

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

Ref # KE/RA&GR/NEPRA/2023/327
May 26, 2023

SUBJECT: K-ELECTRIC LIMITED (KE) APPLICATION FOR GRANT OF ELECTRIC POWER SUPPLIER LICENSE

Dear Sir,

This is with reference to the captioned subject and in furtherance to NEPRA email dated May 17, 2023, through which K-Electric (KE) has been directed to file for grant of Electric Power Supplier License.

In this regard, it is humbly submitted that KE vide letter # KE/RA&GR/NEPRA/2022/846 dated December 01, 2022, had filed an Application for Renewal / Extension of Electric Power Supplier License. However, NEPRA through e-mail dated May 17, 2023, directed KE to file for Grant of Electric Power Supplier License. Accordingly, please find enclosed KE's application for grant of Electric Power Supplier License (**"The Application"**).

Further, please also find enclosed Certified True Copy of resolutions passed by KE's Board of Directors to file said Application along with affidavits of the following authorized representatives:

- Syed Moonis Abdullah Alvi, Chief Executive Officer
- Muhammad Aamir Ghaziani, Chief Financial Officer
- Muhammad Imran Hussain Qureshi, Chief Regulatory Affairs Officer
- Amer Zia, Chief Distribution Officer

This Application is being filed in accordance with Regulation 3 of the NEPRA Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 (**'NEPRA Licensing AMEC Regulations'**).

Further, out of the total fees as set out in Schedule II of the NEPRA Licensing (Application, Modification, Extension and Cancellation) Regulations 2021 amounting to PKR 3,213,560/- (net of 8% WHT), fees amounting to PKR 2,805,224 (net of 8% WHT) has already been submitted to NEPRA through Cheque No. 00004942 dated November 29, 2022, and Cheque No. 00004956 dated December 09, 2022 vide KE letters # KE/RA&GR/NEPRA/2022/846 dated December 01, 2022 and KE/RA&GR/NEPRA/2022/870 dated December 13, 2022. (**Copies of KE letters enclosed for reference**). Accordingly, please find enclosed as Cheque No. 07746110 dated May 25, 2023, the balance fees amounting to PKR 408,336/- (net of 8% WHT) being the fees prescribed for processing of subject license under the NEPRA Licensing AMEC Regulations.

KE humbly requests admission of the Application for determination as requested therein

Sincerely,


Syed Moonis Abdullah Alvi
Chief Executive Officer

Enclosures:

- **Annexure A** - Application for Grant of Electric Power Supplier License
- **Annexures A1 - A16** - Supporting Documents & Annexures
- Certified True Copy (CTC) of Resolutions and General Power of Attorney
- Power of Attorney and Affidavits
- Copies of KE letters dated December 01, 2022 and December 13, 2022

K-Electric Limited

39-B KE House Sunset Boulevard, DHA- Phase 2, Karachi, Pakistan

**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**



**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

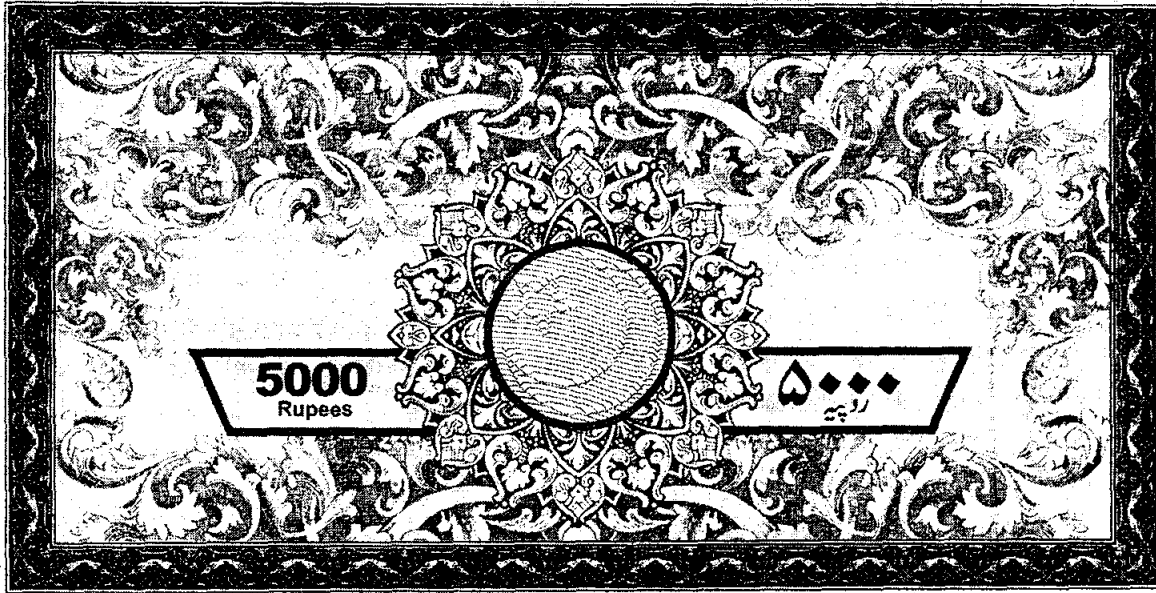


**CERTIFIED TRUE COPY (CTC) OF THE
MINUTES OF 1233RD MEETING OF K-ELECTRIC LIMITED BOARD OF DIRECTORS (BOD)
HELD ON THURSDAY, 11 AUGUST 2022 AT 10:30 HOURS (PST) IN KE BOARD ROOM
3RD FLOOR, KE HOUSE, 39-B SUNSET BOULEVARD, PHASE-II, DHA, KARACHI**

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.

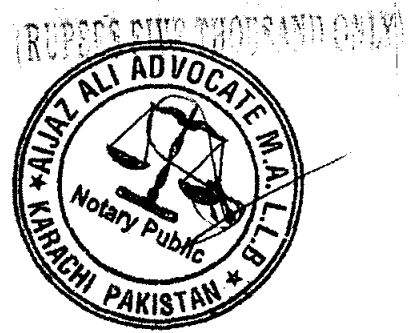

Rizwan Pesnani
Chief Risk Officer & Company Secretary



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. 11 Dt. 11-6-18
 for the purpose of APR.
 Entry No. 02 Dt. 11-6-18

[Signature]
 Ex-Officio Notary



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.

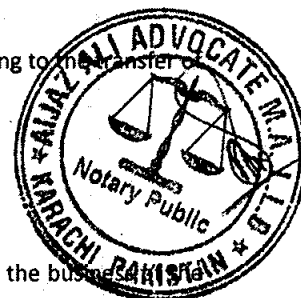
NOW THESE PRESENTS WITNESS THAT Syed Moonis Abdullah Alvi son of Syed Riazuddin Alvi CNIC # 42201-6886191-3, the Chief Executive Officer of the Company, is hereby appointed Attorney of the Company to act in the name and on behalf of the Company to do and perform the following acts and things only:

- 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;

[Signature]

[Signature]

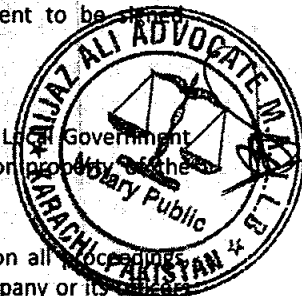
- 3) To sign all acceptances and endorsements on bills of exchanges, hundies, securities and cheques drawn on behalf of the Company and to receive the amount of bills, hundies, securities and cheques and to give receipts and discharge for the same and to sign all documents drawn on or by the Company 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



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



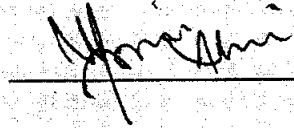
- 18) To represent the Company before any Court of law, Federal, Provincial or Local Government authority or any other authority in all matters concerning the business or property of the Company;
- 19) To commence, institute, prosecute, and to defend, compound and abandon all proceedings, actions, suits, 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.

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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.

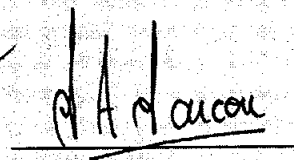
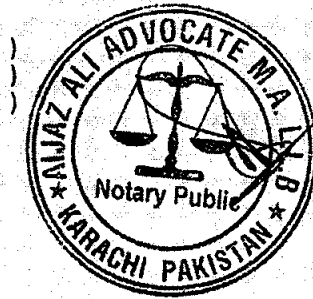
Signature of Syed Moonis Abdullah Alvi
Attorney



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



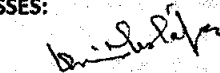
Director



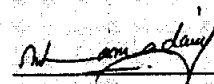
Director

WITNESSES:

1.


Amjad Musalafa
42201-7393750-3

2.


MUHAMMAD ARIF
42401-1568587-5



ATTESTED
AIJAZ ALI ADVOCATE M.A. LL.B.
Advocate & Notary
Public Karachi.

12 JUN 2018



**Certified True Copy (CTC) of Resolutions dated 23 May 2023
Passed by K-Electric Board of Directors**

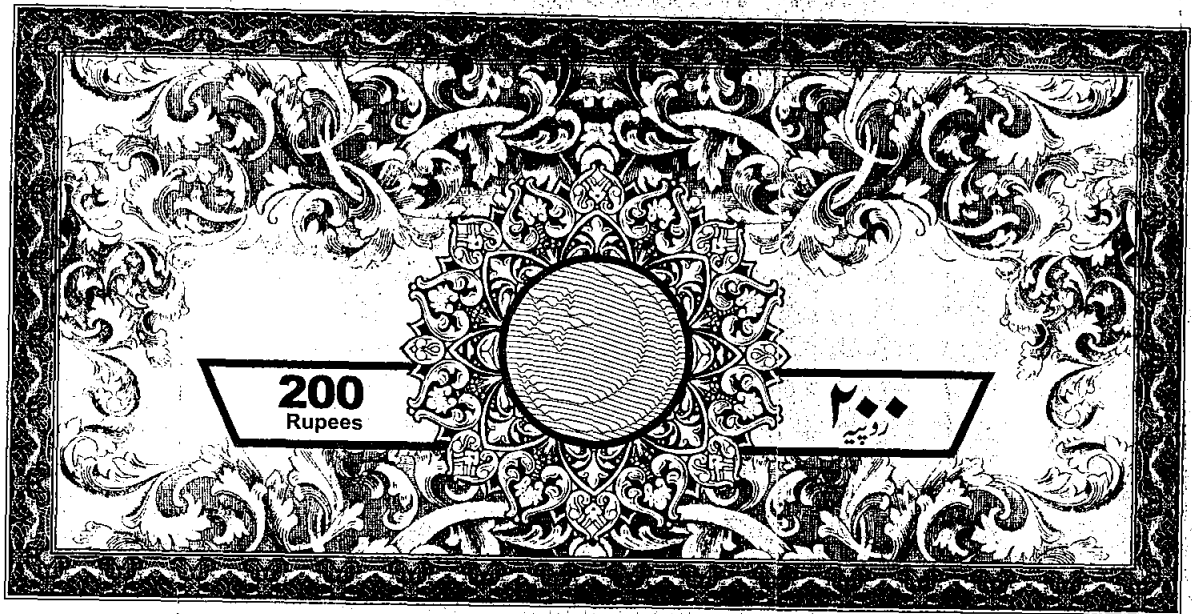
APPLICATION FOR GRANT OF ELECTRIC POWER SUPPLIER LICENSE

RESOLVED THAT, in partial supersession of the Board's earlier decision of 29 November 2022 and in substitution of the earlier application for Renewal/Extension of Electric Power Supplier License already submitted with National Electric Power Regulatory Authority (NEPRA), application for Grant of Electric Power Supplier License of KE be and is hereby approved for submission with NEPRA, pursuant to Regulation 3 of the NEPRA Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 read with 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 Grant of KE's Electric Power Supplier License with NEPRA, where required, along with 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.

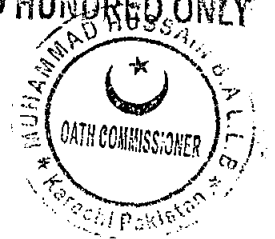
Rizwan Pesnani
Chief Risk Officer & Company Secretary



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VENDOR
238812
Karachi
Karachi

22 NOV 2022

RUPEES TWO HUNDRED ONLY



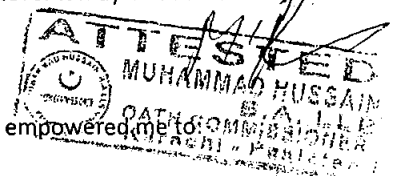
K-ELECTRIC LIMITED
POWER OF ATTORNEY

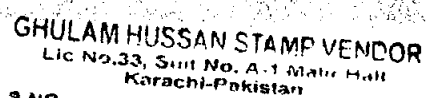
1. TO ALL WHOM PRESENT, by virtue of the powers conferred upon them by Article 77 of the Company's Articles of Association, the Board of Directors of K-Electric Limited (referred to as the "Company" or "KE") have conferred upon me, **Syed Moonis Abdullah Alvi s/o Syed Riazuddin Alvi**, Muslim, adult, 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 December 02, 2014, 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.

3. WHEREAS, pursuant to Resolution dated May 23, 2023 (CTC attached), approved by KE Board of Directors, I have been authorized to sign and file, for and on behalf of the Company, Application for Grant of Electric Power Supplier License ("Application") before the National Electric Power Regulatory Authority ("Authority") for KE's Supply business 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



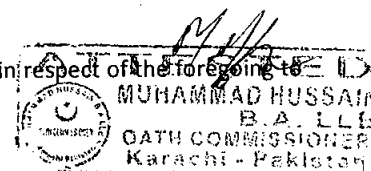


Karachi-Pakistan
 S.NO..... DATE..... 023999
 Issued To With Address.....
 Through With Address... M. AYUB KHAN
 Purpose..... Advocate 1364
 Value Rs..... Attested
 Stamp Vendor's Signature.....
 Not For Use For Will & Divorce Deed
 Vendor Not Responsible Any Fake Documentation

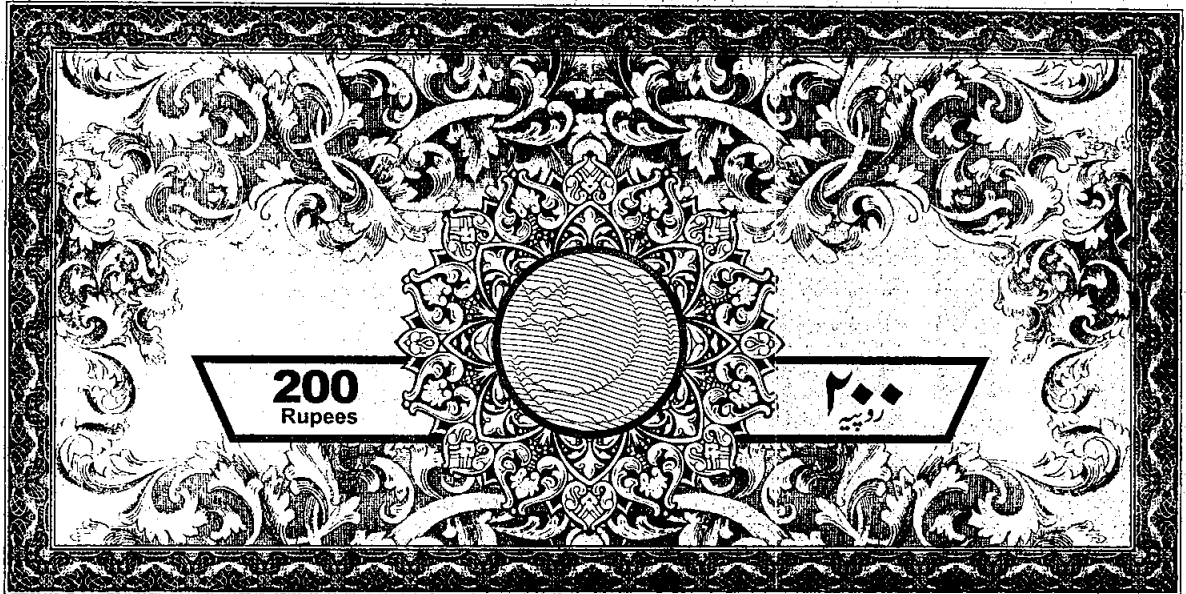


- a. Review, execute, submit and deliver the Application (including any modification to the Application) and related documentation required by the Authority, including any consents, documents, power of attorney, affidavit, statements, letters, forms, applications, deeds, guarantees, notices, certificates,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



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 26th day of May 2023.

