The Registrar,
NEPRA – Registrar Office,
NEPRA Tower, Attaturk Avenue
Sector G-5/1, NEPRA
Islamabad.

Ref # KE/RA&GR/NEPRA/2022/870
December 13, 2022

SUBJECT: **APPLICATION FOR RENEWAL / EXTENSION OF K-ELECTRIC LIMITED (KE) DISTRIBUTION AND ELECTRIC POWER SUPPLIER LICENSES**

Dear Sir,

This is with reference to the captioned subject and the applicable fees payable against renewal/extension of Distribution and Electric Power Supplier Licenses which have been revised with effect from December 01, 2022.

In this regard, it is humbly submitted that KE through its letter dated December 01, 2022 submitted fees amounting to a total of PKR 5,862,981/- (net of 8% WHT) for processing of renewal/extension of KE's Distribution and Electric Power Supplier licenses as prescribed in Schedule II of the NEPRA Licensing (Application, Modification, Extension and Cancellation) Regulations 2021, which was calculated in accordance with applicable fees effective from November 01, 2022.

Due to revision in the applicable fees with effect from December 01, 2022, as aforementioned, differential amounting to a total of PKR 44,329/- (net of 8% WHT) is required to be submitted to NEPRA for processing of KE's license renewal/extension applications of which, PKR 23,278/- (net of 8% WHT) pertain to renewal/extension of Distribution License, whereas PKR 21,051/- (net of 8% WHT) pertain to renewal/extension of Electric Power Supplier License.

Accordingly, in view of the aforementioned, please find enclosed balance fees for respective licenses as cheque # 00004956 dated December 09, 2022 amounting to PKR 21,051/- and cheque # 00004957 dated December 09, 2022 amounting to PKR 23,278/- along with this letter for processing of subject applications.

Looking forward for your support in the matter.

rely,

Muhammad Imran Qureshi
Chief Regulatory Affairs &
Government Relations Officer

Encl: Cheque # 00004956 & Cheque # 00004957

CERTIFIED TRUE COPY (CTC) OF THE
MINUTES OF 1233RD MEETING OF K-ELECTRIC LIMITED BOARD OF DIRECTORS (BOD)
HELD ON THURSDAY, 11 AUGUST 2022 AT 10:30 HOURS (PST) IN KE BOARD ROOM
3RD FLOOR, KE HOUSE, 39-B SUNSET BOULEVARD, PHASE-II, DHA, KARACHI

RE-APPOINTMENT OF CHIEF EXECUTIVE OFFICER

RESOLVED THAT *Syed Moonis Abdullah Alvi be and is hereby appointed as Chief Executive Officer of the Company for a term of three (3) years with effect from 30 July 2022.*

Rizwan Pesnani
Chief Risk Officer & Company Secretary

Certified True Copy (CTC) of Resolution dated 31 July 2019
Passed by K-Electric Board of Directors

Election of Directors – Appointment of Chairman and Chief Executive Officer

RESOLVED FURTHER THAT Syed Moonis Abdullah Alvi be and is hereby appointed as Chief Executive Officer of the Company for a three (3) year term effective from 30 July 2019. The terms & conditions of appointment of Syed Moonis Abdullah Alvi for the position of CEO, as already approved by the Board, shall remain unchanged.

Rizwan Pesnani
Company Secretary

Energy That Moves Life

Certified True Copy (CTC) of Resolution(s)
passed by K-Electric Board of Directors at its Meeting No. 1198
held on Thursday, 07 June 2018 at 11:00 hours in KE's Board Room,
3RD Floor, KE House, 39-B, Sunset Boulevard, Phase-II, DHA, Karachi

---

Re: Appointment of Chief Executive Officer (CEO)

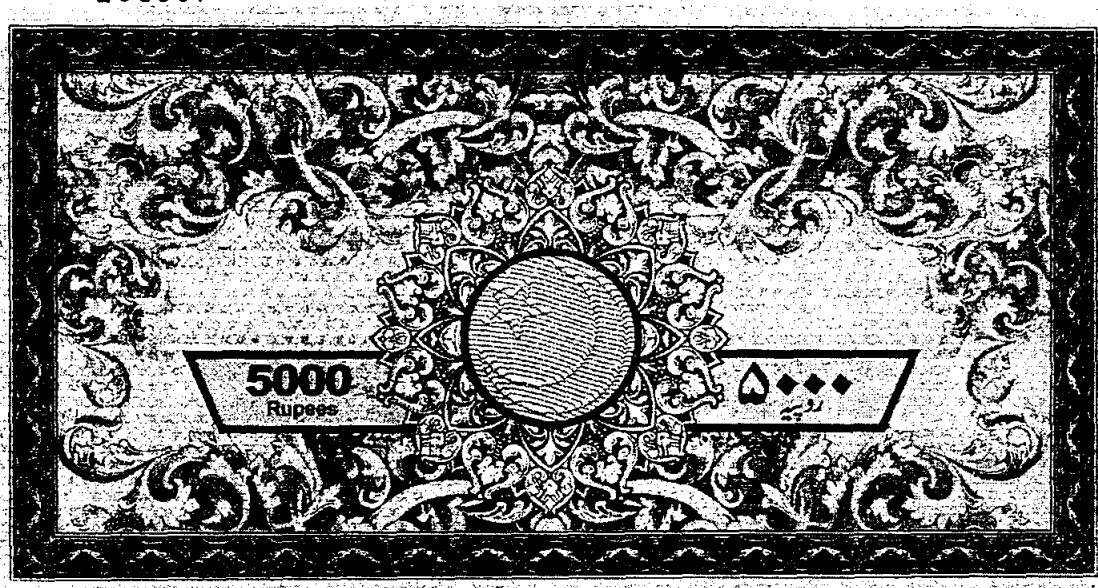
RESOLVED THAT in exercise of powers vested through section 187 and 188 of Companies Act, 2017 and Article 76(ii) and (vi) of K-Electric (KE) Articles of Association, Syed Moonis Abdullah Alvi be and is hereby appointed as interim Chief Executive Officer of the Company in place of Mr. Muhammad Tayyab Tareen with effect from 07 June 2018.

RESOLVED THAT a General Power of Attorney as per draft set out in Appendix **"A"** be and is hereby given to Syed Moonis Abdullah Alvi, CEO, K-Electric and any two (2) Directors of the Company be and are hereby jointly authorized to sign, on behalf of the Board of Directors, the General Power of Attorney for Syed Moonis Abdullah Alvi and affix common seal of the Company on the instrument.

Muhammad Rizwan Dalia
Company Secretary

MUHAMMAD RIZWAN DALIA
Company Secretary
K-ELECTRIC LIMITED

254887



(RUPEES FIVE THOUSAND ONLY)

STAMP OFFICE CITY COURT, KARACHI
Issued to K. Electric.
CNIC/LEG No. 42101-6298941-9
Vide D.S.R. No. 02 Dt. 11-6-18
On behalf of Challan No. 21 Dt. 11-6-18
for the purpose of A/R.
Entry No. 02 Dt. 11-6-18
Ex Officio Vendor

ALJAZ ALI ADVOCATE M.A., LL.B. Notary Public KARACHI PAKISTAN

GENERAL POWER OF ATTORNEY

TO ALL TO WHOM these presents shall come, K-ELECTRIC LIMITED (KE), having its registered office at KE House, 39-B, Sunset Boulevard, Phase-II, DHA, Karachi (hereinafter called the "Company") send greetings.

WHEREAS the Company was incorporated under the Companies Act 1882 as a company limited by shares and continues to operate as such under the Companies Act, 2017.

AND WHEREAS by virtue of the powers conferred upon them by Article 77 of the Company's Articles of Association, the Board of Directors of the Company have passed the resolution dated 07 June 2018 and entrusted to and conferred upon **Syed Moonis Abdullah Alvi**, the Chief Executive Officer of the Company, the following powers which shall be exercisable by him from the date that a Power of Attorney enumerating the same is executed in his favor by any two (2) Directors of the Company.

NOW THESE PRESENTS WITNESS THAT Syed Moonis Abdullah Alvi son of Syed Riazuddin Alvi CNIC # 42201-6886191-3, the Chief Executive Officer of the Company, is hereby appointed Attorney of the Company to act in the name and on behalf of the Company to do and perform the following acts and things only:

1) To purchase, sell, endorse, transfer, negotiate, encash, receive interest or otherwise deal in securities of all kinds including Government of Pakistan securities and securities of the Provincial Governments of Pakistan;

2) To sign all registers, reports and returns and others documents as may be required by law to be signed or filed with any Federal, Provincial or Local Governmental authority including but not limited to the Securities and Exchange Commission of Pakistan, Stock Exchanges, Registrar Joint Stock Companies, State Bank of Pakistan and Income Tax, Customs and other authorities;

3) To sign all acceptances and endorsements on bills of exchanges, hundies, securities and cheques drawn on behalf of the Company and to receive the amount of bills, hundies, securities and cheques and to give receipts and discharge for the same and to sign all documents drawn on or by the Company to which the signature of the Company as agents is required;

4) To sign for and on behalf of the Company all documents, assurances, deeds, and matters or things in or about the business of the Company as fully and effectively as the Company could do if personally present, to present such documents and deeds to the registering authority and admit execution thereof;

5) To process certificates of shares of the Company and to sign all papers relating to the transfer of shares including temporary receipts thereof;

6) To process Dividend Warrants and their revalidation;

7) To authenticate and or cancel the registration of Debentures;

8) To sign all correspondence that may be necessary in the ordinary course of the business of the Company;

9) To sign all deeds of sale, purchase, lease, mortgage, redemption, re-conveyance and present them before the registering authority and admit execution thereof;

10) To execute all bonds, deeds and documents and give such security as may be required now or at any future time by the Government of Pakistan or by any person, corporate body, company or firm to enable the Company to carry on its business;

11) To appoint and authorize any officer of the Company as his agent or agents to admit execution of deeds and documents of whatsoever nature before the registering authority and to revoke such appointment or appointments;

12) To sign, execute, determine or terminate and negotiate terms and conditions thereto agreements/appointment for employment and training with employees and trainees, in line with requirements of the Companies Act 2017 and Code of Corporate Governance Regulations 2017 as applicable;

13) To sign for and on behalf of the Company all documents, agreements, contracts, assurances, deeds, matters or things in or about the business of the Company as fully and effectively as the Company could do personally and to present such documents, agreements, contracts, assurances, deeds, matters or things to the registering authorities and appear before such authorities and admit execution thereof and to do all such other things and acts that may be necessary for registration;

14) To make and sign applications to appropriate Federal, Provincial or Local Government departments, authorities or other competent authority for all and any licenses, filing of any and all applications, petitions with NEPRA which include Licensee Proposed Modifications (LPMs) and others, permissions and consents required by any order, statutory instrument, regulation, byelaw or otherwise in connection with the business, management and affairs of the Company;

15) To obtain securities from any person, corporate body, company or firm for the due performance of any contract in respect of rendering any service or supplying any material to the Company and to accept the same on such terms as may be deemed proper or expedient by the Attorney;

16) To realize debts due to the Company and to receive any money due to the Company from any person, corporate body, company or firm and to grant receipts and discharges for the same;

17) To make payments to any person, corporate body, company or firm for any service rendered to the Company and for such other purposes of the Company and for carrying on of the Company's business and to sign and deliver all receipts, charges and drafts on the bank and other accounts of the Company or on the customers of the Company and to endorse all bills and bills of

exchange received by the Company which may be necessary or expedient to be signed, endorsed or given for the purpose of carrying on of the Company's business;

18) To represent the Company before any Court of law, Federal, Provincial or Local Government authority or any other authority in all matters concerning the business or property of the Company;

19) To commence, institute, prosecute, and to defend, compound and abandon all legal proceedings, actions, suits, petitions, appeals, claims and demands by or against the Company or its officers in relation to the business or property of the Company or otherwise and for such purpose to sign, verify and present any document, pleading, complaint, writ, affidavit application or other instrument in writing and to appear and make statements on oath or otherwise in relation to the affairs of the Company and to appoint and remunerate any barrister, solicitor, advocate, pleader, vakil, mukhtar, or any legal practitioner or any revenue agent, accountants, valuers or surveyors for the said purpose and to obtain legal advice on behalf of the Company on any matter, contentious or otherwise, affecting the Company;

20) To write off amounts as approved by the Board of Directors arising as a result of correction / cancellation / adjustment of electricity bills in the normal course of business of the Company. To approve formula for write offs, adjustment and settlement of electricity bills based on prudent business practices / judgement and within the policy framework approved by the Board of Directors. To sub-delegate such of the powers as he deems fit to the concerned executives / officers of the Company, to fix authority limits, thereof, and to revoke the same at his discretion.

21) To obtain refund of stamp duty or repayment of court fees;

22) To appear and act in the offices of the District Registrar and Sub- Registrar of Deeds and Assurances for registration of documents and in any other office of the Federal, Provincial and local Government, including without prejudice to the generality of the foregoing, City District Government Karachi, any Union Council, District Council, Cantonment Board, Municipal Corporation, any Co-operative Society, State Bank of Pakistan, Collector of Customs, Excise & Taxation Offices and the Chief Controller of Imports and Exports in all matters concerning the business or property of the Company;

23) To file and receive back documents, to deposit and withdraw money and to grant receipts therefore;

24) To negotiate and to enter into and complete contracts with any person, corporate body, company or firm for the lease or purchase of any lands and buildings and to alter, repair, add to, and improve any building or structure and to let or sub-let any immovable property held by the Company and to submit plans of buildings relating to the Company's properties or lands on the Company's behalf before any competent authority and to obtain receipts therefor;

25) To use, sign and attest the name and style of the Company in any transaction, deed, document or muniment of title on all such occasions as may be necessary or expedient for conducting the business of the Company or for the due and proper management of the lands and buildings leased or purchased or to be leased or purchased by the Company and to execute and sign all such deeds and documents as may be required or proper for or in relation to all or any of the matters or purposes aforesaid;

26) To delegate to any person such of the powers as he deems fit and revoke the same at his discretion.

27) Generally to do all other acts and things incidental to the exercise of the aforesaid powers; and

28) The Company hereby agrees to ratify and confirm all and whatever the said Attorney shall lawfully do or cause to be done by virtue of this Power of Attorney.

The Power of Attorney executed in favor of Mr. Muhammad Tayyab Tareen pursuant to the Resolution of the Board of Directors passed on 27 November 2014 is hereby revoked. This Power of Attorney will be valid till the time Syed Moonis Abdullah Alvi holds the position of Chief Executive Officer of KE.

IN WITNESS WHEREOF the Common Seal of the Company has been affixed hereto at Karachi on this the 11 day of June 2018 by the undersigned Directors of the Company pursuant to the resolution dated 07 June 2018 passed by the Board of Directors of the Company.

Signature of Syed Moonis Abdullah Alvi
Attorney

THE COMMON SEAL of the Company is hereunto affixed in the presence of

AIJAZ ALI ADVOCATE M.A. LL.B Notary Public KARACHI PAKISTAN

Director

Director

WITNESSES:

1. Amjad Mustafa
42201-7393750-3

2. Muhammad Arif
42401-1568587-5

ATTESTED
AIJAZ ALI ADVOCATE M.A. L.L.B
Advocate & Notary
Public Karachi.
12 JUN 2018

Certified True Copy (CTC) of Resolution dated 29 November 2022
Passed by K-Electric Board of Directors

Approval for Submission of Application for Renewal / Extension of K-Electric Limited's Distribution License and Electric Power Supplier License

RESOLVED THAT Application for Renewal/Extension of Distribution License and Electric Power Supplier License of KE presented to the Board be and is hereby approved for submission with NEPRA, pursuant to Regulation 13 of the NEPRA Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 read with Section 20 and Section 23E of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, as amended.

RESOLVED FURTHER THAT Chief Executive Officer be and is hereby authorized to sign and file the Application for Renewal/Extension of the Company's Distribution License and Electric Power Supplier License with NEPRA and such other deeds, documents, instruments etc., and take all necessary actions incidental and related to the aforesaid Application and appear before NEPRA and admit execution thereof for and on behalf of the Company.

RESOLVED FURTHER THAT Chief Executive Officer be and is hereby authorized to delegate all or any of the above powers in respect of the foregoing to any other official(s) of the Company.

Rizwan Pesnani
Chief Risk Officer & Company Secretary

F840357

200 Rupees ۲۰۰ روپیہ

22 NOV 2022

RUPEES TWO HUNDRED ONLY

MUHAMMAD HUSSAIN BALLA OATH COMMISSIONER Karachi Pakistan

5. This delegated Power of Attorney does not empower the said **Mr. Muhammad Aamir, Mr. Muhammad Imran Hussain Qureshi** and **Mr. Sheikh Amer Zia** to enter, sign and/or execute, for and on behalf of the Company, any other and all agreements/ documents, except for the documents referred above.

6. That the power to enter, sign and/or execute for and on behalf of the Company, any and all agreements, contracts and documents shall continue to be exercised by me pursuant to my General Power of Attorney.

7. This delegated Power of Attorney shall be valid till the execution of the above documents and completion of the said process unless earlier revoked.

IN WITNESS WHEREOF I have affixed my signature below on this 01 day of December 2022.

Syed Moonis Abdullah Alvi
Chief Executive Officer

Attorneys: -

MUHAMMAD HUSSAIN BALLA OATH COMMISSIONER KARACHI PAKISTAN

Muhammad Aamir
Chief Financial Officer

Muhammad Imran Hussain Qureshi
Chief Regulatory Affairs Officer

F840356

200 Rupees ۲۰۰ روپیہ

22 NOV 2022

RUPEES TWO HUNDRED ONLY

239393

MUHAMMAD HUSSAIN BAYLEY OATH COMMISSIONER Karachi-Pakistan

a. Review, execute, submit and deliver the Application (including any modification to the Application) and related documentation required by the Authority, including any consents, documents, power of attorney, affidavit, statements, letters, forms, applications, deeds, guarantees, notices, certificates, request, statements and any other instruments of any nature whatsoever;

b. Sign and execute necessary documentation, pay necessary fees, appear before the Authority as required, and do all acts necessary for processing of the Application;

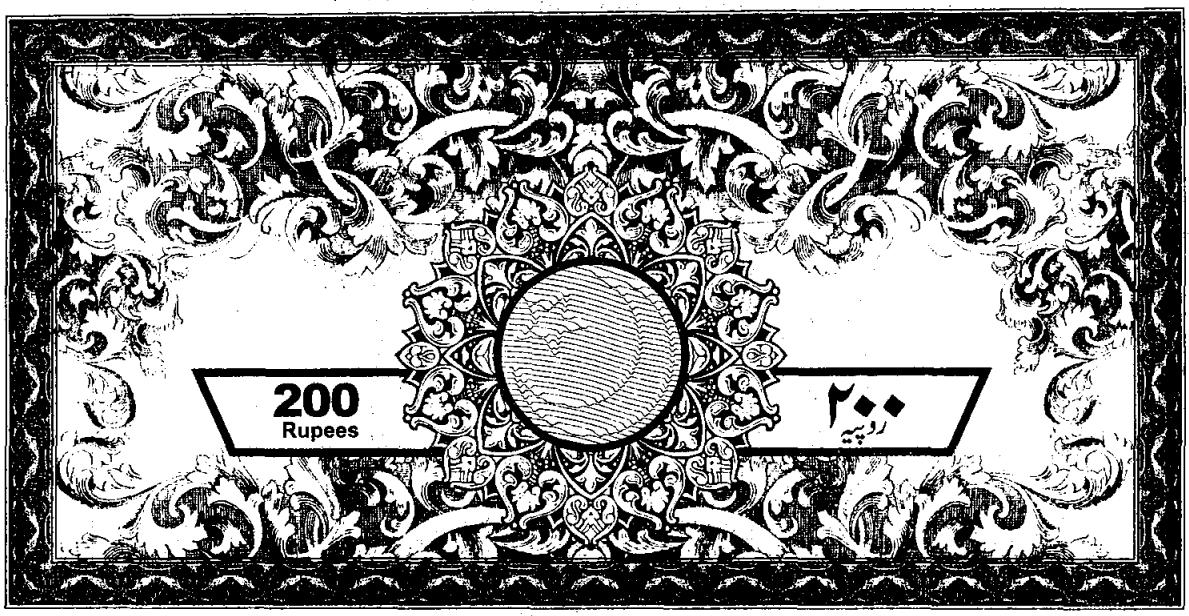
c. Represent and respond on behalf of the Company, in public hearings and in writing, to all queries by the Authority, stakeholders and to attend pre and post hearing and meetings; and

d. Do all such acts, matters and things as may be necessary for carrying out the purposes aforesaid and giving full effect to the aforementioned resolutions.

The Board has further authorized me to delegate all or any of the powers in respect of the foregoing to any other official of the Company.

4. **NOW THEREFORE,** I hereby appoint and authorize (1) **Muhammad Aamir** s/o Muhammad Anwar having CNIC No. 42301-1189331-3, Chief Financial Officer, KE, (2) **Muhammad Imran Hussain Qureshi** s/o Ghulam Hussain Qureshi, having CNIC No. 35201-5044493-5, Chief Regulatory Affairs Officer, KE, and (3) **Sheikh Amer Zia** s/o Sheikh Zia Uddin Ahmed, having CNIC No. 61101-1916774-7, Chief Distribution Officer, KE, as Attorney(s) to act for and on behalf of the Company and anyone of the above three(3) KE officers to **singly** take any or all necessary actions and execute all documents, instruments etc. incidental and related to the said Application, as properly described under clause 3(a), (b), (c) and (d) above.

