wherein the Authority decided as:

"...The Authority therefore principally agrees that KE be allowed part-load operations and heat rate shall be allowed to reflect such scenario. The Authority however is also cognizant of the fact that KE cannot be allowed a free hand to run its power plant at lower levels than is absolutely essential and under those conditions which are not controllable by KE. Therefore the Authority does not agree with KE's contention to allow heat rates corresponding to 50% of the base load levels. In order for KE to achieve better efficiencies while operating on part load, the Authority in addition to heat rates at 100% base loads decides to allow heat rates corresponding to 75% part load operation. Authority expects that KE shall make every endeavour to operate its power plants at higher loading conditions..."

8. In view of the above, the Authority is of the view that the stated issue has already been considered and exhaustively deliberated by the Authority [Ref. paragraph 16-19 of the Decision dated January 18, 2021]. KE has not placed any new material evidence or information which warrants change in decision of the Authority. The fact of the matter is evident from the submissions and the earlier decision that the Authority has already considered all facts and circumstances of the case in the impugned decision. Accordingly the Authority has decided to maintain earlier decision in the respect.

Linear degradation for period FY 2020-23:

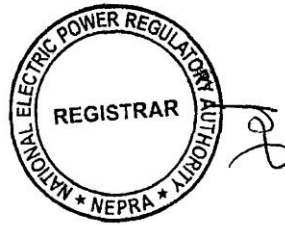
9. K-Electric in its submission requested NEPRA that instead of determining Heat Rate numbers on linear degradation basis for FY 2020-2023, year –wise degradation and heat rate numbers as evaluated by IE be taken into account. The Authority has noted that the degradation numbers evaluated by NEPRA were based on IE's evaluated average degradation factor for remaining life of the plant as given in the IE's report, adjusted for the period FY 2020-23. The Authority has further noted that IE's evaluated Heat Rate numbers for FY 2020 to FY 2023 were also based on certain assumptions (Operating hours, etc.).



10. While considering the request of KE (September 2021), the Authority further noted that more than two years have already passed since the conduct of Test (July 2019). The Authority therefore decided the following principles to determine the Heat Rate numbers and required KE to submit data in this regard;

- i. For the period July 2019 to June 2021, actual average annual Operating hours (July 2019 to June 2021) and the degradation curve / table be used.
- ii. For the period July 2021 to June 2023, average annual Operating hours of the plant since July 2019 and the degradation curve/table be used.

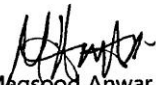
11. Accordingly, KE, in response provided IE's calculated Heat Rate numbers for the period July 2019 to June 2023. The Authority noted that in its calculations, IE has evaluated Heat Rate at base load, at loading position of 75% (i.e. three sections in CC mode) as well as at loading position of 50% (i.e. two sections at CC mode). The Authority having considered the submissions of IE as made by KE, approved the Heat Rate number corresponding to 75% loading as well as at base load for SGTPS plant of K-Electric.



Decision of the Authority:

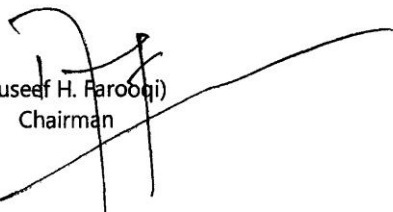
Based on the Heat Rate tests conducted by the IE, the Authority decides as follows;

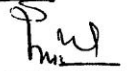
- i. For the period from July 2016 to June 2019, the Authority maintained its earlier decision in the matter.
- ii. For the period from July 2019 to June 2020, the Authority allowed the following Heat Rate numbers
 - For 100% load as 9109.521 Btu/kWh (Net HHV)
 - For 75% load as 9128.518 Btu/kWh (Net HHV)
- iii. For the period from July 2020 to June 2021, the Authority allowed the following Heat Rate numbers
 - For 100% load as 9137.699 Btu/kWh (Net HHV)
 - For 75% load as 9156.755 Btu/kWh (Net HHV)
- iv. For the period from July 2021 to June 2022, the Authority allowed the following Heat Rate numbers
 - For 100% load as 9104.419 Btu/kWh (Net HHV)
 - For 75% load as 9123.406 Btu/kWh (Net HHV)
- v. For the period from July 2022 to June 2023, the Authority allowed the following Heat Rate numbers
 - For 100% load as 9129.624 Btu/kWh (Net HHV)
 - For 75% load as 9148.663 Btu/kWh (Net HHV)
- vi. For any plant operation above 75% of plant load the Heat Rate corresponding to 100% load shall be applicable, whereas for operation of plant at/or below 75% loading, Heat Rate allowed for 75% loading shall be applicable.
- vii. KE shall submit monthly record of power plant operations and corresponding gas data (pressure, consumption, etc.) on hourly basis to the Authority to determine applicable Heat Rates along with relevant periods.
- viii. KE is required to conduct maintenance including Major Overhaul of its plants/units as per prudent utility practices and OEM recommendations.


(Engr. Maqsood Anwar Khan)
Member


(Rafique Ahmed Shaikh)
Member




(Tauseef H. Farooqi)
Chairman


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