Syed Moonis Abdullah Alvi
Chief Executive Officer



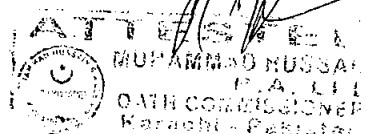
[Signature]

Attorneys: -

Muhammad Aamir
Chief Financial Officer

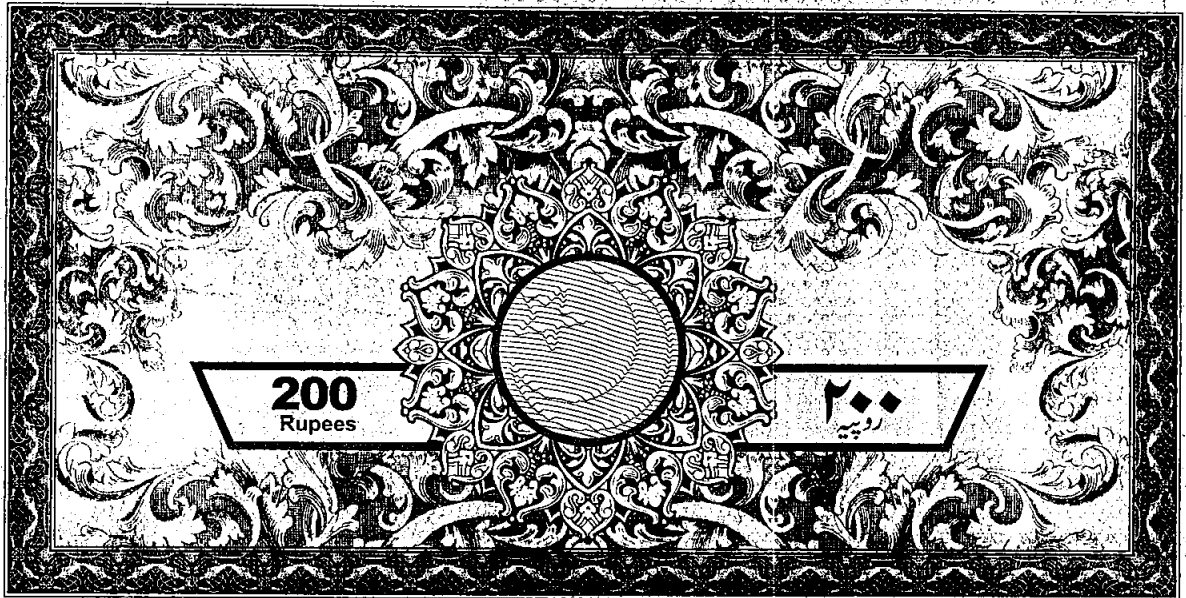
[Signature]

Muhammad Imran Hussain Qureshi
Chief Regulatory Affairs Officer



[Signature]

F840343

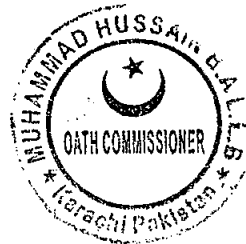


SACRED VENDOR
235385

22 NOV 2022

RUPEES TWO HUNDRED ONLY

Sheikh Amer Zia
Chief Distribution Officer

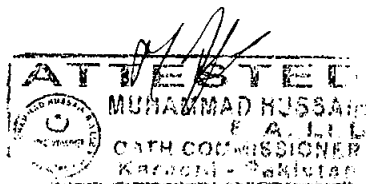


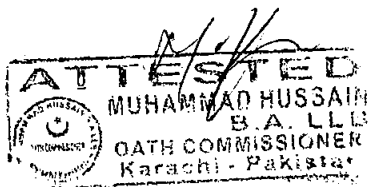
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WITNESSES:

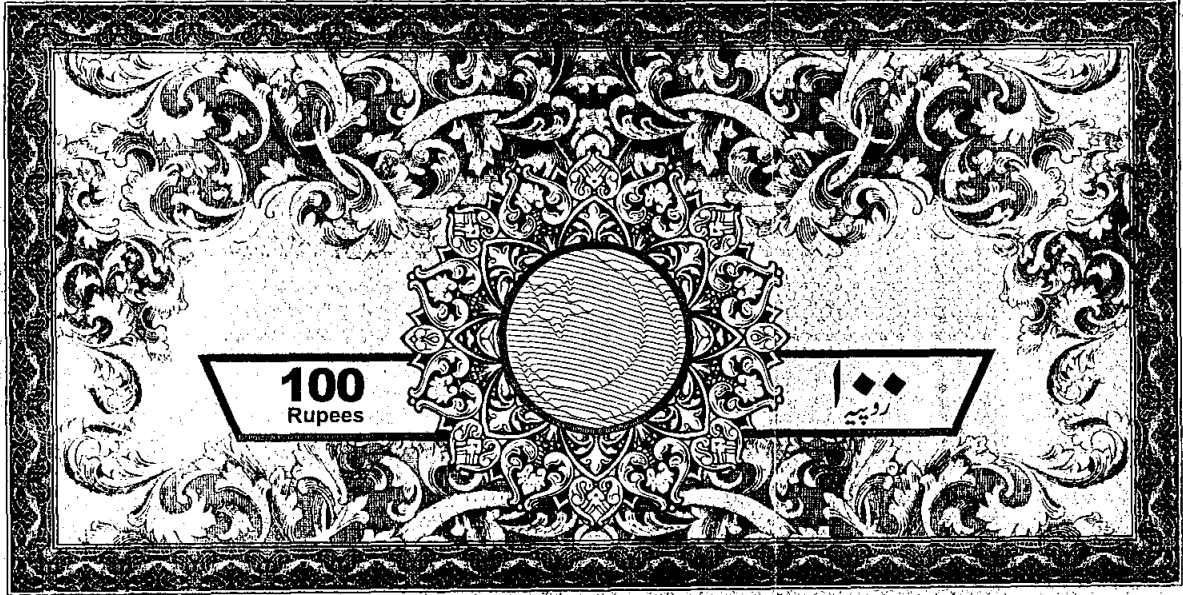
1. *F Khem*
FARIYAL KHIZAR
42301-2194580-4

2. *Syeda*
SYED SAMEER HASAN
45101-7326302-7





AA159334

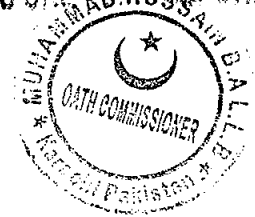


SARDAR ALI STAMP VENDOR
Licence # 15, Shop # 58, SITE Market
SITE, Karachi.

21 MAR 2023

RUPEES ONE HUNDRED ONLY

S No. DATE
ISSUED WITHIN THE LIMIT OF Rs. 1000/-
THROUGH WITH ADDRESS Advocate
PURPOSE 15126/LC/Khi
VALUE ATTACHED
STAMP OF JUDICIAL SIGNATURE
This document is valid for Divorce & Free Will Purpose

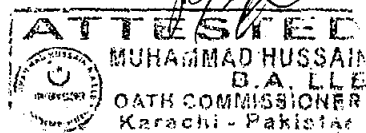


BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

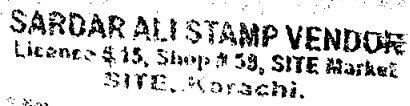
AFFIDAVIT of Mr. Muhammad Aamir s/o Muhammad Anwar having CNIC No. 42301-1189331-3 Chief Financial Officer, K-Electric Limited (the "Company"), a company incorporated under the laws of the Islamic Republic of Pakistan, having its registered office at KE House, 39-B, Sunset Boulevard, Phase II, Defence 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 Grant of Electric Power Supplier License being submitted vide Letter Letter # KE/RA&GR/NEPRA/2023/327 dated May 26, 2023, including all supporting documents are true to the best of my knowledge and belief and that nothing has been concealed.

Karachi dated May 26, 2023

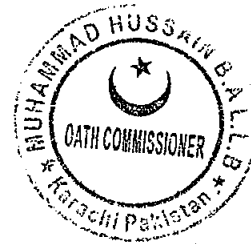


Muhammad Aamir
MUHAMMAD AAMIR



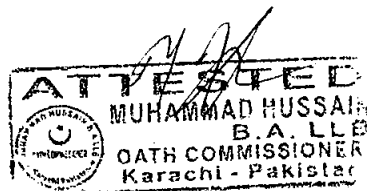
RUPEES ONE HUNDRED ONLY


P.No. _____ DATE _____
 RECEIVED WITH DEDUCTIONS BY **TAHA SIDDIQUI**
 THROUGH WITHDRAWALS OF _____ Advocate
 PURPOSE _____ 15126/ILCKhi
 VALUE RS. _____ ATTACHED _____
 STAMP VENDOR'S SIGNATURE _____
 This Stamp Paper is not valid for Divorce & Free Will Purpose



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 Grant of Electric Power Supplier License being submitted vide Letter # KE/RA&GR/NEPRA/2023/327 dated May 26, 2023, including all supporting documents are true to the best of my knowledge and belief and that nothing has been concealed.




SHEIKH AMER ZIA

Karachi dated May 26, 2023

11-11-68

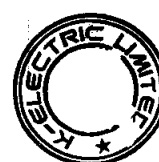


ATTESTED
MUHAMMAD HUSSAIN
B.A., LL.B.
OATH COMMISSIONER
Karachi - Pakistan



K-ELECTRIC LIMITED

PROSPECTUS



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1. INTRODUCTION

Established in 1913 as Karachi Electric Supply Corporation, K-Electric Limited (KE) ('the Company') has been meeting the power requirements of Karachi for over 100 years. KE was privatized in November 2005, which was the start of a new era for Karachi, its surroundings, and the organization itself. In line with its progressive objectives, the Company rebranded itself to "K-Electric Limited" (KE) in 2014.

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 faced 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 its old existing assets, which, were less efficient than they would have otherwise 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.

As the only vertically integrated power utility in Pakistan, KE's strategic focus has always been on value creation for its stakeholders and delivering the best quality services to Karachi and its adjoining areas. KE has planned investments and expansion to continue its journey of growing with the city it serves. With an eye on the future and growing power requirements of the city, KE aims to be an example of regional and global excellence in energy provision and management.

1.1 Vision

"To restore and maintain pride in KE, Karachi and Pakistan."

1.2 Mission

"Brightening lives by building the capacity to deliver uninterrupted, safe and affordable power to Karachiites."

1.3 Culture and Ethics

"K-Electric inculcates a positive environment and culture for all of its employees, through the embodiment of its core values, competencies and principles. Our emphasis is on ensuring the highest standards of transparency and integrity to maximize stakeholders' values, in accordance to the best practices in the industry."



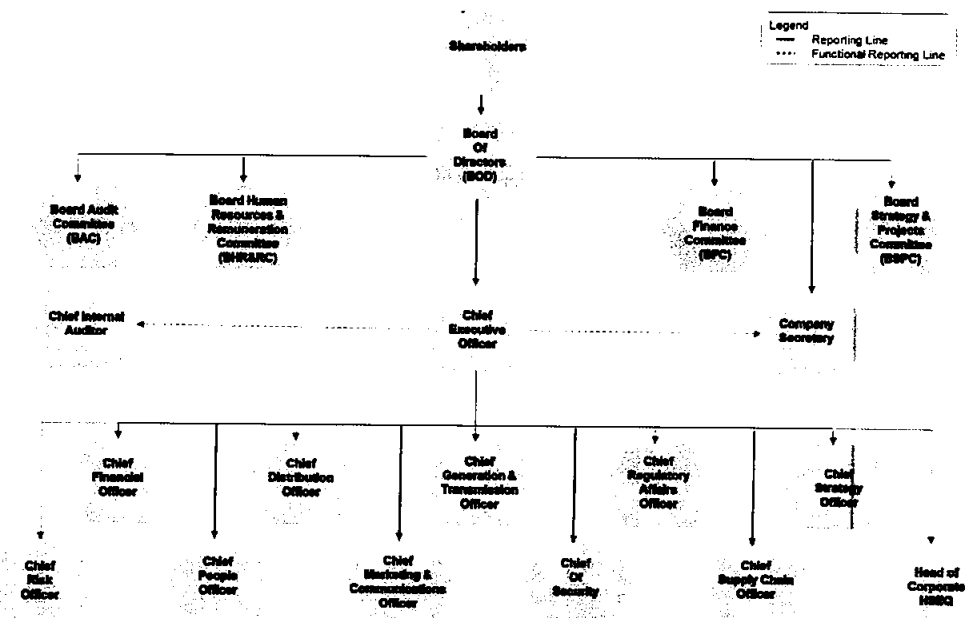
The management ensures strict compliance against the set standards and guidelines of the organization and focuses on instilling accountability within each individual for adherence to cultural norms.

1.4 Core Values

Values are the guiding principles that form the foundation on which we work and conduct ourselves. The key advantage of having a clearly defined set of organizational values is that they guide workplace behavior, leadership development and decision-making. Our core corporate values come together in the KE CARES system, as outlined below.

- **Customer Centric:** We aim to satisfy our customers and all our stakeholders by anticipating their needs and delivering the best possible solutions and services.
- **Accountable:** We take ownership, initiative, and responsibility for all our actions and we are honest and fair in all our dealings.
- **Respectful:** We respect each other in all aspects, and support our communities for societal and environmental well-being
- **Energized:** We are energized to inspire and empower our people to add real value for all stakeholders.
- **Safe:** We ensure that safety remains our top priority in all our operations and behaviors.

2. ORGANIZATIONAL CHART¹



¹ K-Electric Annual Report FY 2022



3. BUSINESS OBJECTIVES AND STRATEGIES

KE has undertaken strategic initiatives to position itself to accelerate, given the market and regulatory evolution it faces. To meet the growing demand and to better serve its consumers, amidst the evolving sector landscape, KE has taken following initiatives:

- Addition of highly efficient 900 MW RLNG based Bin Qasim Power Plant – III (BQPS-III)
- Plans to add around 1,200 MW of renewables by 2030, which would help optimize the overall cost
- Investment in setting up new grids and interconnection points, enabling KE to off-take additional power from external sources including the National Grid
- Delivering various projects under Operational Excellence bringing efficiencies and cost benefits
- Exploring Environmental, Social and Governance (ESG) projects for achieving decarbonization objectives
- Enhance customer focus and centricity
- Network enhancements to cater projected power demand growth
- Strict governance and execution of projects to target loss reduction
- Targeted and technology driven investments for improved reliability and safety

KE embarked upon its flagship Operational Excellence program that delivered substantial benefits in terms of cost optimization; the company is now committed to continue the same going forward.

KE also embarked upon a full Greenhouse Gas (GHG) emissions audit as part of its larger decarbonization vision. This will eventually feed into one of the projects of operational excellence and also explore the carbon credits market.

KE has also invested in its transmission network to enable smooth and reliable power transmission. Upgradation of the Company's transmission network in parallel with expansion on supply side is necessary for ensuring the power generated and procured from external sources is evacuated and supplied reliably and safely to our end customers.

Moreover, KE in-line with its objective to achieve operational excellence made investment in the state-of-the-art SCADA system which is operational since December 2009. The system is being utilized for controlling, monitoring and acquisition of real time events critical to power systems giving edge to improve overall performance and control. At present, the entire KE network including all grid stations and generation plants are adopted and are being monitored / controlled through Supervisory Control and Data Acquisition (SCADA). Further, timely upgradation of SCADA (material, application & software) is critically done by KE to continue with effective monitoring and control of the system while adhering to the standards.



To extend the improvements achieved under its flagship Project Sarbulandi, KE continues to convert existing high loss Pole Mounted Transformers (PMTs) to Aerial Bundled Cables (ABCs), uplifting low income areas, and enhancing network health. In addition, KE made significant strides on Project ENSURE; a dedicated project aimed at improving and strengthening distribution network resilience.

