



**Registrar**

# **National Electric Power Regulatory Authority**

## **Islamic Republic of Pakistan**

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No. NEPRA/TRF-600/KAPCO-2023/ 15662-66

September 23, 2025

Subject: **Determination of the Authority in the matter of Tariff Petition filed by Kot Addu Power Company Limited for Reference Generation Tariff**

Dear Sir,

Please find enclosed herewith the subject Determination of the Authority (total 38 Pages) alongwith Additional Note of Mr. Rafique Ahmad Shaikh, Member(NEPRA) regarding Tariff Petition filed by Kot Addu Power Company Limited for Reference Generation Tariff in Case No. NEPRA/TRF-600/KAPCO-2023.

2. The Decision 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 within 30 calendar days from the intimation of this Decision. In the event the Federal Government fails to notify the subject tariff Decision within the time period specified in Section 31(7), then the Authority shall notify the same in the official Gazette pursuant to Section 31(7) of NEPRA Act.

Enclosure: **As above**

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

  
(Wasim Anwar Bhinder)

**Copy to:**

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block Pak Secretariat Islamabad
3. Chief Executive Officer, Central Power Purchasing Agency Guarantee Limited (CPPA-G), Shaheen Plaza, 73-West, Fazl-e-Haq Road, Islamabad
4. Chief Executive Officer, Kot Addu Power Co. Ltd. (KAPCO) 5-B/3, Gulberg-III, Lahore

**DETERMINATION OF THE AUTHORITY IN THE MATTER OF TARIFF PETITION  
FILED BY KOT ADDU POWER COMPANY LIMITED FOR REFERENCE  
GENERATION TARIFF**

**1. INTRODUCTION**

- 1.1. Kot Addu Power Company Limited (KAPCO) was incorporated on April 25, 1996, as a public limited company under the Companies Ordinance, 1984 for the purposes of acquiring, operating and maintaining a 1600 MW (name plate capacity) multi-fuel-based generation facility/combined cycle thermal power plant, located at Kot Addu, District Muzaffargarh, Punjab, Pakistan (the "Project"). The Petitioner has been operating and maintaining the Project for more than 25 years.
- 1.2. The project comprises of a generation facility that was divided into 3 energy blocks, with each block having a combination of gas and steam turbines and a switchyard facility. However, the Project is now classified into: Plant 1, Plant 2 and a switchyard facility connecting to 12 transmission lines and 4 autotransformers at 132kV/220kV levels (the "Switchyard Facility").
- 1.3. NEPRA granted Generation Licence (No. PGL/020/2004 dated September 22, 2004) to Kot Addu Power Company for a period of 17 years which expired on September 1, 2021. KAPCO vide letter dated June 24, 2021 requested for extension of term of its Generation Licence. NEPRA vide its decision dated September 08, 2022 extended the term of its Generation Licence up to September 21, 2024 i.e. for a period of 3 years. The Authority vide its decision dated April 18, 2025 granted Concurrence to KAPCO for a period of up to 03 years.
- 1.4. KAPCO entered into a Power Purchase Agreement (PPA) with WAPDA for sale of electric power from its 1600 MW multi-fuel based thermal generation facility at Muzaffargarh. The said PPA was for a period of 25 years commencing from June 27, 1996 which expired on June 26, 2021. On February 15, 2021 the PPA was novated to CPPA-G as Power Purchaser. As per third amendment in PPA dated February 11, 2021 signed between KAPCO and WAPDA the term of PPA was extended for 485 days effective from June 27, 2021 which expired on October 24, 2022.

**2. FILING OF TARIFF PETITION**

- 2.1. KAPCO vide its letter No. KAPCO/CEO/2023/471 dated March 08, 2023 submitted the petition for determination of reference generation tariff and Switchyard Charges for five years. The Petitioner requested two part tariff for Plant 1 (892 MW comprising EB-I, EB-IIA & EB-IIB) on Take or Pay basis and Plant 2 (494MW comprising EB-IIC& EB-III) on Take and Pay basis. The Authority admitted the subject Petition on May 29, 2023. Notice of Admission along with salient features of the Petition was made public on June 15, 2023 inviting comments from various stakeholders.
- 2.2. Hearing in the matter was held on October 03, 2023. The following issues were framed for the hearing:
  - i. Whether the tariff should be determined for KAPCO keeping in view the direction issued by the Senate Standing Committee on Power.



- ii. Whether there has been any technical study conducted by the NTDC or any independent consultant, justifying the need for PPA extension in scenario of the surplus capacity in system?
- iii. Whether it is justified to allow the tariff for the 5 years for all energy blocks? Whereas the IGCEP 2022-31 has considered min despatch of 500 MW from Block-I and Block-II till year 2025-26?
- iv. Whether the power purchaser consent has been sought and who shall sign the PPA with KAPCO either CPPAG or DISCOs as SOLR?
- v. Whether requested mode of tariff on "Take or Pay" for Plant I and "Take and Pay" for Plant II is justified?
- vi. Whether the request of two part switchyard tariff comprising Energy transformation Charges and fixed charges are justified?
- vii. Whether all costs associated with Black Start facility are inherent part of proposed tariff so that the facility may be utilized in a smooth and reliable manner during system emergencies?
- viii. Whether the average load factor of 30% is justified?
- ix. Whether the requested efficiencies/Heat Rates and fuel cost component on different fuel is justified?
- x. Whether the requested adjustment on account of Start-ups cost, degradation, part load etc. is justified?
- xi. Whether the requested variable O&M cost is justified?
- xii. Whether the requested fixed O&M cost is justified?
- xiii. Whether the requested ROE of 17% with CPI indexation is justified?
- xiv. Whether the requested cost of working capital on the basis of 3 months KIBOR + 2% is justified?
- xv. Whether the Exchange rate of Rs. 265.95/USD is justified?
- xvi. Whether the request of reimbursement of pass-through items is justified?
- xvii. Any other relevant issue arising during the proceedings.

2.3. KAPCO vide letter No. KAPCO/CEO/2025/514 dated 12th February 2025 submitted Addendum to the tariff petition containing revision in key terms and conditions. The petitioner submitted as under:

*“For all matter pertaining to the Generation Facility, please note that the terms of the Addendum shall prevail over the Tariff Petition and other ancillary documents. The references to concepts/components revised below shall stand replaced in the Tariff Petition and other ancillary documents and are to be construed according to the Addendum.”*

2.4. The petitioner proposed following tariff for its generation facilities:

| Fuel            | Energy Purchase Price |              |           | Capacity Purchase Price |        |        |           |           | Total Reference Tariff |
|-----------------|-----------------------|--------------|-----------|-------------------------|--------|--------|-----------|-----------|------------------------|
|                 | FCC                   | Variable O&M | Total EPP | Fixed O&M               | CWC    | ROE    | Insurance | Total CPP |                        |
|                 | PKR/kWh               |              |           | PKR/kW/h                |        |        |           |           | PKR/kWh                |
| Gas/RLNG        |                       |              |           |                         |        |        |           |           |                        |
| Energy Block I  | 28.0460               | 0.8692       | 28.9152   | 0.6774                  | 0.1545 | 0.3388 | 0.2151    | 1.3858    | 30.3010                |
| Energy Block II | 30.5956               | 0.9992       | 31.5948   |                         |        |        |           |           | 32.9806                |
| LSFO            |                       |              |           |                         |        |        |           |           |                        |
| Energy Block I  | 29.5862               | 0.8692       | 30.4554   | 0.7015                  | 0.1600 | 0.3519 | 0.2227    | 1.4361    | 31.8915                |
| Energy Block II | 3/2.0417              | 0.9992       | 33.0409   |                         |        |        |           |           | 34.4770                |

2.5. ROE is @ 84.4% load factor, requested to be paid on Take or Pay basis till twenty-five percent (25%) of availability and for any generation above this limit, to be based on actual generation. Moreover, reference Gas/RLNG price of Rs. 3,442.7794 per MMBTU and LSFO price of Rs. 150,817.50/ton (including transportation charges) has been assumed.

### 3. INTERIM TARIFF

3.1. The Authority vide its decision dated August 04, 2023 allowed provisional tariff to KAPCO. KAPCO vide its letter dated March 17, 2025 requested for revised provisional tariff as per the tariff requested in the addendum. In order to elaborate the necessity for a revised provisional tariff, the Petitioner submitted that as per CPPA-G's position, they are unable to enter into the PPA on the basis of existing provisional tariff as it was granted prior to negotiations. The Authority vide its decision dated April 09, 2025 allowed following revised provisional tariff:

| Components                                  | Block | Gas/RLNG       | LSFO           |
|---------------------------------------------|-------|----------------|----------------|
| <b>Energy Purchase Price (Rs. /kWh):</b>    |       |                |                |
| Fuel Cost Component                         | I     | 28.0460        | 29.5862        |
|                                             | II    | 30.5956        | 32.0417        |
| V O&M                                       | I     | 0.8692         |                |
|                                             | II    | 0.9992         |                |
| <b>Capacity Purchase Price (Rs. /kW/h):</b> |       |                |                |
| Fixed O&M                                   | I, II | 0.6774         | 0.7015         |
| Cost of Working Capital                     | I, II | 0.1545         | 0.1600         |
| ROE                                         | I, II | 0.3388         | 0.3519         |
| Insurance                                   | I, II | 0.2151         | 0.2227         |
| <b>Total Tariff</b>                         | I     | <b>30.3010</b> | <b>31.8915</b> |
|                                             | II    | <b>32.9806</b> | <b>34.4770</b> |



#### 4. 2<sup>nd</sup> PUBLIC HEARING

- 4.1. The Authority decided to hold public hearing on April 08, 2025 on the addendum filed by KAPCO. As the issues in the matter were already framed and no new issue emerged except change in tariff, therefore, same issues were considered for the public hearing. Notice of hearing was published in leading newspapers on March 27, 2025. Hearing was held as per schedule and was participated by the representatives of the petitioner and CPPA-G.
- 4.2. During the hearing held on April 08, 2025, it was discussed that KAPCO was retained as an alternate by terminating Pak Gen, based on the recommendation of System Operator. It was further highlighted that KAPCO plays a critical role in ensuring system stability in the surrounding region. In light of this, the System Operator was directed vide letter dated May 14, 2025 and reminder dated July 01, 2025 to submit the required information. NGC vide letter July 03, 2025 submitted following response:

| NEPRA Query                                                                               | ISMO / NGC Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| On what basis it was decided to retain KAPCO, whether there is any study in this respect. | <p><b>ISMO:</b></p> <p>Power Purchase Agreement between KAPCO and WAPDA / CPPA-G completed its term on 24.10.2022. After expiry of the PPA, Lalpir Power Limited, Pakgen Power Limited and Thermal Power Station Muzaffargarh were available in the region on RFO fuel. However, the retention of KAPCO was required for following reasons:</p> <ol style="list-style-type: none"> <li>Use of 132 kV switchyard of KAPCO to feed 132kV transmission lines of MEPCO in the region.</li> <li>To manage overloading of 500/220 kV Auto T/Fs at New Multan and New Muzaffargarh grid stations.</li> <li>To manage overloading of 220/132 kV Interconnecting T/Fs at KAPCO grid station.</li> <li>Use of Ancillary Services including Black Start.</li> <li>For fast ramping frequency control, in this regard, a detailed report including low flow study was also submitted vide this office letter referred at Sr. No. [3], with copy to NEPRA. Accordingly, BOD NGC, in its 236<sup>th</sup> meeting held on 28.11.2022, recommended the retention of 500 MW capacity from KAPCO Power Plant (Block-1 and Block-11) up to year 2025-26 beyond its PPA expiry, in line with the IGCEP 2022 and owing to the area network requirement/constraints. The regulatory approval of tariff petition filed by KAPCO was started at NEPRA.</li> </ol> <p>Meanwhile, "National Task Force for Implementation of Structural Reforms (Power Sector)" was constituted by Honorable Prime Minister in Aug 2024. As per the recommendations of National Grid Company ("NGC") (Formerly NTDC), National Task Force terminated Lalpir along with 04 other Power Projects in the system owing to low utilization factor, on 1st Oct 2024. Subsequently, only Pakgen power plant was operational in this region. National Task Force asked NGC for requirement of any plant from KAPCO, Rousch and Fauji Kabirwala</p> |