F840355



22 NOV 2022

RUPEES TWO HUNDRED ONLY

MUHAMMAD HUSSAIN B.A. LL.B. OATH COMMISSIONER Karachi Pakistan

K-ELECTRIC LIMITED

POWER OF ATTORNEY

1. **TO ALL WHOM PRESENT,** by virtue of the powers conferred upon them by Article 77 of the Company's Articles of Association, the Board of Directors of the K-Electric Limited (referred to as the **"Company" or "KE")** have conferred upon me, **Syed Moonis Abdullah Alvi s/o Syed Riazuddin Alvi,** Muslim, adult, holder of CNIC **No. 42201-6886191-3,** the **Chief Executive Officer** of the Company, having its registered office at 3rd Floor, KE House, 39-B, Sunset Boulevard, DHA, Phase-II, Karachi, through a General Power of Attorney dated June 11, 2018, to act in the name and on behalf of the Company to exercise and perform certain powers and actions.

2. WHEREAS, pursuant to clause thirteen (13) of my General Power of Attorney, I am empowered to sign for and on behalf of the Company all agreements, contracts, assurances, deeds, matters or things in or about the business of the Company and pursuant to clause twenty six (26) of my General Power of Attorney, I am empowered to delegate any of my powers to any person deemed appropriate by me and to revoke the same at my discretion.

ATTESTED MUHAMMAD HUSSAIN B.A. LL.B. OATH COMMISSIONER Karachi - Pakistan

3. WHEREAS, pursuant to Resolution dated November 29, 2022 (CTC attached), approved by KE Board of Directors, I have been authorized to sign and file, for and on behalf of the Company, Distribution and Electric Power Supplier Licenses Renewal/Extension Applications ("Application") before the National Electric Power Regulatory Authority ("Authority") for KE's Distribution and Supply businesses and in relation thereto, enter into and execute any and all required documents, make all filings, perform any act and pay all applicable fees, whatever it may be in each case, of any nature whatsoever as may be required.

The Board, in respect of the said Application etc., has further authorized and empowered me to:

F840358

200 Rupees ۲۰۰ روپیہ

...Market
23?900

22 NOV 2022

RUPEES TWO HUNDRED ONLY

MUHAMMAD HUSSAIN B.A. LL.B
OATH COMMISSIONER
Karachi Pakistan

Sheikh Amer Zia
Chief Distribution Officer

WITNESSES:

1. Fariyal Khizar
FARIYAL KHIZAR
42301-2194580-4

2. Hafiz Muhammad Arsalan
42101-6496558-2

ATTESTED
MUHAMMAD HUSSAIN
B.A. LL.B.
OATH COMMISSIONER
Karachi - Pakistan

X278766

100 Rupees

۱۰۰ روپیہ

SARDAR ALI STAMP VENDOR

NOV 2022

RUPEES ONE HUNDRED ONLY

MUHAMMAD HUSSAIN B.A. LL.B OATH COMMISSIONER Karachi Pakistan

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

AFFIDAVIT of Mr. Syed Moonis Abdullah Alvi s/o Syed Riazuddin Alvi having CNIC No. 42201-6886191-3 Chief Executive Officer, K-Electric Limited (the "Company"), a company incorporated under the laws of the Islamic Republic of Pakistan, having its registered office at KE House, 39-B, Sunset Boulevard, Phase II, Defence Housing Authority, Karachi.

I, the above named deponent, being the duly authorized representative of the Company solemnly affirm and declare that the contents of Application for Renewal/Extension of Distribution and Electric Power Supplier Licenses being submitted vide Letter KE/RA&GR/NEPRA/2022/846 including all supporting documents are true to the best of my knowledge and belief and that nothing has been concealed.

SYED MOONIS ABDULLAH ALVI

ATTESTED
MUHAMMAD HUSSAIN
B.A. LL.B
OATH COMMISSIONER
Karachi - Pakistan

Karachi dated December 01, 2022

X278771

100 Rupees

۱۰۰ روپیہ

SARDAR ALI STAMP VENDOR

22 NOV 2022

MUHAMMAD HUSSAIN B.A. LL.B. OATH COMMISSIONER Karachi Pakistan

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

AFFIDAVIT of Mr. Muhammad Aamir s/o Muhammad Anwar having CNIC No. 42301-1189331-3 Chief Financial Officer, K-Electric Limited (the "Company"), a company incorporated under the laws of the Islamic Republic of Pakistan, having its registered office at KE House, 39-B, Sunset Boulevard, Phase II, Defence Housing Authority, Karachi.

I, the above named deponent, being the duly authorized representative of the Company solemnly affirm and declare that the contents of Application for Renewal/Extension of Distribution and Electric Power Supplier Licenses being submitted vide Letter KE/RA&GR/NEPRA/2022/846, including all supporting documents are true to the best of my knowledge and belief and that nothing has been concealed.

Muhammad Aamir Ghaziani
Chief Financial Officer
K-ELECTRIC LIMITED

MUHAMMAD AAMIR

ATTESTED
MUHAMMAD HUSSAIN
B.A. LL.B.
OATH COMMISSIONER
Karachi - Pakistan

Karachi dated December 01, 2022

X278764

100 Rupees

۱۰۰ روپیہ

RUPEES ONE HUNDRED ONLY

SARDAR ALI STAMP VENDOR

S.No. 23-805

MUHAMMAD HUSSAIN B.A. LL.B OATH COMMISSIONER Karachi Pakistan

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

AFFIDAVIT of Mr. Sheikh Amer Zia s/o Sheikh Zia Uddin Ahmed having CNIC No. 61101-1916774-7 Chief Distribution Officer, K-Electric Limited (the "Company"), a company incorporated under the laws of the Islamic Republic of Pakistan, having its registered office at KE House, 39-B, Sunset Boulevard, Phase II, Defence Housing Authority, Karachi.

I, the above named deponent, being the duly authorized representative of the Company solemnly affirm and declare that the contents of Application for Renewal/Extension of Distribution and Electric Power Supplier Licenses being submitted vide Letter KE/RA&GR/NEPRA/2022/846, including all supporting documents are true to the best of my knowledge and belief and that nothing has been concealed.

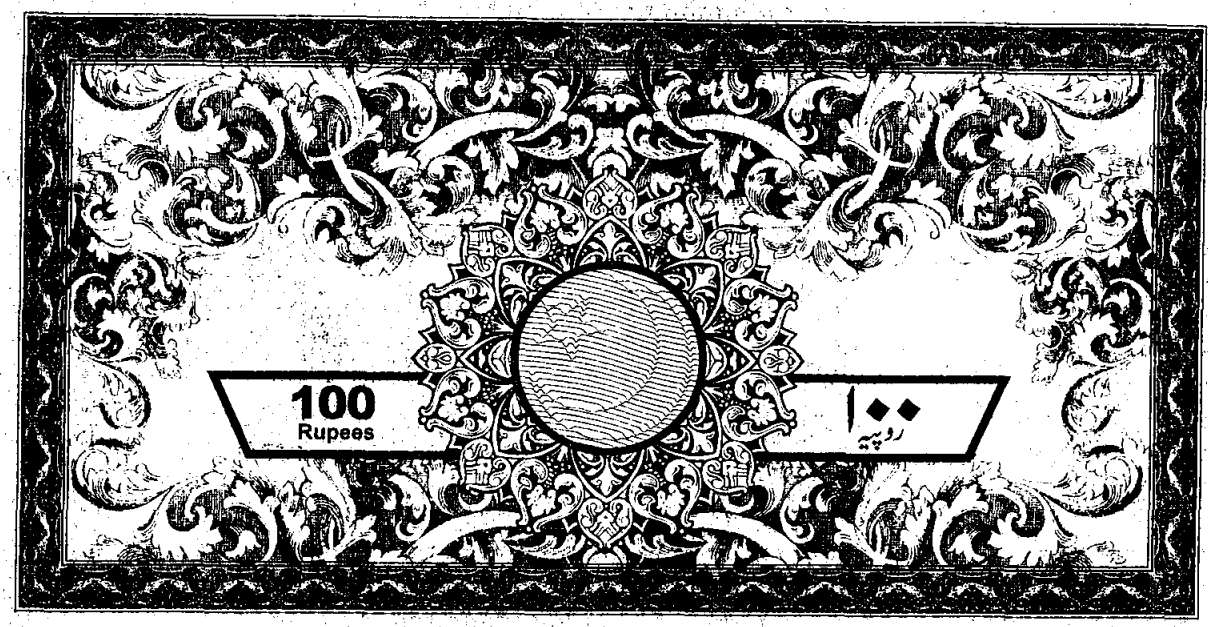
SHEIKH AMER ZIA

AMER ZIA
Chief Distribution Officer
K-ELECTRIC LIMITED

ATTESTED
MUHAMMAD HUSSAIN
B.A. LL.B
OATH COMMISSIONER
Karachi - Pakistan

Karachi dated December 01, 2022

X278763



RUPEES ONE HUNDRED ONLY

SARDAR ALI STAMP VENDOR
Licence # [illegible]
231804

22 NOV 2022

MUHAMMAD HUSSAIN B.A. LL.B
OATH COMMISSIONER
Karachi Pakistan

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

AFFIDAVIT of Mr. Muhammad Imran Hussain Qureshi s/o Ghulam Hussain Qureshi having CNIC No. 35201-5044493-5 Chief Regulatory Affairs Officer, K-Electric Limited (the "Company"), a company incorporated under the laws of the Islamic Republic of Pakistan, having its registered office at KE House, 39-B, Sunset Boulevard, Phase II, Defence Housing Authority, Karachi.

I, the above named deponent, being the duly authorized representative of the Company solemnly affirm and declare that the contents of Application for Renewal/Extension of Distribution and Electric Power Supplier Licenses being submitted vide Letter KE/RA&GR/NEPRA/2022/846, including all supporting documents are true to the best of my knowledge and belief and that nothing has been concealed.

MUHAMMAD IMRAN HUSSAIN QURESHI

IMRAN QURESHI
Chief Regulatory Affairs
Government Relations
K-ELECTRIC LIMITED

Karachi dated December 01, 2022

ATTESTED
MUHAMMAD HUSSAIN
B.A. LL.B
OATH COMMISSIONER
Karachi Pakistan

K-ELECTRIC LIMITED

APPLICATION FOR:

A. RENEWAL/EXTENSION OF DISTRIBUTION LICENSE

B. RENEWAL/EXTENSION OF ELECTRIC POWER SUPPLIER LICENSE

CONTENTS

1. DETAILS OF THE APPLICANT

1.1 NAME AND ADDRESS

K-Electric Limited

Registered Office and Head Office
KE House, 39-B, Sunset Boulevard,
Phase II, Defence Housing Authority,
Karachi.

1.2 REPRESENTATIVES

i. Mr. Syed Moonis Abdullah Alvi – Chief Executive Officer

ii. Mr. Muhammad Aamir Ghaziani – Chief Financial Officer

iii. Mr. Amer Zia – Chief Distribution Officer

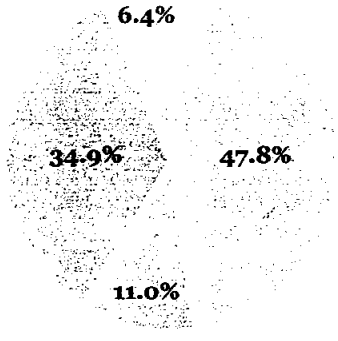
iv. Mr. Imran Hussain Qureshi – Chief Regulatory Affairs Officer

1.3 ABOUT THE APPLICANT

K-Electric Limited (KE) is a vertically integrated electric supply company providing utility services to the city of Karachi and adjoining parts of Sindh and Baluchistan. KE was incorporated in 1913 and subsequently privatized in the year 2005. As a vertically integrated utility, KE is engaged in generation, transmission, distribution, and supply of electricity by virtue of its licenses granted by the National Electric Power Regulatory Authority (NEPRA) (Authority).

KE is a public limited company duly listed on the Pakistan Stock Exchange serving a consumer base of over 3.4 million consumers.

Consumer Mix FY 2022 (Units Sold)



2. INTRODUCTION TO KE'S APPLICATION

KE was granted Distribution License on July 21, 2003 (09/DL/2003) to function as the sole distributor and supplier of power for its service territory for a period of twenty (20) years till July 2023.

Further, under the NEPRA Act, 1997 (as amended), Distribution (network) and Electric Power Supplier functions are now separate licensed activities under its Section 20 and Section 23E, respectively. However, as per proviso to Section 23E of the NEPRA Act, 1997 (as amended), the existing Distribution License holders were and are deemed Electric Power Suppliers in their respective service territories for a period of five (05) years from coming into effect of the NEPRA Act 1997 (as amended). Accordingly, KE in addition to its application for Renewal/Extension of its Distribution License also seeks Renewal / Extension for its Electric Power Supplier License.

In view of the above, KE is hereby filing this application in line with Regulation 13 of the NEPRA Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 (**'NEPRA AMEC Regulations'**) to seek:

i. Renewal / Extension of its Distribution License; and

ii. Renewal / Extension of its Electric Power Supplier License.

Grant of KE's requests will enable KE to ensure continuity of reliable power supply to the consumers in its service territory, thus facilitating the interests of consumers.

Further, it is humbly submitted that KE's request for Renewal / Extension of its licenses is without prejudice to KE's rights and remedies in pending matters/litigations before NEPRA, NEPRA Appellate Tribunal, Honorable Sindh High Court, and/or any other legal forum(s).

2.1 RENEWAL / EXTENSION OF DISTRIBUTION LICENSE

KE's existing Distribution License authorizing exclusive distribution and sale of power within its service territory is expiring on July 20, 2023. Since privatization in 2005, KE through investments of **PKR 146,738 Million** (including supply function) have brought significant improvements towards distribution and supply of electric power within its service territory as further explained in Sections 3.1.2 and 3.1.3 and going forward, is committed towards further improvement through a robust investment plan.

Accordingly, to fulfill obligations of provision of safe and reliable power supply to consumers on a non-discriminatory basis through smooth and reliable network operations, KE humbly requests for Renewal/Extension of its Distribution License for a period of twenty (20) years in line with Regulation 5(1) of the NEPRA Licensing (Distribution) Regulations, 2022 read with Section 20 of the NEPRA Act, 1997 (as amended) based on terms enclosed as Annexure A1 and in accordance with the approved CTBCM

design (as amended from time to time) including any subsequent determination(s) made by the Authority pursuant to KE's Evaluation and Integration Plan for CTBCM and market reforms / policy / plan issued under Section 14A of the NEPRA Act, 1997 (as amended).

2.2 RENEWAL / EXTENSION OF ELECTRIC POWER SUPPLIER LICENSE

As per Section 23E of the NEPRA Act 1997 (as amended), all existing Distribution Licensees are deemed to hold an Electric Power Supplier License for a period of five (05) years from coming into effect of the NEPRA Act, 1997 (as amended).

Further, under the CTBCM regime, all existing distribution companies are to function as Suppliers of Last Resort (SoLR) in their respective service areas, accordingly, KE's request for Renewal / Extension in its Electric Power Supplier License for a period of twenty (20) years is in conformity with the NEPRA Licensing (Electric Power Supplier) Regulations, 2022 as well as the term for Renewal / Extension of KE's Distribution License requested in Section 2.1, enabling KE to ensure continuity of electric power supply in its service territory.

Accordingly, to fulfill obligations to provide secured, reliable and efficient electric power supply within its service territory on a non-discriminatory basis to all persons who meet the consumer eligibility criteria, KE humbly requests for Renewal/Extension of its Electric Power Supplier License for a period of twenty (20) years under Regulation 6(2) of the NEPRA Licensing (Electric Power Supplier) Regulations, 2022 read with Section 23E of the NEPRA Act, 1997 (as amended) based on terms enclosed as Annexure A2 and in accordance with the approved CTBCM design (as amended from time to time) including any subsequent determination(s) made by the Authority pursuant to KE's Evaluation and Integration Plan for CTBCM and market reforms / policy / plan issued under Section 14A of the NEPRA Act, 1997 (as amended).

3. Reasons in Support of Requested Renewal / Extension of Licenses

KE was incorporated in the year 1913 and was subsequently privatized in November 2005. At the time of privatization, KE was a loss-making entity and due to its fragile financial position, its ability to undertake investments, both in terms of capacity addition and upgrading its existing capacity along with initiatives aimed at achieving customer centricity and operational excellence was impaired.

As a result, KE was faced with derailed operational performance with inadequate and reactive maintenance, high Transmission and Distribution (T&D) losses of over 34%, and insufficient capacity to meet demand with old existing assets, which, were less efficient than they would otherwise have been with regular upkeep.

After privatization, a strategic direction was devised across the power value chain and KE constantly worked to rebuild and transform itself towards operational excellence. As a result of determined and consistent efforts followed with targeted investments, KE's operational and financial performance improved significantly and KE was successfully transformed from a loss making into a profitable entity, with particular focus on customer centricity.

Here, it is important to highlight that as a vertically integrated utility, the significant improvements made in the Distribution and Supply segments were also a result of focused investments / interventions made in the Generation and Transmission segments.

3.1 Investments Made Since Privatization and Performance Improvements

Despite losses and other challenges including macroeconomic factors such as high borrowing rates and significant rupee devaluation along with material shifts in KE's tariff structure, KE's shareholders and management remained resolute in their pursuit of KE's turnaround and operational excellence.

Since privatization and up to FY 2022, KE has invested an amount of **PKR 474,178 Million** across the power value chain through fresh equity injection, debt, and reinvestment of all profits in the business, resulting in significant improvements across the power value chain. Here, it is important to highlight that all these investments were made without any sovereign guarantee or any financial support from Government of Pakistan (GoP), which has resultantly benefitted the consumers as well as the GoP.

3.1.1 Generation & Transmission

Since privatization, KE has invested **PKR 327,440 Million** in the generation and transmission segments to cater the growing power demand in its service territory through addition of efficient generation as well as capacity enhancement of its transmission network, thus ensuring KE's ability to serve the incremental power demand along with significant improvement in network reliability.

3.1.2 Distribution & Supply

Considering the growing power demand of Karachi, high T&D losses and aged infrastructure, significant investment was required in the distribution segment to improve the quality and reliability of power supply to consumers.

Accordingly, since privatization, **PKR 146,738 Million** have been **invested in the distribution segment** (including supply).

As a result, KE made targeted enhancements/improvements in the distribution segment (including supply), which have resulted in the following:

- Reduction in T&D losses from 34.2% in FY 2005 to 15.3% in FY 2022 (reduction of 18.9% points).
- Increase in overall recovery ratio to 96.7% in FY 2022 through targeted recovery drives and measures.
- Reduction in AT&C losses from 36.6% in FY 2005 to 18.1% in FY 2022 (reduction of 18.5% points).
- Upgradation of network and capacity enhancement through addition of:
    - Over 20,000 Pole Mounted Transformers (PMT) and 4,803 MVA in distribution capacity (from 3,882 MVAs in FY 2005 to 8,685 MVAs in FY 2022).
    - Over 1,000 11kV feeders increasing the total number of 11kV feeders to 2,001 in FY 2022.
- Conversion of over 12,500 PMTs into Aerial Bundled Cables (ABC).
- Addition of around 1.6 million consumers at CAGR of 3.8% in consumer base.
- Improved network safety and resiliency through:
    - Complete revalidation of earthing/grounding of KE's entire LT network - continuous earth wire project also initiated to serve as secondary protection.
    - Continued installation/replacement of Vacuum Circuit Breakers (VCB), Ring Main Unit (RMU), Earth Fault Indicators (EFI) and Load Breaker Switches (LBS) across the network.
    - Raising of asset placement platforms from ground level and replacement of cables and conductors to prevent assets from flooding, deterioration and build resilience against water ingress.

Further to the above operational improvements, particular emphasis has been on improving customer engagement and satisfaction index through various customer centricity and community engagement initiatives. In this regard, Project Ujala, Project Sarbulandi and Roshni Baji Program have been notable community engagement projects, under which, KE not only improved operationally through reduction in T&D losses, improvement in recovery levels, and provision of low-cost meters but these initiatives also resulted in social upliftment including reduction in load-shed in these areas and breaking of gender norms.

On the customer centricity and engagement front, KE undertook multiple initiatives to provide consumers with a range of platforms to interact with KE. These include setting-up of Integrated Business Centers (IBC) as one-stop solution for consumers, alternate payment channels, e-billing & digital payment platforms, launch of KE Live App, social media platforms, WhatsApp for Business, etc.

Details of investment and initiatives taken and their resultant improvements in distribution and supply of power are given in subsequent sections.

(i) Loss Reduction Initiatives

At the time of privatization, KE was faced with high T&D losses of over 34%, which necessitated deployment of targeted efforts to improve the loss profile and combat power theft. As a result of targeted investments to curb power theft and pilferage, **KE's T&D losses have reduced from 34.2% in FY 2005 to 15.3% in FY 2022**, also outperforming NEPRA target for FY 2022 given in KE's MYT.

Following key loss reduction initiatives have been implemented over the years:

- Conversion to Aerial Bundled Cable (ABC): Phase wise replacement of Low Tension (LT) bare wires from PMT to consumer meters with ABCs. **Over 12,500 PMTs** have been converted onto ABC.

- Regular kunda removal drives: Removal of illegal connections/kundas through extensive kunda removal drives on a regular basis. During the last three years, on average, **around 200,000 kgs** of kunda have been removed annually.