Moreover, 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, resilience, and improvements in reporting of reliability indices. To further enhance visibility, KE has planned extensive coverage of AMRs across all PMTs and high-end consumers.
- **Customer Services Digitization:** Widening the digitization outreach of its customer services through execution of various initiatives covering core areas including but not limited to billing, payment of bills through digital/online platforms, online registration of complaints, call center services, new connection / disconnection requests, etc.
- **Power Quality Analyzers:** 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):** This will support distribution management and availability of network optimization tools in addition to quick identification and prompt localization of faults. It will also offer automated isolation and restoration of network in case of faults along with paving way towards proactive operations, switching management, crew management, work order lifecycle management, conservation through voltage reduction, peak demand management, etc. Further, the larger ADMS road map includes integration of different Information Technology (IT) and Operational Technology (OT) systems as part of KE's technology landscape.
- **Commercial Digitization:** Facilitating commercial digitization of operational matters as well as encouraging digital adoption through the following initiatives:
 - Digitization of Site Inspection Reports (SIR) and Faulty Meter Reports (FMR) for digital record keeping.
 - 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.

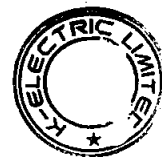
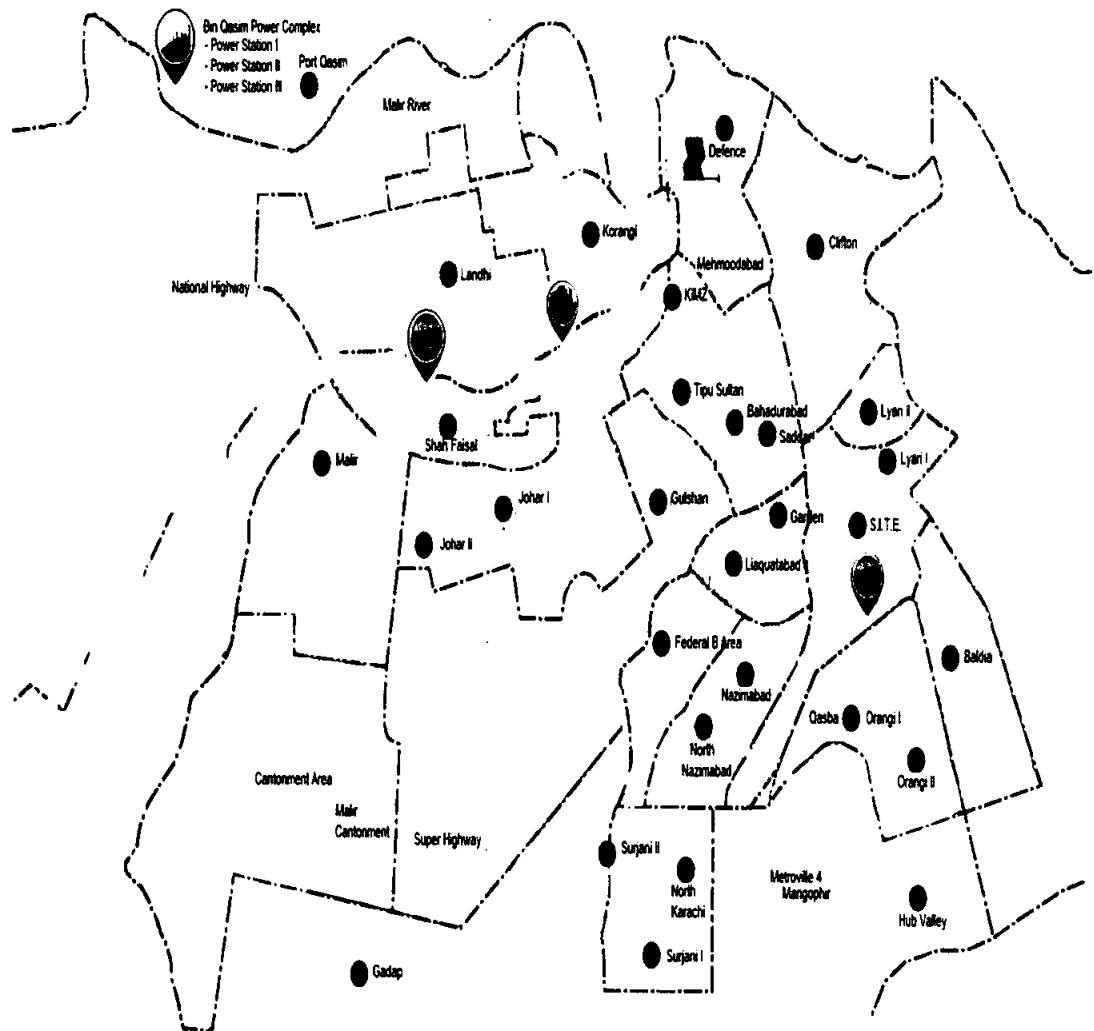


- Assignment of hand-held devices to Disconnection/Reconnection (DC/RC) gangs to ensure DC/RC is maintained real-time in system (SAP) and is auto synchronized with the activity on site.

4. SALIENT FEATURES OF KE

4.1 Service Area/Jurisdiction

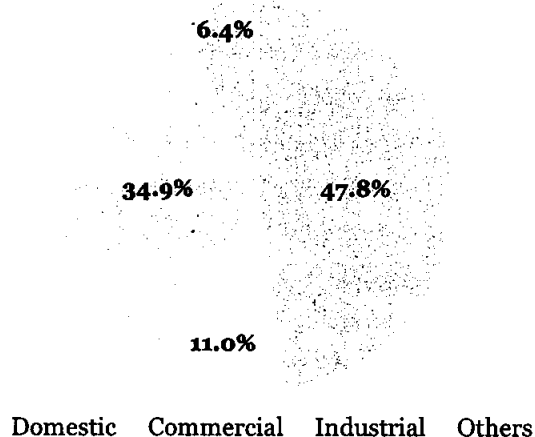
KE supplies power to all residential, commercial, industrial, and agricultural areas that fall under the city's ambit and beyond, serving over 3.4 million customers across Karachi, Dhabeji and Gharo in Sindh, and Uthal, Vinder and Bela in Balochistan.



4.2 Consumer Mix

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)



4.3 Statistical and Financial Information

Physical Assets

The physical assets of KE as on June 30, 2022, are as follows:

No. of Grid Stations

KE Owned	220 kV	No.	10
	132 kV	No.	58
	66 kV	No.	3
Consumer Owned	220 kV	No.	1
	132 kV	No.	11
	66 kV	No.	-

Length of lines

220 kV	Overhead	km	321.1
	Underground	km	42.6
132 kV	Overhead	km	652.3
	Underground	km	185.7
66 kV	Overhead	km	151.8
	Underground	km	0.8
HT Lines	Overhead	km	2,974
	Underground	km	7,546
LT Lines	Overhead	km	17,042
	Underground	km	1,894



Power Transformers

66 kV	No.	4
	Capacity (MVA)	79
132 kV	No.	175
	Capacity (MVA)	6,724

11 kV Feeders

Number	2,001
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Distribution Transformers

Number	29,971
Capacity (MVA)	8,685

Units Billed and Sent-Out

Description	Units	FY 18	FY 19	FY 20	FY 21	FY 22
Units Billed	GWh	13,860	14,318	14,277	16,069	16,763
Units Sent Out	GWh	17,419	17,697	17,787	19,487	19,802
T & D Losses	%	20.4%	19.1%	19.7%	17.5%	15.3%

5. INVESTMENTS ACROSS THE VALUE CHAIN SINCE PRIVATIZATION

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** of CAPEX 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.

5.1 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.

KE's generation fleet at the time of its privatization in 2005 comprised of old inefficient power plants. Generation segment had suffered tremendously due to underinvestment for almost a decade as not a single MW was added to KE's generation fleet since 1997 till



privatization and some of the plants in KE's fleet were operating at efficiency levels below 30%.

In addition to setting up new generation, KE was also able to recoup derated capacity of BQPS – I units. Following is a highlight of improvement and addition in generation capacity of KE's generation fleet since privatization:

- 247 MW Korangi Combined Cycle Power Plant (KCCPP)
- 200 MW Site Gas Turbine Power Station (SGTPS) & Korangi Gas Turbine Power Station (KGTPS)
- 560 MW Bin Qasim Power Station – II (BQPS II)
- 900 MW Bin Qasim Power Station -III (BQPS III)
- 50 MW derated capacity recouped at Bin Qasim Power Station – I (BQPS-I) units

With the addition of efficient generation to KE's fleet and continued investments in maintenance and rehabilitation of BQPS-I units, KE's average fleet efficiency improved from 30% in FY 2005 to 39% in FY 2022 (29% increase). With the addition of 900 MW BQPS-III project, KE's average fleet efficiency is expected to improve further to around 50% in FY 2024.

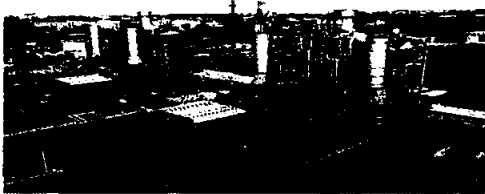
Bin Qasim Power Station I



Bin Qasim Power Station II



Korangi Combined Cycle Power Plant



GE Jenbacher SITE & GE Jenbacher



Bin Qasim Power Station III



In transmission, investments have been made to improve infrastructure, focusing on network reliability, security and power quality in the transmission segment which resulted in addition of 19 grid stations, 254 km increase in transmission line length and enhancement of transmission capacity by 3,323 MVAs (increased from 3,480 MVAs in FY 2005 to 6,803 MVAs in FY 2022). These capacity additions in the transmission segment enhanced KE's ability to serve the incremental power demand and resulted in significant improvement in network reliability including improvement in System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI). Along with this, owing to investment made in transmission network, transmission loss has been reduced, thus improving the overall efficiency of the system.

The improvement in transmission is mainly attributable to following activities:

- Grid Capacity Enhancement Projects
- Restructuring and Reconductoring of Transmission Lines
- Installation of RTV/ Composite Insulators
- Overhauling Projects
- Rehabilitation of Remote Infrastructure
- Replacement of obsolete grid equipment
- Enhancement of SCADA functionality
- Safety Initiatives

5.2 Distribution & Supply

KE was granted Distribution License in the year 2003, which included exclusive rights for both distribution and supply of electric power. 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, to sustain both functions and improve reliability, targeted investments amounting to **PKR 146,738 Million**² have been made in simultaneity since privatization and upto FY 2022.

As a result, KE made targeted enhancements/improvements in the distribution segment, 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).

² Includes support CAPEX of PKR 7,829 Million



- 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.

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 benefiting 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.



6. HEALTH, SAFETY, ENVIRONMENT & QUALITY

At KE a Safety-First culture is at the heart of what we do. To inculcate this culture, KE embarked on the following initiatives:

6.1 Performance Safety Management Systems

KE embarked and implemented Performance Safety Management Systems across all Business Units in FY 2021. The system was introduced to provide focused interventions, address identified risks and system gaps, and to ensure proper alignment on safety objectives across KE. In FY 2021 a gap analysis of KE Safety Management System was conducted in collaboration with DuPont Sustainable Solution (DSS), with a vision to identify gaps and implement solutions for Safety-First across board. During FY 2022, 07 PSM elements were developed, and 2,736 staff were trained to implement the same on ground and to bring across a cultural change. KE's HSEQ Policy and CHSEQ Manual were also revised in FY 2022, to ensure alignment with IFC performance standards, NEPRA Power Safety Code and PSM elements. Safety Committees have been formed and function as per defined frequencies to discuss safety performance, concerns, share incident lessons learnt and show visible management commitment towards safety.

6.2 Behavioral Observations Program – (MSA) Management Safety Audit

Management Safety Audits (MSA) play a pivotal role in building a safety culture in any organization. This is done by visible leadership interaction at shop floor, engagement of employees in dialogue over safety issues and necessary remedial actions. During FY 2022, 46,616 MSAs were carried out to monitor compliance with national safety regulations and laws, company safety policies, departmental procedures, and standard best practices.

6.3 Environment and Corporate Social Responsibility (CSR)

KE recognizes the importance of the global initiative of the United Nation's Sustainable Development Goals (SDG) and the '2030 Agenda', which develops a uniform mechanism for businesses to report on their contribution and impact on the SDGs. KE also plays a critical role in infrastructure, advancing quality of life and furthering global development sustainably. KE has strengthened this intention by committing to the United Nations Global Compact (UNGC) and entering a collaborative relationship with Global Compact Network Pakistan, signatory to the UN Global Compact since 2021. KE has a large regional footprint and as a responsible corporation, KE has incorporated environmental and social concerns throughout the value chain.

With a vision to make Karachi's future greener and healthier, the environmental initiatives have benefitted over 3,000 individuals. As part of KE's contribution to SDG 7 - access to affordable, reliable, sustainable and modern energy for all, KE partnered with NEPRA under its CSR drive "Power with Prosperity" along with other energy companies to co-create a solar microfinance facility program with Akhuwat Foundation as the implementing partner. Other initiatives include upcycling of paper and standee material



and reuse of wood from discarded fishing boats as giveaways to support fishermen communities.

With an eye to the future, KE's Research & Innovation wing is currently exploring possible implementation of off-grid and green energy solutions that will expand energy access for people in Karachi and beyond. Additionally, in line with the GoP's objectives and the approved National Electricity Policy (NEP 2021), KE is targeting to diversify and optimize its energy mix with the addition of renewable projects. This would enable KE to serve a more reliable, affordable, and sustainable power to customers, while also meeting the national target of increasing renewable sources of generation and reducing the carbon footprint.

7. ORGANIZATIONAL OUTLOOK

Through investments of **PKR 474,178 million** across the power value chain since privatization and upto FY 2022, strategic vision along with targeted initiatives in customer centricity, governance, human capital, and technological advancements, KE has been able to bring significant operational improvements. However, it is critical to further build on these improvements to have sustainable results in the long run. In view of this, KE has filed a robust investment plan of **PKR 484,079 million**^{3&4} for its Transmission and Distribution business which is currently under NEPRA approval. Further, KE has also filed a Power Acquisition Program (PAP) with NEPRA with a great focus on capacity addition on indigenous sources and to serve the growing power demand on reliable and least cost basis.

However, planned 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, as well as reduction in quality, reliability, and availability of electricity in Karachi and its adjoining areas.

Hence, for timely execution of planned investments and initiatives, it is important that KE be allowed a tariff that balances the interest of all stakeholders and ensures continuity of investment.

³ Includes PKR 18,514 Million for expanding and improving the IT infrastructure, Data Governance, Cyber security, Innovation and People management.

⁴ This amount is at macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022, and CPI of 158.48 (average) as of FY 22, and US CPI of 282.03 (average) as of FY 22 and is proposed to be adjusted based on indexation mechanism submitted as part of KE's Investment Plan for Transmission and Distribution Business.



7.1 Generation and Transmission

KE's vision is to ensure a reliable, and safe supply of electricity in an efficient and sustainable manner to its consumers. The past performance of KE and improvements made in generation over the previous years has significantly improved system availability and reliability.

Based on existing plans, KE plans to procure power from external sources, including IPPs with increased off-take of power from National Grid, which will ensure optimal utilization of idle capacity in the National Grid and reduce burden of capacity payments on the National Exchequer.

Further, several initiatives were taken in transmission over the years to improve reliability and availability of power system which includes installation of new 132kV and 220KV grid and transmission lines, replacement of aged equipment, transition to condition-based maintenance regime, adopting modern maintenance mechanisms / tools, transition from conventional operational regime to automated environment through SCADA and other digitalization projects.

Drawing inference from the above, KE has proposed an investment plan to upkeep and improve its focus on safety, outage reduction, restricting spread of outages, power quality, technical loss reduction alongside enhancing technology interventions to improve operational efficiency and sustainability by focusing investment in the following areas:

Growth Projects

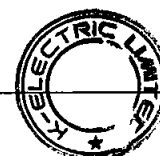
KE plans to achieve transmission capacity enhancement by 755 MVAs out of which 200MVA is assumed to be consumer funded, in order to meet the growing demand through augmentation in existing grid stations and addition of new 132kV grid stations in network. Further, to improve the reliability & stability of transmission network, KE will also add 250MVA auto transformers through augmentation in existing grid stations, addition of 220kV grid stations and associated transmission lines.

