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Islamic Republic of Pakistan

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No. NEPRA/Advisor(CTBCM)/RFP-07/ 7093-99

May 26, 2025

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

Subject: **Decision of the Authority in the matter of Approval of Bid Evaluation Report submitted by K-Electric Limited (KEL) for 220 MW Site Neutral Hybrid Project at Dhabeji Grid**

Enclosed please find herewith the subject Decision of the Authority (total 12 pages) in the matter of Approval of Bid Evaluation Report submitted by K-Electric Limited (KEL) for 220 MW Site Neutral Hybrid Project at Dhabeji Grid.

Enclosure: **As above**

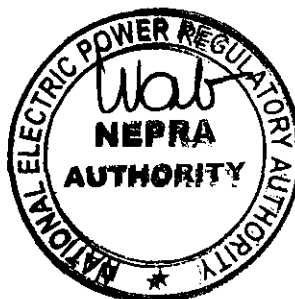

(Wasim Anwar Bhinder)

Copy to:

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, Ministry of Inter Provincial Coordination, (Secretariat of Council of Common Interests), Government of Pakistan, Cabinet Block, Cabinet Secretariat, Islamabad.
5. Chief Executive Officer, Central Power Purchasing Agency Guarantee Limited (CPPA-G), Shaheen Plaza, 73-West, Fazl-e-Haq Road, Islamabad.
6. Managing Director, National Grid Company (NGC) of Pakistan, 414-WAPDA House, Lahore.
7. Chief Executive Officer, Independent System and Market Operator of Pakistan (the "ISMO"), Pitras Bukhari Road, Sector H-8/1, Islamabad

Decision of the Authority in the Matter of Approval of Bid Evaluation Report Submitted by K-Electric Limited (KEL) for 220 MW Site Neutral Hybrid Project at Dhabeji Grid

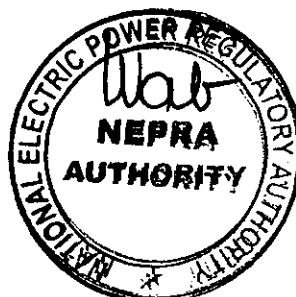
1. In exercise of the powers conferred by Section 7(3) and 47 of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 as amended from time to time ("**NEPRA Act**") read with Rule 17(3) (vi) of NEPRA Tariff (Standards and Procedure) Rules, 1998 ("**Tariff Rules**"), the Authority on 03 May 2017 notified the NEPRA Competitive Bidding Tariff (Approval Procedure) Regulations, 2017 ("**NCBTR-2017**" or "**Regulations**"), to lay down the procedure for approval of tariff arrived at through a competitive bidding process.
2. The instant matter stems from the Authority decision dated 15 March 2024 ("**Decision**"), whereby the Request for Proposal ("**RFP**") submitted by K-Electric Limited ("**KEL**" or "**Petitioner**") was approved, and KEL was allowed to conduct open competitive bidding for a 200 MWp-AC Peak (with a +20% allowance) renewable hybrid power project (wind and solar) to be setup at Dhabeji Grid Karachi ("**Project**"). The above approval was granted under the NCBTR-2017.
3. KEL carried out open competitive bidding process for the Project, and in accordance with Regulation 11 of the NCBTR and paragraph 14 of the Decision, submitted the Bid Evaluation Report ("**BER**") to the Authority on 16 October 2024, for the approval of BER and the bidding process. KEL stated that upon approval of the BER, it shall notify the successful bidder and proceed with the subsequent procedural steps.
4. Whilst NCBTR-2017 requires KEL to notify the successful bidder and submit the BER to NEPRA upon completion of the bidding process, these Regulations do not explicitly mandate approval of the BER. They provide that the Authority has the discretion to reject the tariff application filed by successful bidder, if the BER, among other reasons, is found non-compliant of the Regulations. Nonetheless, in its Decision, the Authority directed KEL to obtain approval of the BER. This directive was issued in view of the relaxation of NCBTR-2017 granted to KEL for conducting open competitive bidding, and to ensure that the additional prudency checks as prescribed by the Authority in the Decision, can be checked through BER prior to granting approval of the bid tariff.
5. KEL submitted the BER including therewith all the information as stipulated in Regulation 11(1) of NCBTR. KEL informed that JCM Power Corporation ("**JCM**") emerged as the lowest responsive bidder for Project, having successfully cleared the technical evaluation and submitted the lowest financial bid. According to KEL's submission, notification to the successful bidder shall be issued upon receipt of the Authority's approval of the BER.
6. Upon receipt of the BER, the Authority decided to conduct a public hearing in the matter, scheduled for 04 February 2025 at 02:00 PM. The public notices of the hearing were published in the national dailies 'The News' and 'Express' on 22 January 2025. Additionally, separate hearing notices were sent to KEL and other relevant stakeholders on 27 January 2025. Following issues were framed and approved by the Authority for public hearing in the matter:



- i. Whether the bidding process carried out by KEL is transparent and in accordance with the NCBTR-2017 and directions of the Authority in the approved RFP or otherwise?
 - ii. Whether the delay in the bidding process against the timelines specified under the NCBTR 2017 is justified?
 - iii. Whether KEL has established measures to ensure that a successful bidder remains technically qualified, in the event that the bidder makes changes to its equipment and/or suppliers?
 - iv. Whether KEL has complied with the directions of the Authority in the approved RFP regarding prudence check and displacement of expensive units?
 - v. Whether the lowest Bid Tariff is prudent and reflective of prevailing market conditions?
 - vi. Whether the cost of the transmission line has been taken into account in the investment plan/reviewed plan as submitted by KEL to the Authority for approval?
7. The public hearing was held as per the schedule and attended by representatives of KEL, Private Power Infrastructure Board ("PPIB"), bidding parties, and the general public. KEL submitted written responses to the framed issues through its letter dated 21 February 2025. Additionally, written comments were also submitted by various stakeholders, including Amreli Steel and Mr. Arif Bilwani. Produced below is the summary of the submissions with respect to each issue by KEL and other parties, followed by the analysis and decision of the Authority.

Issue No. I: Whether the bidding process carried out by K-Electric Limited (KEL) is transparent and in accordance with the NCBTR-2017 and the directions of the Authority in the approved RFP or otherwise?

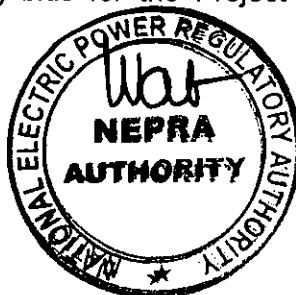
8. In its BER, KEL stated that the initial prequalification process for the Project was conducted in 2023. Subsequently, in compliance with the Authority's Decision, the prequalification process was re-conducted, along with the technical evaluation, to permit the participation of new applicants, while excluding the pre-qualification process for those who had already been prequalified. According to KEL, two (02) new bidders namely Fauji Fertilizer Company Limited and Reshma Power Generation (Pvt.) Limited submitted the documents, in addition to five (05) parties already prequalified in 2023.
9. The invitation to bid advertisement for the Project was published on 02 April 2024 in the following publications:
- International newspapers: China Daily, Khaleej Times, New York Times and Financial Times
 - National newspapers: Daily Dawn, Business Recorder, Express Tribune and others
 - Tendering websites: globaltenders.com and tendersinfo.com.
10. KEL submitted that it formed the Bid Evaluation Committee ("BEC"), in accordance with the NCBTR- 2017 to oversee the competitive bidding process, evaluation of bids and preparation of the BER. The BEC comprised of five members; four members of KEL and one Independent Consultant namely OMS (Pvt.) Limited ("OMS").