| NEPRA Query                                                                                  | ISMO / NGC Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                  |               |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
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|                                                                                              | <p>Power Company Limited as a replacement of Pakgen in case its contract is terminated. Accordingly, NGC vide letter referred at Sr. No. [4], highlighted that in line with its BOD Resolution, KAPCO (495 MW capacity) is the only feasible option to avoid overloading of 500/220 kV transformers at Muzaffargarh New and 500 kV Multan Grid stations during summer, and to serve the load of MEPCO through its 132 kV switchyard. After several Task Force meetings and as mutually agreed in the meeting held on 16-12-2024, among Task Force members (including CPPA-G, NEPRA, PPIB) and NGC &amp; MEPCO for retention of KAPCO power project, the final technical recommendation of NGC (vide reference at Sr. No. [5] was provided to the Task Force as under:</p> <p>a. Switchyard of KAPCO is required permanently to serve the demand of MEPCO in the region.</p> <p>b. In the absence of Pakgen, 495 MW capacity from KAPCO is required to be retained for at least 3 years for system stability and to control the overloading of 500/220 kV Transformers at Muzaffargarh New and New Multan Grid station during summer. Breakdown of the Capacity is as follows:</p> <table><tr><th>Complex Description</th><th>Unit</th><th>Gas/RLNG (MW)</th><th>Furnace Oil (MW)</th><th>Technology</th></tr><tr><td rowspan="3">Block-I</td><td>13</td><td>117</td><td>112</td><td>Gas turbine</td></tr><tr><td>14</td><td>112</td><td>108</td><td>Gas turbine</td></tr><tr><td>15</td><td>118</td><td>114</td><td>Steam turbine</td></tr><tr><td><b>Total Block-I</b></td><td></td><td><b>347</b></td><td><b>334</b></td><td></td></tr><tr><td rowspan="2">Block-II</td><td>1</td><td>96</td><td>93</td><td>Gas Turbine</td></tr><tr><td>9-A</td><td>52</td><td>51</td><td>Steam turbine</td></tr><tr><td><b>Total Block-II</b></td><td></td><td><b>148</b></td><td><b>144</b></td><td></td></tr><tr><td><b>Total</b></td><td></td><td><b>495</b></td><td><b>478</b></td><td></td></tr></table> <p>c. Rehabilitation/replacement by NGC of existing deteriorated 220/132 kV T/s (2x100 MVA T-1 &amp; T-2) at KAPCO in order to maintain transformation capacity of 500 MVA.</p> <p>d. Reconfiguration of Black Start facility with the above-mentioned units. The final decision for retention of KAPCO (495MW capacity) was taken by the Cabinet, conveyed to MD NTDC vide letter at Sr. No. [6], based on the technical recommendations of NTDC. Financial analysis by CPPA-G and negotiations held by the National Task Force. Based on above, PPA of Pakgen Power Plant has been terminated on 31st Jan 2025. Draft TPPA of KAPCO has been approved by NEPRA on 19-05-25, and finalization of the same is in process.</p> | Complex Description | Unit             | Gas/RLNG (MW) | Furnace Oil (MW) | Technology | Block-I | 13 | 117 | 112 | Gas turbine | 14 | 112 | 108 | Gas turbine | 15 | 118 | 114 | Steam turbine | <b>Total Block-I</b> |  | <b>347</b> | <b>334</b> |  | Block-II | 1 | 96 | 93 | Gas Turbine | 9-A | 52 | 51 | Steam turbine | <b>Total Block-II</b> |  | <b>148</b> | <b>144</b> |  | <b>Total</b> |  | <b>495</b> | <b>478</b> |  |
| Complex Description                                                                          | Unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Gas/RLNG (MW)       | Furnace Oil (MW) | Technology    |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
| Block-I                                                                                      | 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 117                 | 112              | Gas turbine   |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
|                                                                                              | 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 112                 | 108              | Gas turbine   |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
|                                                                                              | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 118                 | 114              | Steam turbine |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
| <b>Total Block-I</b>                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>347</b>          | <b>334</b>       |               |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
| Block-II                                                                                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 96                  | 93               | Gas Turbine   |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
|                                                                                              | 9-A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 52                  | 51               | Steam turbine |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
| <b>Total Block-II</b>                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>148</b>          | <b>144</b>       |               |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
| <b>Total</b>                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>495</b>          | <b>478</b>       |               |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
| An estimate of the cost required to ensure system stability/constraint removal in the region | <p><b>NGCP Reply:</b></p> <p>The total estimated cost for the projects mentioned below in Sr. No. (iv) is approx. USD 151.2 Million</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |                  |               |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |
| What is the main reason for allowing the continued                                           | <p><b>ISMO Reply:</b></p> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                  |               |                  |            |         |    |     |     |             |    |     |     |             |    |     |     |               |                      |  |            |            |  |          |   |    |    |             |     |    |    |               |                       |  |            |            |  |              |  |            |            |  |



| NEPRA Query                                                                                                                                                                                                                                                                                                                                             | ISMO / NGC Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| operation of the KAPCO power plant after the expiry of its Power Purchase Agreement (PPA) and generation license, despite it being more expensive than other underutilized power plants located in both the north and south? Please clarify whether this decision is based on actual generation requirements or due to transmission system constraints. | Addressed in Sr. (i) above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| If generation from KAPCO an otherwise costlier plant is currently necessitated due to transmission constraints, including grid limitations, what specific plans or projects have been developed to address these issues and reduce reliance on KAPCO?                                                                                                   | <b>NGCP Reply:</b><br>Following are the proposed projects to eliminate the need of KAPCO power plant: <ul style="list-style-type: none"> <li>• 96 MVAR Switched Shunt Capacitors each at 132 kV KAPCG, Piranghaib (NGPS), Bahawalpur and Yousafwala grid stations.</li> <li>• Addition of 3<sup>rd</sup> 600 MVA, 500/220 kV transformer at Muzaffargarh.</li> <li>• Up gradation of Vehari grid station from 220 kV to 500 kV voltage level.</li> <li>• 220/132 kV Nagshah grid station.</li> </ul> |
| Is there any possibility of procuring the required Generation through a competitive bidding process, with the objective of securing a more economical tariff compared to KAPCO?                                                                                                                                                                         | Not related to NGC / SO                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| It is mentioned that NTDC intends to acquire the KAPCO Grid Station. If this is the case, please explain how the acquisition is expected to help address power supply issues in the area, especially considering the absence of generation from KAPCO.                                                                                                  | <b>ISMO Reply:</b><br>As already explained, the switchyard of KAPCO is required to provide a primary transmission source to the six (06) number 132 kV transmission lines of MEPCO in the region. The remedial measures for transmission constraints in the region in absence of generation from KAPCO is already provided in Sr. (iv) above.                                                                                                                                                        |



| NEPRA Query                                                                                                                                                                            | ISMO / NGC Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| What would be month wise plant factor for the proposed operation period of the KAPCO power plant? Further, what would be the estimated part-load adjustment charges for this duration. | <b>ISMO Reply:</b><br><br>The updated estimate of month-wise plant factor of KAPCO has been submitted to NEPRA for Tariff Rebased exercise for FY 25-26. The plant utilization factor is estimated to remain above 25% for the proposed operation period. Based on historic load trend, the projected partial load adjustment of KAPCO units will be daily reduction of 30% of running load in four (04) hours, for a span of 122 days (Jun-Sept). The corresponding PLAC may please be sought from CPPA-G. |
| What would be the estimated adverse impact of operating KAPCO power plant in violation of the Economic Merit Order (EMO) during the proposed period?                                   | <b>ISMO Reply:</b><br><br>Lalpir and Pakgen power plants were already being operated on RFO fuel to manage loading of 500/220 kV Auto T/Fs at Multan and New Muzaffargarh, as per principle of Security Constrained Economic Dispatch. Operation of KAPCO on relatively cheaper RLNG will have positive financial impact. The detailed commercial analysis has already been provided by CPPA-G in its Regulatory Report submitted to NEPRA and may please be referred accordingly.                          |
| Is the requested tariff control period for the KAPCO power plant aligned with the provisions of the IGCEP.                                                                             | <b>ISMO Reply:</b><br><br>The generation from KAPCO (495 MW) has been included in the revised IGCEP 2024-34, currently under development, as recommended. The same was also included in the IGCEP 2022 as already mentioned in Sr No.(i) above.                                                                                                                                                                                                                                                             |

## 5. COMMENTS OF THE STAKEHOLDERS

- 5.1. In response to the notice of admission dated June 15, 2023, NTDC, CPPA-G, planning commission, FESCO and Mr. Nasir Ayaz submitted comments in the matter. The comments were forwarded to KAPCO for rejoinder. The comments and rejoinder are as under:

| Stakeholder | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Rejoinder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| NTDC        | <ul style="list-style-type: none"> <li>It is highlighted that as per Grid Code 2023 OC 5.6, power plants with Black Start facility are obligated to provide black start during system emergencies as and when required by the System Operator.</li> <li>Since KAPCO is equipped with black start facility and assists in system restoration during blackouts. It is therefore specifically requested that it may please be ensured that all costs associated with Black Start facility are inherent part of proposed tariff so that the facility may be utilized in a smooth and reliable manner during system emergencies.</li> <li>Additionally, all costs associated with aligning of technical limits of generating units</li> </ul> | <ul style="list-style-type: none"> <li>It is reiterated that the tariff for the Plant-1 (Energy Block I, Energy Block IIA and Energy Block IIB) of the Generation Facility (the "Plant-1") has been requested on a "take or pay" for the complete recovery of its fixed costs as well as the working capital costs which is imperative to ensure the firm and reliable availability of the respective generating units at all the times, as per the requirements in the Indicative Generation Capacity Expansion Plan for 2022-31 ("IGCEP").</li> <li>In view of the IGCEP requirement for 500 MW and to ensure the smooth availability of the black start facility (the significance of which has been highlighted by NTDC), the Authority has requested to allow the new tariff</li> </ul> |



| Stakeholder | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Rejoinder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|             | in order to comply with Grid Code 2023 are also part of proposed tariff by KAPCO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | for Plant-1 of the Generation Facility on a "take or pay" basis for the complete recovery of all prudent fixed costs and working capital costs in relation thereto as allowed under the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (as amended or restated from time to time) and the rules and regulations framed thereunder. In the absence of Take or Pay arrangement, the availability of Facility cannot be ensured at the time of need of electricity in the system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CPPA-G      | <ul style="list-style-type: none"> <li>As per IGCEP 2022-31, minimum despatch 500 MW from existing KAPCO (Block-I and Block-II) in the months of May to September up till year 2025-26 has been considered, beyond its PPA expiry i.e. Oct-2022, owing to network requirements/constraints and the remaining capacity for Block-III has been retired as per PPA expiry.</li> <li>Whereas KAPCO through its Tariff Petition has demanded Tariff for a period of 5 years for all Energy Blocks.</li> <li>CPPA is of the view that Authority may consider the Energy Blocks/Units of KAPCO as per IGCEP and NTDC requirements.</li> <li>General Manager PSP vide a letter dated 20-10-2022 mentioned that KAPCO generation has been kept in summer months (May to September) up till 2025-26 which is not in line with the Petitioner's request.</li> <li>To the contrary, Petitioner is demanding Tariff for Plant 1 on take or Pay basis which implies that the Power Purchaser will be bound to pay Capacity Charges for the entire 12 months against the purchase of power merely for 5 months. Therefore, Authority may consider the arrangement of required Units/Blocks as per operational requirements.</li> <li>The Petitioner has also requested Tariff for switchyard. Since NTDC requested KAPCO through its letter No. 160056-63 GM (SO) NPCC/DDPC-1 CPPA-G dated 17-10-2022 to ensure availability of its 220/132kV switchyard and other ancillary services after expiry of its PPA term on 24-10-2022 therefore, the Authority is requested to consider the grant of Petitioner's switchyard</li> </ul> | <ul style="list-style-type: none"> <li>Company has submitted the Tariff Petition for Plant-1 on a take or pay basis for blocks/units in IGCEP, and energy Block-2 B connected with the black start facility as per existing configuration. NTDC has emphasized for availability of black start facility in geographical centre of grid centre. Additionally, we have offered Plant-2 on take and pay basis which will be operated as per the economic merit order. Take and pay tariff of Plant-2 will result in cheaper electricity to consumer whenever operated to meet peak demand.</li> <li>It is the Company's view that both, CPPA-G and NTDC should be a party to such agreement. It may please be noted that Switchyard facility is being made available and operated from the date of expiry of PPA (24-Oct-2022) on special request of CPPA-G/NPCC and ministry of Power without any compensation so far. As requested in Tariff Petition, the tariff of Switchyard Facility is essential (including arears) and we expect the earliest resolution of the same to keep this facility available for the system. However, the Authority may direct either NTDC and/or CPPA-G to enter into such an agreement in respect of the Switchyard Facility.</li> <li>As explained in the Tariff Hearing, the Company is not a public sector entity rather it is a listed entity with over 65,000 shareholders, therefore, we have requested PKR based ROE of seventeen percent (17%) in line with other IPPs. It is highlighted that the Company has not requested USD indexation for ROE. Therefore, the Company requests the Authority to allow indexation of</li> </ul> |