Additionally, KE is geared-up to complete the Hub, Vinder, Uthal and Bela Grids and 132kV Transmission Lines project to ensure improved reliability of power supply in the region and seeks support from Provincial and Federal Government on the matter.

Interconnection

Investment is planned for enhancing interconnection capacity of KE network through construction of new interconnecting grids with National Grid for increased power drawl from National Grid. This includes addition of 500 kV Grid Station which is key to off-take additional power from the National Grid. For interconnection with National grid through NTDC transmission lines, investment is considered for below mentioned which was primarily envisaged to be constructed by NTDC at its own cost.

Further, addition of additional lines is also planned, which include the following:



- 220 kV double circuit transmission line for looping In /Out of Jhimpir-2 - Jhimpir/DSEZ (Gharo) single circuit at 220 kV Dhabeji grid station.
- 500 kV double circuit transmission line for looping in/out of the planned 500 kV (K2/K3) plant to Port Qasim coal fired power plant single circuit at KKI grid station.

Further, with increase in import from NTDC network, augmentation in NKI interconnection, through addition of 500kV /220kV Auto Transformer and Loop in/out of KE's 220kV Baldia-Surjani Circuit and their associated bays, is planned to draw power from NTDC and from new generation projects being planned in Thar area through wheeling.

Moreover, for evacuation from renewable plants of 600 MW and 350 MW investment is also planned for construction of the following:

1. Step-up grid and related transmission line of 20 km is planned at Gharo corridor for inducting additional 600 MW renewable power plants in KE system.
2. Transmission lines having estimated length of 20 km is planned for evacuation of power from 350 MW renewable power plants through Surjani Grid.

System Improvement / Reliability

New SMART technologies have also been opted for improving efficiency and operational excellence along with the projects required for adhering the technical limits, as per Grid Code, which includes network augmentation for maintaining N-1 contingency, system security and safety standards. This includes execution of following major activities:

- Overhauling of GIS bays
- Replacement of Old Power Transformers and allied equipment
- Replacement of relays and allied equipment
- RTV coating and services/installation and replacement of composite insulators
- Tower structures rehabilitation/Transmission line allied equipment
- Underground cable replacement
- Rehabilitation of grid automation system/ Server with application for DRC
- Installations and replacements in telecom network

Reactive Power Management and Loss Reduction Project

KE's load growth and other transmission CAPEX has an indirect impact on efficiency of the network and system losses. In order to optimize the transmission loss and to have compensation for VAR requirement of network / load centers which would also help managing the power factor / quality as per the grid code / prudent utility practices, installation of additional capacitor banks at existing 132kV Grid stations alongside capacitors at new grids is planned.



7.2 Distribution & Supply

In line with its vision, KE is committed to a 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 5 of this document substantiate the same. While significant improvements have been demonstrated on the back of aggressive investments in the Distribution and Supply business, KE realizes that there is considerable room for improvement to further improve the service levels.

In view of the foregoing, KE has prepared a robust and comprehensive investment plan, under which KE plans to invest **PKR 184,650 million** during the period FY 2024 to FY 2030 in its distribution network and infrastructure. The investment plan encapsulates initiatives to cater projected growth in power demand, loss reduction initiatives, targeted and technology driven investments in the network for improved reliability and safety. This would enable KE to ensure provision of safe and reliable supply of power.

Moreover, on the supply front, KE is aggressively pursuing addition of power projects on indigenous sources which will help improve the fuel mix and resultantly lower the overall cost in KE system. In this regard, KE has submitted its Power Acquisition Program (PAP) for the approval of the Honorable Authority, wherein KE plans to add around 1,200 MW of renewables and another 990 MW of base load addition on local coal. These planned additions are expected to have a significant positive impact in terms of optimization of overall cost in KE system.

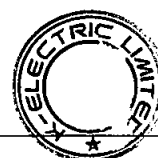
The investment plan for distribution is divided into five categories: (i) Growth, (ii) Loss Reduction, (iii) Maintenance, (iv) Safety and (v) Technology; summarized as follows:

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 the spatial limitations of the city due to its increasing population. Based on these investments, KE envisages the following by FY 2030:

- Addition of 444 11kV feeders and 7,606 distribution transformers
- Capacity enhancement by 2,561 MVAs
- Addition of over 3,170 km of High Tension (HT) lines

Further, expansion of Common Distribution System (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 planned additions/ enhancements in network will serve future demand projections.

Loss Reduction

KE plans to invest 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. Loss reduction initiatives are categorized into commercial and technical loss reduction.

Commercial loss reduction initiatives will include continuation of KE's flagship Aerial Bundled Cable (ABC) project and Faulty Meter Replacement (FMR). Upto FY 2022, KE has converted over 12,500 PMTs on to ABC and plans to convert another 1,770 PMTs during the period FY 2024 to FY 2030.

Further technical loss reduction initiatives will include loop splitting, installation of Power Factor Improvement Plant (PFIP) and other rehabilitation initiatives.

With these planned initiatives, KE targets to reduce its distribution losses to 11.5% in FY 2030 from a projected 13.8% in FY 2023.⁵

Maintenance

For overhauling and maintenance of its existing distribution network, KE has planned Corrective Maintenance (CM) and rehabilitation of its network. 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. Based on these investments, KE expects improvement in SAIFI and SAIDI by around 30%.

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.

Additionally, KE has also planned investments in its network through Network Improvement Plan (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.

⁵ This is based on best estimates and subject to approval of KE's investment plan



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. 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
- Replacement of hazardous Multi Storey Bus Bars (MSBB)
- Shifting of PMTs (for dilapidated poles and structures)

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
- Earthing all metallic infrastructure connected to ground
- Installation of stay unit isolators
- Conversion of OH HT to UG cables to maintain safe clearance distance
- Installation of Distribution Boxes (DB)
- Induction of PMU on wheels

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.

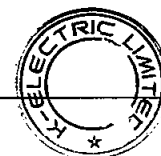
Technology

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:

- Installation of AMRs at PMT level and high-end consumers
- Widening of digitization outreach of customer services
- Commercial digitization of operational matters
- Installation of Power Quality Analyzers
- Deployment of Advanced Data Management System (ADMS)

7.3 Customer Experience

KE is consistently exploring new avenues to improve customer experience. Also, KE regularly captures voice of customers and implementation of this feedback to further improve the customer experience. In FY 2022, KE successfully introduced a new digital channel for their valuable customers i.e. WhatsApp for KE (with Urdu language facility), which managed to acquire over 300,000 customers within 7 months of launch. Also, the smartphone app 'KE Live' witnessed an increase in usage trend during FY 2022.



The launch of the Queue Management System (QMS) at Customer Care Centers (CCC) has helped in reducing the wait times through effective traffic management. To serve customers at their doorsteps, especially in locations with limited banking service proximity, KE uses IBCs on Wheels, opens smaller Sahulat Centres and arranges customer camps.

As a future-centric organization, KE remains committed to strengthening customer service through increased online access and streamlining of our processes. KE's external communication improvement plan prioritizes:

- Strengthening customer facilitation through digital enhancement and ensuring accessibility in areas which requires new connection (potential new KE customers)
- Deployment of Virtual Customer Service Centers
- Restructuring existing Customer Services to be more accessible and inclusive
- Technological upgrades to strengthen existing digital touchpoints
- Capacity building of front-end staff around customer-centricity

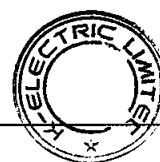
7.4 Human Capital & Employee Experience

KE has a workforce of 9,959 employees⁶ as of FY 2022 To strengthen the talent pipeline, KE initiated a series of development programs, which includes the LEAD (Leadership Exploration & Development) program. This program was initiated to assess, identify, and develop leadership skills amongst top performers to develop a sustainable talent pool, and create a long-term platform for succession planning. Additionally, KE also has a dedicated facility named Distribution Network Academy (DNA), which is equipped with state-of-the-art facilities such as Meter Labs, Switchgear Labs & Training Fields etc, which imparts technical trainings.

Moreover, focused learning interventions were introduced through development programs, "Meri Shanakht", "Up Your Game" and "Hum Qadam" to develop and upskill officers and non-management employees. These programs focused on enhancing skills, personal branding, self-awareness as well as grooming towards a customer-centric approach. Additionally, to support women professionals on a career break, KE introduced a "Returnship Program" that aims to offer project based contractual opportunities to such women professionals.

As a result of its efforts to develop human capital, KE has been awarded 'Employer of Choice Award' and was declared as a 1st Runner up for the Employer of Choice Gender Diversity Awards, hosted by IFC and CERB - Pakistan Business Council. KE has also been recognized as a winner for its Employee Retention initiatives in WePOWER, SouthAsia.

⁶ Excluding third party contractor employees



Going forward, KE is committed to the continuous improvement of its workforce through various mediums such as Physical Trainings (covering both Behavioral & Skill Requirements), e-Learning, Affiliation Programs with Leading Universities & Technical Training/ Apprenticeship Programs, etc.

7.5 IT Governance and Cyber Security

KE has obtained ISO 27001 certification (Information Security management Systems - ISMS), which enables KE to reduce risk and guarantee business continuity by actively reducing the effects of a possible security breach. KE's multipronged efforts include investments in cyber security technologies, techniques, and human capital. Additionally, as a regulated organization, KE abides by NEPRA's (Security of Information Technology and Operational Technology) Regulations, 2022 (NEPRA IT and OT Regulations). Moreover, KE regularly issues companywide advisories related to information/cyber security to keep its employees updated. Further, phishing attack simulations and other training sessions are held regularly to reinforce cyber security practice. Information Technology (IT) security training is also part of the employee onboarding process. To integrate digital technology into all areas of business, there are robust governance structures in place for a seamless and secure customer experience.

Going forward, KE plans to invest **PKR 18,514 million**⁷ mainly for expanding and improving the customer satisfaction, robust infrastructure, data governance & strategy, cyber security, innovation and people management. This proposed investment plan has been divided as follows:

i. Information Technology

With various investments planned across its business segments, KE is poised to continue its journey of sustainable technology growth and disruptive phenomena of Industry 4.0 revolution with strategic plans in emerging technologies related to digital transformation, cloud-enabled infrastructure and services, data governance, analytics, machine-learning, Artificial Intelligence (AI) capabilities, Internet-of-things (IoT), mobility, Operational technologies (OT) convergence with IT, cybersecurity and digital and social media channels.

ii. Cyber Security

KE has planned to further fortify its cyber security through enhancement of areas such as Defense & Security and Risk Assessment & Compliance. Further, KE in line with NEPRA's IT & OT Regulations is scrutinizing IT & OT systems for all its business segments.

KE is fully committed to continuous evolving alongside the sector and driving innovation through collaboration with multiple stakeholders. KE firmly believes in investing in its people

⁷ This amount is at macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022, CPI of 158.48 (average) as of FY 22, and US CPI of 282.03 (average) as of FY 22 and is proposed to be adjusted based on indexation mechanism.



and embracing cutting-edge advancements to consistently exceed expectations. KE's unwavering dedication to staying at the forefront of industry trends and technologies will enable it to anticipate and respond effectively to the ever-changing needs of the power sector and continuously improve the service levels.



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
KEL	K – Electric Limited
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





SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN
COMPANY REGISTRATION OFFICE

CERTIFICATE OF INCORPORATION ON CHANGE OF NAME

[Under section 40 of the Companies Ordinance, 1984 (XLVII of 1984)]

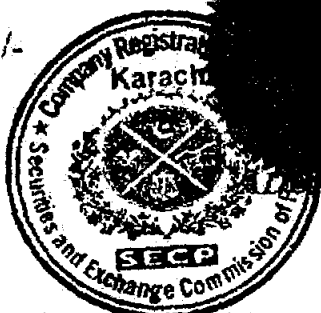
Company Registration No. K-0000002 / 90797

I hereby certify that pursuant to the provisions of section 39 of the Companies Ordinance, 1984 (XLVII of 1984), the name of KARACHI ELECTRIC SUPPLY CORPORATION LIMITED has been changed to KARACHI ELECTRIC SUPPLY COMPANY LIMITED and that the said company has been duly incorporated as a company limited by Shares as a Public company under the provisions of the said Ordinance.

This change is subject to the condition that for period of one year from the date of issue of this certificate, the company shall continue to mention its former name alongwith its new name on the outside of every office or place in which its business is carried on and in every document or notice referred to in clauses (a) and (c) of section 143.

Given under my hand at Karachi this 9th day of January Two Thousand and Eight.

Fee Rs.1000/-




(AWAR HUSSAIN)
REGISTRAR OF COMPANIES,
KARACHI

B001514



SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN

CERTIFICATE OF INCORPORATION ON CHANGE OF NAME

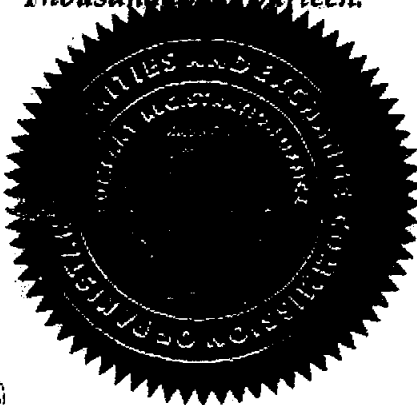
[Under section 40 of the Companies Ordinance, 1984 (XLVII of 1984)]


Company Registration No: 0000002

I hereby certify that pursuant to the provisions of section 39 of the Companies Ordinance, 1984 (XLVII of 1984), the name of KARACHI ELECTRIC SUPPLY COMPANY LIMITED has been changed to K-ELECTRIC LIMITED and that the said company has been duly incorporated as a company limited by shares under the provisions of the said Ordinance.

This change is subject to the condition that for period of one year from the date of issue of this certificate, the company shall continue to mention its former name along with its new name on the outside of every office or place in which its business is carried on and in every document or notice referred to in clauses (a) and (c) of section 143.

Given under my hand at Karachi this 16th day of January Two Thousand and Fourteen.




(Sidney C. Pereira)
Joint Registrar/Incharge
Company Registration Office,
Karachi

Fee Rs. 2500/-

B001514

SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN
CERTIFICATE OF INCORPORATION ON CHANGE OF NAME

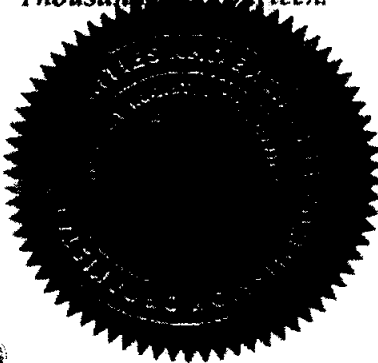
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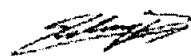
Company Registration No: 0000002

I hereby certify that pursuant to the provisions of section 39 of the Companies Ordinance, 1984 (XLVII of 1984), the name of KARACHI ELECTRIC SUPPLY COMPANY LIMITED has been changed to K-ELECTRIC LIMITED and that the said company has been duly incorporated as a company limited by shares under the provisions of the said Ordinance.


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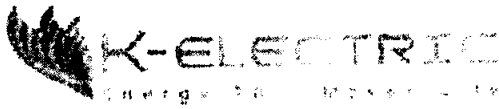
Given under my hand at Karachi this 16th day of January Two Thousand and Fourteen.