- Provision of Low-Cost Meters and Asaan Meters: Provision of low-cost and asaan meters to previously unmetered consumers, thus mitigating higher pilferage of electricity from KE network and associated safety hazards. During the period from FY 2017 till FY 2022, **over 750,000 connections** have been provided under this initiative.

- Community Engagements: Prompt implementation of area policing and community engagement initiatives post conversion of bare cables into ABCs and removal of kundas to discourage malpractices and retain the sanctity of the investments made.

- Rehabilitation of equipment: Continued rehabilitation of equipment to ensure its sanctity and preserve the improvements made keeping in view climatic conditions of Karachi, which, damage the insulation installed on ABC and tampering of the equipment by area residents in certain high loss areas.

(ii) Recovery Initiatives for Improvement in Recovery Ratio

Consumers propensity to pay over the years has declined due to rising inflation, increase in taxes and increased consumer tariffs, thus making collection from consumers a challenge. With this realization, KE over the years has initiated various incentives and rebate schemes, particularly in areas with chronic defaulters and low recoveries. These schemes have been aimed at making non-paying consumers habitual in making regular payments through engagements including engaging with area representatives and offering easy installments on arrears.

As a result, KE has improved its overall recovery ratio significantly to a level of **96.7% in FY 2022**. Key recovery initiatives implemented include:

- Easy Payment Plans: Convenient payment plans / schemes such as Current Bill ka Wada (FY2019), Qadam Barhao Scheme (FY 2020), Azaadi Scheme (FY2021) and Ehad Scheme (FY 2022) have been offered to defaulters to enable them to clear their outstanding dues and continue making regular payments of current bills.

- Recovery Camps: Recovery Camps set up in various neighborhoods for maximum customer outreach and facilitation.

- Area Specific Schemes: Tailormade area-specific rebate schemes offered as a recovery solution in selected pockets in various localities of the city having chronic defaulters as well as law and order situations.

- IBC on Wheels: As of FY 2022, 11 IBC on Wheels, which are essentially movable camps set up in various neighborhoods of the city especially focusing far flung areas and those neighborhoods where the actual IBC is at a distance.

- Recovery Officers: Recovery Officers appointed to collect dues on behalf of KE in areas with chronic defaulters as well as law and order situations.

- Door Knocking Agents: Representatives appointed as door knocking agents having the authority to collect dues from consumers residing in far flung and less affluent areas on behalf of KE and subsequently depositing the payment in banks on behalf of such consumers.

(iii) Growth and Maintenance Initiatives for Network Upgradation and Improved Network Reliability

For safe and reliable supply of power to its consumers amidst growing power demand in its service area, KE has made continued investments in network upgradation and rehabilitation to enhance network capacity as well as improve network safety and reliability.

Additionally, lack of urban infrastructure planning and ad-hoc growth of the city also led to the design of an inherently complex power network, which, along with the coastal climate of Karachi necessitated frequent maintenance and rehabilitation, thus leading towards increased investment requirements for KE.

In this respect, KE has taken the following initiatives focusing on network upgradation and improved network reliability:

- Expansion of 11kV network: **Over 1,000 feeders** and **20,000 PMTs** added in the network resulting in distribution capacity enhancement by **4,803 MVAs** (from 3,882 MVAs in FY 2005 to 8,685 MVAs in FY 2022).

  Further, around **4,286 km of 11kV lines** have also been added in the system for improved system flexibility and expansion.

- Periodic maintenance: Robust periodic maintenance performed including initiatives such as introduction of dry-type transformers, mobile trolleys, and Pad Mounted Units (PMU) along with rehabilitation of existing network to improve reliability indices on a pre-emptive basis.

- System Improvement Programs (SIPs): Over 1,500 SIPs have been executed since FY 2017 till FY 2022 keeping in view the current loads at the PMT level, the future load growth, enhancement, and rehabilitation of the common distribution network as well as to avoid any overloading.

- ABC rehabilitation: Prompt rehabilitation of already executed ABC schemes to retain their effectiveness and preserve the improvements achieved.

- Village electrification: Since FY 2017 till FY 2022, KE has electrified over two hundred (200) villages, thus expanding its network and facilitating its consumers residing in far flung areas by providing them access to power.

(iv) Safety Initiatives for Enhanced Safety of the Network, Communities, and Organization

Safety has always been KE's utmost priority, not only for its employees, but also for the communities and the environment in which KE operates. KE has remained committed to ensure highest standards of safety company wide and in this respect

special emphasis is placed on standardization, monitoring, training, continued safety inspections and audits.

Key initiatives taken to enhance safety across the organization and KE network include:

- Revalidation of Earthing / Grounding of Network: Successful revalidation of earthing/grounding of 100% of KE's LT poles performed, with a sweeping process put in place to continue identifying any missing poles to be earthed, as and when identified.

- System and Network Safety Enhancement: For system enhancement, improved network performance and safety, KE has installed / replaced over 400 VCBs, over 100 RMUs, over 3,500 EFIs and over 1,500 LBS since FY 2017 till FY 2022.

- Process Safety Management (PSM): DuPont Sustainable Solution (DSS), a global safety leader engaged to perform PSM gap analysis / benchmarking of KE safety management system with the vision of implementing PSM across the organization. Standard Operating Procedures (SOP) in line with PSM elements, audits & observations, integrated safety organization, incident investigation and behavioral observation program (Management Safety Audit) have been developed.

- Integrated Organization Structure: Inclusive management approach termed as Integrated Organization Structure adopted to further improve efficiency and effectiveness in existing structure along with traceability and accountability as well as alignment of KE's Safety Management System to PSM Systems.

- Management Safety Audit (MSA): Performance audits with established standards and evaluation of system effectiveness to nourish and reinforce correct systems, behavior and work practices while identifying areas / opportunities for improvement.

- Disaster Recovery and Operational Continuity Plan: Mitigating and combatting the drastic changes in weather and unprecedented climatic conditions through deployment of a Disaster Recovery and Operational Continuity Plan to ensure continuity of critical business operations with minimal effect on all stakeholders.

- Public Accident Prevention Plan (PAPP) and Annual Preventive Plan: Various safety schemes conceived and deployed as part of PAPP and Annual Preventive Plan to ensure overall safety of the network and public as well as KE employees.

- Anti-Theft Doors: Anti-theft doors installed in substations to deter/prevent theft of equipment and mitigate safety hazards.

- Public Awareness Campaigns: Public awareness campaigns carried out on regular basis to educate people on safety and dangers of touching / going near electrical installations especially during the rain.

- Safety Trainings: Safety trainings carried out for employees and third-party staff to educate them on best safety practices.

(v) Technological Advancements

Initiatives to advance technological landscape at KE have been a core component of KE's strategy to bring efficiency improvements, achieve operational excellence and enhance customer centricity.

In this regard, KE has taken the following initiatives focusing on advancing its technological capability:

- Implementation of SAP-ISU: KE became the first power utility to implement SAP-ISU in Pakistan, which resulted in improved accuracy of billing through benefits of systematic controls along with greater transparency in the billing system as a result of which, quality of billing has improved to c. 95% (FY 2022) from c. 83% (FY 2017).

- Smart Network: Existing network being converted into smart network through installation of Automated Meter Readers (AMRs) at feeders, PMTs and at customer level followed by implementation of Meter Data Management Systems (MDMS) enabling:

    - Better network monitoring, increased stability, reduced losses, and optimized outage management.

    - Targeted investments towards network upgradation and maintenance resulting in improved network health.

    - Automated meter reading and theft detection enabling KE to make targeted interventions in identified areas for improved performance including loss reduction.

(vi) Customer Centricity Initiatives for Enhanced Customer Focus and Facilitation

With a renewed focus, customer centricity is placed at the helm of KE's operations and core of its business model. KE has been a pioneer in several initiatives focused on improving customer experience.

Over the years, KE as part of its customer centricity has taken various initiatives in order to facilitate its customers, some of which are mentioned below:

- Integrated Business Centers (IBCs): Dedicated centers established to provide customers with one-stop solution for their queries as well as enabling KE to have better administrative control resulting in significant reduction of commercial losses, substantial improvement in recovery, marked reduction in average complaint resolution times and conducive environment demonstrating high standards of customer services.

- 118 Call Center Interactive Voice Response (IVR): State-of-the-art call center for smooth facilitation of KE's customers. The call center has been further upgraded to deliver best in class call handling experience. IVR has been further customized to increase self-service utilization and reducing customer wait times, thus enhancing overall customer experience.

- Safety Response Cell: Dedicated cell established to ensure end-to-end resolution of customer safety complaints on real time basis, ultimately helping KE to minimize/mitigate safety hazards.

- Social Media Management: KE's online presence has been strengthened through complaint ticket generation via KE's social media network through integration of SAP-CRM with social media, thus enabling customers to easily avail KE's social media services.

- KE Live Mobile App: KE launched its own KE Live App, which allows its customers to access a variety of services such as billing details with historic data, duplicate bill downloads, and integrated unit consumption comparative graphs along with other additional features including live power status updates, the ability to report power theft, lodge complaints and locate the nearest customer care centers.

- Digital Payment Platforms: KE partnered with various banks to provide payment flexibility to its customers, thus enabling them to make online payments with ease.

- Easy Bill: Multiple alternate channels introduced for customers like e-bill and URL bill invoicing facility, through which they can easily receive their e-bills.

- SMS Broadcasting: SMS broadcasting bandwidth enhanced to ensure timely broadcast of proactive notifications to customers including planned and unplanned outages.

- 8119 Chat Bot Services: A key word-based service introduced, where customers are being facilitated rapidly through automated process for queries, complaints, and updates with unlimited response capacity. Additionally, KE has also automated the process for account register/unregister for Calling Line Identification (CLI) against consumer account numbers through SMS 8119 Chat bot.

(vii) Rain Emergency Initiatives for Improved Equipment Resiliency

To mitigate the impact of severe flooding, as faced by Karachi during 2019 and subsequent monsoons, resulting in prolonged submersion of KE's distribution infrastructure in water, KE conceived 'Project Ensure'. This project focuses on initiatives to make KE's distribution network safer, while also strengthening its ability to withstand extreme weather events. This project is in line with KE's broader plan to reduce the risk of damage to critical power infrastructure from waterlogging.

Under this project, KE planned phase wise rehabilitation of its existing distribution network in certain areas focused on building resilience against water ingress due to monsoons, including following key work streams:

- Raising of RMU foundation level to up to 4ft.
- Repair and waterproofing of substation equipment.
- Raising substation foundation by up to 4ft along with replacing its equipment with compact 5-way RMU or VCB switches, metering panels & new LT panels.
- Replacing and raising foundation of LT pillar boxes by up to 4ft.
- Replacement of 11 kV Under-Ground (UG) cables.
- Replacement of LT ABC on PMTs.

3.1.3 Benefits of KE's Investments and Operational Improvements

KE's privatization and subsequent turnaround has had a clear and immediate impact on the consumers and the broader economy particularly through:

- Increased generation capacity and transmission and distribution infrastructure enhancement (over 250 km addition of transmission lines; and over 4,000 km of additional 11kV distribution lines) to provide reliable supply of power to customers.
- Improved turnaround times in connecting with customers including provision for online registration for new connections, cost estimate generation and status tracking.
- Accessibility to low-cost meters in less affluent areas to enable metered consumption – from FY 2017 till FY 2022, over 750,000 low-cost meters have been provided under various schemes.
- Improved network reliability and efficiency through reduction in fault rates and overloading in 11kV feeders

- Combination of loss reduction and community engagement initiatives resulting in reduction in losses and improved recovery levels – as a result, over 74% of service territory is exempt from load-shed in FY 2022, which includes conversion of very high loss areas such as Gharo to low loss (6.6% of feeders were load-shed exempt in 2005).

- Improved communication and prompt redressal of customer queries.

- Enhanced network safety through revalidation of earthing/grounding of 100% of KE's LT poles and other safety initiatives.

- Ease of payment resulting in a paradigm shift – around 60% customers have shifted from conventional to digital payers in FY 2022.

- Technological advancements including implementation of SAP ISU for greater transparency in billing, installation of Automated Meter Readers (AMRs) at PMT level and implementation of Meter Data Management System (MDMS) Project, providing greater visibility into network performance.

In addition to benefiting customers through improved operational performance and service levels, KE's post privatization targeted investments and resultant efficiency improvements have also benefited customers in the form of lower tariffs in real terms.

In this regard, it is estimated that had KE not improved operationally including reduction in T&D losses and generation efficiency improvements as compared to 2005 levels, KE tariff would have been PKR 19.5/kWh higher (as of June 2022).

Operational Improvement	**Impact on Tariff (June 2022)**
Reduction in T&D losses since 2005	12.9 / kWh
Improvement in Generation Fleet Efficiency since 2005	6.6 / kWh
KE Tariff would have been higher by	**19.5 / kWh**

It is also important to highlight that pre-privatization, to keep the operations of KE afloat, GoP had to provide operational subsidy of around PKR 9 billion annually, and therefore, had KE not been privatized and achieved these operational improvements, KE would have continued on the loss-making trajectory, burdening the GoP in the form of operational subsidy. Accordingly, in addition to benefitting consumers in the form of lower tariffs, KE's post privatization operational improvements have also benefited the GoP.

KE aims to continue on its path to bring operational efficiencies, make capacity additions, improve network reliability, and provide maximum facilitation to its customers. In this respect, KE has conceived a comprehensive investment plan for its entire value chain focusing on areas of improvement in the overall network along with enhancing the customer centricity and better delivery of services.

4 PROPOSED BUSINESS PLAN & BENEFITS | FY 2024 TILL FY 2030[1]

In line with its vision, KE is committed to safe and reliable supply of electricity in an efficient and sustainable manner to its consumers. Past performance of KE and improvements recorded over the previous years as narrated in section 3 of this application substantiate this as well. Also, KE realizes that there is still a long way to go to be at par with the progressive distribution companies operating globally. Considering the aged asset base of distribution network and associated technical complexities including lack of urban infrastructure planning and unplanned growth of the city, KE realizes that a strategic and data driven approach can guarantee a sustainable performance with long lasting results enabling KE to be the utility of choice.

Drawing inference from the aforementioned thought process, KE has proposed a Network Improvement Plan (NIP) to reduce technical and commercial losses as well as enhance customer base through new connections, ensure continued electrical safety and continued introduction of advanced technologies. Through the NIP, KE plans to shift its maintenance regime from preventive to periodic maintenance framework with focus on safety, outage reduction, restricting spread of outages, power quality, technical loss reduction and technology intervention to improve operational efficiency and sustainability. During the last 2-3 years, due to advent of technology initiatives like AMI/MDMS and GIS (Arc FM) as well as outage reporting mechanism, data visibility has increased to a level where investment decisions are now based on data analytics. Using the historic data, Change Management Plan will be implemented to transform distribution through technological transfer of knowledge and skill. This will be done across distribution in a phase wise strategy through ring fencing a cluster and converging all initiatives including technological interventions along with skill development to enable transformation.

To validate KE's proposed distribution network improvement journey, international consultancy services from FICHTNER GmbH & Co. based in Stuttgart, Germany with its local partner PITCO (Pvt) Ltd. ('the Consultant') based in Lahore, Pakistan, were engaged to review KE's NIP. The scope included validation of the initiatives planned under NIP vis-a-vis prudent practices adopted by global distribution companies operating in similar environments. The Consultant has thoroughly reviewed the entire NIP and based on its vast global experience has provided its recommendations, which, have been incorporated in the NIP.

Based on the above, KE plans to invest **PKR 184,650 Million**[2] during the period FY 2024 to FY 2030 *(this amount is at current macro-economic factors i.e., exchange rate of PKR 206 / USD on June 30, 2022, and CPI of FY 2022, without any indexation)* in its distribution network and infrastructure.

The investment plan for distribution is divided into five categories: (i) Growth, (ii) Loss Reduction, (iii) Maintenance, (iv) Safety and (v) Technology; summary of which is appended in the table below:

[1] The Business Plan is indicative and based on estimates/ projections that involve various economic and business risks and uncertainties, which could cause actual results or events to differ materially from those presently anticipated, thus requiring revisions to Business Plan.
[2] Exclusive of consumer funded capex

PKR Million

Description	Planned Investments FY 2024 to FY 2030
Growth	37,105
Loss Reduction	64,662
Maintenance	40,496
Safety	25,858
Technology	16,529
Total Planned Investment	**184,650**

Further, it is pertinent to highlight that above-mentioned investments and their summarized details as given in subsequent sections are based on certain estimates and assumptions and are therefore subject to change. The detailed investment plan along with set of assumptions will be submitted as part of KE's MYT petition for the period FY 2024 to FY 2030.

4.1 Growth

Growth serves as a backbone in the expansion of KE's Distribution Network. KE aims to fulfill electricity demand projections of its service territory, which, based on peak demand is expected to grow at a CAGR of around 3% during FY 2023 to FY 2030, through optimum utilization of existing network equipment i.e., Grid Stations, Power Transformers (PT), Medium Voltage (MV) feeders and Distribution Transformers (DT) along with induction of new electricity infrastructure keeping in view of the spatial limitations of the city due to its increasing population.

Additional growth is served through two types of investments i.e., investments incurred by KE for Common Distribution System (CDS) or Dedicated Distribution System (DDS)[3]. For expansion of CDS, KE has planned an investment of **PKR 37,105 Million,** while significant portion is also expected based on dedicated consumer funded investment.

Year-wise breakup of investments planned by KE for its CDS is given below:

PKR Millions

Description	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Growth	2,426	3,687	4,700	6,316	6,484	7,344	6,148	**37,105**

Addition in CDS will comprise of new link formations among existing MV feeders along with induction of new MV feeders, distribution transformers and carrying out MV feeder shifting among existing and new grid stations and PTs for load balancing. These new planned assets will serve projected demand on common network ensuring optimum

[3] Consumer sponsored system/equipment

utilization of existing assets, timely availability of requisite operational system along with quality and reliability of power supply to meet regulatory obligations.

Investments planned by KE and including those funded by consumers are expected to result in the following additions/enhancements in KE's network:

- Addition of 1.2 million customers resulting in addition of 3,251 MW of load
- Addition of 444 11kV feeders and 7,606 distribution transformers
- Capacity enhancement by 2,562 MVAs
- Addition of over 3,100 km of High Tension (HT) lines

These planned additions/ enhancements in network will serve future demand projections as mentioned below, which have been forecasted based on past trends and accounting for the projected disruptions due to solar PV penetration at distributed generation level including both net metered connections as well as captive solar installations.

Years	Day Peak Demand (MW)	Solar Disruption (MW)	Day Peak Demand (MW) – After Solar	Night Peak Demand (MW)
	A	B	C = A – B	D
FY 23	4,165	250	3,915	4,010
FY 24	4,350	359	3,991	4,168
FY 25	4,478	473	4,005	4,290
FY 26	4,597	589	4,008	4,404
FY 27	4,720	716	4,004	4,522
FY 28	4,834	855	3,979	4,631
FY 29	4,977	1,007	3,970	4,768
FY 30	5,111	1,171	3,940	4,896
CAGR	**2.97%**	-	-	**2.89%**

4.2 Loss Reduction

KE plans to invest **PKR 64,662 million** on loss reduction initiatives during the period from FY 2024 to FY 2030 to ensure sustainable loss reduction as well as to maintain and enhance the loss reduction improvements that KE has achieved over the years, with some investments expected to be made under DDS. These will help curb power theft as well as improve technical losses and the overall quality of service.

Year-wise breakup of KE's planned investments under loss reduction initiatives is as follows:

PKR Millions

Description	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Loss Reduction	8,748	11,502	12,545	12,854	6,106	6,315	6,591	**64,662**

Loss reduction initiatives are categorized into commercial and technical loss reduction and activities planned under each category are mentioned below:

Commercial Loss Reduction

Following initiatives are planned towards reduction of commercial losses as summarized below:

- **Aerial Bundled Cables (ABC)**

  As detailed in Section 3.1.2 above, ABC has been a major contributor in KE's loss reduction and since the start of ABC project, KE has managed to complete conversion of over 12,500 PMTs to ABC, with replacements planned on PMTs completing 10 years of their life. Further, rehabilitation of already converted PMTs is also planned to cater for areas, which are prone to high theft and non-payment and where ABCs installed have been damaged by installation of direct hook/ kundas.

  Accordingly, during FY 2024 to FY 2030, KE plans to continue roll out of ABC on PMTs to reduce commercial losses, for which it has planned the following:

  - ABC installation on over 1,770 new PMTs.
  - ABC rehabilitation on around 3,000 PMTs.
  - ABC replacement on existing ABC PMTs completing 10 years.

- **Faulty Meter Replacement (FMR)**

  Faulty meters planned to be replaced in line with NEPRA approved CSM guidelines.

Technical Loss Reduction

KE has identified improvement areas in distribution network and planned different initiatives for the reduction of energy losses due to technical reasons. Below initiatives pertaining to OH and UG network will contribute to technical loss reduction:

- **Loop Splitting**

  KE has planned network augmentation to optimize technical energy loss in its distribution network. For this, KE's simulation software CYMDST will be used as primary tool to validate the technical loss reduction initiatives, which, includes right

sizing of DTs and OH / UG conductors and placement of transformers on load center keeping in view the area dynamics.

Network augmentation will also focus on reduction of losses through:

- Load shifting and load balancing within the network assets.
- Reducing lengthy lines to maintain voltage drop within prescribed limits.
- Creating operational flexibility in the interconnected ring network.

- **Power Factor Improvement Plant (PFIP)**

  Installation of Power Factor Improvement Plants (PFIP) is planned across the distribution network with the objective of improving the power factor, reducing technical losses as well as improving the voltage profile and capacity of DTs. KE plans to deploy PFIP in around hundred (100) substations in LT distribution network subject to space availability.