| Stakeholder         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Rejoinder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|                     | <p>tariff by determining the same under Use of system charges through separate service agreement with NTDC.</p> <ul style="list-style-type: none"> <li>The Petition has requested Return of Equity of 17% with CPI indexation. The honourable Authority is requested to rationalize ROE component considering following: <ul style="list-style-type: none"> <li>i. ECC decided to allow 2002 policy IPPs, ROE fixed at 17% per annum on USD exchange rate of Rs. 148/USD for local investors with no further indexation.</li> <li>ii. ECC decided that return of Public Sector Power Projects such as WAPDA/GENCOs be reduced to 10% with no USD indexation.</li> <li>iii. ECC decided 12% IRR of Govt. owned RLNG IPPs with no dollar indexation.</li> </ul> </li> <li>Since WAPDA possesses major part of its shareholding therefore in the light of aforesaid ECC decisions, ROE should not be more than 10% with no USD indexation.</li> <li>The Petitioner has also requested reimbursement of Pass-through items i.e. WWF, WPPF and Corporate taxes etc. While determining Corporate Taxes as Pass-through item, the Authority is requested to set-aside not only withholding tax on dividends but also any other taxes of similar nature.</li> <li>The Petitioner has also requested adjustment on account of start-up cost, degradation, Part load etc. As per pervious arrangement of PPA, certain number of free start-ups were agreed between the parties and there was no degradation factor, the same should also be considered for new arrangement.</li> <li>The Petitioner has requested cost of working capital based on 3 months KIBOR + 2%. It is suggested to consider 1-month KIBOR + 2% for this purpose.</li> </ul> | <p>ROE component with national consumer price index so that investors are not impacted because of the inflationary pressure</p> <ul style="list-style-type: none"> <li>We request that taxes should fall within the ambit of pass-through items given the Authority has permitted the same for other IPPs.</li> <li>There will be no free start in the new PPA, and the Authority is requested to allow recovery of the prudent start-up costs of all starts.</li> <li>With regard to KIBOR issue, we request the Authority to consider our request as per the Tariff Application.</li> </ul> |
| Planning Commission | <ul style="list-style-type: none"> <li>Requested 17% Return on Equity (RoE) may be rationalized that the plant has already completed its useful life</li> <li>As IGCEP 2022-31 requires dispatch of 500 MW power from KAPCO till 2026, therefore, if it is essential to retain the KAPCO, the tariff</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>In this regard, it is pertinent to mention that the Plant has a remaining useful life of more than ten (10) years (as highlighted in the report previously submitted to Authority on March 08, 2023 along with Tariff Petition). Therefore, the Company has requested</li> </ul>                                                                                                                                                                                                                                                                       |





| Stakeholder | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Rejoinder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|             | <p>for power from KAPCO only be allowed on "Take and Pay" basis for the requisite period and power generation be allowed on LSFO which comparatively has low production cost</p> <ul style="list-style-type: none"> <li>KAPCO may be allowed to sell power to the commercial consumers under CTBCM.</li> </ul>                                                                                                                                                                                                                                                                                                                | <p>seventeen percent (17%) ROE (PKR based) in line with other independent power producers ("IPPs"). Further, as already explained in our Tariff Petition and subsequent public hearing, the current interest rates are over 22% and 17% return is quite reasonable for short term PPA.</p> <ul style="list-style-type: none"> <li>It is further mentioned that Plant-1 units have provision of both LSFO and gas operation and will be dispatched/ operated as per then prevailing fuel availability and prices or the economic merit order.</li> <li>To this end, at the onset it is noted that the Authority has not yet notified the "Competitive Market Operation Date" or "CMOD" that is defined in the Market Commercial Code as "the date set by the Authority for commencement of commercial operations of the CTBCM...". [Emphasis added].</li> <li>Therefore, currently the CTBCM is not operational. The Company may consider offering the capacity of Plant-2 (Energy Block IIC and Energy Block III) of the Generation Facility ("Plant 2") under the CTBCM following, inter alia, (a) the notification of the CTBCM, (b) once the legal framework for participating in the CTBCM has been fully developed and (c) all technical and commercial constraints associated with participating and operating under the CTBCM have been fully addressed.</li> </ul> |
| MEPCO       | <ul style="list-style-type: none"> <li>It is stated that relying upon the NTDC study as stated in Ministry of Energy (Power Division) U.O No. GP-3(1 1)12023 dated 27.04.2023, KAPCO is required only for system stability and low voltages being faced in the vicinity of Kot Addu area. However, MEPCO has been already allocated/procured capacity and energy through central pool excluding KAPCO</li> <li>MEPCO does not necessarily require any capacity as per capacity obligation. Furthermore, if KEPCO is inevitable, due to system constraints, KAPCO may be considered as part of pool on take and Pay</li> </ul> | <ul style="list-style-type: none"> <li>We would like to clarify that in addition to problem of low voltages in the vicinity of the Kot Addu area, the Company has been facing overloading of 220/ 132 KV autotransformers during summer peak demand. NTDC has also presented its view that the Company's plant is required to cater to transformation constraints in the MEPCO region to avoid over loading of autotransformers (500/ 220 KV autos T/Fs) at 500 KV grid station new Multan and 220/132 KV at the Company's grid. NTDC has further stated that in case of non-availability of the Company's Generation Facility, in situations where demand is more than 4300 MW, NTDC is left with no option but to carry out load shedding in the MEPCO region. Therefore,</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Stakeholder | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Rejoinder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>basis and NTDC should bear the financial implication of KAPCO.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>MEPCO's contention that it does not require the capacity from the Generation Facility is not understandable. The fact remains that the Company's 500 MW has been proportionally allocated to all DISCOs in Power Acquisition Programme submitted to the Authority by XW-DISCOs.</p> <p>✓ MEPCO has commented that the Company may be considered as part of the central pool. The Company supports MEPCO's view, and it is to be noted that in the FESCO Letter, FESCO has also stated that a power purchase agreement ("PPA") should be executed between the Company and CPPA-G (for and on behalf of the ex-WAPDA distribution companies ("DISCOs")), particularly to avoid any energy crisis / shortfall during the summer season. Accordingly, the Authority is humbly requested to instruct CPPA-G to execute a PPA (for and on behalf of the DISCOs) with the Company for the sale and purchase of the electric power generated by the Total Generation Facility in view of, inter alia, the strategic nature of the Total Generation Facility and its retention in IGCEP.</p> |
| FESCO       | <ul style="list-style-type: none"> <li>NTDC vide letter enclosed with tariff petition stated that, the Facility is most effective &amp; supportive for system restoration by using the Black-start Facility and advised the Petitioner as well as Power Purchaser to expedite the process of entering into a Power Purchase Agreement, which was expired on 24-10-2022. Therefore, in such a scenario, it is a dire requirement of the local area network to avoid any energy crisis/shortfall during summer season, so the Authority may consider/determine Provisional Tariff of the Kot Addu Power Company Limited (Petitioner) as per applicable Rules &amp; Regulations.</li> <li>The plant No. 1 based on "Take or Pay" mechanism are increasing capacity burden of CPPA-G which have adverse effect on the consumers of XWDISCOs. Therefore, it is</li> </ul> | <ul style="list-style-type: none"> <li>It is reiterated that the tariff for the Plant-1 (Energy Block I, Energy Block IIA and Energy Block IIB) of the Generation Facility (the "Plant-1") has been requested on a "take or pay" for the complete recovery of its fixed costs as well as the working capital costs which is imperative to ensure the firm and reliable availability of the respective generating units at all the times, as per the requirements in the Indicative Generation Capacity Expansion Plan for 2022-31 ("IGCEP").</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



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| Stakeholder | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Rejoinder                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|             | proposed that the tariff regime shall be on "Take & Pay basis" in order to reduce the overall burden of capacity payments on the CPPA-G and on the end consumers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Nasir Ayaz  | <ul style="list-style-type: none"> <li>KAPCO was to retire in 2023 as per the IGCEP 2021. However, it is again extended till 2026 in IGCEP 2023 on the assumptions of technical constraints. Has the responsibility been fixed for this delay?</li> <li>As per Regulations 3(2)(e) of the NEPRA Power Procurement Regulations, 2022 a legacy project can be considered in IGCEP subject to least cost criteria fulfilment and optimization. However, admittedly, this project does not fulfil these two requirements. Therefore, if the project was not optimised on least cost basis, who share pay for the cost differences (if any) for any likely merit order deviations owing to the constraints?</li> <li>The project is based on imported fuels (RLNG, RFO, HSD). As per the NE Policy any new power procurement has to be made on least cost basis and indigenous fuel is to be preferred</li> <li>Has the system operator conducted any study and run simulations to determine the cost benefit analysis of continuing with this project? Please share a copy of the study if so. It may be appreciated that any such decision is to be based on proper facts and data instead of mere assumptions</li> <li>The Authority may kindly provide a comprehensive definition of take and pay tariff.</li> <li>Why the CTBCM is being delayed. This delay is in fact causing problems for projects like KAPCO and also for the electric power consumers by depriving them from free and open access to the electric power and system. In my humble view, the requirement of giving CMOD cannot supersede or hold in abeyance the mandatory provisions of the NEPRA Act and any further delay may not be justified under the law.</li> </ul> | <ul style="list-style-type: none"> <li>We would like to explain that the Company has been included in the IGCEP (2022-31) as per system requirement duly approved by NEPRA. Furthermore, the Total Generation Facility is a strategic national asset in mid country and its contributions are highlighted by key stakeholders such as NTDC. Furthermore, the Company will use indigenous LSFO supplied by local refinery (ARL).</li> </ul> |

| Stakeholder | Comments                                                                                                                                                           | Rejoinder |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|             | <ul style="list-style-type: none"> <li>Issue of transmission/interconnection facilities of KAPCO can be resolved under NEPRA (Open Access) Regulations.</li> </ul> |           |

5.2. The comments of stakeholders on the addendum along with KAPCO's rejoinder are reproduced hereunder:

| CPPA-G Comments                                                                                                                                                                  | KAPCO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| Cost of Back-feed billing/standby auxiliary consumption should be capped and actualized (hence 100% savings may be passed on to consumers).                                      | The Petitioner had offered a Fixed O&M costs of Rs. 2.35 billion per annum on a 'wholesome' basis. Since it's a package deal, it is not correct to pick an item out of fixed O&M and treat it differently. We have already agreed to share the savings with the Power Purchaser, if any, through claw-back mechanism offered by the Petitioner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Claw-Back Mechanism as offered by the Petitioner in its Addendum to the Tariff Petition under clause 3.4.2 may be granted in line with 2002 power policy - (RFO 50:50 GAS 60:40) | The Petitioner offered incorporation of a claw-back mechanism for savings in aggregate in respect of the following components: (a) Fuel Cost Component; (b) Variable O&M Cost Component; and (c) Fixed O&M Cost Component and such savings shall be shared between the Petitioner and the Power Purchaser on a 50:50 basis. It is highlighted that the claw back mechanism provided in the 2002 power policy i.e. 50:50 for RFO and 60:40 for gas is not strictly applicable for the Petitioner since KAPCO is operating on a multi-fuel system whereas the 2002 power policy envisages 100% operations on either RFO or gas. Since the Petitioner has multi-fuel operations (Gas & RFO) on the same machines, so any change in claw-back formula for Gas and RFO will not only be cumbersome but will also lead to unnecessary disputes between the parties.<br><br>The Authority is also requested to advise the inclusion of SOP for calculation of claw-back as an Annexure to the PPA to avoid different interpretations and disputes in future. |
| It should be indexed lower of National CPI or 5% Annually / rather than quarterly as requested by the Petitioner.                                                                | Agreed. The Petitioner meant the same i.e. 5% annually as evidenced by the KAPCO's offer letter dated 01-01-2025 that states: "Annual Indexation 5% or National CPI whichever is lower".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| It should not exceed PKR 472 million as communicated in clause (f) of KAPCO's offer letter dated 01-01-2025.                                                                     | We recognize CPPA-G's stance and request the Authority to approve the cost of working capital of PKR 472 million.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| It should not exceed PKR 295 million as communicated in clause (h) of KAPCO's offer letter dated 01-01-2025.                                                                     | As requested in the Addendum, the Petitioner will be entitled to receive 25% ROE on Take or Pay basis while the remaining ROE shall be linked with actual dispatch exceeding 25%. This was discussed in the NEPRA hearing on April 8, 2025 and justifications for the same were                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |







| CPPA-G Comments                                                                                                                                                                                                                                                                                  | KAPCO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|                                                                                                                                                                                                                                                                                                  | provided to the Authority. It is reiterated that KAPCO is continuing operations under the new PPA to augment the system requirements.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| FCC Tariff may be based on tested efficiency or benchmark efficiency whichever is higher.                                                                                                                                                                                                        | The Petitioner has already offered the benchmark efficiency (refer to section 2.2.5 of the Addendum). Also, the Petitioner offered the testing of heat rate/efficiency and higher of actual or benchmark efficiency would apply for the purposes of invoicing.                                                                                                                                                                                                                                                                                                        |
| Allow LSFO fuel at lower of current prevailing market price or the price of fuel its existing stock.                                                                                                                                                                                             | <p>For any thermal IPP in Pakistan, Fuel cost is a pass through of fuel acquisition cost by the IPP.</p> <p>For liquid and solid fuels-based plants, it comes from the inventory as plants are obliged to keep inventory under the PPA. Fuel Inventory carrying cost is compensated via working capital cost whereas inventory acquisition cost is pass through in FCC.</p> <p>CPPA G assertion is not in line with industry practice and unfairly pushes fuel price risk towards IPP. CPPA G further passes fuel price risk under FCA mechanism to the consumer.</p> |
| Variable O&M should be recomputed based on recent financial criterion.                                                                                                                                                                                                                           | Since it's a package deal, it is not correct to change the basis of variable O&M now. We have already agreed to share the savings with the Power Purchaser, if any, through claw-back mechanism. Please refer to Annexure A (Agreed Terms & Conditions).                                                                                                                                                                                                                                                                                                              |
| Section 1.5: In case of any delay in transfer of switchyard facility to NTDC after the Term and the Petitioner continues to operate the switchyard facility then any remuneration to be paid to Petitioner may directly be dealt between NTDC and the Petitioner with the approval of Authority. | The Petitioner is in agreement and the Authority is requested to direct NTDC to implement this including reimbursement of switchyard arrears from 25-Oct-2022 to date. However, for abundant clarity, two areas need to be approved by the Authority: (1) reimbursement of arrears by NTDC; and (2) compensation mechanism in the event of delay in transfer of switchyard facility to NTDC after the Term and the Petitioner continues to operate the switchyard facility.                                                                                           |
| Section 1.6: The Authority is requested to deliberate on the matter of reimbursement of switchyard charges for the period 25-10-2022 to 31-12-2024.                                                                                                                                              | The Petitioner acknowledges the stance of CPPA-G. It is reiterated that KAPCO has performed a critical function with the O&M of the switchyard and has assumed considerable commercial exposure in doing so for the benefit of the consumers in ensuring continuity of operations. As a result, the Authority is requested to approve reimbursement of the O&M cost from NTDC for the switchyard facility till the PPA Effective Date.                                                                                                                                |