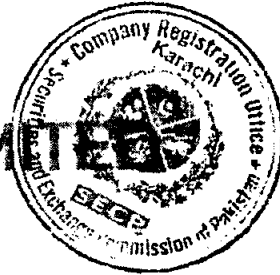

(Sidney C. Pereira)
Joint Registrar/Incharge
Company Registration Office,
Karachi

Fee Rs. 2500/-

TRUE COPY

RASHID MOHIUDDIN
Manager
Corporate Affairs
K-ELECTRIC LIMITED



K-ELECTRIC LIMITED



MEMORANDUM & ARTICLES OF ASSOCIATION

TRUE COPY
Rashid Mohiuddin
RASHID MOHIUDDIN
Manager
Corporate Affairs
K-ELECTRIC LIMITED

K-Electric Limited

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Rashid Mohiuddin
 RASHID MOHIUDDIN
 Manager
 Corporate Affairs
 K-ELECTRIC LIMITED

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1

**THE COMPANIES ORDINANCE 1984
COMPANY LIMITED BY SHARES**

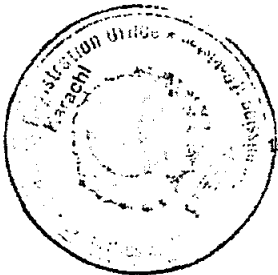
**MEMORANDUM OF ASSOCIATION
OF
K-ELECTRIC LIMITED**

- I. The name of the company is K-Electric Limited.
- II. The registered offices of the Company will be situated in Karachi, Sindh, Pakistan.
- III. The objects for which the Company is established are
 1. To carry on at Karachi and elsewhere in Pakistan, the business of an electric light company in all its branches and in particular to construct, lay down, establish and fix all necessary cables, wires, lines, accumulators, lamps and works and to generate, accumulate, transmit, distribute and supply electricity and to light cities, towns, streets docks, markets, theaters, buildings and places both public and private.
 2. To carry on the business of Electrical Engineers, Electricians, Engineers, and Contractors, Shopkeepers, Agents and Manufacturers of Electrical apparatus, and of generating, producing and supplying light, heat, sound and power by electricity, galvanism, magnetism or otherwise, suppliers of electricity whether for the purposes of light, heat, motive power, telephonic, telegraphic industrial or other purposes and generally to provide, work, maintain and carry out all necessary cables, wires, accumulators, lamps exchanges telephones and apparatus.
 3. For the purposes of the above section, to buy, sell, hire or deal in cables, wires, accumulators, lamps, exchanges, telephones, fittings and furniture and apparatus of every kind with special reference to apparatus connected with the producing, storing, supplying, using, regulating or measuring the supply or facilitating the use of electricity or electrical currents or force.
 4. To buy, sell, hire, manufacture, deal in, turn to account, plant, machinery, implements, convenience, provisions, articles and products capable of being used in connection with the operations of or required by workmen and others employed by the Company or incidentally or conveniently connected with any such business as aforesaid.
 5. To construct, purchase, lease or otherwise acquire any tramways, railways, aerial ropeways or any other means of transport by land, air or water.
 6. To equip and to maintain and work by electricity, steam, petrol or other mechanical power or by animal power, all tramways, railways, aerial ropeways or other means of transport by air, land or water in which the Company may at any time be interested.
 7. To carry on the business of tramways, railways, omnibus and van proprietors and carriers of passengers and goods by air, land or water and of manufacturers of and dealers in tramways, carriages, trucks, locomotives, launches, accumulators, dynamos and other chattels and effect and conveniences required for making, maintaining equipping and working tramways, railways, aerial ropeways or any other means of transport by air, land or water.
 8. To purchase, take in, exchange or lease rent, occupy or otherwise acquire any lands, hereditaments and estates and any property and effects thereon or used or connected therewith and to acquire any grants, concessions, leases, rights easements, licenses, privileges, and any other interests in land.



TRUE COPY
Rashid Mahmood
RASHID MAHMOOD
MANAGING DIRECTOR
K-ELECTRIC LIMITED

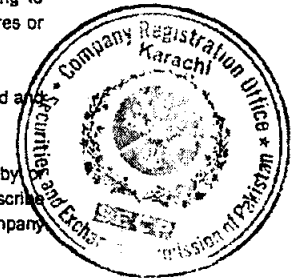
9. To acquire, erect, construct, lay down, enlarge, alter and maintain any buildings, works, and machinery necessary or convenient for the Company's business.
10. To sell, lease, improve, manage, develop, mortgage, exchange turn to account or otherwise deal with, dispose of absolutely, conditionally, or for any, limited interest, and grant any leave or license in respect of all or any of the rights or privileges of the Company, and to distribute in specie as dividend or bonus any money, shares, stocks, debentures or debenture stock that may be accepted as consideration for any such sale, lease, exchange or other disposition.
11. To promote, amalgamate with or buy up any other Company for the purpose of acquiring all or any of the property and liabilities of this Company, or for any other purpose which may seem directly or indirectly calculated to benefit this other purpose which may seem directly or indirectly calculated to benefit this Company having and to take or otherwise acquire and hold shares in any other company objects altogether or in part similar to those of this Company, or carrying on any business capable of being conducted so as directly or indirectly to benefit this Company.
12. To enter into partnership or into any arrangement for sharing profits, union of interest, co-operation, joint venture, reciprocal concession, or otherwise with any person or company carrying on or engaged in or about to carry on or engage in any business or transaction capable of being conducted so as to directly or indirectly benefit this Company, and to lend money to guarantee the contracts of, or otherwise assist any such person or company, and to take, or otherwise acquire shares and securities of any such company and to sell, hold, re-issue, with or without guarantee, or otherwise deal with the same.
13. To carry on any other business which may seem to the Company capable of being conveniently carried on in connection with the above or calculated to directly or indirectly enhance the value of or render profitable any of the Company's property or rights.
14. To enter into any arrangement with any Government or authority, supreme, municipal, local or otherwise that may seem conducive to the Company's objects or any of them; to obtain from any such Government or authority any rights, privileges, and concessions which the Company may think desirable to obtain and carry out, exercise and comply with any such arrangements, rights, privileges and concessions, and to apply for and obtain licenses, provisional orders, special Acts or other statutory or parliamentary authority for supplying electricity for any public or private purpose.
15. To promote any Bill or Bills in any parliament or any application or applications to any public authority for any order, provisional order or license and to enter into any contract to bear and pay the expenses of or in connection with the same or arising there out, and to underwrite or guarantee the capital required for carrying out any undertaking authorized by any such Act, order or license
16. To purchase or otherwise acquire any patents, brevets d'inventions, licenses, concessions and the like conferring any exclusive or non-exclusive or limited right to use any invention which may seem capable of being used for any of the purposes of the Company or, the acquisition of which may seem calculated directly or indirectly to benefit the Company, and to use, exercise, develop or grant licenses in respect of, or otherwise turn to account, the property and right so acquired
17. To pay for any property or rights acquired by the Company either in cash or shares with or without preferred or deferred right, in respect of dividend or repayment of capital, or otherwise, or by any securities which the Company has power to issue or partly in one mode and partly in another and generally on such terms as the Directors may approve.
18. To issue all or any part of the original or other share capital whether preference or ordinary shares of the Company at par or at premium or at discount and as fully or partly paid up.



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Rashid Mohiuddin
 RASHID MOHIUDDIN
 Manager
 Corporate Affairs
 K-ELECTRIC LIMITED

19. To borrow and raise money in such manner as the Company shall think fit and in particular by the issue of debentures, mortgage debentures, or debenture stock payable to bearer or otherwise and either permanent or redeemable or repayment and collaterally to secure any securities of the Company by means of a trust deed or otherwise.
20. To invest and deal with the moneys of the Company not immediately required upon such securities and in such manner as may from time to time be determined.
21. To make, draw, endorse, accept and negotiate Bills of Exchange, promissory notes or any other negotiable instruments.
22. To receive money on deposit, at interest or otherwise and to lend money, and in particular to customers and others having dealings with the Company and to guarantee the performance of any contracts.
23. To remunerate any person or company for services rendered in placing or assisting to place or in guaranteeing any of the shares in the Company's capital or any debentures or other Securities of the Company.
24. To indenture, contract or otherwise engage handicraftsmen and other workmen, skilled and unskilled and to import labour.
25. To grant pensions, allowances, gratuities and bonuses to the persons employed by the Company trading with the Company and to aid in the establishment and support of and to subscribe to any association or institutions, calculated to benefit persons employed by the Company or having dealings with the Company.
26. To pay out of the funds of the Company all expenses which the Company may lawfully or by agreement with Government pay, incident to the formation, registration and advertising of or raising money for the Company by debentures or otherwise and the issue of its capital, including brokerage and commission for obtaining applications for or taking, placing or underwriting, shares, debentures or debenture stock and to apply at the cost of the Company to the Government of Pakistan or any other Government Authority, for any extension of the Company's powers.
27. To guarantee the performance of any contract.
28. To procure the Company to be registered or recognized in any country or place outside Pakistan and to keep Branch Registers.
29. To do all or any of the above acts in any part of the world as principals, agents, contractors, trustees or otherwise, and by or through trustees, agents or otherwise, and either alone or in conjunction with others.
30. To do all such other things as are incidental or conducive to the attainment of the above objects.
31. And it is hereby declared that the word "company" in this clause shall be deemed to include any authority, partnership or other body of person whether incorporated or not incorporated, and the word "person" shall be deemed to include any partnership, association or other body of persons, and any company if the context so admits; and the intention is that the objects set forth in each of the several paragraphs of this clause have the widest possible construction, and shall be in no wise limited or restricted by reference to or inference from the terms of any other paragraph of this clause or name of the Company except as otherwise expressed therein.

IV. The Liability of the Members is Limited.



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 RASHID MOHIUDDIN
 Manager
 Corporate Affairs
 K-ELECTRIC LIMITED

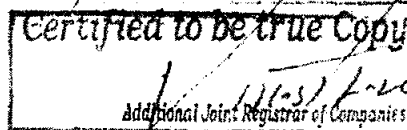
V. The share capital of the Company is Rs.125,000,000,000 (Rupees One Hundred Twenty-Five Billion Only) divided into the following kinds of shares:

- i. Share Capital of Rs.115,000,000,000 (Rupees One Hundred Fifteen Billion Only) divided into 32,857,142,857 ordinary shares of Rs.3.50 each.
- ii. Shares Capital of Rs 10,000,000,000 (Rupees Ten Billion Only) divided into 2,857,142,857 Redeemable Preference Shares of Rs.3.50 each.

WE, the several persons whose names and addresses are subscribed, are desirous of, being formed a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the Capital of the Company set opposite our respective names.

Dated this Sixth day of September 1913.

Name of Subscriber	Address and Description of Subscriber	Number of Ordinary Shares taken by each Subscriber	Witness to Signature
T.L.F. Beaumont	Merchant, Karachi	1 (one)	
Ghulamali G. Chagla	Merchant, Karachi	1 (one)	
Nadirshaw E. Dinshaw	Merchant, Karachi	1 (one)	
W.U. Nicholas	Merchant, Karachi	1 (one)	
B. Frank Jones	Merchant, Karachi	1 (one)	
Chellaram Dullomal	Merchant, Karachi	1 (one)	
Abdool Rahim Saleh Mahomed	Merchant, Karachi	1 (one)	



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THE COMPANIES ORDINANCE, 1984 COMPANY LIMITED BY SHARES

ARTICLES OF ASSOCIATION OF K-ELECTRIC LIMITED

PRELIMINARY

1. The Regulations contained in Table 'A' referred to in Section 26 (2) in the First Schedule to the Companies Ordinance, 1984 (hereinafter called "the Ordinance" shall not apply to the Company except as may be reproduced herein.
2. The Regulations, for the management of the Company and for the observance of the Members thereof and their representatives, shall (subject to any exercise of the statutory powers of the Company in reference to the repeal or alteration of or addition to its regulations by Special Resolution as prescribed under the Ordinance) be such as are contained in these Articles.

DEFINITIONS

3. The chapter heading shall not affect the construction hereof, and in these Articles, unless there is something in subject or context inconsistent therewith :

"Debenture" includes debenture stock, Bonds, Term Finance Certificates (TFC) and any other security other than the shares of the Company, whether constituting a charge on the assets of the Company or not.

"Dividend" means the distribution of profits of the Company to its members.

"Member" means a member of the Company within the meaning of clause (21) of sub-section (1) of Section 2.

"Month" means a calendar month according to the English calendar.

"Office" means the Registered Office of the Company.

"Participatory Redeemable Capital" or PRC means such Redeemable Capital as is entitled to participate in the profit and loss of the Company.

"Person" shall include a body corporate.

"Proxy" includes an attorney duly constituted under a power of attorney.

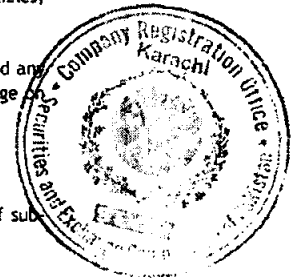
"Redeemable Capital" includes finance obtained on the basis of Participation Term Certificates (PTC), Musharika Certificates, Term Finance Certificates (TFC), or any other security or obligation not based on interest as defined in Section 2(30A) of the Ordinance.

"Section" means section of the Ordinance.

"Special Resolution" has the meaning assigned therein by clause (36) of subsection (1) of Section 2 of the Ordinance.

"The Articles" means these Articles of Association, as originally framed or as altered from time to time by Special Resolution.

"The Authority" means the Corporate Law Authority constituted under Section 11.



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Corporate Affairs
K-ELECTRIC LIMITED

"The Board" shall mean the Directors from time to time of the Company acting at a meeting or through a committee of Directors or pursuant to written consent.

"The Company" means K-Electric Limited.

"The Chairman" means the Chairman of the Board appointed from time to time pursuant to the Articles.

"The Chief Executive" means the Chief Executive of the Company appointed from time to time pursuant to the Articles and the Ordinance.

"The Directors" means the Directors of the Company appointed from time to time pursuant to these Articles including alternate Directors.

"The Memorandum" means the Memorandum of Association of the Company as originally framed or as altered from time to time in accordance with the provisions of the Ordinance.

"The Ordinance" means the Companies Ordinance 1984, as amended and now in force in Pakistan, and any amendment or re-enactment thereof for the time being in force.

"The Register" means the Register of Members to be kept pursuant to Section 147 of the Ordinance.

"The Seal" means the Common Seal of the Company.

"The Secretary" means the Secretary for the time being of the Company.

"In writing" and "Written" includes printing, lithography and other modes of representing or reproducing words in a visible form.

"Words" importing the singular include the plural number and vice versa.

Words importing the masculine gender only include the feminine gender and words or expression contained in the Articles shall bear the same meaning as in the Ordinance.

Words importing persons include bodies corporate.

BUSINESS

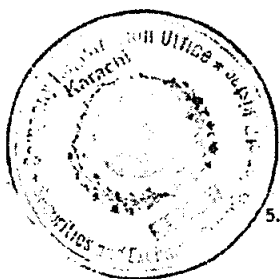
4. The business of the Company shall include the several objects expressed in the Memorandum of Association or those which are within its scope and meaning and all incidental matters taken or to be taken in hand as the Directors in their discretion shall think fit, and all matters which may appear to the Directors to be expedient for attaining these objects. The business shall be carried on by or under the management of Directors, subject only to such control of General Meetings as is provided for by these Articles and the Ordinance.

PUBLIC COMPANY LIMITED BY SHARES

5. The Company is a Public Company with Limited Liability.

CAPITAL

6. The authorized share capital of the Company is Rs.125,000,000,000 (Rupees One Hundred Twenty Five Billion Only) divided into the following kinds of shares:-
 - i. Share Capital of Rs.115,000,000,000 (Rupees One Hundred Fifteen Billion Only) divided into 32,857,142,857 ordinary shares of Rs.3.50 each.
 - ii. Share Capital of Rs.10,000,000,000 (Rupees Ten Billion Only) divided into 2,857,142,857 Redeemable Preference Shares of Rs.3.50 each.