- **Rehabilitation Initiatives**

  Sustainable and effective rehabilitation initiatives have been planned on OH and UG network to reduce power losses by improving connection quality especially ensuring bolt tightness at correct torque values, improving joints quality by replacing deteriorated joints, thus reducing current leakages, replacement of deteriorated connection leads, replacement of damaged insulators causing leakages and improving high contact resistance paths especially in old Oil Circuit Breakers (OCB) present in the network.

With planned investments and initiatives detailed above, KE targets to reduce its distribution losses by 2.3% points, taking it from 13.8% in FY 2023 to 11.5% in FY 2030. This along with targeted recovery initiatives would further reduce the AT&C losses consequently increasing the load-shed exempt feeders to 95% by FY 2030.

Description	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Distribution Loss	13.8%	13.5%	13.1%	12.7%	12.3%	11.9%	11.7%	11.5%

4.3 Maintenance

For overhauling and maintenance of its existing distribution network, KE has planned an investment of **PKR 40,496 Million,** which includes Corrective Maintenance (CM) and network rehabilitation.

Year-wise breakup of KE's planned investments towards network maintenance is as follows:

PKR Millions

Description	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Maintenance	4,653	6,270	6,082	5,697	5,989	5,889	5,915	**40,496**

- **Corrective Maintenance**

  To ensure continuity of power supply as well as enhance the reliability of its network, KE plans to undertake multiple maintenance activities and with the learnings taken from the 2019 and subsequent monsoons in Karachi, KE plans to have a more robust corrective maintenance regime.

  Moreover, KE has also planned key initiatives targeted towards a pro-active maintenance regime focused on periodicity of the cycle through usage of engineering tools to effectively plan all the activities.

- **Network Rehabilitation**

  KE has also planned investments in its network through NIP, whereby, considering the current loads at the PMT level and the future load growth, enhancement, and rehabilitation of the common distribution network at LT level shall be carried out to avoid any overloading of the network. These activities will benefit in improving the reliability indices on a preemptive basis.

  Activities planned under network rehabilitation activities include:

  - Addition of layers of redundancy in system through installation of RMUs and VCBs
  - Replacement of deteriorated HT cables
  - Installation / replacement of LBSs
  - Addition of 11kV feeders

  In addition to above, planned initiatives also include a comprehensive plan to guarantee long-term sustainable reliability and operational efficiency, which, will provide the following benefits:

  - Enhanced visibility through Meter Data Management System (MDMS), Outage Management System (OMS), SCADA and ADMS
  - SAP-PM driven periodic / preventive maintenance
  - Effective asset lifecycle management

- Centralized monitoring of asset loading
- Ringfencing at cluster level
- Longevity of assets' useful lives
- Capacity building as per futuristic needs
- Prediction of faults, asset failure, predictive maintenance, theft identification, etc.
- Holistic rehabilitation of aged assets

Additionally, as part of network rehabilitation, following planned activities shall also be performed:

- Replacement of Knife Switches with SF6 type LBS for on-line operation and quick restoration of supply.
- Implementation of protection framework for distribution protection layers on 11kV outgoing loops to localize the faults as near as the fault point and minimize the number of consumers affected during an outage.
- Replacement of obsolete protection relays with new relays on outgoing loops of 11kV primary substations.
- Implementation of new design scheme to use auxiliary power (through Capacitor Unit) on selected underperforming self-powered relays to make performance of protection relays' independent of the feeder loading.
- Replacement of deteriorated OCBs with VCBs to assist in fault reduction, asset up-keep and timely restoration of supply, ensure public safety and establish protection regime to limit spread of outages.
- Replacement of selected deteriorated HT cables planned to mitigate main and linking cable faults.
- Enhancement of Transformer & Switchgear Workshop (TSW) capability for sustainable and reliable network performance through 'Asset Maintenance' covering complete lifecycle of major distribution equipment.

These planned initiatives envisage enhancement in KE's infrastructure followed by improved performance of assets, consequently resulting in gradual improvement of reliability indices.

4.4 Safety

Workplace and public safety under the jurisdiction of KE network is of paramount importance and in order to reinforce safety standards, KE has enhanced the scope of its safety and protection projects in view of ground realities and learnings drawn from monsoon spells to ensure safe and reliable supply of power to its consumers.

To further its aim of supplying reliable and safe electric power to its consumers, KE has planned an investment of **PKR 25,858 Million** during the period from FY 2024 to FY 2030 towards safety initiatives.

Year-wise breakup of KE's planned investments towards network safety is as follows:

PKR Millions

Description	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Safety	5,438	5,268	3,726	2,897	2,897	2,797	2,834	**25,858**

Safety initiatives shall be implemented through a focused approach through KE's PAPP, under which, following three (03) sub-projects will be executed:

- Replacement of Dilapidated Poles: KE network comprises of around 245,000+ Poles, and with these necessary investments, around 7,000 poles are envisaged to be replaced every year.

- Replacement of hazardous Multi Storey Bus Bars (MSBB): Replacement of 2,900 MSBB units per year is planned against a count of around 100,000 MSBB in KE system.

- Shifting of PMTs (for dilapidated poles and structures): Shifting of around 210 PMTs per year targeted against a count of around 20,000 CDS PMTs in KE system.

Besides these projects, KE has also planned execution of the following projects for overall safety of the public, its employees, and its network.

- Electrification of hazardous/no mains area to mitigate safety hazards posed by illegal abstraction of electricity as well as provide safe and reliable power to its consumers.

- Earthing all metallic infrastructure connected to ground such as service bracket(s) to ensure safe and reliable supply of electricity up to consumer premises.

- Installation of stay unit isolators to mitigate leakage current on the upper part of the pole brackets to mitigate any untoward safety incident(s).

- Conversion of OH HT to UG cables to maintain safe clearance distance in areas where KE infrastructure is illegally encroached.

- Installation of Distribution Boxes (DB) to convert double LT circuits to single LT circuits with proper fuse protection in case of over loading and wire broken safety hazards.

- Induction of PMU on wheels to facilitate network with provision of a compact, transportable, and cost-effective mobile power supply solution for providing temporary energization.

In addition to the above planned initiatives, to ensure safe work practices and improve workmanship in installation of network assets, special equipment and tools are to be employed as per requirement.

4.5 Technology

As part of its investment plan, KE has planned an investment of **PKR 16,529 Million** on technological initiatives, year wise breakup of which is as follows:

PKR Millions

Description	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Technology	3,616	3,334	2,488	1,317	2,684	1,813	1,276	**16,529**

KE as part of its technology initiatives aims to digitize its existing distribution network, which, would help in better monitoring of power consumption by its consumers, through implementation of following activities:

- **Automated Meter Reading (AMR) Coverage**

  Installation of AMRs at PMT level has resulted in greater visibility on outages, enabling targeted investments to improve network reliability and resilience as well as improvements in reporting of reliability indices. To further enhance visibility, KE has planned extensive coverage of AMRs across all PMTs and high-end consumers. Further, with this planned initiative, KE also expects to achieve substantial improvement in network reliability indices.

- **Customer Services Digitization**

  KE also plans to widen the digitization outreach of its customer services through execution of various initiatives covering the following core areas:

  - Billing
  - Payment of bills through digital/online platforms such as KE Live App / online banking, etc.
  - Online registration of complaints
  - Customer Call Centre services

- New connection / disconnection requests

- **Commercial Digitization**

  KE has planned execution of various initiatives targeted to facilitate commercial digitization of its operational matters as well as encourage digital adoption such as:

  - Digitization of Site Inspection Reports (SIR) and Faulty Meter Reports (FMR) for digital record keeping, paperless real-time survey reports punching and ensuring a near real-time availability of evidence to lodge FIR on discrepant meters. This will ensure timely processing of surveys, improved governance, prompt monitoring of Meter Inspection Officers (MIO) productivity and resultant resource optimization, system recording of evidence (theft/ faulty meter) and route management.

  - Provision of new hand-held devices to meter readers as replacement for stolen, damaged, and faulty devices. This will ensure operational business continuity and reliability/accuracy of meter reading process.

  - Assignment of hand-held devices to Disconnection/Reconnection (DC/RC) gangs to ensure DC/RC is maintained real-time in system (SAP) and is auto synchronized with the activity on site. This will enable digital record-keeping of recovery efforts and disconnection evidence, permitting pictorial evidence to be recorded for each disconnection with ease, ensuring strong governance and efficient workforce management through optimal utilization of resources.

- **Power Quality Analyzers**

  KE has planned installation of Power Quality Analyzers to improve overall performance of its network and facilitate its customers in line with the recommendations given by Siemens Germany to ensure permanent power monitoring and restructuring of feeders at grid end to create 'Clean Bus Bar' concept for key industrial customers.

- **Advanced Distribution Management System (ADMS)**

  KE envisions the deployment of ADMS, to support distribution management and availability of network optimization tools. ADMS comprises of three modules including: SCADA, Outage Management System, and Distribution Management System. This system will enable quick identification and localization of faults reducing the time spent on the field. The system also offers the provision for automated isolation and restoration of network in case of faults however, to enable this functionality the relevant switches should be motorized. It will also pave way in proactive operations, switching management, crew management, work order lifecycle management, conservation through voltage reduction, peak demand management, etc.

The larger ADMS road map includes integration of different Information Technology (IT) and Operational Technology (OT) systems as part of KE's technology landscape.

Following are the major integrations that will be carried out with ADMS implementation.

- Genesys IVR & SAP CRM for automatic assignment of calls to respective ADMS user(s).
- SAP PM
- Mobility Solution
- Geographical Information System (GIS) to provide geospatial view of network to ADMS for effective distribution management.
- MDMS to facilitate distribution planning by eliciting energy profiles from AMI.
- SAP ERP, IS-U to retrieve consumer data for calculation of outage impacts.

- **Other Projects for Technological Advancements**

  Following are the major components that are planned to be added or augmented for utilization of ADMS:

  i. SCADA Services: Will provide real-time information of outage events with location of fault(s), electrical parameters for proactive operations (condition monitoring), power quality data for critical and large-scale industrial consumers and enhance the investment in network protection by significantly reducing the resolution time of load drop, load zero and other outage events.

  ii. ADMS/OMS: Will serve as single platform for distribution operations management. It integrates the complaint management process, crew management, logging of events with their status, shutdown management and visualizes the data from field devices on a single geospatial network to all operations' stakeholders.

  iii. OT Infrastructure (GIS and ADMS): A high-available enterprise infrastructure designed to provide the fail-proof functioning of advanced and business-critical systems with minimal downtime. The landscape is to be supported with redundant load balancers and replication hosts.

  iv. ADMS (DMS): Converges the data from different systems and field devices and suggests the best configuration of network, compensation measures for system efficiency as well as contingency planning and performs load flow analysis for better planning of energy demand.

v. Hardware Upgrade which will provide the following benefits:

- Enhanced database performance
- Reduction in daily batch jobs time consumption
- Faster response of integrated systems
- Reduction in utilization of system resources
- Efficient performance of server

As detailed above, KE has prepared a robust and comprehensive investment plan, which, would enable KE to ensure provision of safe and reliable supply of power, however, continued investment in the business can only be sustained if KE is allowed a cost reflective tariff that incentivizes efficiency improvements and allows a reasonable level of return that is comparable to rate of return earned by other private investors in power sector. This is in the utmost interest of consumers, as in case KE is unable to invest, or make timely investment decisions, there would be potential drastic consequences for the consumers in the form of increased load-shed, cost for consumers as well reduction in quality, reliability, and availability of electricity in Karachi and its adjoining areas. Hence, for timely execution of planned investments and initiatives detailed above, it is humbly requested that KE be allowed a tariff that balances the interest of all stakeholders and ensures continuity of investment.

5 POWER PROCUREMENT PLAN

KE as an Electric Power Supplier (SoLR) for its service area is responsible for ensuring that sufficient capacity is added to meet the growing power demand, which, in addition to enable KE to meet its regulatory obligation, will also have an impact on the economic development of the overall country.

To achieve this objective, KE has prepared a Power Procurement Plan which includes details of new plants / sources of power supply to be added to serve the growing power demand with an objective to ensuring reliable and efficient power supply on least cost basis ***(Power Procurement Plan for FY 2024 to FY 2030 is enclosed as Annexure A3)***.

6 KE'S REQUEST

To ensure continued provision of safe, secured, reliable and efficient electric power supply within its service area in alignment with the regulatory framework as well as the approved CTBCM design and for timely execution of planned investments to facilitate infrastructural enhancements to further improve service levels, KE humbly requests NEPRA to:

i. Renew / Extend KE's Distribution License for a term of twenty (20) years in line with Regulation 5 (1) of NEPRA Licensing (Distribution) Regulations, 2022 read with Section 20 of the NEPRA Act, 1997 (as amended) and in accordance with the approved CTBCM design (as amended from time to time) including any subsequent determination(s) made by the NEPRA Authority pursuant to KE's Evaluation and Integration Plan for CTBCM and market reforms / policy / plan issued under Section 14A of the NEPRA Act, 1997 (as amended), and as per the terms enclosed as **Annexure A1.**

ii. Renew / Extend KE's Electric Power Supplier License for a term of twenty (20) years in line with Regulation 6 (2) of NEPRA Licensing (Electric Power Supplier) Regulations, 2022 read with Section 23E of the NEPRA Act, 1997 (as amended) and in accordance with the approved CTBCM design (as amended from time to time) including any subsequent determination(s) made by the NEPRA Authority pursuant to KE's Evaluation and Integration Plan for CTBCM and market reforms / policy / plan issued under Section 14A of the NEPRA Act, 1997 (as amended) and as per terms enclosed as **Annexure A2.**

Grant of above requests will enable KE to ensure continuity of power distribution and supply in its service territory in a safe and reliable manner and is therefore in the consumer interest.

Further, it is humbly submitted that this Renewal / Extension Application is being filed with the understanding that KE will be allowed to approach the Authority for modification, if any, required in its Application for Renewal / Extension of Distribution License and Electric Power Supplier License in case of any change and/or amendments in (between the period of submission of this application and issuance of the requested license(s)) the applicable provisions of the Act, Rules, Regulations from time to time and/or any determination(s) by the Authority.

Furthermore, KE reserves the right to request NEPRA for modification in the application in the future including at the time of / during hearing or during the processing of the application or share additional documents in support of the application till the time of Determination by NEPRA.

Syed Moonis Abdullah Alvi
Chief Executive Officer

Muhammad Aamir Ghaziani
Chief Financial Officer

Amer Zia
Chief Distribution Officer

Imran Hussain Qureshi
Chief Regulatory Affairs Officer

K-ELECTRIC LIMITED

GLOSSARY

Acronym	Definition
ABC	Aerial Bundled Cables
ADMS	Advanced Distribution Management System
AMI	Automated Meter Infrastructure
AMR	Automated Meter Reader
AT&C	Aggregate Technical and Commercial
CAGR	Compounded Annual Growth Rate
CDS	Common Distribution System
CM	Corrective Maintenance
CSM	Consumer Service Manual
CTBCM	Competitive Trading Bilateral Contract Market
CYMDST	Distribution System Analysis Package (CYMW Software)
DB	Distribution Box(es)
DC/RC	Disconnection / Reconnection
DDS	Dedicated Distribution System
DSS	DuPont Sustainable Solution
EFI	Earth Fault Indicator
FIR	First Information Report
FMR	Faulty Meter Replacement
GOP	Government of Pakistan
GIS	Geographic Information System
HHU	Handheld Unit
HT	High Tension
IBC	Integrated Business Centre
IT	Information Technology
IVR	Interactive Voice Response
KE	K – Electric
kVAR	Kilo Volt Amps Reactive
LBS	Load Break Switch
LT	Low Tension
MDMS	Meter Data Management System
MIO	Meter Inspection Officer
MSA	Management Safety Audit
MSBB	Multi Storey Bus Bar
MVA	Mega Volt Ampere
MV	Medium Voltage
MW	Mega Watt
MYT	Multi Year Tariff

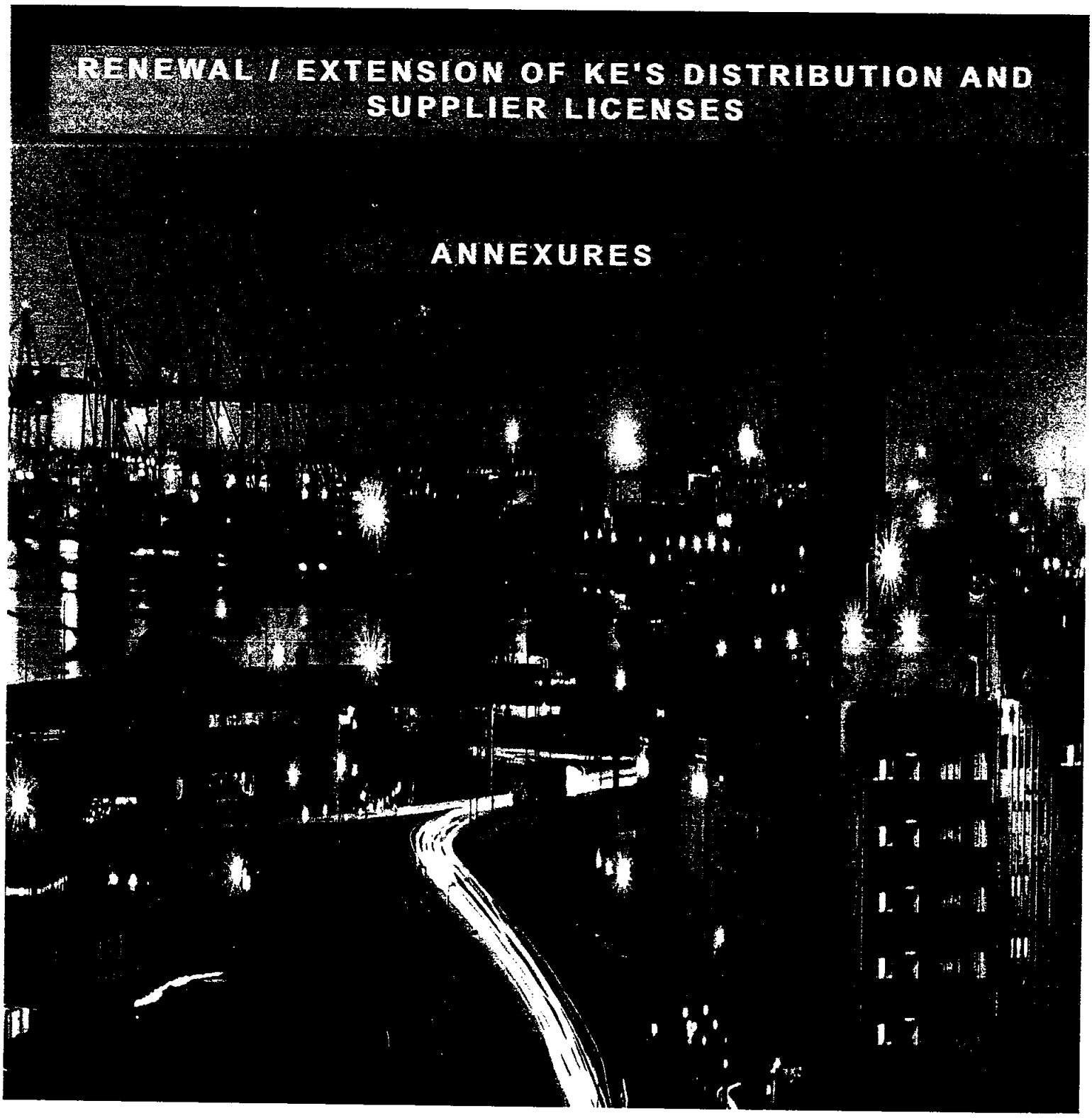
Acronym	Definition
NC	New Connection
NEPRA	National Electric Power Regulatory Authority
NIP	Network Improvement Plan
O&M	Operation & Maintenance
OCB	Oil Circuit Breaker
OH	Overhead
OMS	Outage Management System
OT	Operational Technology
PAPP	Public Accident & Prevention Plan
PFIP	Power Factor Improvement Plant
PMT	Pole Mounted Transformers
PMU	Pad Mounted Units
PQ	Power Quality
PSM	Process Safety Management
PT	Power Transformer
RMU	Ring Main Unit
SF6	Sulphur Hexa-Flouride
SAP CRM	SAP Customer Relationship Management
SAP ERP IS-U	SAP Enterprise Resource Planning IS-U
SAP PM	SAP Plant Maintenance
SCADA	Supervisory Control and Data Acquisition
SIP	System Improvement Plan
SIR	Site Inspection Report
SMS	Short Message Service
SoLR	Supplier of Last Resort
T&D	Transmission & Distribution
TSW	Transformer & Switchgear Workshop
UG	Underground
VCB	Vacuum Circuit Breaker

KE letter with reference # KE/RA&GR/NEPRA/2022/846

Dated December 01, 2022

RENEWAL / EXTENSION OF KE'S DISTRIBUTION AND SUPPLIER LICENSES

ANNEXURES



INDEX SHEET

S. Nos.	Information	Reference Document	Comments
1	**KE's Proposed License(s) Template(s)**		-
(a)	Distribution License	Annexure A1	-
(b)	Electric Power Supplier License	Annexure A2	
2	**Power Procurement Plan For FY 2024 - FY 2030**	Annexure A3	-
3	**Annual Forecasts For Each Tariff Category and Sub Category Based on NEPRA Determined Schedule Of Tariffs (SoTs)**		
(a)	Number of Consumers	Annexure A4	-
(b)	Sanctioned Load	Annexure A5	-
(c)	Units Billed	Annexure A6	-
6	**Forecasted Demand & Consumption Pattern On Different Time Periods**		
(a)	Monthly Forecast	Annexure A7	-
7	**Standards Operating Procedures/Policies**		
(a)	Training and Development	Annexure A8	-
(b)	Provision of Electric Power Supply, Billing and Collection	Annexure A9	-
(c)	Emergency and Safety	Annexure A10	-
8	**Service Territory Maps**	Annexure A11	Owing to quantum of size and data, soft copies of Annexure A11 are being enclosed in Compact Disc (CD)

K-ELECTRIC LIMITED

DISTRIBUTION LICENSE

Article 1
Definitions

1.1 Unless there is anything repugnant in the subject or context and save as expressly defined hereafter, words and expressions used in this License bear the respective meanings given thereto in the Act or in the Rules/Regulations.