11. KEL submitted that during the tendering process, several potential bidders submitted pre-bid clarifications, which were addressed by KEL in consultation with OMS. A consolidated document of pre-bid clarifications was subsequently prepared and circulated to all bidders by KEL on 27 August 2024.
12. The prequalified bidders were required to submit the (i) bid submission letter, (ii) confidentiality agreement, (iii) form of covenant, (iv) power of attorney, (v) affidavit, (vi) letter of acceptance, and (vii) form of bid bond, and as per KEL, all the bidders were found compliant with the legal requirements.
13. On the bids' submission deadline of 31 August 2024, a total number of seven (07) bids were received for the Project. According to KEL, BEC assessed both the technical and financial proposals and subsequently conducted bid evaluations, in accordance with RFP. OMS was the integral part of the bid evaluation process and has endorsed the technical and financial evaluation.
14. According to KEL, one of the new bidder i.e. Reshma Power Generation (Pvt.) Limited did not pass the prequalification criteria. Reshma Power on 05 September 2024 was notified of failing to meet the RFP requirements and was asked to provide the missing information, however, it did not comply and was disqualified, and therefore, its technical bid was not validated/opened, leaving the process to six (06) bidders.
15. KEL informed that from the date of announcement of technically qualified bidder, any bidder feeling aggrieved by the evaluation outcome could have lodged a complaint before the Grievance Redressal Committee ("GRC") at the email address provided by the company. According to KEL, no grievance was received as all the bidders were declared as technically qualified. Lastly, JCM was evaluated as the successful bidder given it submitted the lowest bid for the Project.
16. Regarding transparency of the bidding process, KEL submitted that it has conducted the bidding process in a transparent manner ensuring that all information is communicated to all bidders and in a timely manner. KEL further informed that the RFP document was also made available on its website. Additionally, all bidders were required to register on SAP ARIBA software, for submission of soft copy of the bids. Additionally, the bidders were asked to submit the bids in the form of hard copies. All correspondences, clarifications and amendments were uploaded on the ARIBA Software and/or on KEL's website.

Analysis and Decision of the Authority:

17. The Authority noted that KEL had initially indicated the possibility of equity participation in the Project, which was approved in the Decision, subject to certain directions. However, upon review of the submitted BER, it has been noted that KEL opted not to participate in the Project, as an equity shareholder. Accordingly, the Authority's directions regarding equity participation do not apply in the present circumstances.
18. Pursuant to Regulation 9 of the NCBTR-2017 and the Authority's Decision in the matter, KEL was directed to publish public notices inviting bids for the Project in order to ensure maximum



transparency and wider market participation. KEL was further required to incorporate prequalification criteria in the RFP for new prospective bidders, while exempting those already prequalified in the earlier process. KEL has submitted that it complied with these directions by publishing advertisements for the Project on 2 April 2024, whereby two new bidders applied and added into the process. The copies of the advertisements along with the details of pre-qualified parties were submitted by KEL.

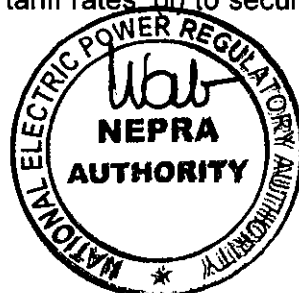
19. The Authority, through its Decision, had directed KEL to include parameters related to sourcing of materials and CSR initiatives under the criterion of contribution towards the local economy and community welfare. KEL has confirmed that the above-mentioned components were duly incorporated in the technical evaluation, with a weightage of five percent (5%).

It is noted that KEL's submissions regarding the transparency of the bidding process also appear to be well-founded. The timely communication with bidders, publishing the RFP on its website, requiring both hard and soft copy submissions via SAP ARIBA, and uploading all correspondences, clarifications, and amendments on both ARIBA and its website for equal access to information, shows that the bidding process was visible and transparent.

20. In accordance with Regulation 3 of the NCBTR, 2017, KEL was obligated to appoint an Independent Consultant as part of its BEC, and KEL appointed OMS for this role. A formal endorsement and declaration from OMS was submitted, wherein the firm confirmed that it conducted an impartial and independent evaluation of the bids. The declaration further affirmed that OMS has no direct or indirect commercial, financial, or other interest with any of the qualified bidders, ensuring the integrity of the evaluation process.
21. Additionally, the Authority noted that no grievance or complaint was filed by any participating bidder during the entire bidding process before the designated GRC, and during the instant proceedings. Furthermore, all documentation, procedural steps, and disclosures required under the NCBTR-2017 were verified, and found to be in order by the Authority.
22. In light of the foregoing, the Authority is satisfied that the competitive bidding process undertaken by KEL has been carried out in a transparent manner and is in compliance with the provisions of the NCBTR-2017, as well as the directions issued by the Authority in the Decision.