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SHARES

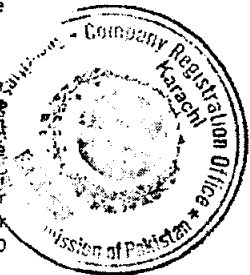
- 7(i) Subject to the conditions, here in contained the shares shall be under the control of the Directors who may allot or otherwise dispose of the same to such persons, on such terms and conditions, and either for cash or for a consideration other than cash, as the Directors think fit.
- (ii) The Company shall have the power to issue Redeemable Capital, by whatever name called liable to be redeemed, or liable at the option of the Company to be redeemed in any manner permissible under the provision of the Ordinance or conditions of any agreement for issue of such certificate or instrument:
- The Redeemable Preference Shares shall be entitled to a preferential dividend at the rate fixed at the General Meeting of the Company.
 - The preferential dividend shall be cumulative.
 - The preference shareholder(s) shall only be entitled to preferential dividend and shall not be entitled to any other dividend (whether cash, bonus shares, right shares etc.) to which ordinary shareholders may become entitled from time to time.
 - The Redeemable Preference Shares shall be redeemed on redemption date or shall be converted into ordinary shares as deemed expedient by the Board of Directors. The Board of Directors shall also finalize other modalities & mechanism with regard to issue of Redeemable Preference Shares, payment of preferential dividend, redemption, conversion etc.
 - Redeemable Preference shareholders shall not be entitled to attend or vote at the meetings of shareholders of the Company.
- (iii) The Company may, upon terms and conditions contained in an agreement in writing, issue to one or more Scheduled Banks, Financial Institutions or such other persons as are specified for the purpose by the Federal Government by notification in the Official Gazette, either severally, jointly or through their syndicate, any instrument in the nature of Redeemable Capital in any or several forms in consideration of any funds, moneys, accommodations received or to be received by the Company whether in cash or specie or against any promise, guarantee, undertaking or indemnity issued to or in favour of or for the benefit of the Company, subject to the legal provisions, on the issue and Section 120 of the Ordinance.
- (iv) The Board shall, as regards any allotment of shares, duly comply with such provisions of Sections 68 to 73 as may be applicable.

SHARES FOR CONSIDERATION OTHER THAN CASH

8. Subject to the provisions of the Ordinance and the Articles, the Board may allot and issue shares in the capital of the Company as payment or part payment for any property sold or transferred, goods or machinery supplied, or for services rendered to the Company in the conduct of the business or affairs, and any shares which may be so allotted may be issued as fully paid up shares, and if so issued, shall be deemed to be fully paid up shares.

FRACTIONAL SHARES

9. If and whenever as a result of an issue of new shares any consolidation or sub-division of shares any Member becomes entitled to hold shares in fractions, the Board shall not be required to offer or issue such fractional shares and shall be entitled to sell whole shares at a reasonable price and pay and distribute to and amongst the Members entitled to such fractional shares in due proportion the net proceeds of the sale thereof. For the purpose of giving effect to any such sale, the Board may authorize any person to transfer the shares sold to the purchaser thereof, and the purchaser shall be registered as the holder of the shares comprised in such transfer but he shall not be entitled to see the



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application of the purchase money nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.

ISSUE OF FURTHER SHARES

10. Subject to Section 86, where at any time the Board decides to increase the issued capital of the Company by issuing any further shares, then subject to any direction to the contrary that may be given by the Company in General Meeting, such shares shall be offered to the Members in proportion to the existing shares held by each Member, and such offer shall be made by notice specifying the number of shares to which the Member is entitled and limiting a time within which the offer, if not accepted, will be deemed to be declined and after the expiration of such time, or on receipt of information from the Member to whom notice is given that he declines to accept the shares offered, the Board may dispose of the same in such manner as it may consider most beneficial to the Company.

The Company shall not give whether directly or indirectly, and whether by means of a loan, guarantee, provisions of security or otherwise, any financial assistance for the purpose of or in connection with a purchase made or to be made by any person of any shares in the Company, nor shall the Company make a loan for any purpose whatsoever on the security of its shares, but nothing in the Articles shall prohibit any transaction which may be permitted by the Ordinance.

REGISTER OF MEMBERS

11. The Company shall cause to be kept a Register of Members and Index of Members in accordance with the provisions of Section 147 of the Ordinance.

EVIDENCE OF MEMBERSHIP

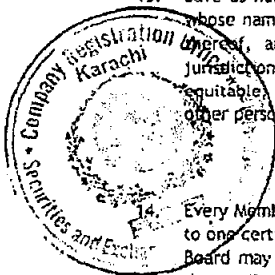
12. Any application for subscription signed by or on behalf of an applicant or subscriber for shares in the Company, followed by an allotment of any shares therein, shall be an acceptance of shares within the meaning of the Articles, and every person who thus or otherwise accepts any shares and whose name is entered on the Register shall for the purpose of the Articles be a Member.

TRUST NOT RECOGNISED

13. Save as here in otherwise provided, the Company shall be entitled to treat the person whose name appears on the Register as the holder of any shares as the absolute owner thereof, and accordingly shall not (except as ordered by a Court of competent jurisdiction or as by law required) be bound to recognize any trust or equity or benami, equitable, contingent or other claim to or interest in such shares, on the part of any other person whether or not it shall have expressed or implied notice thereof.

CERTIFICATES

14. Every Member shall, on payment of such sum as the Directors may prescribe, be entitled to one certificate for all the shares registered in his name or upon paying such fee as the Board may from time to time determine, to several certificates each for one or more shares. Every certificate of shares shall specify the number and denote the number of shares in respect of which it is issued, and the amount paid thereon, such certificates shall be issued under Seal, and shall bear the signature of one Director and shall be countersigned by the Secretary or by a Second Director, or by some other person appointed for that purpose by the Board. The Directors may by resolution determine, either generally or in any particular case, that the signature of any Director (s) may be affixed by some mechanical means in the mode and manner specified in such resolution, provided that, in respect of a share or shares held jointly by several persons, the Company shall not be bound to issue more than one certificate, and delivery of a certificate for a share to one of several joint-holders shall be sufficient delivery to all.



**ISSUE OF NEW CERTIFICATE IN PLACE OF
DEFACED, LOST OR DESTROYED CERTIFICATE**

15. If any Certificate is worn-out, defaced or rendered useless, then upon production thereof to the Board, it may order the same to be cancelled and may issue a new Certificate in lieu thereof, and if any Certificate is lost or destroyed, then on proof thereof, to the satisfaction of the Board and on such indemnity as the Board deems adequate being given, a new Certificate in lieu thereof shall be given to the party entitled to such lost or destroyed Certificate. The new Certificate may be issued on such terms and fee as may be prescribed by the Board including payment of expenses incurred by the Company in investigating title.

TRANSFER OF SHARES

16. The instrument of transfer of any shares in the Company shall be executed both by the transferor and transferee, and the transferor shall be deemed to remain holder of the share until the name of the transferee is entered in the Register of Members in respect thereof. The Company shall keep a book to be called the "Register of Transfer" and therein shall be fairly and distinctly entered the particulars of every transfer or transmission of any share.

FORM OF TRANSFER

17. The instrument of transfer of any share shall be in writing in the usual common form or in the form appearing in the next paragraph or as near thereto as circumstances will admit.

K-Electric Limited

"I, _____ son/daughter/wife of _____ and of _____ being a _____ national, called the "Transferor" in consideration of the sum of Rs. _____ (Rupees _____) paid to me by _____ son/daughter/wife of _____ of _____ national of _____ and Muslim/Non-Muslim (hereinafter called "The Transferee") do hereby transfer to the Transferee _____ share(s) numbered _____ in the undertaking called K-Electric Limited to hold the same unto the said Transferee, his (or her) executors, administrators and assigns subject to the several conditions on which I held the same immediately before the execution hereof, and I, the Transferee, do hereby agree to take the said share(s) subject to the conditions aforesaid. As witness our hands the day of _____

Witness

Signature: _____

Transferor:

Signature: _____ dated _____

Signature: _____

Transferee

Full Address: _____

Witness

Signature : _____

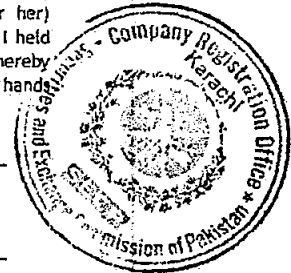
Full Name

Father's / Husband name

Full Address : _____

Nationality:

Occupation and Full Address
of Transferee



The Board may from time to time alter or vary the transfer form.

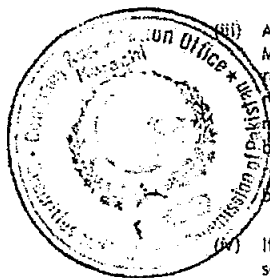
CONDITIONS FOR REGISTRATION OF TRANSFER

18. The Directors shall not refuse to register any transfer of fully paid shares unless the instrument of transfer is defective or invalid or is not accompanied by the Certificate of the shares to which it relates.

TRANSMISSION OF SHARES

- 19(i) Any Member may make and deposit with the company a nomination in writing specifying one or more eligible persons who or each of whom, in the event of the death of the Member, may be entered in the Register as the holder of such number of shares specified in the nomination for such nominee or each such nominee of which the Member remains the registered holder at the date of his death. A person shall be eligible for nomination for the purposes of this Article only if he is a spouse, parent, brother, sister or child of the Member nominating him and the applicable relationship shall be specified in the nomination in respect of each nominee. A Member may at any time by notice in writing cancel, or by making and depositing with the company another nomination before his death vary, any nomination already made by him pursuant to this Article. In the event of the death of a Member any person nominated by him in accordance with this Article may, on written application accompanied by the relative share certificate and evidence establishing the death of the Member, request the Company to register himself in place of this deceased Member as the holder of the number of shares for which the nomination in his favour had been made and deposited with the company, and if it shall appear to the Directors that it is proper so to do, the Directors may register the nominee as the holder of those shares in place of the deceased Member.

- (ii) In case of death of a Member who was a joint holder of shares, the survivor or survivors shall be the only persons recognized by the Company as having any title to his interest in the shares. If the deceased Member was a sole holder of shares, the nominee or nominees of the deceased where a nomination under Article 19(i) is effective, shall be the only person recognized by the Company as having any title to his interest in the shares. In case of such deceased Member who had not made a nomination under Article 19(i), the legal personal representative of such deceased Member where he was a sole holder shall be the only person recognized by the Company as having any title to his interest in the shares.



- (iii) Any person becoming entitled to a share in consequence of the death or insolvency of a Member may, upon such evidence being produced as may from time to time properly be required by the Directors and subject as hereinafter provided, elect either to be registered himself as the holder of the shares or instead of being registered himself, to make such transfer of the share as the deceased or insolvent person could have made, but the Directors shall, in either case, have the same right to decline or suspend registration as they would have had in the case of a transfer of the share by that Member before his death or insolvency as the case may be.
- (iv) If the person so becoming entitled shall elect to be registered himself, he shall deliver or send to the Company a notice in writing signed by him stating that he so elects. If he shall elect to have another person registered he shall testify his election by executing to that person a transfer of the share. All the limitations, restrictions and provisions of these Articles relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice or transfer as aforesaid as if the death or insolvency of the Member had not occurred and the notice or transfer were a transfer signed by that Member.
- (v) A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he was the registered holder of the share, except that he shall not before

being registered as a Member in respect of the share, be entitled in respect of it to exercise any rights conferred by Membership in relation to meetings of the Company.

- (vi) The Company shall incur no liability or responsibility whatsoever in consequence of its registering or giving effect to any transfer of shares made or purporting to be made by any apparent legal owner thereof (as shown or appearing in the Register) to the person having or claiming any equitable right, title or interest to or in the same shares, notwithstanding that the Company may have had notice of such equitable right, title or interest or notice prohibiting registration of such transfer, and the Company shall not be bound or required to regard or attend or give effect to any notice which may be given to it of any equitable right, title or interest, or be under any liability whatsoever for refusing or neglecting so to do, but the Company shall nevertheless be at liberty to regard and attend to any such notice and give effect thereto, if the Board shall so think fit.

ALTERATION OF CAPITAL

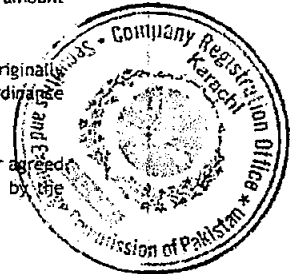
- 20(i) The Company may from time to time by Special Resolution increase the authorized share capital by such sum to be divided into shares of such amount as the resolution shall prescribe.
- (ii) Except and so far as otherwise provided by the conditions of issue or by the Articles, any capital raised by the creation of new shares shall be considered part of the authorized capital and shall be subject to the provision herein contained with reference to transfer and transmission, voting and otherwise.
- (iii) The Company may by Special Resolution reduce its share capital in any manner and with and subject to any incident, authorization and consent required by law.
- (iv) The Company may in a General Meeting by Ordinary Resolution alter the conditions of its Memorandum as follows:
- (a) Consolidate and divide all and any of its share capital into shares of larger amount than its existing shares.
 - (b) Sub-divide shares or any of them into shares of smaller amounts than originally fixed by the Memorandum, subject nevertheless to the provisions of the Ordinance in that behalf.
 - (c) Cancel shares which at the date of General Meeting have not been taken or agreed to be taken by any person and diminish the amount of its share capital by the amount of the shares so cancelled.

POWER TO BORROW POWER OF THE BOARD

21. The Board may from time to time borrow any moneys for the purpose of the Company from the Members or from any other persons, firms, companies, corporations, government agencies, institutions or banks, or the Directors may themselves lend moneys or provide finance to the company.

GIVING OF SECURITIES

22. The Board may borrow moneys and secure payment thereof in such manner and upon such terms and conditions in all respects as it may think fit, and in particular by the issue of bonds, debentures, or by mortgage or charge or other security on the whole or any part of the property, assets and rights of the Company, (both present and future), including its uncalled capital for the time being.



CONDITIONS OF BONDS, ETC

23. Any bonds, debentures or other securities issued or to be issued by the Company shall be under the control of the Board which may issue them upon such terms and conditions and in such manner and for such consideration as shall be considered by the Board to be for the benefit of the company.

ISSUE AT DISCOUNT

24. Any bonds debentures or other securities may be issued at a discount premium or otherwise and with any special privileges as to redemption, surrender, drawings, convertibility into shares, attending and voting at General Meetings of the Company, appointment of Directors, and otherwise, provided that debentures with the right to be converted into shares shall not be issued without the consent of the Company in General Meeting.

INDEMNITY TO DIRECTORS

25. If Directors or any of them or any other person shall become personally liable for the payment of any sum primarily due from the company, the Board may execute or cause to be executed any mortgage, charge or security over or affecting the whole or any part of the assets of the Company by way of indemnity to secure the Directors or person so becoming liable aforesaid from any loss in respect of such liability.

GENERAL MEETINGS

ANNUAL GENERAL MEETING

26. A General Meeting, to be called Annual General Meeting, shall be held, in accordance with the provisions of Section 158, within eighteen months from the date of incorporation of the Company and thereafter once at least in every calendar year within a period of four months following the close of its financial year and not more than fifteen months after the holding of its last preceding Annual General Meeting as may be determined by the Board.
- 26-A: "The Company may provide video conference facility to its members for attending the general meetings at places other than the town where general meeting is convened subject to fulfillment of such conditions, consent and meeting the requirements relating to number of members and time limit as notified by SECP vide circular no.10 of 2014 dated 21 May 2014 and any other conditions / guidelines notified by SECP from time to time."

EXTRA-ORDINARY GENERAL MEETING

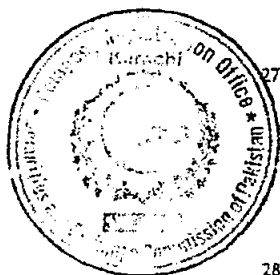
27. All General Meetings of the Company other than an Annual General Meeting shall be called Extraordinary General Meetings.

WHEN EXTRA-ORDINARY GENERAL MEETINGS TO BE CALLED OR REQUISITIONED

28. The Board may call an Extraordinary General Meeting whenever it shall deem fit. An Extraordinary General Meeting may also be called on the requisition of the Members in accordance with the provision of Section 159.

NOTICE OF MEETINGS

29. Twenty-one day's notice at the least (exclusive of the day on which the notice is served or deemed to be served, but inclusive of the day for which notice is given) specifying the



place, the day and the hour of General Meeting and in case of special business, all material facts concerning such business, shall be given in a manner provided by the Ordinance for the General Meetings to such persons as are, under the Ordinance or the Articles, entitled to receive such notice from the Company.

SPECIAL BUSINESS

30. All business shall be deemed special that is transacted at an Extraordinary General Meeting, and also all that is transacted at an Annual General Meeting with the exception of declaring a dividend, the consideration of the accounts, balance sheet and the reports of Directors and Auditors, the election of Directors, the appointment of and the fixing of the remuneration of the Auditors. Where it is proposed to pass a Special Resolution at a General Meeting, notice of the Meeting shall specify the intention to propose the Resolution as a Special Resolution.