1.2 Subject to Article 1.1

a) "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (Act No. XL of 1997), as amended from time to time;

b) "Applicable Documents" mean the Act, the Rules and Regulations framed by the Authority under the Act, any documents or instruments issued or determinations, any applicable codes, manuals, directions, guidelines, orders or notifications issued/approved/made by the Authority under any of the foregoing or pursuant to the exercise of its powers under the Act or the documents or instruments made by the Licensee pursuant to its license;

c) "Authority" means the National Electric Power Regulatory Authority constituted under Section 3 of the Act;

d) "Bulk Power Consumer (BPC)" means a Consumer, who purchases or receives electric power, at one premises, in an amount of one (01) megawatt or more or in such other amount and voltage level and with such other characteristics as the Authority may specify and the Authority may specify different amounts and voltage levels and with such other characteristics for different areas;

e) "Commercial Code" or "Market Commercial Code" means the commercial code prepared and maintained by the market operator pursuant to Sections 23A and 23B of the Act and approved by the Authority from time to time;

f) "Competitive Supplier" means a person licensed under Section 23E of the Act to supply power to only those consumers who are located in the territory specified in its license and meet the eligibility criteria specified by the Authority from time to time;

g) "Competitive Trading Bilateral Contract Market" or "CTBCM" means the electric power market established in accordance with the high level and detailed designs approved by the Authority vide its determinations dated 5th day of December 2019 and 12th day of November 2020, and any subsequent determination(s) made by the Authority pursuant to Licensee's Evaluation and Integration Plan, as may be amended by the Authority from time to time;

h) "Connection Charges" means the charges made or levied or to be made or levied by the Distribution Licensee for carrying out works, provisions and installation of electrical facilities, meters, electric lines and circuits, and ancillary distribution system, together

with charges in respect of maintenance and repair of such items in so far as not otherwise recoverable as Use of System Charges, and in respect of disconnection and the removal of electrical facilities, electric lines and circuits, and ancillary meters following disconnection, or such other charges as may be specified in or pursuant to the distribution license;

i) "Concession Territory" means the territory outside the Service Territory of the Licensee defined by the administrative/geographical boundaries as delineated in Schedule I to this License;

j) "Consumer" means a person or his successor-in-interest who purchases or receives electric power for consumption and not for delivery or re-sale to others, including a person who owns or occupies a premises where electric power is supplied;

k) "Consumer Eligibility Criteria" means the relevant consumer eligibility criteria to obtain connection of electric power as specified by the Authority in the National Electric Power Regulatory Authority Consumer Eligibility Criteria (Distribution Licensees) Regulations, 2022;

l) "Distribution Service Manual" means the manual of instructions developed by the distribution service providers and approved by the Authority containing the instructions and guidance to the consumers for requesting distribution services, as described in Regulation 8 of the Licensing Regulations;

m) "Distribution" means the ownership, operation, management or control of distribution facilities for the movement or delivery to consumers of electric power but shall not include the ownership, operation, management and control of distribution facilities located on private property and used solely to move or deliver electric power to the person owning, operating, managing and controlling those facilities or to tenants thereof;

n) "Distribution Code" means the code, which defines the technical and operational standards and procedures for Distribution Licensee and all those connected to the Distribution System of the Licensee as specified in Regulation 12 of Licensing Regulations and approved by the Authority;

o) "Distribution facilities" means electrical facilities operating at the Distribution voltage and used for the movement or delivery of electric power;

p) "Distribution Licensee" means a person to whom a license for Distribution of electric power has been granted by the Authority under the Act;

q) "Distribution System" includes the distribution facilities and electric lines or circuits, meters, interconnection facilities or other facilities operating at the Distribution voltage, and shall also include any other electric lines, circuits, transformers, sub-

stations, interconnection facilities or other facilities determined by the Authority as forming part of Distribution System, whether or not operating at Distribution voltage;

r) "Distribution Services" means planning, expansion, up-gradation, rehabilitation, reinforcement, operation and maintenance of the Distribution System by the Licensee to deliver and transfer electric power to or for the persons connected with its Distribution System within its Service Territory in an efficient, reliable and non-discriminatory manner and in accordance with performance standards, including providing cost-effective distribution connection services and non-discriminatory Open Access to its Distribution System to the eligible consumers, licensees, captive generating plants and generation companies subject to, the applicable charges including but not limited to payment of Connection Charges, Use of System Charges or any such other charges as may be determined by the Authority from time to time;

s) "Distribution voltage" means any voltage level of 11kV and below or the voltage level below the Minimum Transmission voltage defined in the Act;

t) "Electric Power Supplier" means a person who has been granted a license under the Act to undertake supply of electricity and shall include both Competitive Supplier and Supplier of Last Resort;

u) "Grid Code" means the grid code approved by the Authority from time to time;

v) "Licensee" means K-Electric Limited (KEL) and shall include its permitted successors and assigns;

w) "Licensee's Evaluation and Integration Plan" means Licensee's plan submitted to the Authority with respect to Licensee's Evaluation and Integration into the Competitive Trading Bilateral Contracts Market (CTBCM) Model;

x) "Licensing Regulations" mean the National Electric Power Regulatory Authority Licensing (Distribution) Regulations, 2022 as amended or replaced from time to time;

y) "Licensing AMEC Regulations" mean the National Electric Power Regulatory Authority Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 as amended or replaced from time to time;

z) "Minimum Transmission voltage" means sixty-six kilovolts or such other voltage that the Authority may determine to be the minimum voltage at which electrical facilities are operated when used to deliver electric power in bulk;

aa) "Open Access" means use of Distribution System for the movement and delivery of the electric power from generation facility to destination of its use as specified in the relevant regulations governing open access, as may be notified by the Authority and subsequently as amended or replaced from time to time;

bb) "Service Territory" means the territory specified by the Authority in Schedule-I of this license within which the Licensee is authorized to provide Distribution Services on a non-discriminatory basis;

cc) "Supplier of Last Resort", means who is a holder of distribution license falling within the purview of Regulation 2(o) of the National Electric Power Regulatory Authority Licensing (Electric Power Supplier) Regulations, 2022 read with proviso to sub section (I) of Section 23E of the Act and for the service territory specified in its license and is obligated to supply electric power to all consumers located in that service territory at the rates determined by the Authority, and is also obligated to provide electric power supply to the consumers, located within its service territory, of any Competitive Supplier who defaults on its obligations of electric power supply;

dd) "Use of System" means use of Distribution System of a Distribution Licensee for movement or delivery of electric power by or for any person;

ee) "Use of System Charges" means the charges made or levied or to be made or levied by a Distribution Licensee for the use of its Distribution System for the purposes of the Distribution Services but shall not include Connection Charges.

1.3 The words and expressions used but not defined herein bear the meaning given thereto in the Act or Rules and Regulations issued under the Act.

Article 2
Applicability of Legal & Regulatory Framework

The License is hereby renewed with the permission that the Licensee may approach the Authority for any modifications, if necessarily required, due to any change and/or modifications in the applicable provisions of the Act, relevant Rules and Regulation framed thereunder and/or under any other Applicable Documents or market reforms / policy / plan issued under Section 14A of the Act, as may be amended or replaced from time to time.

Article 3
Provision of License

3.1. The renewal of this license is granted to the Licensee to provide Distribution Services within its Service Territory as specified in Schedule I of this license subject to further renewals/extensions.

3.2. All disputes relating to the Distribution Services within the specified Service Territory shall be decided by the Authority.

3.3. (i) The Service Territory of the Licensee shall extend up to 5 km on either side and tail end points of its existing 11 kV Distribution System as shown in the Schedule I to the license. Service

Territory shall stand extended on expansion of the Licensee's 11 kV Distribution System within its Concession Territory as indicated in Article 3.3 (iii) below.

Provided that the Service Territory shall not include the following:

(a) Area in use of the Armed Forces for defense purposes for which an authorization by the Authority for Distribution of power purchased at one or more points for consumption within its own area has been provided. The Authority shall issue such authorization on a case to case basis. Appropriate compensation to the Licensee as determined by the Authority shall be provided in such cases where applicable.

(b) Areas in the use of housing colonies, plazas/complexes and other bulk purchasers, at the option of the organizations or bodies representing the occupiers or owners thereof, on the date of issuance of previous license dated July 21, 2003.

(ii) Without the prior approval of the Authority, the Licensee shall not change or alter the arrangement as it existed under previous license dated July 21, 2003, for the Distribution of electric power.

(iii) The Concession Territory of the Licensee shall comprise the area defined in Schedule I. The Licensee shall have the first right of refusal of its Distribution Services within its Concession Territory. The Licensee shall plan its Distribution System expansion within its Concession Territory. Areas where the Licensee is, despite the request and fulfillment of necessary formalities as per regulatory framework; by the owners or occupiers thereof, unable to provide Distribution Services under the Authority's approved terms and conditions within one year, shall at the option of owner or occupiers, stand excluded from the Concession Territory, shall be decided by the Authority.

3.4. (i) The Licensee shall provide to the Authority on annual basis an updated digitized plotting status of its 11 kV Distribution System. In the case of Low-Tension (LT) Distribution System, the Licensee shall complete the digitization process within three years from the issuance of this license. The Authority may extend the time required for reasons to be recorded in writing. The Licensee shall provide updated maps showing 11 kV Distribution System of the Service Territory of the Licensee on a high-resolution satellite imagery, preferably owned by the Licensee, as part of Schedule I of this License. The Licensee shall on an annual basis and within one month of the end of the preceding financial year provide to the Authority an updated map showing 11 kV Distribution System clearly demarcating the extension(s) made in the immediately preceding year.

(ii) The Licensee shall on an annual basis and within one month of the end of the preceding financial year, furnish a progress report in this regard to the Authority until completion of the LT digitization process.

Article 4
License Fee

The Licensee shall pay to the Authority the license fee as stipulated under Regulation 4 of the Licensing Regulations in the amount, manner and at the time specified in the National Electric Power Regulatory Authority (Fees) Regulations, 2021 as amended from time to time.

Article 5
Term and Renewal

5.1. This license shall become effective from the date of its issuance and will have a term of twenty (20) years in line with Regulation 5 of the Licensing Regulations.

5.2. The Licensee may apply for renewal of this license in line with Regulation 13 of the NEPRA Licensing AMEC Regulations read with Regulation 5 (2) of the Licensing Regulations

Article 6
Tariff

The Licensee shall charge only such tariff including Use of System Charges or Connection Charges, as determined or approved by the Authority from time to time.

Article 7
Provision of Distribution Services

7.1. The Licensee shall within its Service Territory specified in Schedule-I, be responsible for providing safe, secure and reliable Distribution of electric power on a non-discriminatory basis to all the licensees, generation companies, captive generating plants and persons who meet the consumer eligibility criteria, in accordance with the applicable documents.

7.2. Provided that any person willing to engage in Distribution Services in the Licensee's Service Territory as specified in Schedule I of this license shall be subject to grant of distribution license in accordance with the applicable legal framework to be prescribed by the Authority and/or Federal Government as well as in compliance with the approved CTBCM design and market reforms / policy / plan issued under Section 14A of the Act.

Article 8
Use of System and obligation to offer terms

8.1. The Licensee shall provide Open Access to its Distribution System and inter-connection facilities on a non-discriminatory basis to all consumers, licensees, captive generating plants and generation companies who are using or intend to use its Distribution System, provided that the

Open Access arrangement is in accordance with the CTBCM design and subject to applicable provisions of the relevant regulations governing Open Access, as may be notified or amended by the Authority from time to time.

8.2. The Licensee shall ensure that its Distribution System is planned, designed, implemented, maintained and operated in a manner that fully supports Open Access, the electric power market development and operations in compliance with the Applicable Documents.

8.3. The Licensee shall, on the request of Open Access user enter into a Use of System Charges Agreement for Use of System and connection to the system with an open access user, which shall include all charges related to use of Licensee's Distribution facilities and any other charges related to Open Access as determined by the Authority from time to time.

8.4. Any dispute relating to Open Access between the Licensee and the Open Access user, shall be dealt with in accordance with the mechanism provided in the Use of System Charges Agreement, Grid Code or Distribution Code or any other applicable code, as the case may be.

8.5. In the event the parties to a dispute are not able to resolve their dispute as per the procedure prescribed in the Applicable Documents, then the matter shall be referred to the Authority. The Authority shall give its decision within a period of three months after providing an opportunity of hearing to the concerned parties.

Article 9
Investment Programmes, Acquisition and Disposal of Assets

9.1. The Licensee shall not, except under a prior authorization acquire whether on ownership basis, lease, hire purchase or other mode of possession or use, any tangible or intangible asset of a nature or value inconsistent with or which is not expressly or by necessary implication stated in the Licensee's investment programme approved by the Authority in accordance with its Rules and Regulations provided that until such time the Licensee's investment programme is approved by the Authority in accordance with Regulation 14(1) of the Licensing Regulations, the Licensee may acquire assets required for the operation and maintenance of the Distribution System or assets of a value not exceeding ten percent of the proposed investment programme of Licensee for that year. The investment programme of the Licensee may be approved by the Authority as part of the Licensee's tariff petition.

9.2. The Licensee shall not except under a prior authorization, sell or dispose in any manner any of the tangible assets comprised in the Distribution System or any intangible assets accruing or likely to accrue to the Licensee from the Distribution business in a manner inconsistent with or which is not expressly stated in the Licensee's investment programme approved by the Authority in accordance with its Rules and Regulations, provided that until such time the Licensee's investment programme is approved by the Authority in terms of Regulation 14(1) of the Licensing Regulations, the Licensee may dispose or sell assets of a value not exceeding ten percent of the specified amount in the proposed investment programme of the Licensee for that

year. The investment programme of the Licensee may be approved by the Authority as part of the Licensee's tariff petition.

9.3. The Licensee shall not assume any responsibility for any encumbrance in relation to any asset unless the ownership thereof vests in the Licensee.

Article 10
Compliance with Performance Standards

The Licensee shall conform to the relevant performance standards and public service obligations as may be prescribed by the Authority from time to time.

Article 11
Compliance with Environmental Standards

The Licensee shall conform to the environmental standards as may be prescribed by the relevant competent authority.

Article 12
Uniform Industrial Standards and Codes of Conduct

The Licensee shall participate in such measures and activities as may be initiated by the Authority for the development of uniform industry standards and codes of conduct in accordance with the Applicable Documents.

Article 13
Accounting Practices

The Licensee shall maintain separate accounts for its distribution and other businesses, if any, in accordance with the Applicable Documents as may be revised from time to time.

Article 14
Maintenance of Record

14.1. The Licensee shall keep complete and accurate record and data in respect of all aspects of the Distribution business in their standard or electronic form.

14.2. Without prejudice to the provisions of the Regulation 16 of the Licensing Regulations, unless provided otherwise under the law or the Applicable Documents, all record and data shall be maintained for a period of five years after the creation of such record or data. Provided further

that the Licensee shall maintain all consumer billing related data in their standard or electronic form.

14.3. Original copies of any data and record shall not be destroyed or disposed off which the Authority directs the Licensee to preserve.

14.4. All record and data maintained shall, subject to just claims of confidentiality, be accessible by staff authorized by the Authority.

Article 15
Provision of Information

15.1. The obligation of the Licensee to provide information to the Authority shall be in accordance with Section 44 of the Act.

15.2. The Licensee shall be subject to such penalties as may be specified in the relevant rules made by the Authority, for failure to furnish such information as may be required from time to time by the Authority and which is or has been in the control or possession of the Licensee.

Article 16
Consumer Complaints and Dispute Resolution

16.1. The Licensee shall make available complaint-handling mechanisms that provide consumers, Electric Power Suppliers, other licensees and generation companies with expeditious, fair, transparent, inexpensive, accessible, speedy and effective dispute resolution.

16.2. Any complaints regarding connection, non-compliance of instructions with respect to metering, collection of approved charges, and disconnection in case of non-payment of charges, electric power theft and use of energy for purposes other than for which it was supplied, that cannot be resolved under the mechanism provided in pursuance of Regulation 25 (1) of the Licensing Regulations, shall be referred to the Authority in accordance with the Act.

ELECTRIC POWER SUPPLIER LICENSE

Article 1
Definitions

1.1. Unless there is anything repugnant in the subject or context and save as expressly defined hereafter, words and expressions used in this license bear the respective meanings given thereto in the Act or in the Rules/Regulations.

1.2. Subject to Article 1.1 in this license

(a) "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (Act No. XL of 1997), as amended from time to time;

(b) "Applicable Documents" mean the Act, the Rules and Regulations framed by the Authority under the Act, any documents or instruments issued or determinations, applicable codes, manuals, directions, guidelines, orders or notifications issued/approved/ made by the Authority under any of the foregoing or pursuant to the exercise of its powers under the Act, or the documents or instruments made by the Licensee pursuant to its license;

(c) "Authority" means the National Electric Power Regulatory Authority constituted under Section 3 of the Act;

(d) "Bulk Power Consumer (BPC)" means a Consumer who purchases or receives electric power, at one premises, in an amount of one (01) megawatt or more or in such other amount and voltage level and with such other characteristics as the Authority may specify and the Authority may specify different amounts and voltage levels and with such other characteristics for different areas;

(e) "Commercial Code" or "Market Commercial Code" means the commercial code prepared and maintained by the market operator pursuant to Sections 23A and 23B of the Act and approved by the Authority from time to time;

(f) "Competitive Supplier" means a person licensed under Section 23E of the Act to supply power to only those consumers who are located in the territory specified in its license and meet the criteria specified by the Authority;

(g) "Competitive Trading Bilateral Contract Market" or "CTBCM" means the electric power market established in accordance with the high level and detailed designs approved by the Authority vide its determinations dated 5th day of December 2019, 12th day of November 2020 and any subsequent determination(s) made by the Authority pursuant to Licensee's Evaluation and Integration Plan, as may be amended by the Authority from time to time;

(h) "Consumer" means a person or his successor-in-interest who purchases or receives electric power for consumption and not for delivery or re-sale to others, including a person who owns or occupies a premises where electric power is supplied;

(i) "Consumer Eligibility Criteria" means the relevant consumer eligibility criteria to obtain supply of electric power as specified by the Authority in the National Electric Power Regulatory Authority Consumer Eligibility Criteria (Electric Power Suppliers)

Regulations, 2022 as amended from time to time;

(j) "Consumer Supply Manual" means the manual of instructions developed by the electric power suppliers and approved by the Authority containing the instructions and guidance to the consumers for requesting electric power supply services, as described in Regulation 10 of the Licensing Regulations;

(k) "Distribution Code" means the code, which defines the technical and operational standards and procedures for distribution licensees and all those connected to the distribution system of the distribution licensees as specified in Regulation 12 of the National Electric Power Regulatory Authority Licensing (Distribution) Regulations, 2022 and shall include the supplier code prepared by the Licensee;

(l) "Electric Power Supplier" means a person who has been granted a license under the Act to undertake supply of electricity and shall include both Competitive Supplier and Supplier of Last Resort;

(m) "License" means this license granted to the Licensee for providing supply of electric power service to the consumers residing within its service territory;

(n) "Licensee" means K-Electric Limited (KEL) or its successors or permitted assigns;

(o) "Licensee's Evaluation and Integration Plan" means Licensee's plan submitted to the Authority with respect to Licensee's Evaluation and Integration into Competitive Trading Bilateral Contracts Market (CTBCM) Model;

(p) "Licensing Regulations" mean the National Electric Power Regulatory Authority Licensing (Electric Power Suppliers) Regulations, 2022 as amended or replaced from time to time;

(q) "Licensing AMEC Regulations" mean the National Electric Power Regulatory Authority Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 as amended or replaced from time to time;

(r) "Power Acquisition Programme" means the Licensee's power acquisition programme prepared on an annual basis in accordance with the Act, power procurement regulations and other applicable documents in line with Regulation 12 of the Licensing Regulations;

(s) "Service Territory" means the area specified by the Authority in Schedule-I of this license within which the Licensee is authorized to supply electric power to the consumers who meet the relevant eligibility criteria;

(t) "Supplier of Last Resort", means who is a holder of distribution license falling within the purview of regulation 2(o) of the Licensing Regulations read with proviso to sub section (I) of Section 23E of the Act for the service territory specified in its License and is obligated to supply electric power to all consumers located in that service territory at the rates determined by the Authority and is also obligated to provide electric power supply to the consumers, located within its service territory, of any Competitive Supplier who defaults

on its obligations of electric power supply.

1.3. The words and expressions used but not defined herein bear the meaning given thereto in the Act or Rules and Regulations issued under the Act.