| CPPA-G Comments                                                                                                                                                                                                                                           | KAPCO Response                                                                                                                                                      |
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| Section 8.2.3: The time of the Annual Schedule, Washing and Maintenance Outage will be determined by the Power Purchaser in the Power Purchase Agreement in accordance with the availability factor of the Petitioner with mutual consent of the parties. | The matter has been determined by the Power Purchaser in the Power Purchase Agreement as per Approvals of Cabinet.<br><br>KAPCO is in agreement with CPPA-G stance. |
| 8.2.6: As per the prevailing practice in the Power Sector, the Tolerance in Dispatched and Delivered Net Electrical Output is allowed at +1.5% for the relevant hour.                                                                                     | The matter has been determined by the Power Purchaser in the Power Purchase Agreement                                                                               |
| Section 8.2.13: The total number of free startups in an Agreement Year will be 10 Hot, 25 Warm, and 10 Cold startups irrespective of individuals Gas Turbine                                                                                              |                                                                                                                                                                     |

| MEPCO Comments                                                                                                                                                                                                        | KAPCO Response                                                     |
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| Due to system constraints, KAPCO may be considered as part of pool. Having said that all DISCO's/CPPA-G may considered as power purchaser and capacity may be allocated as per commercial code criteria.              | Agreed. Capacity may be allocated as per commercial code criteria. |
| In the scenario where MEPCO is the only power purchaser, MEPCO may not be able to sustain as financial burden. Consequently, capacity may at least be allocated according to allocation described in commercial code. | Agreed. Capacity may be allocated as per commercial code criteria. |

| PPDB Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | KAPCO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Currently, DISCOs are also considering suppressed demand projections for the future. In the absence of a firm Power Acquisition Plan, it is anticipated that the proposed tariff could lead to increased rates, including associated capacity purchase price components due to partial load adjustment factors under lower demand conditions. Additionally, significant variations may occur in the energy price component as well due to these potential inefficiencies due to fluctuating load pattern and variation in imported fuel prices. Therefore, it is recommended that NEPRA to thoroughly consider the potential increase due to uniform tariff regime resulting from unutilized capacity under the requested take or pay tariff to safeguard additional hike in the end-consumer tariff while determining the pending proceedings. | While KAPCO appreciates the issues relating to the lower demand conditions and fluctuating load pattern, it is reiterated that variations in demand are cyclical whereas the technical requirement of continuity of KAPCO operations in the system is critical including the continued generation in the area, the operations of the switchyard facility, the availability of 132KV and 220KV facilities as well as Black Start Facilities to enable the required system stability.<br><br>As far as the impact on end-consumer tariff is concerned, KAPCO has offered a package deal that strikes a balance between the needs and demands of both the system and the end-consumer. |





**6. CONSIDERATION OF THE VIEWS OF THE STAKEHOLDERS, ANALYSIS AND DECISION ON IMPORTANT ISSUES**

6.1. The issue wise discussion, submissions of stakeholders, analysis and findings are provided in the succeeding paragraphs:

**7. WHETHER THE TARIFF SHOULD BE DETERMINED FOR KAPCO KEEPING IN VIEW THE DIRECTION ISSUED BY THE SENATE STANDING COMMITTEE ON POWER.**

7.1. Senate Standing Committee on Power in its meeting held on October 13, 2022 vide its minutes dated October 26, 2022 communicated vide Power Division letter dated October 27, 2022 directed that further extension in contract of KAPCO may not be given otherwise the case will be referred to NAB for further inquiry in it.

7.2. Power Division vide its letter No. 6(12)/2022-SS dated November 07, 2022 by referring above letters has directed to convey the following among others to the organizations under its administrative control:

- Honourable Committees of Parliament have an advisory role in the matter of general administrative, policy or special problems.
- Rule 166 of the Rules of Procedure and Conduct of Business in the Senate 2012, as amended upto January 27, 2020, iterates that the Committees may call for views of the Minister and may make a report to the Senate, which may make recommendations thereon as it may deem fit. This further clarifies the role of committees as advisory and recommendatory bodies through the august forum of Senate and cannot issue direction thereon.
- Use of the word ‘‘directed’’ in the above referred communication by the Senate Secretariat violates the Rules of Business, 1973. It is also an infringement of the rulemaking domain of the Federal Government as enunciated in articles 90 and 99 of the Constitution of the Islamic Republic of Pakistan.
- It is clarified that the subject communication has advisory implications only, which should be weighed in terms of rules and policy already issued by the Federal Government/Power Division, before implementation of the same.

7.3. The Petitioner during the hearing made following submissions under this issue:

- The Petitioner has not been provided with any information on such direction, therefore, the Petitioner cannot comment on its contents.
- The Authority is an autonomous, statutory body that is a creation of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (NEPRA Act) and has the powers and functions stated in the NEPRA Act.



- Section 7 (Powers and functions of the Authority) of the NEPRA Act provides that the “Authority shall be exclusively responsible for regulating the provision of electric power services.” [Emphasis added]
- Section 31 (Tariff) of the NEPRA Act provides that the “Authority shall, in the determination, modification or revision of rates, charges and terms and conditions for the provision of electric power services, be guided by the national electricity policy, the national electricity plan and such guidelines as may be issued by the Federal Government in order to give effect to the national electricity policy and national electricity plan.” [Emphasis added]
- In reference to Section 31, the “Federal Government” is collectively the ‘Cabinet constituting the Prime Minister and Federal Ministers’ as per the Supreme Court of Pakistan’s ruling in *Mustafa Impex, Karachi v. The Government of Pakistan* [PLD 2016 SC 808].
- Standing committees of the Senate are constituted by the upper house of Parliament (i.e. legislative limb of government). As per the Rule of Business, 1973 and the Rules of Procedure and Conduct of Business in the Senate, 2012, their role is to provide advice and recommendations to the Senate.
- Therefore, such committees do not fall under the ambit of the ‘executive authority of the Federal Government’, and neither do they have any jurisdiction over the Authority.
- In *K-Electric Limited v. Federation of Pakistan through Secretary, Ministry of Energy and Secretary, Ministry of Finance, Islamabad* [2023 PLD 412], at para 13, the Supreme Court of Pakistan held that:

*“The scheme of the tariff determination legal regime is such that in terms of the Act, Section 7 read with Section 31, tariff determination can only be made by the Authority. This is one of the core functions of NEPRA and cannot be delegated to anyone. The Federal Government is required to notify the tariff determined by NEPRA but cannot exercise this function itself. NEPRA determines the tariff as per the guidelines provided in Section 31(3) of the Act and is also to be guided by the National Electricity Policy, the National Electricity Plan and any Guidelines issued by the Federal Government from time to time with respect to the tariff.”* [Emphasis added]

- 7.4. It is also a fact that the project has been included in the approved IGCEP for 2022-31 to the extent of 500MW beyond its PPA expiry i.e., October 2022, owing to network requirements/constraints. Keeping all above in view and the system requirements, the Authority may decide to continue buying power from KAPCO as per approved IGCEP.
- 7.5. The submissions of the Petitioner have been examined. On the recommendations of the System Operator, the cabinet approved termination of power purchase agreements of five plants, namely; HUBCO, Saba Power, Rousch, Lalpir and Atlas Power. Subsequently, NTDC considered KAPCO as a suitable replacement of Pakgen power plant due to its efficiency, multifuel operation, location, Black Start facility and connectivity with the grid system. The Power Division vide letter dated February 14, 2025 communicated to KAPCO that the Cabinet





Division vide Case No. 30/03/2025 dated 14.01.2025 approved the draft TPPA and authorised NTDC to procure/acquire the switchyard on permanent basis from KAPCO to meet the requirements of the MEPCO region. KAPCO was also directed to proceed further for the fulfilment of its legal and regulatory requirement. During the hearing, CPPA-G submitted that replacement of Pakgen with KAPCO will yield annual saving of Rs. 1.32 billion in capacity payments. It would also be highlighted that in addition to the savings on account of capacity charges, there are substantial fuel savings of Rs. 7.51 billion as provided under Paras No. 11.4. Keeping in view the substantial savings, requirement of KAPCO as a replacement of Pakgen and approval of Cabinet, the Authority has decided to grant tariff to KAPCO.

**8. WHETHER THERE HAS BEEN ANY TECHNICAL STUDY CONDUCTED BY NTDC OR ANY INDEPENDENT CONSULTANT, JUSTIFYING THE NEED FOR PPA EXTENSION IN SCENARIO OF THE SURPLUS CAPACITY IN SYSTEM?**

- 8.1. The Petitioner submitted that throughout its operations it has successfully met its obligations under the original PPA. Whilst complying with a strict maintenance regime, the Petitioner guarantees that the Generation Facility still has a remaining useful life of over 10 years. This is also evident from the KAPCO Plant Remaining Useful Life Assessment (RULA) Study Report dated June 22, 2021 (RULA Report) carried out by an independent renowned consultant, M/s Ramboll UK.
- 8.2. The Petitioner during the hearing under this issue submitted that they understand that NTDC / NPCC has done a comprehensive study / analysis and thereafter included KAPCO in the IGCEP report. NTDC (Planning Department) prepared IGCEP 2022-31 as per Grid Code to forecast the load and generation capacity expansion/optimization for next 10 years using state-of-the-art software 'Plexos'. NTDC Board approved the IGCEP 2022-31 on September 13, 2022 and the same was submitted to NEPRA on September 20, 2022 which was approved by NEPRA on February 01, 2023. Keeping in view the strategic location and significance of KAPCO including its capability at 132KV & 220KV levels, IGCEP 2022-31 has optimized KAPCO Plant (Minimum 500MW) for Network requirements/constraints. Additionally, the Board of Directors of NTDC specifically approved retention of KAPCO's 2 Energy Blocks (500MW) in system till 2026 and 132KV~220KV switchyard without any expiry in its meeting held on November 28, 2022 to ensure 'Reliability of Power Supply to Area Network'. The Power Acquisition Plan 2022-2027 submitted by SOLRs/xWDiscos also includes KAPCO Plant till 2026.
- 8.3. The submissions of the Petitioner have been examined. Although no special study was conducted by NTDC or any independent consultant justifying the need for PPA extension in scenario of the surplus capacity in the system but as provided above, the plant has been included in the IGCEP due to Network requirements/constraints. KAPCO is substantially better in the merit order listing due to better fuel efficiency as compared to its neighboring plants i.e. M/s Lalpir and Pakgen. Keeping all these factors in view, KAPCO was included in IGCEP and PAP.





**9. WHETHER IT IS JUSTIFIED TO ALLOW THE TARIFF FOR 5 YEARS FOR ALL ENERGY BLOCKS? WHEREAS THE IGCEP 2022-31 HAS CONSIDERED MINIMUM DESPATCH OF 500 MW FROM BLOCK-I AND BLOCK-II TILL YEAR 2025-26?**

- 9.1. Initially, KAPCO requested for tariff control period of 5 years for all energy blocks which was revised to 3 years by KAPCO in the addendum dated February 12, 2025 from the effective date of new PPA for 495 MW on gas/RLNG and 478MW on LSFO. As provided above, CPPA-G vide letter dated April 24, 2025 submitted that the term of KAPCO's new PPA will be determined as per the guidance provided by the Authority. The requested configuration of the plant is provided hereunder:

| Energy Blocks | GTs / STGs         | Capacity (RLNG) | Capacity (LSFO) |
|---------------|--------------------|-----------------|-----------------|
| EB-I          | GT: 13-14, STG: 15 | 347 MW          | 334 MW          |
| EB-IIA        | GT: 1, STG: 9*     | 148 MW          | 144 MW          |
| <b>Total</b>  |                    | <b>495 MW</b>   | <b>478 MW</b>   |

\*Respective share of steam turbine (STG 9)

- 9.2. The submissions of the Petitioner have been examined. Section 5.2 of the approved IGCEP pertains to the assumptions of the plan. The assumption regarding KAPCO is provided hereunder:

*"Minimum Despatch of 500 MW from existing KAPCO CCPP (Block-I and Block-II) in the months of May to September until year 2025 has been considered, beyond its PPA expiry i.e., Oct 2022, owing to network requirements/constraints, whereas, the remaining capacity (Block-III) has been retired as per PPA expiry. It is pertinent to mention that the requirement of KAPCO beyond its PPA expiry will be assessed in ongoing Transmission System Expansion Plan (TSEP), accordingly competent forum will be approached after consensus among concerned stakeholders i.e., NTDC, CPPAG, and KAPCO, for PPA extension or otherwise and the same will considered in next iteration of IGCEP."*

- 9.3. NTDC Board in its 236<sup>th</sup> meeting held on November 28, 2022 approved retention of 500 MW capacity from KAPCO i.e. Block I connected with 220 kV system and Block II only GTs and STs connected with 132 kV system. The net dependable capacity of these systems/units is 645 MW comprising 347 MW for Block I and 298 MW for Block II connected with 132 kV. The combined PAP submitted by DISCOs in April 2023 also include only 500 MW from KAPCO. CPPA in its original comments also submitted to consider the Energy Blocks/Units of KAPCO as per IGCEP and NTDC requirements. Section 2.2 of the TPPA provides following:

*"Subject to IGCEP, PAP and Tariff Determination, this Agreement shall continue in full force and effect until the end of third (3<sup>rd</sup>) Agreement Year (the "Term") unless terminated earlier...."*

- 9.4. Therefore, in line with the approved IGCEP, approved PAP and revised request of KAPCO, the Authority has decided to allow tariff for 495MW (gas/RLNG) and 478MW (LSFO) till September 2025 which shall be subject to extension on the basis of approved IGCEP/PAP. The maximum term of the tariff shall be 03 years in line with the TPPA.