Issue No. II: Whether the delay in the bidding process against the timeline specified under the NCBTR-2017 is justified?

23. KEL submitted that following NEPRA's approval of RFPs for all five renewable projects on 15 March 2024, advertisements for all the procurement of 640 MW were published on 02 April 2024, in both local and international newspapers as well as on tendering websites. During this period, KEL also sought its board approval for its equity share in the RFPs, as Authority directed it to communicate the equity share upfront in the RFPs.
24. KEL further stated that the bid submission deadline was initially set for 20 May 2024, however, due to the Project's unique nature as a Site Neutral Hybrid Project, multiple bidders requested extension in time citing compelling reasons, including (i) to propose an optimal wind-solar technology mix for better land utilization and tariff rates, (ii) to secure land within a 50 km radius



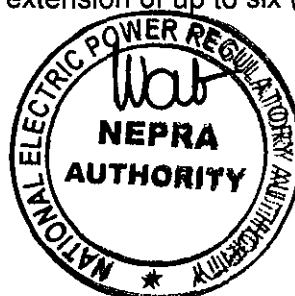
of the Dhabeji Grid, and (iii) to conduct technical studies on the selected land and (iv) the need for extended timeframes to secure financing and finalize loan terms with foreign financiers. In view of the foregoing, KEL emphasized that managing the bidding process concurrently for five renewable projects totaling approximately 640 MW, negotiating the Energy Purchase Agreement ("EPA"), addressing technical and other project requirements with multiple bidders, and engaging with lenders to ensure the project's bankability necessitated an extension of the bidding process timeline. Additionally, KEL submitted that the Authority is entitled to exercise its discretion in accordance with the powers vested in it by Regulation 14(2) of the NCBTR-2017 which provide:

"The Authority may in a particular case, or class of cases, or if it would be in the interest of electric power services market, for reasons to be recorded in writing, relax such requirements subject to such conditions as it may deem fit."

25. Stating above, KEL requested the Authority to exercise its discretion reasonably in permitting the extension in competitive bidding process.

Analysis and Decision of the Authority:

26. Pursuant to Regulation 9(2) of the NCBTR, 2017, the relevant agency is required to complete the bidding process within three (03) months from the date of the Authority's approval of the RFP. The said regulation further permits the Authority to extend this timeline by one (01) month upon a formal request from the relevant agency.
27. In the present case, the Authority approved the RFP for the Project on 15 March 2024, thereby establishing 14 June 2024, as the deadline for completion of the bidding process. Subsequently, KEL, through its letter dated 05 April 2024, requested an extension of the prescribed timeline under Regulation 9(2) of NCBTR-2017. The Authority acceded to the request and formally conveyed the extension to KEL on 13 May 2024, thereby revising the bidding process deadline to 14 July 2024 and directed KEL to share the same with all prequalified and prospective bidders. Later, KEL vide its letter dated 09 May 2024, had apprised the Authority of revising the bid submission timeline to 31 August 2024.
28. The Authority noted that the financial bids were opened by KEL on 24 September 2024, and the successful bidder was informed on 25 October 2024. The BER was submitted for the Authority's approval on 16 October, 2024. If the date of information to the successful bidder is considered the effective date of completion of the bidding process, the process appears to have concluded approximately three (03) months beyond the extended deadline.
29. Nonetheless, the Authority has considered the submissions of KEL along with the copies of the time extension requests made by the participating bidders, indicating operational constraints faced during the bidding period. It was also observed that this is the first successful bidding round for the procurement of renewable energy happened in the country, which necessitated quite a number of clarifications required by the participating bidders. The Authority further noted that Regulation 14(2) of the NCBTR, 2017 empowers the Authority to relax any requirement of the Regulations, including timelines. This flexibility had previously been invoked by the Authority to allow extended timeline in (i) Taunsa Project for giving an extension of up to five (05) months, and (ii) Category-III renewable projects for giving an extension of up to six (06) months.