Article 2
Applicability of Legal and Regulatory Framework

The license is hereby renewed with the permission that the Licensee may approach the Authority for any modifications, if necessarily required, due to any change and/or modifications in the applicable provisions of the Act, relevant rules and regulations framed thereunder and/or under any other Applicable Documents or market reforms / policy / plan issued under Section 14A of the Act, as amended or replaced from time to time.

Article 3
Provision of License

3.1. The renewal of this license is granted to the Licensee to perform the functions of Electric Power Supplier in its Service Territory.

3.2. All disputes relating to the supply of power and consumers within the specified Service Territory shall be decided by the Authority.

Article 4
Term and Renewal of License

4.1. This License shall become effective from the date of its issuance and will have a term of twenty (20) years in line with Regulation 6 of the Licensing Regulations.

4.2. The Licensee may apply for renewal of this License in line with Regulation 6 (3) of the Licensing Regulations.

Article 5
License Fee

5.1 The Licensee shall pay to the Authority the License fee as stipulated in Regulation 5 of the Licensing Regulations in the amount, manner and at the time specified under National Electric Power Regulatory Authority (Fees) Regulations, 2021 as amended or replaced from time to time.

Article 6
Tariff

Licensee is allowed to charge only such tariff to its customers as is determined by the Authority.

Article 7
Competitive Trading Bilateral Contracts Market (CTBCM)

The Licensee shall participate in CTBCM in such manner as may be directed by the Authority from time to time. The Authority and the Licensee shall in good faith work towards implementation and operation of the aforesaid CTBCM regime.

Article 8
Investment Programme

8.1. The Licensee shall from time to time submit its investment programme as part of the Licensee's tariff application with the Authority for its approval.

8.2. Provided that the investment plan shared by the Licensee in pursuance of Article 8.1 of this license shall be drawn up consistently with the provisions of the relevant rules, regulations and directions of the Authority as may be issued from time to time.

Article 9
Obligation to Supply and Prohibition of Discrimination

9.1. The Licensee shall supply, for such period as may be specified in the license, electric power in its Service Territory to all consumers who fulfill the Consumer Eligibility Criteria for supply of electric power from Electric Power Supplier in a safe, secured, reliable and efficient manner on a non-discriminatory basis and on such terms and conditions including tariff as may be specified or determined by the Authority.

Provided that the Licensee, as Supplier of Last Resort for the Service Territory specified in Schedule-I of this License shall also be obligated to provide electric power services to such Consumers whose Competitive Supplier defaults on its obligations.

9.2 Provided further that any person willing to engage in electric power supply services in the Licensee's Service Territory shall be subject to grant of Electric Power Supplier license in accordance with the applicable legal framework to be prescribed by the Authority and/or Federal Government as well as in compliance to approved CTBCM design as amended by the Authority and market reforms / policy / plan issued under Section 14A of the Act.

Article 10
Power Acquisition Programme

10.1. The Licensee shall submit to the Authority its Power Acquisition Programme in accordance with the Act, Licensing Regulations, power procurement regulations and other applicable documents.

10.2. The Licensee shall establish adequate communication and information sharing mechanism with the concerned distribution licensee to periodically obtain information about the prospective consumers who have submitted an application for installation of an electricity connection to develop its Power Acquisition Programme.

Article 11
Accounting Practices

The Licensee shall prepare its accounts in respect of the electric power supply and other businesses, if any, in accordance with the applicable documents as may be revised from time to time.

Article 12
Compliance with Performance Standards

The Licensee shall comply with the relevant provisions of the Performance Standards and public service obligations as maybe prescribed by the Authority as amended from time to time.

Article 13
Uniform Industrial Standards and Codes of Conduct

The Licensee shall participate in such measures and activities as may be initiated by the Authority for the development of uniform industry standards and codes of conduct in accordance with the applicable documents.

Article 14
Compliance with Environmental and Safety Standards

The Licensee shall comply with the environmental and safety standards as may be prescribed by the relevant competent authority as amended or replaced from time to time.

Article 15
Maintenance of Record

15.1. The Licensee shall keep complete and accurate record and other data relating to the licensed activity including any contractual arrangements, agreements, and any other information as may be specifically required by the Authority in their standard or electronic form.

15.2. Without prejudice to the provisions of the Regulation 21 of the Licensing Regulations, unless provided otherwise under the law or the Applicable Documents, all record and data shall be maintained for a period of five years after the creation of such record or data. Provided further that the Licensee shall maintain all consumer billing related data in their standard or electronic form.

15.3. Original copies of any data and record shall not be destroyed or disposed off which the Authority directs the Licensee to preserve.

15.4. All record and data maintained shall, subject to just claims of confidentiality, be accessible by staff authorized by the Authority.

Article 16
Provision of Information

In accordance with provisions of Section 44 of the Act, the Licensee shall be obligated to provide the required information in any form as desired by the Authority without any exception.

Article 17
Consumer Complaints and Dispute Resolution

17.1. The Licensee shall make available complaint-handling mechanisms that provide consumers with expeditious, fair, transparent, inexpensive, accessible, speedy and effective dispute resolution.

17.2. Any complaints regarding billing, non-compliance of instructions with respect to metering, collection of approved charges, and disconnection in case of non-payment of charges, electric power theft and use of energy for purposes other than for which it was supplied, that cannot be resolved under the mechanism provided in pursuance of Regulation 26 (1) of the Licensing Regulations, shall be referred to the Authority.

ANNEXURE A3

POWER PROCUREMENT PLAN

(FY 2024 – FY 2030)

Table of Contents

DISCLAIMER

The Power Procurement Plan (**'the Plan'**) has been prepared only as an indicative development plan for the period from FY 2024 to FY 2030. The Plan does not contain or determine targets or ascertain liabilities pertaining to power purchase or procurement, commissioning of future power projects assumed within the Plan, regulation or determination of electricity tariff(s), performance or ascertainment of economic despatch etc. The Plan has been prepared in compliance with regulatory requirements and is based on proprietary input data as received from various entities and best estimates/assumptions. Use or reliance on this Plan or any portion or variation thereof by any third party shall be at their sole discretion and risk. KE shall not be held responsible/liable in any manner whatsoever for the integrity, accuracy, authenticity, correctness or representation of such data or consequences resulting from dependency on the Plan therefrom.

PREAMBLE

This Plan is developed in compliance with the requirements stipulated under NEPRA Licensing (Electric Power Supplier) Regulations, 2022.

The Plan envisages KE's long-term planning to ensure security of power supply with an objective to determine a minimum cost strategy for long-range expansion of power generation, which is adequate to supply the load forecasted within a set of prevailing policies and technical and socio-economic considerations. The Plan is indicative and pertains to the period from FY 2024 till FY 2030 duly considering the future electricity demand forecast, KE's generating fleet (including external sources of supply) and energy mix, as well as most suitable possible options for power procurement.

The Plan will serve as a roadmap for KE's power augmentation with a focus on leveraging indigenous fuel resources followed by meaningful inclusion of renewable sources of power generation.

EXECUTIVE SUMMARY

The provision of reliable, adequate, and affordable electricity is a pre-requisite for socio- economic growth and development of any country. In this context, KE has formulated this Plan spanning on a horizon from FY 2024 till FY 2030, aptly identifying KE's long-term power needs through addition of new power generation and power supply sources with a focus on reduction of KE's basket price keeping in view the reliability of the system through induction of renewables and indigenous power sources.

This Plan is being formulated at the crucial juncture of time, when both the local and global power markets are going through unprecedent challenges such as growing emphasis on induction of renewable energy power sources to reduce the carbon footprint and address the global warming and climatic changes followed by change on political landscape globally. Additionally, the world is still recovering from the aftermath of COVID-19 pandemic, which posed challenges including but not limited to the pent-up demand scenario, supply chain bottlenecks due to global disruption of supply chain, rising inflation levels and alarming increase in commodity and fuel price(s). In addition to aforementioned, formulation of the Plan has also considered the directives pronounced by the Government of Pakistan (GoP), as also iterated through the National Electricity Policy 2021, encouraging development of power projects on indigenous and renewable resources.

In order to effectively respond to these impeding challenges, KE remains committed towards adding sustainable and cheaper power generation in its fleet. To achieve this, KE has devised this Plan as part of its long-term planning in line with the best international practices, assisting it to achieve not just the future financial success, but also to provide cheaper and reliable power to its customers, along with meeting its regulatory obligations whilst navigating the constraints as elaborated in preceding para.

It may please be noted that the Plan has been modeled on the assumption of power availability from National Grid up to 2,050 MW throughout the planning horizon from the time of commissioning of KKI Grid in FY 2024 with new capacity additions of Renewables (1,100MW), Hydro (82MW) and Thermal Baseload (990MW). The data utilized for the purpose of this Plan has been sourced internally or has been referenced from the assumptions taken by NTDC during the development of draft Integrated Generation capacity Expansion plant (IGCEP) 2022-2031, submitted to the NEPRA Authority by NTDC in September 2022. Based on these data and assumptions, the results achieved clearly depict a positive impact in terms of reduction of KE's basket price based on indexed tariff to ~9 c/kWh in FY 2030 from ~11.1 c/kWh in FY 2024.

Going forward, KE will be re-evaluating its assumptions and long-term forecast on annual basis, as required under regulation 12 of NEPRA Licensing (Electric Power Supplier) Regulations, 2022, which will be submitted to the Authority for its consideration and approval.

1. Introduction

The provision of reliable, adequate, and affordable electricity is a pre-requisite for growth and development of economy and as an emerging economy, a country's demand for electricity correlates with the GDP of the country. Accordingly, certain electricity indices such as per capita consumption of electricity and access to electricity are used to express the socio-economic strength of a country. The per capita consumption of Pakistan is 644[1] kWh compared to 1,218[2] kWh in India. Considering the consequential high capacity costs in the National Grid as well as given the volatility of electricity demand, it is imperative to conduct planning in such a manner that reliable supply is ensured, which is crucial for the economy and socio-economic development of Pakistan.

Company Overview

KE is a vertically integrated power utility in Pakistan providing utility services to the city of Karachi and adjoining parts of Sindh and Baluchistan. KE was incorporated in the year 1913 and subsequently privatized in November 2005. As a vertically integrated utility, KE is engaged in generation, transmission, distribution, and supply of electricity by virtue of its licenses granted by NEPRA. KE is a public limited company duly listed on the Pakistan Stock Exchange and serving a consumer base of over 3.4 million consumers.

KE's Existing Generation Capacity

Since privatization and up to FY 2022, KE has invested an amount of **~PKR 474 Billion** across the power value chain through fresh equity injection, debt, and reinvestment of all profits in the business, resulting in significant improvements across the power value chain. Out of the PKR 474 Billion invested across the power value chain, **~PKR 204 Billion** have been invested in the Generation function. As a result of investments made in the Generation function, KE since privatization has added 1,977 MW of installed capacity in its generation fleet which includes BQPS-III currently under testing and commissioning. KE's licensed installed capacity including BQPS III is 2,817 MW.

The total net generation capacity in KE system (after considering auxiliary consumption) including procurement from IPPs and import from National Grid at present stands at around 4,061 MW (including BQPS III) which will further increase upon enhancement in interconnection capacity enabling off-take of upto 2,050 MW from National Grid.

[1] NEPRA State of Industry Report 2022
[2] Statista.com

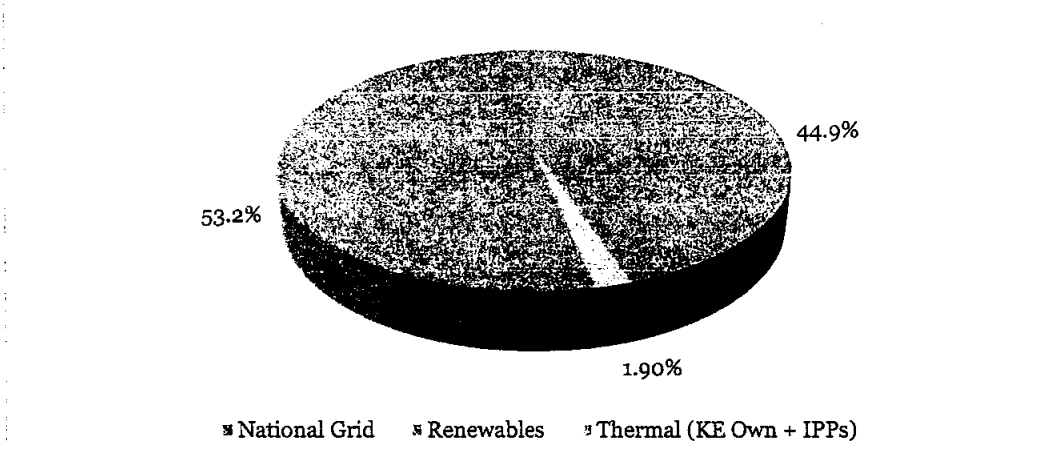
Table 1: Existing Generation Capacities in KE System

Plants	Fuel	Installed Capacity as per License (MW)	Net Capacity after Aux. consumption (MW)
BQPS-I	NG/RLNG / RFO	840	693
BQPS-II	NG/RLNG	573	494.5
BQPS-III	RLNG / HSD	942	899.6[3]
SGTPS	NG/RLNG	107	93
Korangi CCPP	NG/RLNG/HSD	248	220.8
KGTPS	NG/RLNG	107	92
Total KE Fleet		**2,817**	**2,493**
Gul Ahmed	RFO	136	128
Tapal Energy	RFO	126	124
SNPC-I	NG	52	51
SNPC-II	NG	52	51
FPCL	Imp. Coal	60	52
Oursun	Solar	50	9
Gharo	Solar	50	11
Total IPPs		**526**	**426**
Total CPPs		**42**	**42**
National Grid Supply		**1,100**	**1,100**
Total Existing Capacity		**4,485**	**4,061**

KE's Fuel Mix

During FY 2022, KE served a total energy of 19,802 GWh, which was generated by 1.9%[4] renewables, 53.2% thermal (KE's own and IPPs), and 44.9% from National Grid.

Chart 1: KE Fuel Mix 2022



[3] Actual dependable capacity of BQPS III will be determined post commissioning
[4] Includes 44GWh of power import from net metering consumers

2. Objective

The key objective of the Plan is to develop a 7-year indicative generation capacity expansion plan for KE's service territory to meet the load and energy demand in a reliable and sustainable manner, while maximizing use of indigenous resources. Accordingly, this Plan has been prepared with the following objectives:

a) Identification of KE's requirements
This is the prime objective of this Plan, which envisages identification of generation requirements by capacity, fuel, technology, type and planned commissioning dates on year-by-year basis.

b) Creation of a long-term plan
Identification of KE's requirements is followed by formulation of a long-term plan to ensure that the projected demand in the system is adequately met by adding most optimal and reliable generation capacity, which would not only diversify KE's generation fleet mix, but also reduce its generation cost. This Plan is however indicative in nature and based on estimates/ projections that involve various economic and business uncertainties and is subject to changes upon its future iterations.

c) Reduction in generation costs
The Plan also focuses on reduction of KE's generation costs through induction of indigenous and renewable resources to meet the future load growth in KE's service area. Considering the challenges and restrictions in procuring power from indigenous resources such as hydel and local coal from outside KE's system via wheeling, the Plan has been conceived keeping a balance between procurement within and outside KE's territory, to ensure reliability of project commissioning and evacuation timelines. It is pertinent to mention that wheeling is a critical element for KE to procure power based on indigenous sources and hence, now with the enactment of open access regulations, support of the Authority is of key importance in this regard.

d) Ensure reliability of the system
Another key consideration accounted for in the Plan is availability of reliable sources of generation to meet the future load demand with maintenance of contingency and spinning reserve along with other requirements and due compliance with the provisions of the applicable documents.

3. Assumptions / Inputs of Procurement Plan

The Plan takes into account several assumptions including but not limited to technical, commercial and economic factors, as detailed below.

Technical Assumptions

Following technical assumptions have been accounted for in this Plan.

1) **Renewable Energy Generation**

Actual data of wind and solar, collected from the vicinity of KE's renewable corridors has been used to predict the future energy generation and the annual generation pattern. For the sake of the Plan, the capacity utilization factor of 23.1%[5] and 40.3%[6] has been taken for Solar and Wind generation plant(s) respectively.

2) **System Reserve Requirement**

Reserve of a generating system is a measure of the system's ability to respond to a rapid increase in load or loss of the generating unit(s). For the purpose of this Plan, two types of reserves have been modelled as per provisions of the Grid Code, i.e., contingency and secondary reserve.

a) Contingency Reserve

The contingency reserve is the level of generation over the forecasted demand, which is required from real time plus 24 hours to cover for uncertainties. This reserve is provided by the generators, which are not required to be synchronized but they can be synchronized within 30 minutes of the initiation of the contingency and the corresponding fall in frequency. As per best industry practices, this is equal to the capacity of the largest generator in the system.

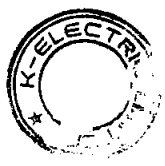
b) Secondary Reserve

The secondary reserve is a type of spinning reserve, and it is the increase in power output of the online generators following the falling frequency and is fully sustainable for 30 minutes after achieving its maximum value. It is equal to the one third of the largest unit in the system.

3) **Scheduled Maintenance / Availability of power plants**

Scheduled maintenance plays an important role in retaining the desired efficiency and reliability while at the same time preserving the useful life of a generating unit. Scheduled maintenance of available plants has also been considered while formulating this Plan.

[5] Based on Actual capacity factor of Gharo Solar
[6] Based on latest NEPRA benchmark for wind plants



0318 - 3992445 ✓

4) **Renewables Integration Study**

KE is in the process of conducting a VRE study, which shall evaluate the extent to which renewables can be incorporated into KE's network, without making a compromise to the reliability of the network. The current Plan assumes that all the proposed renewable projects, as delineated in the Plan, shall be incorporated subject to the outcome of VRE study being conducted, and with no additional cost of development of spinning/contingency reserve and transmission augmentation which could differ from the Transmission System Investment Plan.

5) **Transmission System Investment Plan of KE**

The long-term transmission investment plan has been developed by KE, which will be submitted for NEPRA's approval as part of KE's MYT Petition (FY 2024-FY 2030) for Transmission business, and the generation selected under this Plan is in accordance with the availability of the grid and transmission capacities envisaged under the investment plan.

Commercial and Economic Assumptions

Following commercial and economic assumptions have been accounted for in this Plan.

1) **Demand Forecast**

Energy and power demand forecast provides the basis for all planning activities in the power sector and it is one of the decisive inputs for generation planning. In line with this, KE foresees following demand projections, based on historical demand and macroeconomic environment:

Table 2: Peak Demand

Fiscal Year	Peak Demand [7] (MW)	Sent out (GWh)
2024	4,168	19,932
2025	4,290	20,558
2026	4,404	21,052
2027	4,522	21,478
2028	4,631	21,848
2029	4,768	22,208
2030	4,896	22,539

Sent-out growth per annum has been taken at ~1.77%. Following aspects are considered while calculating sent-out growth:

a) Data sources (GDP, Historic Demand etc.)
b) Demand side considerations (Impact of equipment efficiency)
c) Net metering/Solar disruptions
d) AT&C loss based load-shed has been considered in the projected sent-out

[7] based on demand peak observed during night-time

K-ELECTRIC LIMITED

e) Non-AT&C loss based load management

2) **Fuel price Forecast**

Base fuel prices for the indexed tariff have been taken as per the prevailing fuel prices in August 2022 and have been further indexed for future years in accordance with the indexation factors provided in the draft **IGCEP 2022-31**, submitted to the NEPRA Authority for approval.

Whereas, for non-indexed tariffs, Fuel prices prevalent in November 2022 have been considered while no indexation of fuel prices and macro-economic factors have been taken during the planning horizon.

3) **Contractual Assumptions**

Following contractual commitments have been assumed under the Plan:

a) Up to 2,050 MW power drawl from National Grid throughout the year for the entire planning horizon starting from June 2024, subsequent to commissioning of KKI grid station.

b) Take or Pay obligations of existing fuel contracts and IPPs

Other Assumptions

In addition to aforementioned, retirement of KE's own power plants and IPPs has also been considered based on completion of their useful lives and/or expiry of PPA (shown in Table 3 below). KE will further evaluate their retirement before their expiry date as per its business needs and keeping in view the expected demand-supply situation. Therefore, KE, keeping in view the safety and operational viability, may request the NEPRA Authority for extension in their useful lives, if required.

Table 3: Retirement Schedule of Existing Power Projects in KE's System

S No.	Name of Project	Fuel Type	Installed Capacity (MW)	Retirement /PPA Expiry
1	Gul Ahmed	RFO	136	FY 25
2	Tapal	RFO	126	FY 24
3	BQPS 1 – Unit 1	NG/RLNG/RFO	210	FY 24
4	BQPS 1 – Unit 2	NG/RLNG/RFO	210	FY 24
5	BQPS 1 – Unit 5	NG/RLNG/RFO	210	FY 27

4. KE Proposed Power Procurement Plan

KE's proposed procurement plan focuses on reduction in future generation cost by maximizing induction of renewables and use of indigenous coal for base load generation. The proposed Plan provides the most prudent scenario of KE's long-term procurement planning with addition of generation planned from different generation technologies, with majority of the power coming from renewables i.e., Solar 900MW and Wind 200MW till FY 2030. In addition to this, 82MW hydel is also proposed to be added in the generation mix in year FY 2029. Additionally, KE has also considered that the import of power from National Grid up to 2,050 MW will be available throughout the year, for the entire planning horizon i.e., FY 2024 till FY 2030. With respect to baseload power, 330MW Siddiqsons Energy Limited is expected to come online in FY 2026, followed by two additional units of 330MW coal power project in FY 2027 and 2029 respectively.