**10. WHETHER THE POWER PURCHASER CONSENT HAS BEEN SOUGHT AND WHO SHALL SIGN THE PPA WITH KAPCO EITHER CPPAG OR DISCOS AS SOLR?**

10.1. Initially, KAPCO requested the Authority to designate CPPA-G as the power purchaser and sign power purchase agreement. The Power Division vide its letter No. IPPs-10(75)2023 dated February 14, 2025 communicated approval of draft Tripartite PPA (TPPA) to KAPCO. The TPPA has been negotiated between CPPA-G, NGC (formerly, NTDC) and KAPCO and signed on June 04, 2025. Accordingly, the issue stand resolved and does not require further deliberation.

**11. WHETHER THE REQUESTED MODE OF TARIFF ON "TAKE OR PAY" FOR PLANT I AND "TAKE AND PAY" FOR PLANT II IS JUSTIFIED?**

11.1. Initially KAPCO requested tariff on Take or Pay basis for Pant-1 (892 MW) and Take and Pay Basis for Plant-II (494 MW). Subsequently, KAPCO in its addendum dated February 12, 2025 requested tariff to the extent of 495 MW on RLNG and 478 MW on RFO falls within Plant-I on hybrid take & pay basis. The plant configuration submitted by KAPCO as per approved IGCEP is provided hereunder:

| Energy Blocks | GTs / STGs         | Capacity (RLNG) | Capacity (LSFO) |
|---------------|--------------------|-----------------|-----------------|
| EB-I          | GT: 13-14, STG: 15 | 347 MW          | 334 MW          |
| EB-IIA        | GT: 1, STG: 9*     | 148 MW          | 144 MW          |
| <b>Total</b>  |                    | <b>495 MW</b>   | <b>478 MW</b>   |

\*Respective share of steam turbine (STG 9)

11.2. The submissions of the petitioner have been reviewed. During the hearing, CPPA-G submitted that an analysis was carried out to ascertain whether Lalpir and Pakgen plants operating in the same region can be terminated to reduce the burden of capacity payments. However, as per the requirement of System Operator only one plant could be terminated and in case both plants are to be terminated, than the SO required KAPCO in the system. The requested capacity charges of KAPCO are lower than the capacity charges of Pakgen. Furthermore, KAPCO's availability is important for the system irrespective of actual dispatch by the SO and in case of non-availability of KAPCO LDs / penalties will be imposed to safeguard the interests of the consumers.

11.3. CPPA-G presented comparison of capacity payment of KAPCO and Pakgen:

| DESCRIPTION                        | PAKGEN (350 MW)   |                  | KAPCO (495 MW) |
|------------------------------------|-------------------|------------------|----------------|
|                                    | Invoiced (Legacy) | Hybrid (Revised) |                |
|                                    | Rupees in Billion |                  |                |
| Fixed O&M                          | -                 | -                | 2.35           |
| Insurance                          | -                 | -                | 0.70           |
| Cost of Working Capital            | -                 | -                | 0.47           |
| 25% Fixed ROE (Including SWY-Grid) | -                 | -                | 0.30           |
| Escalable (Indexed)                | 5.85              | 4.09             | -              |
| Escalable (Fixed)                  | 2.93              | 1.02             | -              |
| Non-Escalable                      | 0.02              | 0.02             | -              |
| Total                              | 8.79              | 5.13             | 3.82           |
| Annual Savings                     |                   |                  | 1.32           |



- 11.4. In addition to the capacity payment savings, the estimated fuel savings at 25% annual load factor are as under:

| Block     | KAPCO<br>(RLNG) | Pakgen<br>(RFO) | Difference | Fuel Saving @<br>25% LF<br>(Rs. in Million) |
|-----------|-----------------|-----------------|------------|---------------------------------------------|
|           | Rs./kWh         |                 |            |                                             |
| Block -I  | 28.05           | 35.74           | 7.69       | 5,845                                       |
| Block -II | 30.60           |                 | 5.14       | 1,667                                       |
| Total     |                 |                 |            | 7,511                                       |

\*Impact of recently imposed petroleum levy of Rs. 82,077 and Climate Support Levy of Rs. 2,665/Ton have not been considered

\*\*RLNG Price of Rs. 3,443/MMBtu and RFO Price of Rs. 153,600/Ton

- 11.5. It would be important to note that both Lalpir and Pakgen have been terminated and KAPCO has been retained as an alternate to Pakgen - a relatively less efficient plant with higher capacity charges. The hybrid take and pay arrangement is in line with other IPPs established under 2002 Policy and recently renegotiated. KAPCO's terms are better than the IPPs. As per the agreement with IPPs, 35% of the total ROE is to be paid as fixed payment based on availability, while the remaining 65% is linked to actual dispatch. However, in case of KAPCO only 25% of the total ROE is to be paid as fixed payment based on availability and the remaining 75% is linked to actual dispatch. It is a negotiated arrangement which was discussed at length. Cabinet has also approved the draft TPPA.
- 11.6. Considering the above and in order to ensure smooth operation and availability of the plant for the grid system, the Authority has decided to allow tariff on "Hybrid Take and Pay" basis.
- 12. WHETHER THE REQUEST OF TWO PART SWITCHYARD TARIFF COMPRISING ENERGY TRANSFORMATION CHARGES AND FIXED CHARGES ARE JUSTIFIED?**

- 12.1. Initially, KAPCO requested to allow separate switchyard tariff, however, in the addendum dated February 12, 2025, no separate switchyard tariff is requested by KAPCO and instead following submissions have been made with respect to Switchyard Facility:

#### **Transfer of Switchyard Facility**

- 12.2. According to KAPCO, at the end of the term, it shall be bound to transfer the switchyard facilities to NTDC against the payment of the market value to be determined by an independent valuer, duly registered with State Bank of Pakistan. In case of land, the value of land shall not be less than DC rate applicable to the area on which switchyard is situated NTDC shall enter into a separate agreement with the Petitioner for finalization of the modalities of the take-over (including the control room operations) within 1 year of tariff determination. If there is any delay in transfer of Switchyard facility to NTDC after the expiry of the term and the petitioner continues to operate the Switchyard Facility then the Petitioner will be paid at least 30% of the Fixed Cost and ROE components of the Capacity Purchase Price for that period. Notwithstanding anything to the contrary in this agreement, the petitioner shall have the right to evacuate its power through the Switchyard Facility after expiry of the term and/or transfer of the Switchyard Facility.



- 12.3. The Power Division vide letter No. IPPs-10(75)2023 dated February 14, 2025 communicated following to KAPCO:

*".... authorized NTDC to procure/acquire the Switchyard on permanent basis from KAPCO to meet the requirement of MEPCO region ..."*

- 12.4. Section 6.4 of the draft TPPA is reproduced hereunder:

*At the end of the Term, the Company shall be bound to transfer the switchyard facilities (described in Schedule-3) to NGC against the payment of a mutually agreed price. NGC shall enter into a separate agreement with the Company for finalization of the modalities of the take-over within 1 year of execution of this Agreement*

- 12.5. CPPA-G vide its letter dated April 24, 2025 submitted that in case of any delay in transfer of switchyard facility to NTDC after the term and the petitioner continues to operate the switchyard facility then any remuneration to be paid to petitioner may directly be dealt between NTDC and the petitioner with the approval of the Authority.
- 12.6. As provided above, the parties are in agreement for transfer of switchyard facility at the expiry of the term for which a separate agreement between NGC and KAPCO will be signed. The agreement should also address the issue of delay in transfer of switchyard facility and its compensation which should be borne by the party responsible for delay. Accordingly, the Authority decided to allow transfer of switchyard facility to NGC at the end of the term.

#### **Costs in Relation to Installation of Transformers**

- 12.7. According to the petitioner, NTDC shall provide up to two (02) 160 MVA transformers 220/132 kV for the replacement of old transformers at the Switchyard Facility of KAPCO, whereas the ownership of these transformers shall remain with NTDC. KAPCO shall be responsible for the installation, operation and configuration of these transformers with the its systems subject to reimbursement of actual cost. KAPCO will be responsible for the operations and maintenance (including insurance coverage) of these transformers, however, it shall not be responsible for the damage of these transformers or associated equipment unless it is due to its gross negligence.
- 12.8. The submissions of the petitioner have been reviewed. Section 6.3 and Section 10.3(b) of Schedule-I of the draft TPPA are provided hereunder:

#### **Section 6.3:**

*"NGC shall provide up to two (02) 160 MVA transformers 220/132 kV for the replacement of old transformer at the Switchyard Facility of KAPCO; whereas, the ownership of these transformers shall remain with NGC. Company shall be responsible for the installation and configuration of these transformers with the systems of the Company subject to reimbursement of actual cost pursuant to Section 6.2"*



**Section 10.3(b) of Schedule-I (Pass-through items)**

*"Any cost incurred by the Company on the requirement of NTDC pursuant to Section 6.2 of the PPA. The Company will seek NEPRA's approval of such cost and after the approval, the Power Purchaser will pay such cost"*

- 12.9. It would be pertinent to highlight that no details of installation costs have been provided at this stage, therefore, the same shall be considered separately as passthrough after submission of actual cost by KAPCO vetted by NGC.
- 12.10. Further, NGC, ISMO and KAPCO are directed to submit a comprehensive plan with associated timelines to NFPA within one (01) month of signing of the TPPA. Failure to comply may result in proceedings under the NFPA Act and Applicable Documents.

**Recovery of Switchyard Charges**

- 12.11. The petitioner further submitted that upon request of the NTDC/system operator and MoE, the petitioner has kept the Switchyard Facility available for continued utilization by both NTDC and MEPCO since expiry of the original PPA without any compensation.
- 12.12. Accordingly, the petitioner requested the Authority to allow the reimbursement of Switchyard Facility Charges (incurred in relation to insurance premium, other operation and maintenance costs of Switchyard and required ROE for a period from October 25, 2022 till date), which accumulates to a total of PKR 1.611 billion (till December 31, 2024).
- 12.13. The submissions of the petitioner have been examined. CPPA-G vide its letter dated April 24, 2025 requested the Authority to deliberate on the matter of reimbursement of switchyard charges for the period 25-10-2022 to 31-12-2024.
- 12.14. The switchyard services were provided to NGC/system operator and the reimbursement for these services should be made by NGC. Moreover, KAPCO should have negotiated payment mechanism with NGC before providing these services. Furthermore, KAPCO did not include reimbursement of these charges in its revised terms proposed through its letter dated January 01, 2025. Accordingly, the Authority has decided to disallow the same.
- 13. WHETHER ALL COSTS ASSOCIATED WITH BLACK START FACILITY ARE INHERENT PART OF PROPOSED TARIFF SO THAT THE FACILITY MAY BE UTILIZED IN A SMOOTH AND RELIABLE MANNER DURING SYSTEM EMERGENCIES?**
- 13.1. Initially, KAPCO submitted the all costs related to BSDG are included in tariff of Plant-1 which was requested on Take or Pay basis. The Petitioner vide its addendum dated February 12, 2025 requested to allow actual cost of reconfiguration of black start facility with GT-1.
- 13.2. Section 5.9(f), Section 10.3(c) and Section 5 of Schedule 3 of the TPPA are provided hereunder:



**Section 5.9(f):**

*The Company shall reconfigure its Black Start Facility with the Gas Turbine Unit of Block-II. The Company shall submit such cost to NEPRA for the approval. After approval, the Power Purchaser shall pay the Company the amount within thirty (30) Days after delivery of the invoice by the Company.*

**Section 10.3(c):**

*Reconfiguration cost incurred for the Black Start Facility pursuant to Section 5.9 of the PPA. The Company will seek NEPRA's approval of such cost and after the approval, the Power Purchaser will pay such cost*

**Section 5 of Schedule 3**

*Black start facility (BSDG) is to be reconfigured with GT-I within 120 days after PPA*

- 13.3. CPPA-G vide its letter dated April 24, 2025 submitted that cost pertaining to reconfiguration of black start facility, protective devices and installation cost etc shall be paid to the company as pass-through items subject to approval of NEPRA.
- 13.4. The submission of the petitioner and comments of CPPA-G have been reviewed. Considering the above discussion, the Authority has decided to allow the cost of reconfiguration of Black Start Facility as pass-through after being vetted by CPPA-G and NGC.
- 13.5. The parties to the TPPA shall ensure that the reconfiguration shall be made within 120 days of the effective date of PPA and non-compliance may result in proceedings under the NEPRA Act and Applicable Documents.