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30. In light of the justifications provided by KEL, and keeping in view the past precedents, the Authority finds the reasoning provided by KEL to be convincing. Accordingly, the Authority hereby grants post-facto approval for the delay in the bidding process under Regulation 14(2) of the NCBTR, 2017.

Issue No. III: Whether KEL has established measures to ensure that a successful bidder remains technically qualified, in the event that the bidder makes changes to its equipment and/or suppliers?

31. KEL submitted that under Exhibit 11 of the RFP, successful bidder/SPV is required to ensure the following with respect to changes in the equipment and /or suppliers;

"The SPV will be required to construct the Project consistent with the technical specifications, equipment details and design parameters that are consistent with the Technical Proposal of the Successful Bidder received pursuant to this RFP and agreed with K-Electric in the EPA with the approval of NEPRA. Any variations to above that are determined to be material by K-Electric, shall result in revocation of the LOI by K-Electric and encashment of Performance Guarantee provided that K-Electric shall notify in writing to the Successful Bidder of such material deviations and allow ten (10) Business Days for rectification of such material deviations".

32. KEL informed that in case any changes are proposed in the equipment and /or suppliers by the bidder, KEL will re-evaluate the technical scorecard of the bidder in order to ensure that the bidder be allowed to make changes only if it continues to meet the minimum technical score requirement as per Section 20 of the RFP.

Analysis and Decision of the Authority:

33. The Authority noted that all participating bidders met the minimum knock-out criteria, i.e. the radial distance of the Project from the Dhabeji Grid Station (had to be within a 50 km radius), the Project's capacity, site availability/arrangements, hybrid technology, tier-1 solar panels, type-tested wind turbine generators (WTGs), various technical studies, and the compatibility of equipment and the complex with the technical standards of the Grid Code and other applicable documents, stipulated in the RFP, and attained technical scores above the prescribed qualifying threshold of seventy (70) marks. Specifically, the successful bidder (JCM) secured a technical score of about eighty-six (86.25) out of a total of one hundred (100) marks. The bidders proposed a number of equipment and suppliers to choose from, and technical evaluation of the bidders, including the successful bidder, was carried out based on bidders' preferred configuration of equipment and supplier(s). While the successful bidder has provided different options of equipment/suppliers, there was a possibility that any post-evaluation substitution of equipment or supplier may potentially impact the technical score. Should such a change result in the technical score falling below the mandatory threshold of seventy (70), the bidder would effectively become technically disqualified, hence, this issue was framed.



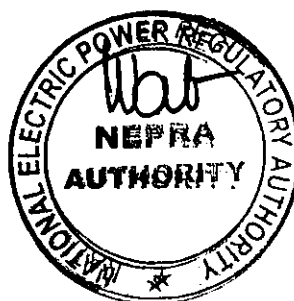
34. KEL in response referred to the relevant clause in the RFP, stating that in the event of a change in equipment and/or suppliers by the successful bidder, it would re-evaluate the technical scorecard to ensure that the bidder continues to meet the minimum technical score requirement. To strengthen this aspect, the Authority directed KEL to conduct a technical evaluation of the successful bidder based on the second preferred supplier/equipment proposed by the bidder. Accordingly, KEL submitted the requisite information, confirming that the bidder met the technical score criteria also under the revised evaluation.
35. The Authority observed that multiple arrangements for selecting equipment or suppliers could arise; therefore, to uphold the integrity of the evaluation process, KEL is directed to ensure that any changes in equipment, suppliers, or other material alterations by the successful bidder do not cause the technical score to fall below seventy (70). A corresponding mechanism shall be incorporated within the EPA to enforce compliance with this directive.

Issue No. IV: Whether KEL has complied with the directions of the Authority in the approved RFP regarding prudence check and displacement of expensive units?

Issue No. V: Whether the lowest bid tariff is prudent and reflective of prevailing market conditions?