Table 4 - Year Wise Addition of New Capacity | FY 2024 – FY 2030

Financial Year	Technology Type	Installed Capacity (MW)
2025	Solar	150
	Solar	350
2026	Local Coal	330
2027	Local Coal	330
	Solar	200
2028	Wind	100
2029	Local Coal	330
	Solar	200
	Hydel	82
2030	Wind	100
Total Additions		**2,172**

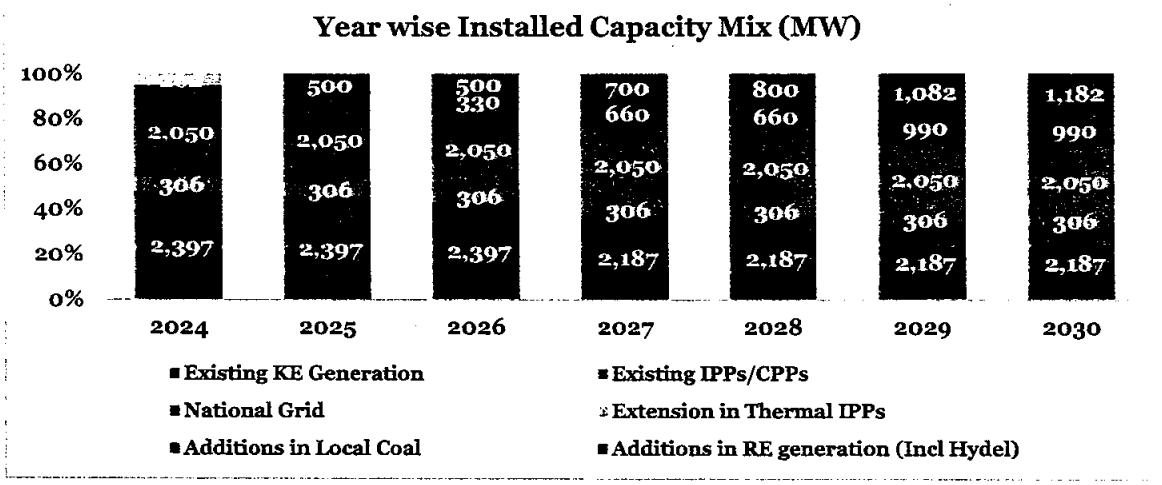
Detail of key Projects are enclosed as **Annexure I** of this Plan while KE had also submitted a detailed plan for renewable energy additions to the Honorable NEPRA Authority in September 2022.

Moreover, KE is also actively evaluating the possibility of direct offtake from larger hydel projects, however they have not been included in the planning horizon of this Plan due to later commissioning of the projects being targeted (i.e. post FY 2030).

Capacity Additions | Installed Capacity Mix (MW)

KE's year-wise Installed capacity (including additions planned from FY 2024-2030) is depicted below:

Chart 2: Existing and Planned Additions in Installed Capacity (MW)



Demand-Supply Outlook

KE's future Demand Supply outlook, considering optimum mix of baseload and renewable projects is presented below for consideration. The demand supply scenario depicts that if the planned capacity addition is pursued, then there will be power surplus for each of the year considered in the planning horizon, which is in accordance with prudent utility planning principles.

The below table depicts the picture of peak demand for every year and also presents the available capacities that will be utilized to serve the projected demand. It is pertinent to mention here that the expected peak demand will be observed during the night-time, therefore solar PV projects will not be available to serve the demand at that point of time.

Table 5: Demand and Supply outlook

Particulars (MW)[8]	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
KE Existing Plants	1,253	1,253	1,253	1,077	1,077	1,077	1,077
BQPS III	900	900	900	900	900	900	900
Existing IPPs / CPPs[9]	173	173	173	173	173	173	173
National Grid	2,050	2,050	2,050	2,050	2,050	2,050	2,050
Supply – Before Additions	**4,376**	**4,376**	**4,376**	**4,200**	**4,200**	**4,200**	**4,200**

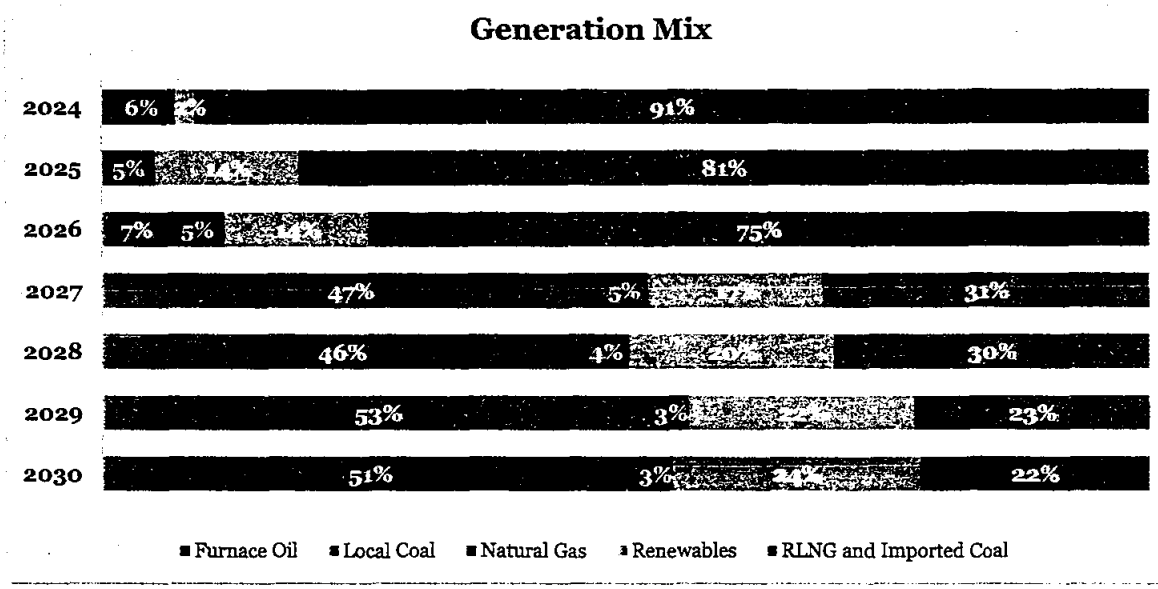
[8] Based on Net Capacity after auxiliary consumption
[9] Existing Solar IPPs not considered against night Peak

Particulars (MW)[8]	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Proposed Supply Additions							
Thermal Extension	251	-	-	-	-	-	-
Local Coal	-	-	305	610	610	915	915
Wind	-	-	-	-	40	40	81
Solar[10]	-	-	-	-	-	-	-
Hydel	-	-	-	-	-	80	80
Total Supply	**4,627**	**4,376**	**4,681**	**4,810**	**4,850**	**5,235**	**5,276**
Peak Demand (Night Peak)	**4,168**	**4,290**	**4,404**	**4,522**	**4,631**	**4,768**	**4,896**
Surplus	**459**	**86**	**277**	**288**	**219**	**467**	**380**

Generation Fuel Mix (GWh)

The energy contribution by FY 2030 in KE's system (excluding supply from National Grid) will primarily be dominated by indigenous fuels and renewables. The percentage of renewables and indigenous fuel penetration in KE's network will be 24% and 54% respectively by FY 2030, wherein the percentage increment of indigenous fuel utilization and renewables will by 70%.

Chart 3: Generation Fuel Mix (FY 2024-2030)



[10] Additions in Solar IPPs not considered in night peak

This significant shift towards renewables and indigenized fuel resources along with off-take of 2,050 MW from National Grid will help reduce KE's cost of generation, and accordingly, the basket price is expected to reduce from ~11.1 cents/kWh in year FY-2024 to ~9 cents/kWh in year FY- 2030.

Impact on Basket Price

Paradigm shift towards indigenous fuel and renewable power sources over the years will result in substantial reduction in KE's basket price. However, as highlighted earlier, the development of coal power generation is subject to the support of international technology providers and financiers. KE is currently engaging with all the relevant stakeholders to assess the viability of development of coal-based project and to acquire further clarity in this regard.

In parallel, KE will also actively engage with Hydel developers of KPK and AJK, to create a fallback option in case the development of indigenous coal project does not materialize.

Movement of Basket price on both indexed and non-indexed tariff is given below:

Chart 4: Basket Price Indexed Tariff (FY 2024-30)

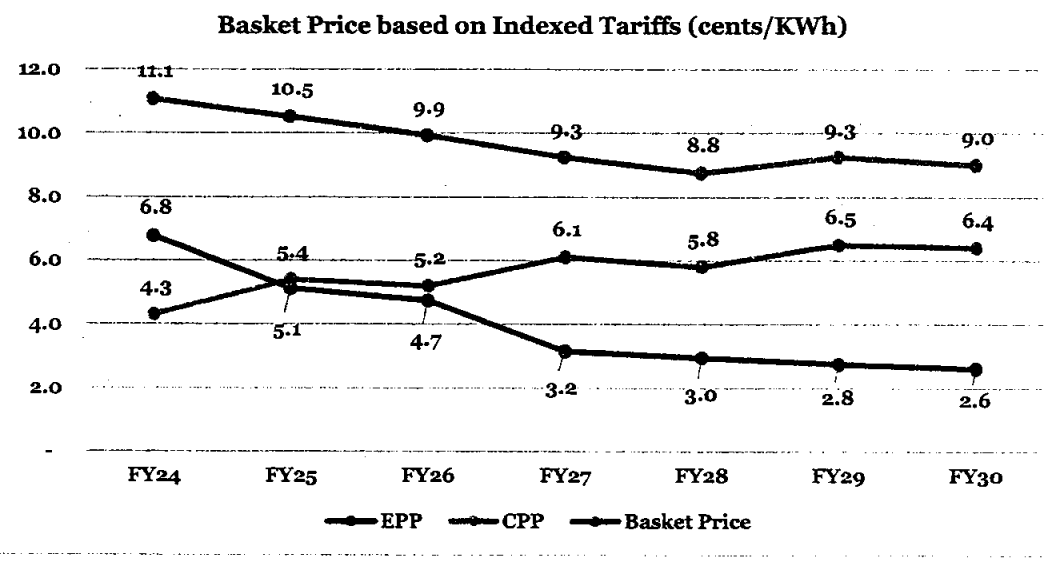
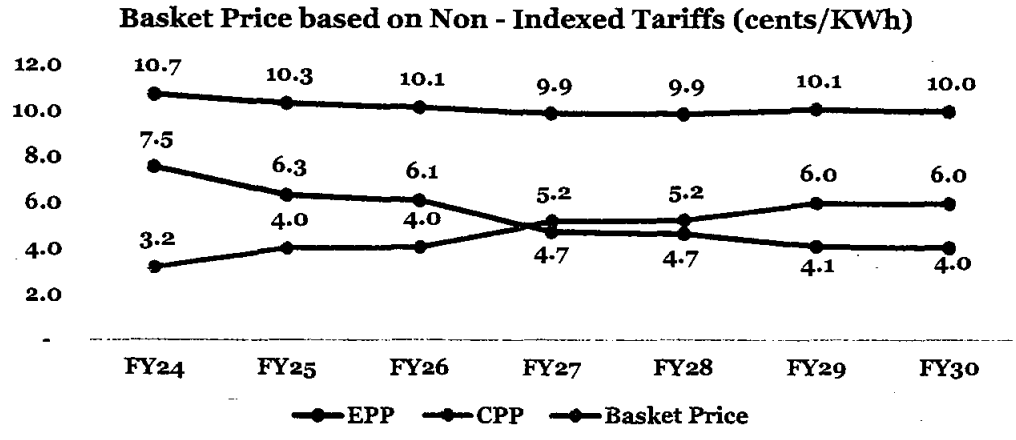


Chart 5: Basket Price Non-indexed Tariff (FY 2024-30)



5. Anticipated Challenges

KE anticipates the following challenges, which, may be faced in implementation/execution of this Plan.

a) **Local Coal:** Other than SEL, for which, there is a signed EPC contract and signed term sheet based on mainly local financing, future development on local coal remains to be seen due to the moratorium on coal projects in consideration of global carbon targets.

KE is actively pursuing a multifaceted strategy, to create a fallback option in case the current plan of developing indigenous coal power projects doesn't materialize due to the challenges narrated in preceding paras. To mitigate the impact of coal projects, KE is actively working with the private developers of KPK and AJK and is also in close contact with the Federal and Provincial Hydel power development agencies like PPIB and PEDO to ensure that the required capacity of hydel power is developed and contracted in a timely manner, to displace the power, which, has been planned to be generated from indigenous coal assets.

b) **National Grid:** KE in collaboration with National Transmission & Distribution Company (NTDC), had successfully implemented the cross-trip scheme along with rehabilitation of KDA-Jamshoro lines, enabling KE to draw additional power of 450-600 MW from the National Grid through existing interconnections.

At present, KE is also in the process of constructing grids at KKI and Dhabeji, which will enable KE to increase its power evacuation from the National Grid. However, the firm capacity available to KE from NTDC remains to be finalized.

For NTDC to be able to deliver the planned 2,050 MW capacity for KE's import, timely development of large hydel power projects will be pivotal, especially the projects supported by public sector like Dasu (2,160MW), Mohmand (800MW), Tarbela Ext. 5

(1,630MW) and Thakot (1,490MW), which are significantly dependent upon availability of funds and land for construction. Considering that historically there have been significant delays in commissioning of large-scale hydel power projects from their stipulated timelines, there is a material risk that the proposed generation and its timelines assumed in the draft IGCEP 2022-31 would turn out to be drastically different from the actual commissioning dates. This would certainly have a consequential impact on the execution of this Plan.

c) **Induction of Renewables:** Renewables induction in KE's network, up to its maximum technical capability will always remain a top priority for KE. The fact remains that the development timelines of renewables are also shorter as compared to other generation options, and ample appetite is available amongst international and local lenders to finance such projects. In this context, KE is in the process of conducting a renewable integration study with the assistance of international consultant, which would assist KE in determination of the most optimum capacity of renewables that could be inducted into KE's network, in line with the international best practices with due regards to the inherent technical limitations. Further, in case of any changes to the proposed Plan in light of the results of the VRE Study, the same shall be duly shared with NEPRA.

d) **Implementation of CTBCM:** While KE has already incorporated an impact of net metering and solar penetration on its expected demand, the possible impact of defections of KE's Bulk Power Consumers (i.e., over 1 MW of load) towards the bilateral mode contracts post implementation of CTBCM cannot be ascertained at this stage. However, KE anticipates that this may alter KE's demand forecast, which will also affect this Plan in future years.

6. Conclusion

KE is committed to adding cheaper power to its system and humbly requests the NEPRA Authority to consider and approve this Plan to enable KE to continue working upon the avenues as highlighted under this Plan.

Further, KE humbly submits that this Plan is conceived with limited foresight of future dynamics of the power market and the current geopolitical environment, based on the factors listed below:

- **Geo-political conditions:** Have added to global fuel constraints and has led to exponential rise in fuel prices that are depressing the global economy. This in turn has increased the need for self-sufficiency to ensure fuel supply security for Pakistan. To consider as an example the global brent prices varied between $ 37 to $ 76 per barrel in FY 2021 compared to a variation of $ 65 to $ 123 per barrel in FY 2022 representing an increase of ~ 70%[11].

[11] Trading Economics

- **Rupee devaluation:** Rupee has lost over 30 per cent of its value during 2022, according to the Foreign Exchange Association of Pakistan[12].

All the above factors have necessitated the requirement for development in indigenous projects to ensure economic security. Keeping this in perspective, KE has planned to add indigenous coal-based projects for its baseload requirements and renewable projects to limit the dependency on imported fuels, which is also in accordance with the principles of National Electricity Policy 2021.

KE humbly requests NEPRA for approval of the Plan and shall keep NEPRA Authority apprised of any changes in the Plan on annual basis as required under the NEPRA Electric Power Supplier Regulations, 2022. Further, it is humbly submitted that the implementation and timely execution of this Plan is also dependent upon a sustainable tariff for the next tariff control period as well as timely investment approvals such that required network infrastructure is in place for smooth and reliable evacuation of power from the sources envisaged under this Plan. Furthermore, it is important that a level playing field is provided to the IPPs to be contracted with by KE, as envisaged under this Plan, and the IPPs to be contracted by CPPA through PPIB or AEDB in order to ensure that the investors are provided similar attraction for investments.

[12] State Bank of Pakistan

Annexure I - Details and status of Ongoing Projects

1. 3 x 50 MW Winder, Uthal and Bela Solar Project

KE is undertaking 3 x 50 MW Solar Project(s) in the Winder, Uthal and Bela region of Balochistan via competitive bidding mechanism as stipulated under the NEPRA Competitive Bidding Tariff Regulations, 2017, whereby KE is the Relevant Agent and the Power Purchaser.

These are strategic projects for KE to improve the reliability of power supply for these regions as KE is also planning to install new 132 kV lines / grids from Hub to Bela. These initiatives are expected to improve the service delivery, pave way for industrial growth, increase employment in the region and socially uplift the adjoining areas. Proposed 3 x 50 MW solar power projects entail a combined landmark investment of c. USD 200 Million in the region (including upgradation of transmission infrastructure).

Tremendous interest was shown for these Solar Projects by local and international investors, in the form of 56 Expression of Interests (EOIs) that were submitted, which were finally brought down to 22 pre-qualified applicants. Once the bidding process for the generation projects is concluded, the successful Bidder will have majority shareholding and management control in the SPV, while KE may participate as a non-controlling shareholder with the successful bidder. Such discussion will only be initiated upon culmination of the bidding process in a clear and transparent manner. The Bidding process will be overseen by an independent consultant, who will be part of the Bid Evaluation Committee and the Bid Evaluation report would be submitted to NEPRA prior to the Letter of Interest (LOI) being issued to the Successful Bidder.

Moreover, the land for the 3 x 50 MW Solar Projects will be provided by GoB. Successful Bidder will be responsible for development and financial close of the projects with KE providing the necessary support required.

In June 2021, KE had completed all requisite technical studies and submitted them as part of the Request for Proposal (RFP) package to NEPRA and the prospective bidders for the projects in Lasbela. RFP was submitted in April 2021 and was approved by NEPRA in October 2022. It is expected that KE will soon obtain requisite land approvals from the Government of Balochistan enabling initiation of Bidding process.

Milestones achieved since inception include the following:

Milestones	Date
Advertisement seeking EOIs	07-Aug-2020
EOIs received from 56 parties	21-Aug-2020
Issuance of Prequalification Document	05-Nov-2020
Submission of Prequalification Applications from the Applicants	21-Dec -2020
Submission of RFP to NEPRA and issuance to Prequalified Applicants	28-Apr-2021
Submission of Feasibility Studies to NEPRA for the three sites	30-Jun-2021

It is pertinent to mention that the addition of low-cost hydro power to KE system will benefit the electricity consumers through reduction of KE basket price and will help diversify KE's generation fuel mix. The project will further match the seasonal demand requirement by catering to serve during peak summer months.

4. Siddiqsons Energy Limited 330 MW Thar Mine Mouth Power Plant

The project was initially conceived to sell power to CPPA-G and has completed various project milestones including signed project agreements, completion of feasibility studies, upfront tariff and Generation License award by NEPRA. SEL approached KE for power off-take and has been in active discussions with lenders and are confident of securing financing for the Project. KE has completed its due diligence. SEL has approached the Government to sort out the pending issues for the Project so that they may move forward. SEL has also approached NTDC at the working level for discussions on wheeling and initiate the requisite studies. The development of the wheeling structure would be the most critical element for the success of this project with KE, opening the doors for future evacuation of power by KE from projects not located in or around its service territory. In parallel, SEL is pursuing SECMC and GoS for consents and extensions of already executed contracts including Coal Supply Agreement and Water Use Agreement.