OMISSION TO GIVE NOTICE

31. In a case in which notice of any Meeting is given to the shareholders individually, the accidental omission to give notice to any of the shareholders or the accidental non-receipt thereof shall not invalidate the proceedings at any such Meeting.

PROCEEDINGS AT GENERAL MEETING QUORUM

32. Ten Members, present in person and representing not less than [twenty five (25%)] of the total voting power of the company either on their own account or as proxies shall be a quorum for a General Meeting. No business shall be transacted at any General Meeting unless the requisite quorum is present at the time when the Meeting proceeds to business.

CHAIRMAN OF GENERAL MEETING

33. The Chairman shall be entitled to take the chair at every General Meeting. If there is no Chairman or if at any Meeting he shall not be present within fifteen minutes after the time appointed for holding such Meeting or is unwilling to act, the Directors present may elect a Director as Chairman and if no Director present is willing to act as Chairman, the Members present shall choose one of the Members to be the Chairman.

ADJOURNMENT OF MEETING FOR LACK OF QUORUM

34. If within half an hour after the time appointed for the holding of a General Meeting a quorum is not present, the Meeting if convened on the requisition of the Members shall be dissolved, and in every other case shall stand adjourned to the same day in the week following at the same time and place or to such other day, time and place as the Board may by notice to shareholders appoint. If at the adjourned meeting, a quorum is not present the Members present personally being not less than two shall be the quorum and may transact the business for which the meeting was called.



ADJOURNMENT BY CHAIRMAN

35. The Chairman with the consent of a General Meeting may adjourn any Meeting from time to time and from place to place, but no business shall be transacted at any adjourned Meeting other than business left unfinished at the Meeting from which the adjournment took place.

VOTING ON RESOLUTIONS BY SHOW OF HANDS AND WHEN POLL DEMANDED

36. At any General Meeting a Resolution put to the vote of the Meeting shall be decided on a show of hands, unless a poll is (before or on the declaration of the results of the show of hands) demanded by at least five Members present in person or by Proxy or by the

chairman of the Meeting, or by any Member or Members present in person or by Proxy and having not less than one-tenth of the total voting power in respect of the resolution or by any Member or Members present in person or by Proxy and holding shares in the company conferring a right to vote on the resolution being shares on which an aggregate sum has been paid up which is not less than one-tenth of the total sum paid up on all the shares conferring that right, and unless a poll is so demanded, a declaration by the Chairman that a resolution has been carried or carried unanimously or by particular majority or lost, and an entry to that effect in the books of the proceedings of the company shall be conclusive evidence of the fact without further proof of the number or proportion of the votes recorded in favour of or against such Resolution.

CASTING VOTE

- 36a. In the case of equality of votes whether on a show of hands or on a poll, the Chairman of the meeting at which the show of hands takes place or at which the poll is demanded, shall be entitled to a second or casting vote.

POLL

37. If a poll is demanded as aforesaid it shall be taken in such manner and at such time and place as the Chairman of the Meeting directs, and either at once or after an interval or adjournment of not more than fourteen days from the day on which the poll is demanded and the result of the poll shall be the resolution passed at the Meeting at which the poll was held. The demand for a poll may be withdrawn at any time by the person or persons who made the demand.

POLL ON ELECTION OF CHAIRMAN AND ADJOURNMENT

38. Any poll demanded on the election of a Chairman of Meeting or any question of adjournment shall be taken at the Meeting and without adjournment.

EFFECT OF POLL

39. The demand for a poll shall not prevent the continuation of a Meeting for the transaction of any business, other than the question on which the poll was demanded.

MINUTES

40. Minutes shall be made in books provided for the purpose of all resolutions and proceedings at General Meetings, and any such Minutes if signed by any person purporting to have been the Chairman of the Meeting or next following Meeting shall be conclusive evidence of the facts therein stated without further proof.

MINUTES BOOKS

41. The Books containing Minutes of Proceedings of General Meetings of the Company shall be kept at the Registered Office of the Company and during business hours (subject to reasonable restrictions as the Board may from time to time impose but so that not less than two hours each day is allowed for inspection) be open to the inspection of any Member without charge.

VOTES OF MEMBERS

42. Except as provided in Article 56 hereof, upon a show of hands every person entitled to vote and present in person or by Proxy shall have one vote, and upon a poll every Member entitled to vote and present in person or by Proxy shall have one vote for every share held by him.



RIGHT TO VOTE OF JOINT HOLDERS

43. In case of joint-holders, the vote of the senior who tenders a vote, whether in person or by Proxy, shall be accepted to the exclusion of the votes of the other joint-holders; and for this purpose seniority shall be determined by the order in which the names stand in the Register.

REPRESENTATIVES OF CORPORATE MEMBERS

44. A company or other body corporate which is a Member of the Company may, by resolution of its Directors, or Proxy signed by authorized officers, authorize any of its officials or any other persons to act as its representative at any meeting of the Company and the person so authorized shall be entitled to exercise the same powers on behalf of the company which he represents as if he was an individual shareholder of the company.

VOTING BY MEMBER OF UNSOUND MIND

45. A Member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on show of hand or on a poll, by his committee or other legal guardian, and any such committee or legal guardian may, on a poll, vote by Proxy.

POLL BY PROXY

46. On a poll, votes may be given either personally or by Proxy.

PROXY

47. Every Proxy shall be appointed in writing under the hand of the appointer or by an agent duly authorized under a Power of Attorney or if such appointer is a company or corporation under the Common Seal of the company or corporation or the hand of its Attorney who may be the appointer. A Proxy must be a Member. A Proxy shall have right as respects speaking and voting at a meeting as are available to a Member personally present at the Meeting. A Member shall not be entitled to appoint more than one Proxy to attend any one Meeting. If any Member appoints more than one Proxy for any one Meeting and more than one instruments of Proxy are deposited with the Company, all such instruments shall be rendered invalid.

- 47-A: "A member may opt for e-voting in a general meeting of the Company in accordance with the provisions and requirements under the Companies (E-Voting) Regulations 2016 notified by SECP on 22 January 2016 and any other provision, condition and requirement as notified by SECP from time to time in this respect, shall be deemed to be incorporated in these Articles of Association, irrespective of other provisions of these Articles of Association and notwithstanding anything contradictory therein. Members may appoint members as well as non-members as PROXIES for the purposes of e-voting to the extent permitted under the applicable laws."

IRREVOCABLE PROXY

48. A Proxy declared expressly on its face to be irrevocable shall not be revoked or be deemed revoked by the Member giving such Proxy without the consent of the Proxy-holder, whether by attendance at any General Meeting held during the period of such Proxy or by any other action on his part whatsoever or otherwise during the term of such Proxy if such Proxy is furnished to and filed with the records of the Company, and the Company shall be bound to recognize and give effect to such Proxy in accordance with terms thereof.



PROXY TO BE DEPOSITED AT THE OFFICE

49. No person shall act as Proxy unless the instrument of his appointment and the Power of Attorney, if any, under which it is signed, shall be deposited at the Office at least forty-eight hours before the time for holding the Meeting at which he proposed to vote.

FORM OF PROXY

50. An instrument appointing a Proxy may be in the following form or a form as near thereto as may be:

"I _____ of _____ in the district of _____ being a Member of the K-Electric Limited hereby appoint _____ of _____ as my Proxy to vote for me and on my behalf at the (annual, extraordinary, as the case may be) General Meeting of the company to be held on the _____ day of _____ and at any adjournment thereof".

- 50-A: "An instrument of proxy in relation to e-voting shall be in the following form or a form as near thereto as may be:

I/We _____ of _____ being a member of K-Electric Limited, holder of _____ ordinary share(s) as per registered Folio/Account No. _____ hereby opt for e-voting through intermediary and hereby consent the appointment of execution officer (Mr. _____) as my/our proxy and will exercise e-voting as per the Companies (E-voting) Regulations 2016 and hereby demand for poll for resolutions.

My secured email address is _____, please send login details, password and electronic signature through email."

VALIDITY OF PROXY

51. A vote given in accordance with the terms of an instrument of Proxy shall be valid notwithstanding the previous death of principal or revocation of the Proxy or of any power of attorney under which such Proxy was signed, provided that no intimation in writing of the death or revocation shall be received at the office of the Company before the Meeting or the adjourned Meeting at which Proxy is used.

VALIDITY OF VOTE

52. No objection shall be made to the validity of any vote except at the Meeting or at the poll at which such vote shall be tendered, and every vote whether given personally or by Proxy not disallowed at such Meeting or poll shall be deemed valid for all purposes of such meeting or poll.

CHAIRMAN TO DECIDE

53. If any question is raised, the Chairman of the Meeting shall decide on the validity of every vote tendered at such Meeting in accordance with these Articles.

DIRECTORS

54. The number of Directors shall not be less than seven (7) nor more than thirteen (13) elected Directors. The Board shall fix the number of elected Directors of the Company not later than thirty-five (35) days before the convening of the General Meeting at which Directors are to be elected and the number so fixed shall not be changed except with the prior approval of the General Meeting of the Company.



FIRST DIRECTORS

55. The first Directors shall be appointed by the subscribers to the Memorandum and shall stand retired from office at the first Annual General Meeting of the Company

ELECTION OF DIRECTORS

- 56(i) After the first appointment of Directors, the number of elected Directors fixed by the Board under Article 54 shall be elected to office by the Members in General Meeting in the following manner, namely:-
- a Member shall have such number of votes as is equal to the product of voting shares held by him and the number of Directors to be elected;
 - a Member may give all his votes to a single candidate, or divide them between more than one of the candidates in such manner as he may choose;
 - the candidate who gets the highest number of votes shall be declared elected as Director and then the candidate who gets the next highest number of votes shall be so declared, and so on until the total number of Directors to be elected have been so elected;
- (ii) Where the number of candidates is equal to or less than number of Directors to be elected it will not be necessary to hold an election as laid down in clause (i) of this Article and all the candidates shall be deemed to have been elected under this Article.

TERM OF OFFICE

57. A Director elected under Article 56 shall hold office for a period of three years unless he earlier resigns, becomes disqualified from becoming Director or otherwise ceases to hold office. An election of Directors in the manner prescribed by the preceding Article shall be held once in every three years.

REMOVAL OF DIRECTORS

58. The Company may by resolution in General Meeting remove a Director appointed under Article 55 or 60 or elected or deemed to have been elected under Article 56.

Provided that a resolution for removing a Director shall not be deemed to have been passed unless the number of votes cast in favour of such a resolution is not less than:

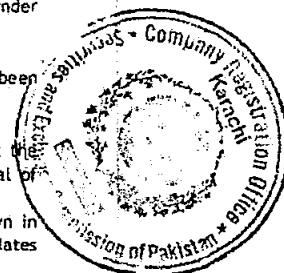
- (i) The minimum number of votes that were cast for the election of a Director at the immediately preceding election of Directors, if the resolution relates to removal of Director elected in the manner provided in Article 56; or
- (ii) The total number of votes for the time being computed in the manner laid down in Article 56 divided by the number of Directors for the time being if the resolution relates to removal of a Director appointed under Article 55 or 60.

DISQUALIFICATION AS A DIRECTOR

- 58a. A person shall be disqualified for appointment as Director of the Company on any one or more of the grounds enumerated in Section 187 of the Ordinance.

CONTINUING DIRECTORS TO ACT

59. The continuing Directors may act notwithstanding any vacancy in their body, but if the minimum falls below the number fixed by Article 54 thereof, the Directors shall not, except for the purpose of filling a vacancy in their number or convening a General Meeting, act so long as the number remains below the minimum.



CASUAL VACANCY

60. The Directors may at any time appoint any person to be a Director to fill a casual vacancy in the Board. Any Director so appointed shall hold office for the remainder of the term of the Director in whose place he is appointed.

REMUNERATION OF DIRECTORS

61. Subject to the Ordinance, until otherwise determined by the Company in General Meeting every Director (including an alternate Director but excluding the Chief Executive and a full time Working Director) shall be entitled to be paid as remuneration for his services for Meetings of Board and Committees of Directors as may be prescribed by the Board and per meeting attended by him. Each Director (including each alternate Director), shall be entitled to be reimbursed his reasonable expenses incurred in consequence of his attendance at meetings of the Directors or of Committees of Directors.

EXTRA REMUNERATION MAY BE PAID TO DIRECTOR

62. Any Director who serves on any Committee or who devotes special attention to the business of the Company or who otherwise performs services which, in the opinion of the Board, are outside the scope of the statutory duties of a Director may be paid such extra remuneration as may be fixed by the Board.

SHARE QUALIFICATION OF DIRECTORS

63. Save and except that a Director must be a Member (unless he represents the Government, an institution (including a multi-national company) or an authority which is a member of the Company, or is a whole time working Director, or a Chief Executive / or a person representing a creditor on the Board, such Director shall not require any share qualification, so long as only subscribers shares are in issue. Thereafter, the qualification of a Director shall be his holding shares in his own name of such value as may be prescribed by the Ordinance. In the case of Directors representing interest holding shares of requisite value, no such share qualification shall be required, provided intimation in writing as to such representation is lodged with the company forthwith upon appointment / election of a Director.

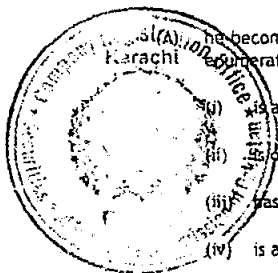
VACATION OF OFFICE OF DIRECTOR

64. The office of a Director shall ipso facto be vacated if:

he becomes ineligible to be appointed as a Director on any one or more of the grounds enumerated as follows, that is to say, he:

- (i) is a minor,
- (ii) is of unsound mind
- (iii) has applied to be adjudicated as an insolvent and his application is pending;
- (iv) is an un-discharged insolvent;
- (v) has been convicted by court of law for an offence involving moral turpitude;
- (vi) has been debarred from holding such office under any provision of the Ordinance;
- (vii) has betrayed lack of fiduciary behaviour and a declaration to this effect has been made by the Court under Section 217 at any time during the preceding five years;
- (viii) is not a Member.

Provided that this clause (viii) shall not apply in the case of:



- (a) a person representing the Government or an institution or authority which is a Member;
 - (b) a whole-time Director who is an employee of the company;
 - (c) a Chief Executive; or
 - (d) A person representing a creditor.
- (B) he absents himself from three consecutive meetings of the Directors or from all the meetings of the Directors for a continuous period of three months, whichever is the longer, without leave of absence from the Directors;
- (C) he or any firm of which he is a partner or any private company of which he is a Director:
- (i) without the sanction of the Company in General Meeting accepts or holds any office of profit under the Company other than of Chief Executive or a legal or technical adviser or a banker, or
 - (ii) accepts a loan or guarantee from the company in contravention of Section 195 (if applicable in terms of that Section);
- (D) he resigns his office by notice in writing to the company;
- (E) he, being a Director who is an employee of the Company, ceases to be an employee of the Company for whatsoever reason.
- (F) he does not hold or ceases to hold the share qualification, if any necessary for his appointment.

POWERS OF DIRECTORS

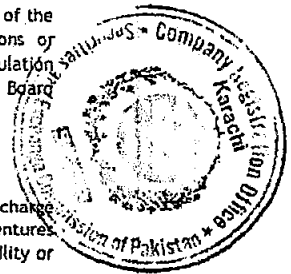
65. The control of the Company shall be vested in the Board and the business of the Company shall be managed by the Board, which may pay all expenses incurred in forming and registering the Company, and may exercise all such powers of the Company as are not by the Ordinance or by these Articles required to be exercised by the Company in General Meeting subject nevertheless to the regulations of these Articles to the provisions of the Ordinance and such regulations, (not inconsistent with the aforesaid regulations or provisions) as may be prescribed by the Company in General Meeting, but no regulation made by the Company in General Meeting shall invalidate any prior act of the Board which would have been valid if the regulation had not been made.