36. KEL submitted that the financial bids of the technically qualified bidders were opened on 24 September 2024 in the presence of the representatives from KEL, OMS and bidders. The details of the tariffs bid by each bidder for the Project and their rankings are tabulated as under:

Lead Sponsor Name	Distance from Dhabeji Grid [km]	Bid Tariff [PKR/kWh]	TCC [PKR/kWh]	Evaluated Tariff [PKR/kWh]	Ranking
JCM Power Corporation	14.2720	8.9189	0.8382	9.7571	1
Hub Power Holdings Limited ²	36.3333	9.8689	1.5000	11.3689	2
Hurricane 150MW (Pvt) Limited ²	19.0000	10.9610	0.9800	11.9410	3
Sapphire Textiles Mills Limited	34.7248	10.5000	1.4517	11.9517	4
Fauji Fertilizer Company Limited	16.8880	11.5000	0.9166	12.4166	5
Metro Group of Companies	38.0000	11.3151	1.5500	12.8651	6



37. KEL informed that based on the evaluation criteria, JCM offered the lowest generation tariff of 8.9189 PKR/kWh (US Cents 3.0898/kWh) for the project. It further informed that after considering the Transmission Cost Component ("TCC") for the 14.2720 km (radial distance of land from the Dhabeji Grid), the evaluated tariff comes out to be PKR 9.7571 /kWh (US Cents 3.3802/kWh). This radial distance has been considered from the proposed switchyard of the complex.
38. KEL submitted that the Transmission Cost Component ("TCC") of the bid tariff has been assessed on the basis of radial distance of the land parcel of the Project from the Dhabeji Grid Station. The land coordinates were provided by the bidders themselves by taking into account the tradeoff. KEL added that the TCC has been calculated by the KEL on the basis as approved by the Authority in the Decision (Rs 0.56kWh for 1st 5 kms and Rs 0.03/kWh for additional kms).
39. KEL in the subject BER and vide letter dated 21 February 2025 has informed that it has duly complied with the directions of the Authority in the approved RFP regarding prudence check, displacement of expensive units and assessment of bids on the overall tariff including transmission/wheeling charges

Prudence Check based on Macroeconomic Conditions

40. KEL informed that it has performed a prudency check on the successful bid, (using the mix of Solar PV and Wind as proposed by the successful bidder), based on the prevailing equipment costs (quotes received from equipment manufacturers) and other market conditions. The key assumptions for the assessment of prudence of bid tariff as used by KEL are as follows:

Parameter	Assumptions
Exchange Rate	288.65/USD
SOFR + Spread	5.37% + 4.25%
Foreign Debt Tenor	15 years
KIBOR + Spread	21.28% + 2.25%
Local Debt Tenor	15 years
Capacity Factor	36.9%
Debt: Equity Ratio	80:20
Return on Equity	15% (USD Based)
IRR ⁴	13% (USD Based)
EPC Cost	USD 0.71 - 0.79 Mn/MW ⁵



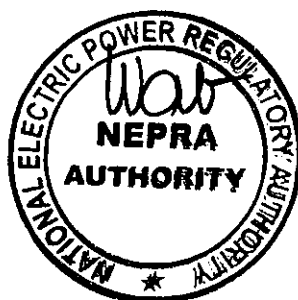
41. KEL submitted that as per its independent assessment of equipment prices and on reference parameters, the levelized tariff comes out to be in the range of 10.8630 PKR/kWh to 11.9930 PKR/kWh.
42. Based on the above analysis, KEL submitted that it is evident that the successful bid is prudent, under the criteria instructed by the Authority under Para 55 (ii) of the NEPRA Decision.
43. **Amreli Steels** supported adding renewable energy to the grid at the proposed rate of around PKR 10/kWh, stating that it is more economical than the marginal cost of thermal power plants

Amreli Steels

and can help offset KEL's capacity costs. **Mr. Arif Bilwani** submitted that since the submissions of bids the local KIBOR rate has been reduced by 1,000 basis points and is anticipated to decline further, likely reaching single digits in the coming months. Similarly, the SOFR rate is also on a downward trend. He further added that given these reductions in both foreign and local debt financing costs, it is imperative that the proposed tariff be reassessed and adjusted accordingly to reflect the lower financing charges.