**14. WHETHER THE AVERAGE LOAD FACTOR OF 30% IS JUSTIFIED?**

- 14.1. Initially, KAPCO assumed an average load factor of 30% for the purpose of tariff computation. KAPCO vide its addendum dated February 12, 2025 requested revised tariff. The ROE component of revised tariff is computed on plant factor of 84.4% while other capacity charge components are calculated on 80% plant factor.
- 14.2. The submissions of the petitioner have been examined. In a take or pay tariff regime, load factor has nothing to do with the actual payment which is made on the basis of availability irrespective of actual operation of the plant. The use of load factor is indicative, which shows that at the assumed load factor what will be the effective tariff. Accordingly, the approved capacity charge components have been calculated on the basis of 100% plant factor. However, availability factor of 87.2% is used as notional plant factor only for indicative tariff of each block.

**15. WHETHER THE REQUESTED EFFICIENCIES/HEAT RATES AND FUEL COST COMPONENT ON DIFFERENT FUELS IS JUSTIFIED?**

- 15.1. The benchmark net efficiencies requested by KAPCO in the original tariff petition was also requested in the addendum dated February 12, 2025. KAPCO also requested the Authority to



review and determine actual heat rate tests of the generation facility for the purpose of new PPA. Benchmark efficiencies are given in the table below:

| Block            | Efficiency               |                          | FCC (Rs, /kWh)      |                                 |
|------------------|--------------------------|--------------------------|---------------------|---------------------------------|
|                  | Gas/RLNG                 | LSFO                     | Gas/RLNG            | LSFO                            |
| Energy Block I   | 46.44%<br>(7,752 KJ/kWh) | 45.54%<br>(7,950 KJ/kWh) | 28.0460             | 29.5862                         |
| Energy Block IIA | 42.57%<br>(8,457 KJ/kWh) | 42.05%<br>(8,561 KJ/kWh) | 30.5956             | 32.0417                         |
| Fuel Price       |                          |                          | Rs. 3,442.78 /MMBtu | Rs. 150,817.50/Ton              |
| HHV-LHV Factor   |                          |                          | 1.1087              | 1.06                            |
| LSFO CV LHV      |                          |                          | -                   | 40,297 KJ/Kg<br>(38,196 Btu/Kg) |

- 15.2. KAPCO further submitted that in case of open cycle/simple cycle operations as per dispatch instructions of NPCC particularly for Blackout operations, 1.5 time of fuel cost component will be paid.
- 15.3. The Authority while approving the TPPA of KAPCO decided that the Heat Rate Test (HRT) and Initial Capacity Test (ICT) are to be conducted by the Parties; NGC, CPPA-G & KAPCO. Further it was directed that the efficiency numbers would be based on actual HRT or benchmark numbers proposed by KAPCO (presented as part of the cabinet summary) whichever is higher. The Authority also directed that the tests shall be conducted without the colony load and with prudent auxiliary consumption as mutually agreed between KAPCO and CPPA-G.
- 15.4. In case of simple/open cycle operations, the Authority has also directed that IE to evaluate simple cycle numbers from combined cycle testing. The number shall be submitted to the Authority with the ICT and the HRT report.
- 15.5. Accordingly, the Authority has decided to allow fuel cost components on the basis of requested heat rates which shall be subject to one-time adjustment in case the actual heat rates determined through the heat rate test are established lower than the abovementioned benchmark heat rates. No adjustment shall be made in case actual heat rates established higher than the benchmark heat rates. Further, operation on simple/open cycle is allowed provided that the Heat Rate number for simple/open cycle shall be lower of 1.5 times of the Combine cycle number or the number evaluated by the IE. The fuel cost component over the term of the power purchase agreement shall be adjusted on account of variation in fuel price.
- 15.6. In case of similar gas/RLNG power plants HHV-LHV conversion factor of 1.1076 has been used. In case of similar RFO power plants, HHV-LHV conversion factor of 1.05 and HHV CV of 40,485.68 Btu/Kg has been used. The conversion factors and RFO CV used by the Petitioner are slightly different from the factors used for the similar fuel. Accordingly, the Authority has decided to use standards factors and CV for calculation of approved fuel cost components:



257



| Block            | FCC (Rs, /kWh)      |                    |
|------------------|---------------------|--------------------|
|                  | Gas/RLNG            | LSFO               |
| Energy Block I   | 28.0173             | 29.3071            |
| Energy Block IIA | 30.5644             | 31.7398            |
| Fuel Price       | Rs. 3,442.78 /MMBtu | Rs. 150,817.50/Ton |

- 15.7. For the purposes of fuel price adjustment, inventory cost of RFO stock under the outgoing/expired PPA shall be considered as lower of actual average price or market price or merit order price, if applicable.

**16. WHETHER THE REQUESTED ADJUSTMENT ON ACCOUNT OF START-UPS COST, PART LOAD ETC. IS JUSTIFIED?**

**Partial Loading**

- 16.1. The petitioner has requested part load adjustments for each block including half module for Block -I. The performance curves have been agreed in the TPPA along with a provision for half block/module operations. However, CPPA-G shall ensure that the IE provides its analysis and vetting on the Part Load curves/tables including those applicable to half module, as previously directed under the PPA approval.

**Startup Cost**

- 16.2. The matter has already been deliberated in the TPPA wherein it is stated that startup charges will be evaluated and finalized by the IE for each block and the same will be covered in TPPA.

**Availability**

- 16.3. the availability of 87.2% has been approved in the TPPA.

**17. WHETHER THE REQUESTED VARIABLE O&M COST IS JUSTIFIED?**

- 17.1. Initially, KAPCO requested following variable O&M cost components as part of energy charge for Plant-I:

| Block  | Gas/RLNG   |              | LSFO       |              | HSD        |              |
|--------|------------|--------------|------------|--------------|------------|--------------|
|        | Local VO&M | Foreign VO&M | Local VO&M | Foreign VO&M | Local VO&M | Foreign VO&M |
|        | Rs./kWh    |              |            |              |            |              |
| EB-I   | 0.1295     | 0.7815       | 0.2333     | 1.4087       | 0.1353     | 0.8166       |
| EB-IIA | 0.1371     | 0.4969       | 0.2950     | 1.0693       | 0.1633     | 0.5921       |
| EB-IIB | 0.1238     | 0.3985       | 0.2705     | 0.8705       | 0.1498     | 0.4820       |

- 17.2. KAPCO vide its addendum dated February 12, 2025 requested to allow following variable O&M components:

| Fuel     | EB-I<br>(Rs. /kWh) | EB-II<br>(Rs. /kWh) |
|----------|--------------------|---------------------|
| Gas/RLNG | 0.8692             | 0.9992              |
| LSFO     |                    |                     |

- 17.3. According to KAPCO variable O&M component is taken as average of Gas/RLNG and LSFO as determined by NEPRA through provisional tariff determination dated August 04, 2023. Indexation is requested to be applied from the date of provisional tariff determination till the date of final determination. Accordingly, the requested indexed components work out Rs. 0.9431/kWh and Rs. 1.0841/kWh for EB-I and EB-II respectively till March 2025 on the basis of 5% annual indexation. The average of both blocks works out Rs. 0.9852/kWh. KAPCO further submitted that the variable O&M components shall be quarterly indexed to the lower of 5% or NCPI as notified by the Pakistan Bureau of Statistics. The same variable O&M components and indexation mechanism have been included in the offer letter.
- 17.4. The submissions of the Petitioner have been examined. The actual variable O&M cost incurred during the last five years operation as per the audited financial statements are provided hereunder:

| Description                       | Actual Variable O&M Cost (Rs. Million) |               |               |               |               |               |
|-----------------------------------|----------------------------------------|---------------|---------------|---------------|---------------|---------------|
|                                   | FY 2018                                | FY 2019       | FY 2020       | FY 2021       | FY 2022       | Average       |
| Fuel additives and Chemicals      | 617                                    | 424           | 352           | 376           | 1,016         | 557           |
| Plant Maintenance                 | 298                                    | 275           | 190           | 199           | 284           | 249           |
| Gas Turbines Overhauls            | 766                                    | 543           | 871           | 606           | 116           | 580           |
| Major Repairs and Renewals        | 524                                    | 94            | 266           | 874           | 152           | 382           |
| Avg. Capitalized maintenance cost | 634                                    | 634           | 634           | 634           | 634           | 634           |
| <b>Total</b>                      | <b>2,839</b>                           | <b>1,970</b>  | <b>2,313</b>  | <b>2,689</b>  | <b>2,202</b>  | <b>2,402</b>  |
| <b>Units Delivered (GWh)</b>      | <b>7,437</b>                           | <b>4,961</b>  | <b>3,477</b>  | <b>3,562</b>  | <b>4,980</b>  | <b>4,883</b>  |
| <b>Variable Cost (Rs./kWh)</b>    | <b>0.3817</b>                          | <b>0.3970</b> | <b>0.6651</b> | <b>0.7548</b> | <b>0.4421</b> | <b>0.4919</b> |

- 17.5. The average variable O&M cost per unit works out Rs. 0.4919/kWh and ranged from Rs. 0.3817/kWh to Rs. 0.7548/kWh. The updated variable O&M cost works out Rs. 0.9999/kWh on the basis of average NCPI of 131.01 ( FY 2018 to FY 2022) and revised NCPI of 266.29 for March 2025. The average actual indexed component is slightly higher than the average of the requested indexed components, therefore, the Authority has decided to allow the requested indexed variable components of Rs. 0.9431/kWh and Rs. 1.0841/kWh for EB-I and EB-II respectively.
- 17.6. The variable O&M components shall be indexed on quarterly basis against March 2025 NCPI until either the cumulative increase reaches the maximum limit of 5% or average annual NCPI value, whichever shall be lower. The reference values for the entire year shall remain fixed. The final indexed component and average NCPI for the preceding year shall serve as the reference for the subsequent year.

## 18. WHETHER THE REQUESTED FIXED O&M COST IS JUSTIFIED?

- 18.1. Initially, the Petitioner requested fixed O&M of Rs. 2,645 million for Plant-I on take or pay basis. KAPCO vide its addendum dated February 12, 2025 requested to allow Rs. 2,350 million



per year as fixed O&M cost. KAPCO in its offer letter dated 1st January also requested same fixed O&M cost. The requested fixed O&M components are Rs. 0.6774/kW/h on gas/RLNG and Rs. 0.7015/kW/h on LSFO. KAPCO further requested to index fixed O&M component as per NPCI or 5% whichever is lower. The breakup of the requested cost is as under:

| Description                               | Rs. Million  |
|-------------------------------------------|--------------|
| Salaries, wages and benefits              | 935          |
| Health and Medication                     | 60           |
| 3rd Party Contract Services               | 111          |
| Security Charges                          | 92           |
| Standby Auxiliary Consumption             | 599          |
| Legal & Professional                      | 92           |
| Computers, Printers & Stationery          | 60           |
| Site Infrastructure Maintenance & Running | 129          |
| Other Expenses (Corporate + Regulatory)   | 272          |
| <b>Total Fixed O&amp;M</b>                | <b>2,350</b> |

18.2. CPPA-G vide letter dated April 24, 2025 submitted following comments:

*"The petitioner has offered Claw-Back Mechanism of savings in its addendum under clause 3.4.2. It is submitted that it may be granted in line with 2002 Power Policy. Furthermore, the standby auxiliary consumption has been claimed at Rs. 599 million. In addition to the submission by the petitioner, any saving in this amount, determined under this head as calculated from the back-feed billing / standby auxiliary consumption may be included in the claw-back and passed on to the consumers at 100% of the saving."*

18.3. KAPCO vide letter dated July 22, 2025 submitted following rejoinder against CPPAG's comments:

*The Petitioner had offered a Fixed O&M costs of Rs. 2.35 billion per annum on a 'wholesome' basis. Since it's a package deal, it is not correct to pick an item out of fixed O&M and treat it differently. We have already agreed to share the savings with the Power Purchaser, if any, through claw-back mechanism offered by the Petitioner.*

18.4. The submissions of the Petitioner have been examined. The total fixed cost for FY 2022 was Rs. 2,908.75 million. The proportionate actual fixed O&M cost for the FY 2022 was Rs. 1,338 million comprising Rs. 1,205 million for 495 MW and Rs. 134 million for switchyard facility. The indexed actual cost till March 2025 works out Rs. 2,248 million on the basis of average NCPI 158.48 for FY 2022 and NCPI of 266.29 for March 2025. The requested fixed O&M of Rs. 2,350 million is slightly higher than the indexed actual cost of FY 2022 which is a crude estimate of the future actual cost. The requested cost was negotiated at length in the Task Force and was agreed upon with a condition that the savings in actual cost shall be shared in the ratio of 50:50. Moreover, KAPCO has been retained in the system by terminating Pakgen power plant which will yield annual savings of Rs 1.32 billion. The requested O&M cost was also part of the terms offered by KAPCO against which termination of Pakgen was decided. Accordingly, considering the overall savings due to retention of KAPCO, the Authority has decided to allow requested fixed O&M cost of Rs. 2.35 billion.