Glossary

Abbreviation	Definition
BQPS	Bin Qasim Power Station
CCPP	Combined Cycle Power Plant
CPPA-G	Central Power Purchase Agency (Guarantee) Limited
CPP	Captive Power Producers
FPCL	FFBL Power Company Limited
GENCO	Generation Company
GoP	Government of Pakistan
ICA	Interconnection Agreement
IGCEP	Indicative Generation Capacity Expansion Plan
IPPs	Independent Power Producers
KGTPS	Korangi Gas Turbine Power Station
KE	K-Electric Limited
KKI	KANUPP Karachi Interconnection
kWh	Kilo-Watt Hours
NTDC	National Transmission and Despatch Company
NEPRA	National Electric Power Regulatory Authority
PAEC	Pakistan Atomic Energy Commission
PPA	Power Purchase Agreement
SGTPS	Site Gas Turbine Power Station
SNPC	Sindh Nooriabad Power Company (Private) Limited and Sindh Nooriabad Power Company Phase II (Private) Limited
TSEP	Transmission System Expansion Plan
USD	United States Dollar
WAPDA	Water and Power Development Authority
VRE Study	Variable Renewable Energy Integration study

K-Electric Limited **Annexure A4**

Number of Consumers Forecasted For Each Tariff Category and Sub Category Based on NEPRA Determined Schedule Of Tariffs (SoTs) From FY 24 to FY 30

Tariff Category	Number of Consumers						
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Tariff: Residential-A1(a) (i)	1,220	1,266	1,324	1,377	1,431	1,486	1,543
Tariff: Residential-A1(a) (ii)	8,780	9,113	9,525	9,909	10,300	10,697	11,102
Tariff: Residential-A1(a) (iii)	247,801	257,198	268,828	279,665	290,690	301,916	313,330
Tariff: Residential-A1(a) (iv)	71,734	74,454	77,821	80,958	84,150	87,399	90,703
Tariff: Residential-A1(a) (v)	125,777	130,547	136,450	141,950	147,546	153,244	159,038
Tariff: Residential-A1(a) (vi)	418,450	434,318	453,957	472,258	490,874	509,832	529,106
Tariff: Residential-A1(a) (vii)	710,120	737,049	770,376	801,433	833,026	865,197	897,905
Tariff: Residential-A1(a) (viii)	430,463	446,787	466,989	485,815	504,967	524,468	544,295
Tariff: Residential-A1(a) (ix)	288,405	299,342	312,877	325,490	338,322	351,387	364,671
Tariff: Residential-A1(a) (x)	197,206	204,684	213,940	222,564	231,338	240,272	249,355
Tariff: Residential-A1(a) (xi)	165,323	171,592	179,351	186,582	193,937	201,427	209,041
Tariff: Residential-A1(a) (xii)	280,813	291,462	304,641	316,922	329,416	342,137	355,072
Tariff: Residential- A1(b)- Peak	254,089	263,724	275,644	286,751	298,049	309,562	321,256
Tariff: Residential- A1(b) - off- Peak	-	-	-	-	-	-	-
Tariff: Commercial-A2 (a)	532,870	553,077	578,086	601,391	625,098	649,239	673,783
Tariff: Commercial- A2(b)	991	1,029	1,075	1,118	1,163	1,207	1,253
Tariff: Commercial-A2(c) - Peak	56,993	59,154	61,829	64,322	66,857	69,439	72,064
Tariff: Commercial-A2(c) - off- Peak	-	-	-	-	-	-	-
General Services A-3(a)	21,167	21,970	22,963	23,889	24,831	25,789	26,764
Tariff: Industrial-B1	1,660	1,723	1,801	1,873	1,947	2,023	2,099
Tariff: Industrial-B1(b) - Peak	16,196	16,810	17,570	18,279	18,999	19,733	20,479
Tariff: Industrial-B1(b) - off-Peak	-	-	-	-	-	-	-
Tariff: Industrial-B2(a)	25	26	27	28	29	30	32
Tariff: Industrial-B2(b) - Peak	8,927	9,266	9,684	10,075	10,472	10,876	11,288
Tariff: Industrial-B2(b) - off-Peak	-	-	-	-	-	-	-
Tariff: Industrial-B3(a)	7	7	8	8	8	9	9
Tariff: Industrial-B3(b) - Peak	1,088	1,129	1,180	1,228	1,276	1,326	1,376
Tariff: Industrial-B3(b) - off-Peak	-	-	-	-	-	-	-
Tariff: Industrial-B4(a)	4	4	4	5	5	5	6
Tariff: Industrial-B4(b) - Peak	23	25	28	32	35	38	40
Tariff: Industrial-B4(b) - off-Peak	-	-	-	-	-	-	-
Tariff: Industrial-B5 - Peak	1	1	1	1	1	1	1
Tariff: Industrial-B5 - off-Peak	-	-	-	-	-	-	-
Tariff: Bulk Supply-C1(a)	-	-	-	-	-	-	-
Tariff: Bulk Supply-C1(b)	19	20	21	21	22	23	24
Tariff: Bulk Supply-C1(c) - Peak	59	61	64	67	69	72	75
Tariff: Bulk Supply-C1(c) - off-Peak	-	-	-	-	-	-	-
Tariff: Bulk Supply-C2(a)	22	23	24	25	26	27	28
Tariff: Bulk Supply-C2(b) - Peak	97	101	105	109	114	118	123
Tariff: Bulk Supply-C2(b) - off-Peak	-	-	-	-	-	-	-
Tariff: Bulk Supply-C3(a)	-	-	-	-	-	-	-
Tariff: Bulk Supply-C3(b) - Peak	1	1	1	1	1	1	1
Tariff: Bulk Supply-C3(b) - off-Peak	-	-	-	-	-	-	-
Tariff: Agriculture D-1	1,278	1,326	1,386	1,442	1,499	1,557	1,616
Tariff: Agriculture D-2 - Peak	1,341	1,392	1,455	1,513	1,573	1,634	1,696
Tariff: Agriculture D-2 - off-Peak	-	-	-	-	-	-	-
Tariff: Temporary Service -E-1(i)	10,422	10,817	11,306	11,762	12,226	12,698	13,178
Tariff: Temporary Service -E-1(ii)	3,111	3,229	3,375	3,511	3,649	3,790	3,934
Tariff: Temporary Service- E-2 (i)	206	218	227	237	247	256	265
Tariff: Temporary Service- E-2 (ii) a	4	-	-	-	-	-	-
Tariff: Temporary Service- E-2 (ii) a b	4	4	4	5	5	5	5

K-Electric Limited

Annexure A4

Number of Consumers Forecasted For Each Tariff Category and Sub Category Based on NEPRA Determined Schedule Of Tariffs (SoTs) From FY 24 to FY 30

Tariff Category	Number of Consumers						
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Tariff: Public Lighting-G	108	112	117	122	127	132	137
Total	**3,856,805**	**4,003,061**	**4,184,064**	**4,352,738**	**4,524,325**	**4,699,052**	**4,876,693**

Note:

Based on expectations, estimates and projections at the time of filing of this application that could differ from actual results or events owing to business and operational risks and changes in scope and circumstances.

K-ELECTRIC LIMITED

K-Electric Limited

Annexure A5

Sanctioned Load Forecasted On Consumer Category and Sub Category Based on NEPRA Determined Schedule Of Tariffs (SoTs)
From FY 24 to FY 30

Tariff Category	Sanctioned Load (kW)						
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Tariff: Residential-A1(a) (i)	2,217	2,270	2,330	2,399	2,469	2,541	2,615
Tariff: Residential-A1(a) (ii)	16,469	16,860	17,308	17,817	18,339	18,873	19,419
Tariff: Residential-A1(a) (iii)	460,184	471,103	483,621	497,850	512,421	527,341	542,619
Tariff: Residential-A1(a) (iv)	140,221	143,548	147,363	151,698	156,138	160,685	165,340
Tariff: Residential-A1(a) (v)	222,172	227,444	233,488	240,357	247,392	254,595	261,971
Tariff: Residential-A1(a) (vi)	728,082	745,358	765,164	787,676	810,729	834,335	858,508
Tariff: Residential-A1(a) (vii)	1,265,468	1,295,496	1,329,919	1,369,048	1,409,115	1,450,145	1,492,159
Tariff: Residential-A1(a) (viii)	874,509	895,260	919,049	946,089	973,778	1,002,131	1,031,165
Tariff: Residential-A1(a) (ix)	579,532	593,283	609,048	626,967	645,316	664,106	683,347
Tariff: Residential-A1(a) (x)	384,923	394,057	404,528	416,429	428,617	441,097	453,877
Tariff: Residential-A1(a) (xi)	258,621	264,757	271,793	279,789	287,978	296,363	304,949
Tariff: Residential-A1(a) (xii)	642,401	657,644	675,119	694,982	715,322	736,150	757,478
Tariff: Residential- A1(b)- Peak	2,276,272	2,330,285	2,392,204	2,462,587	2,534,659	2,608,461	2,684,034
Tariff: Residential- A1(b) - Off Peak	-	-	-	-	-	-	-
Tariff: Commercial-A2 (a)	821,688	841,186	863,538	888,944	914,961	941,602	968,882
Tariff: Commercial- A2(b)	32,074	32,835	33,708	34,700	35,715	36,755	37,820
Tariff: Commercial-A2(c) - Peak	1,090,425	1,116,300	1,145,962	1,179,678	1,214,203	1,249,557	1,285,760
Tariff: Commercial-A2(c) - Off Peak	-	-	-	-	-	-	-
General Services A-3(a)	352,345	360,705	370,290	381,185	392,341	403,764	415,462
Tariff: Industrial-B1	3,532	3,616	3,712	3,821	3,933	4,048	4,165
Tariff: Industrial-B1(b) - Peak	133,112	136,271	139,892	144,008	148,222	152,538	156,957
Tariff: Industrial-B1(b) - Off Peak	-	-	-	-	-	-	-
Tariff: Industrial-B2(a)	430	441	452	466	479	493	507
Tariff: Industrial-B2(b) - Peak	898,368	919,685	944,123	971,901	1,000,345	1,029,472	1,059,298
Tariff: Industrial-B2(b) - Off Peak	-	-	-	-	-	-	-
Tariff: Industrial-B3(a)	6,233	6,381	6,550	6,743	6,940	7,142	7,349
Tariff: Industrial-B3(b) - Peak	1,293,363	1,324,053	1,359,236	1,399,227	1,440,178	1,482,111	1,525,051
Tariff: Industrial-B3(b) - Off Peak	-	-	-	-	-	-	-
Tariff: Industrial-B4(a)	23,077	23,625	24,252	24,966	25,697	26,445	27,211
Tariff: Industrial-B4(b) - Peak	416,760	426,649	437,986	450,872	464,068	477,580	491,416
Tariff: Industrial-B4(b) - Off Peak	-	-	-	-	-	-	-
Tariff: Industrial-B5 - Peak	40,000	40,949	42,037	43,274	44,541	45,837	47,165
Tariff: Industrial-B5 - Off Peak	-	-	-	-	-	-	-
Tariff: Bulk Supply-C1(b)	3,502	3,585	3,681	3,789	3,900	4,013	4,130
Tariff: Bulk Supply-C1(c) - Peak	9,160	9,378	9,627	9,910	10,200	10,497	10,801
Tariff: Bulk Supply-C1(c) - Off Peak	-	-	-	-	-	-	-
Tariff: Bulk Supply-C2(a)	13,759	14,086	14,460	14,886	15,321	15,767	16,224
Tariff: Bulk Supply-C2(b) - Peak	138,305	141,587	145,349	149,626	154,005	158,489	163,081
Tariff: Bulk Supply-C2(b) - Off Peak	-	-	-	-	-	-	-
Tariff: Bulk Supply-C3(b) - Peak	8,842	9,052	9,293	9,566	9,846	10,133	10,426
Tariff: Bulk Supply-C3(b) - Off Peak	-	-	-	-	-	-	-
Tariff: Temporary Service -E-1(i)	23,554	24,113	24,753	25,482	26,228	26,991	27,773
Tariff: Temporary Service -E-1(ii)	22,507	23,041	23,654	24,350	25,062	25,792	26,539
Tariff: Temporary Service- E-2 (i)	100,870	103,264	106,008	109,127	112,320	115,591	118,940
Tariff: Temporary Service- E-2 (ii) a	1,420	1,453	1,492	1,536	1,581	1,627	1,674
Tariff: Temporary Service- E-2 (ii) a b	6,112	6,257	6,424	6,613	6,806	7,004	7,207
Tariff: Agriculture D-1	25,320	25,920	26,609	27,392	28,194	29,015	29,855
Tariff: Agriculture D-2 - Peak	23,761	24,325	24,971	25,706	26,458	27,228	28,017
Tariff: Agriculture D-2 - Off Peak	-	-	-	-	-	-	-
Tariff: Public Lighting-G	24,003	24,573	25,226	25,968	26,728	27,506	28,303
Total	**13,363,595**	**13,680,696**	**14,044,216**	**14,457,422**	**14,880,544**	**15,313,821**	**15,757,497**

Note:

Based on expectations, estimates and projections at the time of filing of this application that could differ from actual results or events owing to business and operational risks and changes in scope and circumstances.

K-ELECTRIC LIMITED

K-Electric Limited **Annexure A6**

Units Billed Forecasted For Each Consumer Category and Sub Category Based on NEPRA Determined Schedule Of Tariffs (SoTs) From FY 24 to FY 30

Tariff Category	Units Billed (MWh)						
	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Tariff: Residential-A1(a) (i)	2,671	2,765	2,846	2,919	2,980	3,038	3,090
Tariff: Residential-A1(a) (ii)	19,841	20,537	21,139	21,677	22,131	22,561	22,947
Tariff: Residential-A1(a) (iii)	554,386	573,853	590,667	605,689	618,389	630,415	641,181
Tariff: Residential-A1(a) (iv)	168,925	174,857	179,980	184,558	188,427	192,092	195,372
Tariff: Residential-A1(a) (v)	267,652	277,051	285,168	292,421	298,552	304,358	309,556
Tariff: Residential-A1(a) (vi)	877,125	907,925	934,526	958,295	978,387	997,415	1,014,448
Tariff: Residential-A1(a) (vii)	1,524,517	1,578,049	1,624,285	1,665,596	1,700,519	1,733,591	1,763,195
Tariff: Residential-A1(a) (viii)	1,053,527	1,090,520	1,122,472	1,151,020	1,175,154	1,198,008	1,218,467
Tariff: Residential-A1(a) (ix)	698,166	722,681	743,855	762,774	778,767	793,913	807,470
Tariff: Residential-A1(a) (x)	463,719	480,002	494,066	506,632	517,255	527,314	536,319
Tariff: Residential-A1(a) (xi)	311,562	322,502	331,952	340,394	347,531	354,290	360,340
Tariff: Residential-A1(a) (xii)	773,905	801,080	824,551	845,522	863,250	880,039	895,067
Tariff: Residential- A1(b)- Peak	251,142	259,961	267,577	274,383	280,136	285,584	290,461
Tariff: Residential- A1(b) - off- Peak	1,309,241	1,355,214	1,394,921	1,430,399	1,460,390	1,488,792	1,514,216
Tariff: Temporary Service -E-1(i)	24,779	25,649	26,400	27,072	27,639	28,177	28,658
Tariff: Commercial-A2 (a)	703,724	728,434	749,777	768,847	784,967	800,233	813,899
Tariff: Commercial- A2(b)	32,618	33,763	34,753	35,636	36,384	37,091	37,725
Tariff: Commercial-A2(c) - Peak	171,792	177,825	183,035	187,690	191,625	195,352	198,688
Tariff: Commercial-A2(c) - off- Peak	804,098	832,333	856,720	878,509	896,929	914,373	929,987
Tariff: Temporary Service -E-1(ii)	23,971	24,813	25,540	26,189	26,738	27,258	27,724
General Services A-3(a)	384,169	397,659	409,310	419,720	428,521	436,855	444,315
Tariff: Industrial-B1	8,234	8,523	8,773	8,996	9,185	9,363	9,523
Tariff: Industrial-B1(b) - Peak	49,372	51,105	52,603	53,941	55,071	56,143	57,101
Tariff: Industrial-B1(b) - off-Peak	244,557	253,145	260,562	267,189	272,791	278,096	282,845
Tariff: Industrial-B2(a)	818	847	871	894	912	930	946
Tariff: Industrial-B2(b) - Peak	280,780	290,639	299,155	306,763	313,195	319,286	324,738
Tariff: Industrial-B2(b) - off-Peak	1,423,132	1,473,104	1,516,265	1,554,829	1,587,429	1,618,301	1,645,937
Tariff: Industrial-B3(a)	14,630	15,144	15,587	15,984	16,319	16,636	16,920
Tariff: Industrial-B3(b) - Peak	388,293	401,928	413,704	424,226	433,121	441,544	449,085
Tariff: Industrial-B3(b) - off-Peak	2,011,475	2,083,021	2,144,052	2,198,583	2,244,681	2,288,335	2,327,413
Tariff: Industrial-B4(a)	85,132	88,122	90,704	93,011	94,961	96,808	98,461
Tariff: Industrial-B4(b) - Peak	215,775	223,351	229,895	235,742	240,685	245,366	249,556
Tariff: Industrial-B4(b) - off-Peak	1,078,952	1,116,839	1,149,561	1,178,799	1,203,515	1,226,921	1,247,873
Tariff: Industrial-B5 - Peak	2,210	2,288	2,355	2,415	2,465	2,513	2,556
Tariff: Industrial-B5 - off-Peak	13,124	13,585	13,983	14,339	14,639	14,924	15,179
Tariff: Temporary Service- E-2 (i)	34,123	35,321	36,356	37,280	38,062	38,802	39,465
Tariff: Bulk Supply-C1(b)	7,582	7,849	8,079	8,284	8,458	8,622	8,769
Tariff: Bulk Supply-C1(c) - Peak	2,286	2,366	2,436	2,498	2,550	2,600	2,644
Tariff: Bulk Supply-C1(c) - off-Peak	11,318	11,715	12,058	12,365	12,624	12,870	13,090
Tariff: Bulk Supply-C2(a)	38,989	40,358	41,541	42,597	43,490	44,336	45,093
Tariff: Bulk Supply-C2(b) - Peak	73,032	75,597	77,812	79,791	81,464	83,048	84,466
Tariff: Bulk Supply-C2(b) - off-Peak	354,107	366,541	377,280	386,876	394,988	402,669	409,546
Tariff: Bulk Supply-C3(b) - Peak	3,797	3,931	4,046	4,149	4,236	4,318	4,392
Tariff: Bulk Supply-C3(b) - off-Peak	19,411	20,093	20,682	21,208	21,652	22,073	22,450
Tariff: Temporary Service- E-2 (ii) a	-	-	-	-	-	-	-
Tariff: Temporary Service- E-2 (ii) a b	2,112	2,186	2,250	2,307	2,356	2,402	2,443
Tariff: Agriculture D-1	71,868	74,392	76,571	78,519	80,165	81,724	83,120
Tariff: Agriculture D-2 - Peak	8,128	8,413	8,660	8,880	9,066	9,243	9,401
Tariff: Agriculture D-2 - off-Peak	48,754	50,465	51,944	53,265	54,382	55,440	56,386
Tariff: Public Lighting-G	109,978	113,840	117,176	120,156	122,675	125,061	127,197
Total	**17,023,500**	**17,622,180**	**18,138,502**	**18,599,825**	**18,989,811**	**19,359,124**	**19,689,718**

Note:

Based on expectations, estimates and projections at the time of filing of this application that could differ from actual results or events owing to business and operational risks and changes in scope and circumstances.

K-ELECTRIC LIMITED

Annexure A7

K-Electric Limited
Annual Forecasted Monthly Demand, Units Sent Out (SO) and Load Shed
From FY 24 to FY 30

Months	FY 24		FY 25		FY 26		FY 27		FY 28		FY 29		FY 30	
	Demand (MWh)	Served (MWh)	Demand (MWh)	Served (MWh)	Demand (MWh)	Served (MWh)	Demand (MWh)	Served (MWh)	Demand (MWh)	Served (MWh)	Demand (MWh)	Served (MWh)	Demand (MWh)	Served (MWh)
July	2,149,928	1,960,436	2,177,814	2,022,584	2,206,412	2,071,638	2,234,691	2,113,715	2,261,962	2,150,350	2,288,510	2,185,948	2,313,858	2,218,705
August	1,882,641	1,745,440	1,907,061	1,794,667	1,932,103	1,834,521	1,956,866	1,869,274	1,980,747	1,899,934	2,003,994	1,929,735	2,026,191	1,957,295
September	2,109,986	1,935,126	2,137,354	1,994,111	2,165,420	2,041,054	2,193,174	2,081,540	2,219,938	2,116,945	2,245,993	2,151,351	2,270,870	2,183,065
October	1,882,382	1,733,700	1,906,798	1,784,999	1,931,837	1,826,089	1,956,597	1,861,674	1,980,474	1,892,899	2,003,718	1,923,245	2,025,911	1,951,251
November	1,550,004	1,416,862	1,570,108	1,461,040	1,590,726	1,496,031	1,611,114	1,526,113	1,630,775	1,552,354	1,649,915	1,577,853	1,668,190	1,601,333
December	1,272,583	1,172,760	1,289,089	1,207,315	1,306,016	1,235,019	1,322,755	1,259,026	1,338,897	1,280,102	1,354,612	1,300,583	1,369,616	1,319,490
January	1,176,292	1,074,650	1,191,549	1,108,285	1,207,196	1,134,905	1,222,668	1,157,778	1,237,589	1,177,721	1,252,114	1,197,101	1,265,983	1,214,944
February	1,226,271	1,124,585	1,242,176	1,158,877	1,258,488	1,186,166	1,274,618	1,209,699	1,290,172	1,230,279	1,305,315	1,250,278	1,319,772	1,268,711
March	1,815,841	1,650,935	1,839,393	1,704,304	1,863,547	1,746,261	1,887,432	1,782,152	1,910,465	1,813,335	1,932,888	1,843,633	1,954,296	1,871,489
April	2,147,624	1,968,849	2,175,480	2,029,029	2,204,047	2,076,896	2,232,296	2,118,162	2,259,537	2,154,238	2,286,057	2,189,296	2,311,377	2,221,606
May	2,235,967	2,009,986	2,264,969	2,079,847	2,294,711	2,133,985	2,324,122	2,179,850	2,352,484	2,219,380	2,380,095	2,257,784	2,406,457	2,292,981
June	2,377,138	2,138,587	2,407,971	2,212,552	2,439,591	2,269,925	2,470,858	2,318,562	2,501,011	2,360,504	2,530,365	2,401,251	2,558,391	2,438,604
Total	**21,826,656**	**19,931,917**	**22,109,762**	**20,557,611**	**22,400,094**	**21,052,490**	**22,687,193**	**21,477,546**	**22,964,051**	**21,848,042**	**23,233,574**	**22,208,058**	**23,490,912**	**22,539,474**

Note:

Based on expectations, estimates and projections at the time of filing of this application that could differ from actual results or events owing to business and operational risks and changes in scope and circumstances.

K-ELECTRIC LIMITED