Analysis and Decision of the Authority:

44. The Authority in the Decision directed KEL to undertake a prudency check of the bid tariff received under the competitive bidding process. This assessment involves computing the tariff based on prevailing equipment costs while utilizing the financing and operational cost benchmarks as approved by the Authority in comparable cases, followed by a comparative analysis to evaluate whether the bid tariff is prudent. This direction was given as KEL's generation basket cost is relatively higher compared to that of CPPA-G, a tariff below 12 cents/kWh could, from a displacement perspective, justify procurement. However, such a tariff, if assessed on a standalone basis, without reference to displacement potential, would be considered unreasonably high for the Project. KEL has submitted that the received bids confirm the prudency checks applied by the company, therefore, found prudent.
45. It is important to discuss that the mix of wind and solar capacity was left to the discretion of the bidders in the Decision, with a minimum solar PV share of 25%. KEL stated in the RFP that the AC power of the Project should not exceed 200 MWp, with a 20% margin, meaning the total capacity should not exceed 240 MW AC. KEL has informed that JCM proposed to install 269 MWp (DC capacity), consisting of 175 MWp of wind capacity and 94 MWp of solar PV capacity. KEL further informed that it has carried out the calculations based on the wind and solar PV mix offered by the bidder.
46. In para 08 of the said Decision, the Authority retained the right to reject any bid if it is found to be imprudent. Accordingly, the required prudency assessments were conducted again by the Authority. For that analysis, the same parameters, i.e. debt-to-equity ratio, foreign-to-local debt ratio, equity injection timelines, and drawdown patterns, as taken into account to approve indexation mechanism in the Decision, were used. The macroeconomic indices (KIBOR, SOFR, and Exchange Rate) were also maintained at approved levels, as stated in the Decision. The equipment prices, reflective of prevailing market conditions, were used. The Capacity Utilization Factor ("CUF") at P50 level for Solar PV and CUF at P75 for Wind, derived from the solar resource assessment submitted by KEL, was taken into account. Additionally, the tariffs, earlier approved for similar-sized projects, were also taken into account.
47. Based on the foregoing assessments, the Authority observed that the tariffs discovered for the Project through the competitive bidding process adequately reflect the market conditions. Moreover, they adhere to the regulatory standards set forth by the Authority and are consistent or lower with the tariffs approved in comparable cases. As a result, the bid tariff is deemed to be both prudent under this check, and, therefore, are considered reasonable for approval.



Prudence Check on Displacement Analysis

48. KEL in BER has submitted that the induction of Project in KEL's fleet will bring savings, both in terms of cost and Forex outflow, in both National and KEL's grid by displacing the existing expensive generation. KEL submitted that unlike baseload plants which contribute to both energy and capacity requirements, renewables are intermittent in nature and contribute only to the energy requirements.
49. KEL has estimated energy cost savings due to fuel displacement at PKR 7.05 billion annually, with total savings projected to reach PKR 176.26 billion over the life of the Project. Furthermore, KEL has indicated that annual savings in FOREX outflows would amount to USD 39.45 million, translating to total savings of approximately USD 986 million over the Project lifespan.
50. According to KEL, the analysis above has been performed taking into account an average annual sent-out growth rate of 1.84%, which also accounts for the impact of rooftop solar as reflected in the solar profile. Energy and fuel prices for KE have been used based on the Economic Merit Order ("EMO") for August 2024. The marginal plant for NTDC displacement has been identified as imported coal-based generation, with the marginal price also derived from the August 2024 EMO. For this analysis, KEL used a constant import from the National Grid at 1,700 MW throughout the analysis period. The technical parameters factored into the analysis encompass minimum loading, ramp rates, part-load heat rate degradation, efficiencies for both open and combined cycles, as well as plant outages.