18.5. It would be pertinent to mention that the fixed O&M cost shall be recovered as capacity charges subject to the availability of the plant. In case plant is available for dispatch  $\geq 87.2\%$  of the time, 100% fixed cost shall be recovered. KAPCO calculated the fixed cost components on the basis of 80% plant factor instead of 100% which is incorrect and will result in over recovery of fixed cost. In line with other power plants, the fixed cost components are required to be calculated on the basis of net capacity and 8,760 hours in a year. Accordingly, the approved fixed O&M components work out Rs. 0.5419/kW/hour on gas/RLNG and Rs. 0.5612/kW/hour for LSFO.

18.6. The fixed O&M component shall be indexed on quarterly basis until either the cumulative increase reaches the maximum limit of 5% or average annual NCPI value, whichever shall be lower. The reference values for the entire year shall remain fixed. The final indexed component and average NCPI for the preceding year shall serve as the reference for the subsequent year.

**19. WHETHER THE REQUESTED ROE OF 17% WITH CPI INDEXATION IS JUSTIFIED?**

**&**

**WHETHER THE EXCHANGE RATE OF RS. 265.95/USD IS JUSTIFIED?**

19.1. Initially, the petitioner requested 17% ROE with CPI indexation. KAPCO vide addendum dated February 12, 2025 requested ROE of Rs. 0.3388/kW/h for gas/RLNG and Rs. 0.3519/kWh for LSFO. As per the addendum, ROE is computed at 84.4% load factor. KAPCO further requested to allow minimum guaranteed ROE of 25% as part of capacity purchase price and in case the despatch exceeds 25% of the total available capacity, it will receive ROE component as part of energy purchase price for the actual despatch beyond 25%.

19.2. CPPA-G in its comments dated April 24, 2025 submitted following comments w.r.t ROE:

*The Petitioner has requested ROE of PKR 0.3519/kWh for LSFO and PKR 0.3388/kWh for Gas/RLNG with a minimum guaranteed ROE of 25% linked with availability by which the Petitioner will recover annual ROE to the tune of Rupees 368 million. However, KAPCO through its letter No. KAPCO/CEO/2025/512 dated 01-January-2025 has shown its willingness to operate the Power Plant and to revise the Tariff Petition with a guaranteed annual ROE of Rupees 295 million. Therefore, the Authority is requested to consider the same.*

19.3. The submissions of the Petitioner and CPPA-G have been reviewed. KAPCO vide letter dated January 01, 2025 to Power Division offered revised terms to operate its power complex. The relevant part of the letter is reproduced hereunder:

*25% fixed ROE based on NEPRA approved ROE of PKR 0.3519/kWh for LSFO and PKR 0.3388/kWh for gas/RLNG linked with availability amounting to PKR 0.295 billion / year.*

19.4. It would be pertinent to highlight that the above referred ROE component of Rs. 0.3519/kWh and Rs. 0.3388/kWh was allowed in the provisional tariff dated August 03, 2023. The



provisional tariff was allowed on Take and Pay basis. The ROE was computed on the basis of proportionate equity of US\$ 88.54 million ( $157.6/892 \times 500$ ) for 500MW, exchange rate of Rs. 112/US\$, and return of 12% which worked out Rs. 1,187 million. The ROE components were then computed on net capacity of 500MW and plant factor of 80%.

- 19.5. As per the offer letter dated January 01, 2025, the minimum 25% ROE equals to Rs. 0.295 billion which however do not correspond to the requested components. On the basis of requested components, the minimum 25% ROE works out Rs. 0.367 billion which is in contradiction to the offer letter, therefore, the component needs to be recalculated. Accordingly, on the basis of comments of CPPA-G, offer letter dated 1<sup>st</sup> January 2025 and net capacity of 495MW on gas/RLNG and 478MW on LSFO, the approved ROE component works out Rs. 0.2721/kW/h on gas/RLNG and Rs. 0.2818/kW/h on LSFO.
- 19.6. KAPCO will be entitled to receive 25% of the total ROE as fixed payment based on availability. In case the despatched and delivered net electrical output (NEO) exceeds 25% of the total contract capacity in terms kWh, then KAPCO will also be entitled to receive ROE on actual NEO exceeding 25%.

**20. WHETHER THE REQUESTED COST OF WORKING CAPITAL ON THE BASIS OF 3 MONTHS KIBOR + 2% IS JUSTIFIED?**

- 20.1. Initially, KAPCO requested estimated working capital requirements on the basis of 25 days receivable, LSFO and HSD inventory of 15 and 5 days, respectively, on 60% load factor, cost of 30 days SBLC for gas, LSFO and HSD and KIBOR + 2%. KAPCO vide its addendum dated February 12, 2025 requested cost of working capital of Rs. 535.8 million based on LSFO inventory of 7 days of generation at 100% load factor. Cost of short-term borrowing assumed at 3-months KIBOR + 1% (to be indexed quarterly). Further, the cost of 30 days SBLC (at the rate 1% per annum) is assumed. The requested cost of working capital (CWC) components are Rs. 0.1545/kW/h and Rs. 0.1600/kW/h for gas/RLNG and LSFO respectively. The requested CWC components are computed on 80% load factor.
- 20.2. CPPA-G vide its letter dated April 24, 2025 submitted following comments w.r.t cost of working capital

*"The Petitioner has requested Cost of working Capital (CWC) to the tune of Rupees 535.8 million which includes the SBLC charges @ 1% per annum. Firstly, the Petitioner should secure the RLNG supply agreement without SBLC charges. Secondly, CWC should not exceed PKR 472 million as claimed by KAPCO's in its offer letter dated 01-01-2025. Moreover, the RLNG supply agreement should have to be submitted to NEPRA for approval. Furthermore, in case the 7 days inventory is not maintained by the petitioner, the tariff should be reduced accordingly"*

- 20.3. The submissions of the Petitioner and CPPA-G have been examined. KAPCO vide letter dated January 01, 2025 offered following with respect to CWC:

*"Cost of Working Capital (CWC) for 7 days at full load LSFO inventory and actual cost of SBLC for RLNG supplies (maximum of 1% SBLC Charges). The estimated CWC is PKR 0.472 Billion/year."*



- 20.4. It has been observed that the requested CWC amount of Rs. 535.8 million was calculated on LSFO price of Rs. 194,700/ton, which includes 18% sales tax. However, the LSFO price excluding sales tax amounts to Rs. 165,000/ton, which results in a CWC of Rs. 472.57 million, as indicated in the offer letter dated January 01, 2025.
- 20.5. It would be pertinent to highlight that CPPA-G and IPPs recently filed joint applications for reduction in tariff components. In the subject applications, the CWC component was revised on the basis of RFO price of Rs. 165,000/Ton excluding sales tax, 7 days RFO inventory at 100% load factor, 15 days receivable on 15% load factor and KIBOR+1%. The revised CWC was subject to quarterly adjustment on the basis of variation in KIBOR only.
- 20.6. The submissions of CPPA-G regarding capping of the CWC to the maximum of Rs. 472 million is illogical and irrational as the subject amount is bound to change with the upward change in the rate of KIBOR and RLNG price, therefore, the same is not maintainable and has not been considered. However, the submissions of CPPA-G regarding maintenance of minimum inventory carries weight and logic. In case of KE generation tariff, adjustment mechanism has been provided to cater for shortage in inventory levels. Accordingly, the Authority has decided to adjust downward the CWC component for shortage in maintenance of minimum inventory. No adjustment shall be provided in case KAPCO maintains inventory higher than the minimum level.
- 20.7. Considering the above discussion and comments of the CPPA-G, the Authority has decided to approve CWC of Rs. 472.57 million and CWC component of Rs. 0.1090/kW/h on gas/RLNG and Rs. 0.1129/kW/h on LSFO which shall be subject to quarterly adjustment on the basis of 3 months KIBOR, actual cost of SBLC maximum of 1% and actual fuel inventory with maximum of 7 days RFO inventory at 100% load factor. The breakup of approved cost of working capital components is provided hereunder:

| Description                              | Unit             | RLNG/Gas           | LSFO          |
|------------------------------------------|------------------|--------------------|---------------|
| LSFO Requirement for 7 days at 100% load | Rs. Mil          | 2,664              | 2,664         |
| Interest Rate (KIBOR 12.19%+1%)          | %                | 13.19%             | 13.19%        |
| <b>Cost of LSFO Inventory</b>            | <b>Rs. Mil</b>   | <b>351</b>         | <b>351</b>    |
| Cost of 30 Days SBLC on RLNG @ 1%        | Rs. Mil          | 121                | 121           |
| <b>Total Cost of Working Capital</b>     | <b>Rs. Mil</b>   | <b>472.58</b>      | <b>472.58</b> |
| Annual Generation (100%)                 | gWh              | 4,336              | 4,187         |
| <b>Cost of Working Capital</b>           | <b>Rs. /kW/h</b> | <b>0.1090</b>      | <b>0.1129</b> |
| <b>Indexation Values:</b>                |                  |                    |               |
| Reference KIBOR                          |                  | 12.19%             |               |
| RLNG Price including Sales Tax           |                  | Rs. 4,062.48/MMBTU |               |
| LSFO price excluding Sales Tax           |                  | Rs. 165,000/Ton    |               |

## 21. WHETHER THE REQUESTED INSURANCE COST OF RS. 746 MILLION IS JUSTIFIED?

- 21.1. KAPCO vide addendum dated February 12, 2025 submitted that insurance cost of Rs. 746 million was paid during FY 2024. Accordingly, considering the ever-increasing insurance costs due to uncertainties associated with global economic outlook, increased country risk, technical



specification of the Facility and inflationary trends, the Authority is hereby requested to allow insurance costs PKR 0.2151/kWh on Gas/RLNG and PKR 0.2227/kWh on LSFO as per actual. The insurance cost will be adjusted each year as per actual capped at 0.90% of the EPC cost.

- 21.2. The submissions of the Petitioner have been examined. KAPCO vide its letter dated January 01, 2025 offered following with respect to insurance:

*“Actual insurance cost for 495 MW of Rs. 0.7 billion/year with capping mechanism of 0.9% of EPC Cost”*

- 21.3. The requested insurance components have been calculated on the plant factor of 80% which is incorrect. Furthermore, as per the audited financial statements for the year FY 2024, the actual insurance cost incurred was Rs. 658.815 million for the entire facility. The proportionate amount for 495 MW and switchyard works out Rs. 254.63 million and the same has been used for calculation of reference insurance component. Accordingly, the Authority has decided to approve reference insurance component of Rs. 0.0587/kWh on Gas/RLNG and Rs. 0.0608/kWh on LSFO which shall be subject to adjustment as per actual with maximum cap of 0.90% of the EPC cost on the basis of prevailing exchange rate as on 1<sup>st</sup> day of the insurance coverage period. The calculation of maximum insurance limit is provided hereunder:

| Description                                                                | Unit            | Amount       |
|----------------------------------------------------------------------------|-----------------|--------------|
| Purchase Price-Transfer Agreement with WAPDA                               | Rs. Mil         | 35,810       |
| Applicable Exchange Rate                                                   | Rs. /US\$       | 34.25        |
| <b>Purchase Price-Transfer Agreement with WAPDA</b>                        | <b>US\$ Mil</b> | <b>1,046</b> |
| Purchase Price (Excluding Switchyard) @95.25%                              | US\$ Mil        | 996          |
| EPC Cost of Generation Facility (1,386 MW) at estimated 70% purchase price | US\$ Mil        | 697          |
| Apportioned EPC Cost for 495 MW                                            | US\$ Mil        | 249          |
| Apportioned EPC Cost for Switchyard (70% of 4.75% of Purchase Price)       | US\$ Mil        | 35           |
| <b>Total Apportioned EPC Cost</b>                                          | <b>US\$ Mil</b> | <b>284</b>   |
| <b>Maximum Insurance Limit @ 0.90% of EPC</b>                              | <b>US\$ Mil</b> | <b>2.55</b>  |

## 22. WHETHER THE REQUEST OF REIMBURSEMENT OF PASS-THROUGH ITEMS IS JUSTIFIED?

- 22.1. KAPCO vide its addendum dated February 12, 2025 requested following as pass-through items:
- i. Corporate Income Tax, minimum turnover tax, alternate corporate tax etc, duties and levies
  - ii. Workers Welfare Fund (WWF)
  - iii. Workers Profit Participation Fund (WPPF)
- 22.2. According to the petitioner, any GST that may be levied on any of the components of the reference generation tariff shall be reimbursed by the Power Purchaser at the time of settlement of respective invoice on the due date. Moreover, any change in taxes/duties shall be adjusted as per actuals and will be pass-through to be paid by the Power Purchaser



22.3. KAPCO further submitted that the terms and conditions of the New PPA are to be finalized between the Parties after approval of the Reference Generation Tariff and Switchyard Facility Transfer Charges by the Authority in terms of this Tariff Petition — as a result of the risk allocation contained therein or from additional cost contemplated for the New PPA, may have an effect on the proposed Reference Generation Tariff and Switchyard Facility Charges. Therefore, it is submitted before the Authority that any cost or risks emanating from such New PPA not already factored in the Reference Generation Tariff and Switchyard Facility Charges calculation will be, fundamentally, assumed to be a pass-through item or otherwise shall result in a supplemental tariff for the Petitioner.