Analysis and Decision of the Authority:

51. In its Decision, the Authority directed KEL to substantiate the proposed renewable energy procurements through a comprehensive displacement analysis, demonstrating the anticipated cost savings by them through displacing high-cost generation sources, which was the primary objective for granting permission for these procurements. KEL submitted the said analysis along with the underlying assumptions. During the proceedings, the Authority instructed KEL to incorporate additional key parameters that were initially omitted from the analysis, including the projected growth in distributed solar rooftop installations and its potential impact on daytime demand profiles, the minimum generation loading requirements of thermal plants within KEL's system, and the implications of Part Load Adjustment Charges (PLAC) arising from the intermittent and non-firm nature of solar generation during daylight hours. Additionally, KEL was required to assess the cumulative impact of other planned renewable energy additions to its system.
52. KEL complied with the directives and submitted a revised displacement working reflecting these updated assumptions and parameters. The Authority noted that the revised analysis reflects a more holistic view of the system-level impact of the 240 MW AC (maximum) renewable addition. The Authority reviewed those workings and observed that KEL had the responsibility of justifying the benefits of cost savings by procuring energy from these projects, and a sufficiently reasoned and data-supported case has been presented to justify the procurement of this Project on the grounds of displacing costlier generation, demonstrating potential savings in energy costs and FOREX outflow through the replacement of expensive generation sources with lower-cost renewable energy.



Issue No. VI: Whether the cost of the transmission line has been taken into account in the investment plan/reviewed plan as submitted by KEL to the Authority for approval?

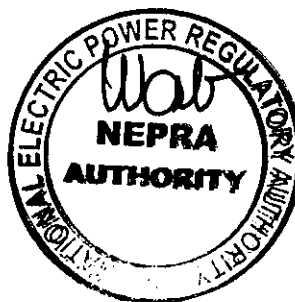
KEL submitted that the successful evacuation of power from the Project depends on the timely completion of the associated transmission line. It further added that the submitted investment plan of KEL already accounts for transmission system up-gradation necessary to off-take 600 MW of renewable energy projects within Ghara/Dhabeji area. It further added that since the Project was site-neutral, therefore, specific transmission investment could not be determined at the time of Investment plan submission, and the same will be covered under the costs approval given for 'Interconnection for 600 MW WPP/Solar Power Plant', in the investment plan.

Analysis and Decision of the Authority:

53. The Authority noted that it has approved the cost of PKR 12,284 Million under the cost head namely Interconnection for 600 MW WPP/Solar Power Plant in the determination of KEL investment plan dated April 24 2024 wherein a cost component of PKR 5,663 million has already been approved for the construction of 220 kV transmission line (20 km OH). The scope and Capex adjustment related to evacuation/interconnection of this Project shall be dealt in accordance with the decision of the Authority in the matter of KEL investment plan. Nonetheless, the Authority directs KEL that any adverse financial impact resulting from the delay in execution of generation or transmission projects whether on account of KEL or the successful bidder shall not be passed on to the consumers in any form, and this condition shall be appropriately reflected in the relevant project agreements.

Other Issues:

54. Certain changes were made by KEL to the RFP following its approval by the Authority. The Authority noted that one of the changes was related to delay, that has already been addressed and decided upon under Issue II. The remaining modifications pertaining to Form of Bid Bond, Bid Validity Period, BEC, Performance Parameter, etc. do not constitute a deviation from or violation of the approved regulatory framework or applicable documents.



ORDER OF THE AUTHORITY:

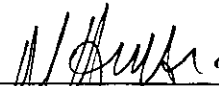
In view of the foregoing, the Authority is satisfied that the bidding process conducted by KEL complies with the applicable provisions of the NCBTR-2017 as well as the directions issued by the Authority from time to time. Given that the Project were duly optimized in the approved Indicative Generation Capacity Expansion Plan ("IGCEP") and included in the approved Power Acquisition Plan ("PAP"), the Authority hereby approves the BER submitted by KEL in respect of 200 MWp - AC Peak (with a +20% allowance) Site Neutral Hybrid power project at Dhabejl Grid Station.

This decision shall form the basis for regulatory processing of the tariff petition in accordance with the applicable laws, rules, and regulations.

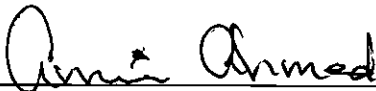
AUTHORITY



Rafique Ahmed Shaikh
(Member)



Engr. Maqsood Anwar Khan
(Member)



Amina Ahmed
(Member)



Waseem Mukhtar
(Chairman)