22.4. CPPA-G submitted following comments in the matter:

*Following Pass-through items shall only be paid to the Company subject to approval of NEPRA:*

a. *Income Tax*

b. *WPPF*

c. *WWF*

22.5. The submissions of the Petitioner and comments of CPPA-G have been reviewed. The impact of corporate income tax has not been considered in the tariff, therefore, actual corporate income tax shall be allowed as pass through. Similarly, WWF and WPPF are allowed as pass-through items in case of other power plants, therefore, the same shall also be allowed as pass-through in the instant case. Further, the issue of GST on monthly invoices is not part of tariff and reimbursement issue of GST, if any, may be raised with CPPA-G.

### 23. CLAWBACK MECHNAISM

23.1. The petitioner in the addendum has proposed a claw-back mechanism for savings in aggregate in respect of following components: (a) Fuel Cost Component (b) Variable O&M Cost Component; and (c) Fixed O&M Cost Component and such savings shall be shared between the petitioner and the power purchaser on a 50:50 basis.

23.2. During the hearing, CPPA-G submitted following comments:

*Claw-Back Mechanism as offered by the Petitioner in its Addendum to the Tariff Petition under clause 3.4.2 may be granted in line with 2002 power policy - (RFO 50:50 GAS 60:40)*

23.3. KAPCO vide letter dated July 22, 2025 submitted following comments with respect to claw-back mechanism:

*The Petitioner offered incorporation of a claw-back mechanism for savings in aggregate in respect of the following components: (a) Fuel Cost Component; (b) Variable O&M Cost Component; and (c) Fixed O&M Cost Component and such savings shall be shared between the Petitioner and the Power Purchaser on a 50:50 basis. It is highlighted that the claw back mechanism provided in the 2002 power policy i.e. 50:50 for RFO and*



60:40 for gas is not strictly applicable for the Petitioner since KAPCO is operating on a multi-fuel system whereas the 2002 power policy envisages 100% operations on either RFO or gas. Since the Petitioner has multi-fuel operations (Gas & RFO) on the same machines, so any change in claw-back formula for Gas and RFO will not only be cumbersome but will also lead to unnecessary disputes between the parties.

The Authority is also requested to advise the inclusion of SOP for calculation of claw-back as an Annexure to the PPA to avoid different interpretations and disputes in future.

- 23.4. The submissions of KAPCO and CPPA-G have been examined. KAPCO vide its letter dated January 01, 2025 made following offer with respect to the claw-back mechanism:

*50% claw-back mechanism for savings in aggregate in respect to fuel cost component, variable O&M cost component and fixed O&M cost component.*

- 23.5. It would be pertinent to highlight that CPPA-G and IPPs signed Master Agreements in February 2021 wherein a clawback mechanism was agreed between the parties. In case of RFO power plants fuel savings were to be shared between the power purchaser and the company in the ratio of 70:30 to 60:40, depending on the efficiency gain, while O&M savings were to be shared equally (50:50). However, in case of gas based plants, it was agreed that Fuel and O&M Saving shall be taken as one consolidated line item and shared in the ratio of 60:40 between power purchaser and the company, respectively.

- 23.6. Being a multifuel plant and considering the above discussion, the Authority has decided to approve 50% sharing mechanism as proposed by KAPCO in its offer letter dated January 01, 2025. Further, CPPA-G and KAPCO are directed to mutually develop SOPs in line with recent Amendment Agreement signed between CPPA-G and IPPs.

## 24. ORDER

- I. The Authority hereby determines and approves the following generation tariff for Kot Addu Power Company Limited along with adjustments/indexations:

| Description                      | RLNG    | LSFO    | Indexation                                                                           |
|----------------------------------|---------|---------|--------------------------------------------------------------------------------------|
| Energy Purchase Price (Rs./kWh): |         |         |                                                                                      |
| Fuel Cost Component              |         |         |                                                                                      |
| Energy Block-I                   | 28.0173 | 29.3071 | Fuel Price(s)                                                                        |
| Energy Block-II A                | 30.5644 | 31.7398 |                                                                                      |
| Variable O&M (Local)             |         |         |                                                                                      |
| Energy Block-I                   | 0.9431  | 1.0841  | Lower of Avg Annual NCPI or 5%                                                       |
| Energy Block-II A                |         |         |                                                                                      |
| Total EPP Block-I                | 28.9604 | 30.3912 |                                                                                      |
| Total EPP Block-II A             | 31.5074 | 32.8239 |  |

| Description                                | RLNG           | LSFO           | Indexation                     |
|--------------------------------------------|----------------|----------------|--------------------------------|
| <b>Capacity Purchase Price (Rs./kW/h):</b> |                |                |                                |
| Fixed O&M                                  | 0.5419         | 0.5612         | Lower of Avg Annual NCPI or 5% |
| Cost of Working Capital                    | 0.1090         | 0.1129         | KIBOR & Actual LSFO Inventory  |
| Insurance                                  | 0.0587         | 0.0608         | As Per Actual                  |
| ROE                                        | 0.2721         | 0.2818         | -                              |
| <b>Total CPP</b>                           | <b>0.9818</b>  | <b>1.0167</b>  |                                |
| <b>Total CPP @ 87.2% (Rs./kWh)</b>         | <b>1.1259</b>  | <b>1.1659</b>  |                                |
| <b>Total Tariff (Rs./kWh):</b>             |                |                |                                |
| <b>Block-I</b>                             | <b>30.0863</b> | <b>31.5572</b> |                                |
| <b>Block-II A</b>                          | <b>32.6333</b> | <b>33.9899</b> |                                |

## II. HEAT RATE TEST (ONE TIME ADJUSTMENT)

- i. The energy charge part of tariff relating to fuel cost shall be subject to heat rate test and in case the actual heat rates established lower than the benchmark heat rates, the fuel cost component shall be adjusted downward. No adjustment shall be made in case actual heat rates established higher than the benchmark heat rates. The test shall be conducted without the colony load and with prudent auxiliary consumption as mutually agreed between KAPCO and CPPA-G.
- ii. Operation on simple/open cycle is being allowed provided that the Heat Rate number in such case shall be lower of 1.5 times of the Combine cycle number or the number evaluated by the Independent Engineer.

## III. INDEXATIONS/ADJUSTMENTS

### i. Fuel Cost Component

The fuel cost components shall be adjusted on account of fuel price variation as and when notified by the relevant authority as per the following formula:

|               |   |                                                                            |
|---------------|---|----------------------------------------------------------------------------|
| $FCC_{(Rev)}$ | = | $FCC_{(Ref)} \times \text{Fuel Price}_{(Rev)} / \text{Fuel Price}_{(Ref)}$ |
| Where         |   |                                                                            |
| $FCC_{(Rev)}$ | = | The revised fuel cost component                                            |
| $FCC_{(Ref)}$ | = | The reference fuel cost component                                          |
| $FP_{(Rev)}$  | = | The revised HHV fuel price.                                                |
| $FP_{(Ref)}$  | = | The reference HHV fuel price                                               |



The reference HHV RLNG price is Rs. 3,442.78/MMBtu and the reference LSFO price is Rs. 150,817.50/Ton.

The inventory cost of LSFO stock procured under the outgoing/expired PPA shall be considered as lower of actual average price or market price or merit order price, if applicable.

The reference LSFO calorific value of 40,485.68 BTU/Kg shall also be subject to adjustment as per actual on quarterly basis in line with the mechanism provided in case of RFO based IPPs.

## **ii. Fixed / Variable O&M**

The variable O&M components shall be indexed on quarterly basis against reference NCPI of 266.29 of March 2025 until either the cumulative increase reaches the maximum limit of 5% or average annual NCPI value, whichever shall be lower. The reference values for the entire year shall remain fixed. The final indexed component and average NCPI for the preceding year shall serve as the reference for the subsequent year.

## **iii. Cost of Working Capital**

The cost of working capital shall be adjusted on quarterly basis on account of 3-Months KIBOR and actual LSFO inventory.

## **iv. Insurance**

The insurance component of tariff shall be adjusted annually as per actual insurance cost for 495 MW subject to maximum insurance limit of 0.90% of the EPC cost at exchange rate prevailing on the 1<sup>st</sup> day of the insurance coverage period.

- IV. KAPCO will be entitled to receive 25% of the total ROE as fixed payment based on availability. In case the despatched and delivered net electrical output (NEO) exceeds 25% of the total contract capacity in terms kWh, then KAPCO will also be entitled to receive ROE on actual NEO exceeding 25%.
- V. Income Tax, WWF and WPPF has been allowed as pass-through Item.
- VI. 50% of the aggregate savings in fuel, variable and fixed O&M shall be shared with the power purchaser annually. CPPA-G and KAPCO are directed to mutually develop SOPs in line with the recent Amendment Agreements signed between CPPA-G and IPPs.
- VII. In line with the approved IGCEP, approved PAP and revised request of KAPCO, the Authority has decided to allow tariff for 495MW (gas/RLNG) and 478MW (LSFO) till September 2025 which shall be subject to extension on the basis of approved IGCEP/PAP. The maximum term of the tariff shall be 03 years in line with the TPPA.

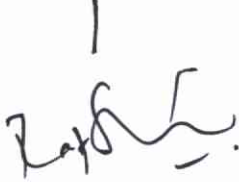
- VIII. The tariff approved through this Order shall supersede the interim tariff granted vide order dated April 09, 2025 and all payments shall be adjusted accordingly

### NOTIFICATION

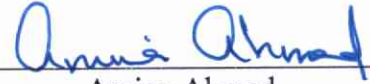
The above Order of the Authority is intimated to the Federal Government for notification in the Official Gazette in terms of Section 31(7) of the Regulations of Generation, Transmission and Distribution of Electric Power Act, 1997.

### AUTHORITY

⊗ Dissent.



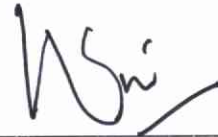
Engr. Rafique Ahmed Shaikh  
Member



Amina Ahmed  
Member



Engr. Maqsood Anwar Khan  
Member



Waseem Mukhtar  
Chairman

⊗ I respectfully disagree with the Authority's decision. I have already given a detailed additional note outlining the reasons for not granting the Take or Pay to KAPCO.

The same note is attached herewith.





### **Additional Note of Member (Technical) – Interim Tariff Request filed by KAPCO**

It is a well-established fact that the installed generation capacity in the CPPAG system, as of June 2024, totalling around 42,512 MW, including around 25000 MW of thermal generation, exceeds the current demand. The utilization of thermal generation capacity in the past two financial years, FY 2023 and FY 2024, remained at around 32% and 29%, respectively. Furthermore, a significant portion of this surplus capacity available in pool is more cost-effective than the proposed interim tariff by KAPCO. Additionally, it is important to note that this is not the first time the case for extending the operation of KAPCO power plant has been presented to the Authority. Previously, the Authority approved an extension of 485 days for this plant.

It is important to note that, when renewing the Generation License for KAPCO on September 8, 2022, for a period of three years, the Authority explicitly directed the NTDC and MEPCO to resolve the identified technical issues within this timeframe. These issues were causing KAPCO to operate in violation of the Economic Merit Order (EMO). Unfortunately, despite the clear direction from the Authority, and with only six months remaining in the three-year period, the situation has not improved as required.

It is relevant to highlight that, on one hand, all stakeholders are working diligently to eliminate costly "Take or Pay" generation capacity. On the other hand, the extension for operation of KAPCO's more expensive generation capacity is being proposed on a "Take or Pay" basis, citing transmission and grid constraints. Moreover, it is worth mentioning that the 4,000 MW HVDC line, built to transfer cheaper generation from the south to the north, is operating at a low utilization rate (around 38 % during FY 2024) despite the full capacity payment charges being paid for.

The failure to address these issues has resulted in a situation where the country is unable to optimally utilize its more economical and indigenous energy resources in the South, primarily due to the limitations of the transmission system. Consequently, we find ourselves reinvesting in outdated and inefficient generation capacity, further exacerbating the problem.

These facts highlight significant flaws in both the planning and execution of power generation and transmission system projects. It is unfair to shift the burden of these inefficiencies onto electricity consumers, particularly when these issues stem from inadequate planning and execution by the power transmission company.

In light of the responsibilities outlined for power transmission company, including NTDC and DISCOs in NEPRA Act and Applicable Documents, I am of the considered opinion that the interim tariff should be granted to this company strictly on a "Take and Pay" basis. However, whenever this plant operates in violation of the Economic Merit Order (EMO), the differential cost between the available cheaper generation and the cost of generation from the plant operated in violation of EMO should not be passed on to electricity consumers. Instead, this cost should be borne by the entities responsible for providing a constraints-free transmission system.