POWER TO OBTAIN FINANCES AND ISSUING SECURITIES

66. The Board may exercise all the powers of the Company to borrow and mortgage or charge its undertaking, property and assets, (both present and future), and to issue Debentures and other securities, whether outright or as collateral security for any debt, liability or obligation of the Company, or of any third party.

DIRECTORS TO COMPLY WITH THE ORDINANCE

67. The Directors shall duly comply with the provisions of the Ordinance or any statutory modification thereof for the time being in force, and in particular with the provisions in regard to the registration of the particulars of mortgage and charges affecting the property of the Company or created by it, to the keeping of a Register of the Directors, and to the sending to the registrar of an Annual list of Members and a summary of particulars relating thereto and notice of any consolidation or increase of share capital, or sub-division of shares and copies of Special Resolutions and a copy of the Register of Directors and notification of any changes therein.



RETIRING DIRECTOR SHALL BE ELIGIBLE FOR RE-ELECTION

- 67a. A retiring Director shall be eligible for re-election. The retiring Directors shall continue to perform their functions until their successors are elected in the manner prescribed by these Articles and the Ordinance.

ALTERNATE DIRECTOR POWER TO APPOINT ALTERNATE DIRECTOR

68. Any Director not permanently resident in Pakistan or any Director so resident but intending to be absent from Pakistan for a period of not less than three months may appoint any person acceptable to the Board to be an Alternate Director of the company to act for him. Every such appointment shall be in writing under the hand of the Director making the appointment. An Alternate Director so appointed shall not be entitled to appoint any other Director, but shall otherwise be subject to provisions of the Articles with regards to Directors, except that he need not be a Member nor shall he require any share qualification. An Alternate Director shall be entitled to receive notices of all meetings of the Board, and to attend and vote as a Director at any such meeting at which the Director appointing him is not personally present, and generally to perform all the functions of his appointer as Director in the absence of such appointer. An Alternate Director shall ipso facto cease to be an Alternate Director if his appointer for any reason ceases to be a Director or if and when his appointer comes or returns to Pakistan, or if the appointee is removed from office by notice in writing under the hand of the appointer.

The appointment of an alternate Director will constitute leave of absence from the Board for the Director for whom such alternate is appointed during such Director's absence.

PROCEEDINGS OF DIRECTORS MEETING OF DIRECTORS

69. The Directors may meet together for the dispatch of business, adjourn, and otherwise regulate meetings of the Board as they think fit. A Resolution moved at any meetings of Directors shall be passed by a majority vote. The Chief Executive or the Secretary may at any time and shall on the written requisition of two Directors at any time, summon a meeting of the Board, unless otherwise decided by the Board, at least seven clear days notice must be given to all Directors to summon a meeting of the Board, and such notice shall set forth the purpose or purposes for which such meeting is summoned. With the consent of all the Directors entitled to receive notice of meeting, or to attend or vote at, any such meeting of the Board may be convened by shorter notice than specified in this Article.
- Any Director may waive notice of the time, place and purpose of any meeting of directors either before, at or after such meeting.
- 69A. The meetings of the Board of Directors and Committees of Directors in emergent situations may be held through tele / video conferencing pursuant to such conditions and guidelines specified by SECP from time to time.
- 69B. The Directors shall meet together at least once in every quarter of every financial year.

QUORUM OF DIRECTOR'S MEETING AND POWERS

70. A meeting of the Board for the time being at which a quorum is present shall be competent to exercise all or any of the authorities, powers and discretion by or under the Article vested in or exercisable by the Board generally. Six Directors or 1/3rd of their number whichever is greater, for the time being personally present shall constitute a quorum, subject to the provisions of the Ordinance. For the purpose of calculating one-third any fraction shall be ignored.

CHAIRMAN

71. The Chairman shall, whenever present, act as Chairman at each meeting of the Board, but if at any meeting the chairman is present and not willing to act or is absent beyond ten minutes after the time fixed for holding the same, the Directors present shall within

fifteen minutes of the time fixed for the meeting choose one of their Members to be chairman of such meeting.

**WHEN ACTS OF DIRECTORS OR COMMITTEE
VALID NOTWITHSTANDING DEFECTIVE APPOINTMENT**

72. All acts by any meeting of the Board or of a committee of Directors, or by any person acting as Director or Alternate Director shall, notwithstanding that it be afterwards discovered that there was some defect in the appointment of any such Directors or persons acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such Director or person had been duly appointed and was qualified to act. Provided that as soon as any such defect has come to notice, the Director or other person concerned shall not exercise the right of this office till the defect has been rectified.

RESOLUTION BY CIRCULATION

73. Except for the matters as are required by Section 196 of the Ordinance to be decided at a meeting of the Board, a resolution in writing signed by majority of the Directors shall be effective as if such resolution had been passed at a meeting of the Directors.

COMMITTEE OF DIRECTORS

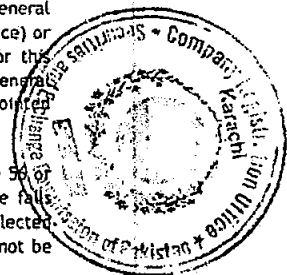
74. The Board may from time to time delegate all, or any of their powers not required to be exercised at a meeting of the Board, to a committee or committees consisting of two or more Directors as the Board thinks fit. Any committee so formed shall conform to any regulations that may be imposed upon it by the Board and shall be governed, in the exercise of the powers so delegated, by the provisions herein contained for regulating meetings and proceedings applicable to the Directors.

**CHAIRMAN AND CHIEF EXECUTIVE
APPOINTMENT OF CHAIRMAN**

75. Upon the first appointment, and thereafter upon each election of Directors, the Directors shall (i) appoint as the Chairman of the Board of Directors and (ii) determine the period for which he is to hold office.

APPOINTMENT OF CHIEF EXECUTIVE

- 76(i) The Board shall within fifteen days of the incorporation of the Company appoint an individual (including a Director) as the Chief Executive of the Company designated as the Chief Executive. The first Chief Executive shall hold office until the first Annual General Meeting of the Company (unless he earlier resigns or otherwise ceases to hold office) or until the expiry of a shorter period if the Board had fixed a shorter period for this appointment. If the Chief Executive ceases to hold office before the first Annual General Meeting, the Board shall fill the vacancy within fourteen days, but the person appointed to fill the vacancy shall hold office only till the first Annual General Meeting.
- (ii) Within fourteen (14) days from the date of an election of Directors under Article 90 or within fourteen (14) days from the date on which office of the Chief Executive falls vacant for whatsoever reason, the Board shall appoint any person (including an elected Director) to be the Chief Executive of the Company, but such appointment shall not be for a period exceeding three (3) years from the date of appointment.
- (iii) Upon the expiry of an appointment under clauses (i) and (ii) above a Chief Executive shall be eligible for re-appointment.
- (iv) The Chief Executive shall, if he is not already a Director of the Company, be deemed to be its Director and be entitled to all the rights and privileges, and subject to all liabilities of the office of Director of the Company.
- (v) The Directors of the Company by a resolution passed by not less than three-fourth of the total number of Directors for the time being, or the Company by Special Resolution, may



remove a Chief Executive before the expiration of his term of office notwithstanding any thing contained in these Articles or in any agreement between the Company and the Chief Executive.

- (vi) The terms and conditions of appointment of the Chief Executive shall be determined by the Board which shall also determine his remuneration.

POWERS OF CHIEF EXECUTIVE

77. The Chief Executive shall have overall authority over and responsibility for the management of the affairs of the Company and the conduct, and the custody and maintenance of its properties, assets, records and accounts in accordance with the policies and guidelines established by the Board.

In addition, the Board may entrust to and confer upon Chief Executive any of the powers exercisable by the Board other than the powers which are required to be compulsorily exercised under the Ordinance by the Board at its meeting upon such terms and conditions and with such restrictions as it may think fit, and may from time to time revoke, withdraw, alter, vary all or any of such powers.

THE SEAL CUSTODY OF SEAL

78. The Board shall provide a Common Seal for the purposes of the Company and for the safe custody of the Seal, and the Seal shall never be used except by the authority of the Board or a Committee of Directors previously given, and one Director at least shall sign (in the same manner as provided for in Article 14) on every instrument to which the Seal is affixed; provided nevertheless, that any instruments bearing the Seal of the Company and issued for valuable consideration shall be binding on the Company notwithstanding any irregularity touching any authority to issue the same. The Board shall also have power to destroy the Seal and substitute a new Seal thereof, if necessary.

DIVIDENDS AND RESERVES DECLARATION OF DIVIDENDS AND RESTRICTION OF AMOUNT THEREOF

79. The Company in General Meeting may declare Dividends, but no Dividends shall exceed the amount recommended by the Board.

INTERIM DIVIDEND

The Board may from time to time pay to the Members such interim Dividends as appear to be justified by the profit of the Company.

DIVIDEND OUT OF PROFITS ONLY

81. No Dividends shall be paid otherwise than out of profits of the year, or any other undistributed profits of prior years.

DECLARATION OF DIVIDENDS IN SPECIE

- 81a. Any declaration of a Dividend may state that such Dividend shall be paid wholly or in part by the distribution of specific assets and in particular of paid up shares, Debentures or debenture stock of the Company or paid up shares, debenture stock of any other Company, or in any one or more of such ways.

DISTRIBUTION OF DIVIDENDS

82. Subject to the rights of any persons entitled to shares with special rights as to Dividends, the profits distributed as Dividends shall be distributed among the shareholders and all Dividends shall be declared and paid according to the amounts paid on the shares. If any



share is issued on the terms that it shall rank for Dividend as from a particular date, such share shall rank for Dividend accordingly.

DIVIDENDS HOW PAID

- 82a. Every Dividend after it is declared shall be paid by crossed cheques or Dividend warrants to be delivered or sent by post to, and at the sole risk of the Members entitled thereto, at the registered addresses of the Members or their agents as provided in Section 250 of the Ordinance and the Company shall not be liable for any loss sustained by a Member by reason of any forged endorsement of any cheque or warrant or the fraudulent recovery by any other person.

POWER OF BOARD TO CREATE RESERVE

83. The Board may before recommending any Dividend, set aside out of the profits of the Company such sum as it thinks proper as a reserve or reserves, which shall, at the discretion of the Board, be applicable for meeting contingencies, or for equalizing Dividends, or for any other purpose to which the profits of the Company may be properly applied, and pending such application may, in the like discretion, either be employed in the business of the Company or be invested in such investments, (other than shares of the Company), as the Board may from time to time think fit.

RECEIPTS FOR DIVIDENDS BY JOINT HOLDERS

84. If several persons are registered as joint holders of any share, any one of them may give effectual receipts for any Dividends payable on the share.

NO INTEREST ON DIVIDENDS

85. No Dividends shall bear interest against the Company. The Dividends shall be paid within the period laid down in the Ordinance.

PAYMENT BY POST

- 86(a) Any Dividend may be paid by Cheque or warrant sent through the post at the registered address of the Member or person entitled thereto, or in the case of joint holders to any one of such joint holders at his registered address, or to such person and at such address as the Member or person entitled or such joint holders, as the case may be, may direct. Every such cheque or warrant shall be made payable to the order of the person to whom it is sent, or to the order of such other person as the Member or person entitled or such joint holders, as the case may be, may direct.
- (b) Unclaimed Dividends may be invested or otherwise used by Board for the benefit of the Company until claimed.

CARRYING FORWARD OF PROFITS

87. The Directors may carry forward any profit which they may think prudent not to distribute without setting them aside as a reserve.

CAPITALISATION CAPITALISATION OF RESERVES

88. Any General Meeting may, upon recommendation of the Board, by ordinary resolution resolve that any undistributed profits of the Company (including profits carried and standing to the credit of any reserve or reserves or other special accounts or representing premiums received on the issue of shares and standing to the Credit of the share premium account and capital reserve arising from realized or unrealized appreciation of the assets or goodwill of the Company or from any acquisition/sale of interests in other undertakings) be capitalized. Such capital undistributed profits and reserve shall be distributed amongst such of the shareholders as would be entitled to receive the same if distributed by way of Dividend, and in the same proportions, on the footing that they



become entitled thereto as capital. All or any part of such capitalized fund may be applied on behalf of such shareholders for payment in full or in part either at par or at such premium as the resolution may provide, for any un-issued shares or Debentures of the Company which shall be distributed accordingly, and such distribution or payment shall be accepted by such shareholders in full satisfaction of their interest in the said capitalized sum.

ACCOUNTS BOOKS OF ACCOUNT TO BE KEPT

89. The Board shall cause to be kept proper books of account as required under the Ordinance.

WHERE BOOKS TO BE KEPT

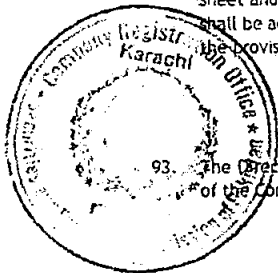
90. The books of account shall be kept at the office or at such other place as the Board shall think fit and shall be opened to inspection by Directors during business hours.

INSPECTION BY MEMBERS

91. The Board shall from time to time determine whether and to what extent and at what time and places and under what conditions or regulations the accounts and books or papers of the Company or any of them shall be opened to inspection of the Members, and no Member (not being a Director) shall have any right of inspecting any account and books or papers of the Company except as conferred by law or authorized by the Board or by Special Resolution.

PROFIT AND LOSS ACCOUNT AND BALANCE SHEET

92. Within eighteen months of the incorporation of the Company, and subsequently once at least in every calendar year, the Directors shall cause to be prepared and lay before the Company in General Meeting a balance sheet and profit and loss account, both made up in accordance with Ordinance and to a date not more than four months before the date of the Meeting for the period, in the case of first balance sheet and profit and loss account, since incorporation of the Company, and in case of any subsequent balance sheet and profit and loss account, since the preceding account. Every such balance sheet shall be accompanied by an Auditor's report and the Directors' report in accordance with the provisions of the Ordinance in that behalf.



COMPLIANCE WITH ORDINANCE

93. The Directors shall in all respects comply with Sections 230 to 236 in regard to accounts of the Company.

COPIES OF DIRECTORS' REPORT AND BALANCE SHEET TO BE SENT TO MEMBERS

94. A copy of the Balance Sheet and Profit and Loss Account together with a copy of the Auditor's Report and Directors' Report shall be sent to all Members along with the notice convening the Annual General Meeting before which same are required to be laid at least twenty-one days preceding the meeting.
- 94-A: The Company may, with prior consent of the member(s), circulate notices of general meetings and annual balance sheet and profit and loss account, auditors' report and directors' report (annual audited accounts) to its member(s) through email. Further, the Company may, with consent of the members obtained in general meeting in accordance with the provisions of SECP's SRO No.470(1)/2016 dated 31 May 2016 and subject to compliance with the conditions specified therein, and any other conditions / instructions as notified by SECP from time to time in this respect, circulate the annual balance sheet

and profit and loss accounts, auditors' report and directors' report (annual audited accounts) to its members through CD/DVD/USB at their registered addresses. However, if a member prefers to receive hard copies for all the future annual audited accounts then such preference of the member shall be given to the Company in writing and thereafter the Company shall provide hard copies of all the future annual audited accounts to such member.

AUDIT

APPOINTMENT OF AUDITORS AND THEIR DUTIES

95. Auditors shall be appointed and their duties regulated in accordance with Sections 252 to 255.

NOTICES

HOW NOTICE TO BE SERVED ON MEMBERS

96. A notice may be given by the Company to any Member or Director either personally or by sending it by post to him at his registered address or, (if he has no registered address in Pakistan), to the address, if any, within or outside Pakistan supplied by him to the Company for the giving of notice to him. A notice may be given by telex or facsimile transmission.

SERVICE BY POST

97. Where a notice is sent by post, service of the notice shall be deemed to be effected by properly addressing, prepaying and posting a letter containing the notice, and unless the contrary is proved, to have been effected at the time at which the letter would be delivered in the ordinary course of post.

NOTICE TO MEMBERS ABROAD BY ADVERTISING IN NEWSPAPERS

98. If a Member or Director has no registered address in Pakistan and has not supplied to the Company an address within or outside Pakistan for the giving of notices to him, a notice addressed to him or to the shareholders generally and advertised in a newspaper circulating in the Province in which the Office is situated shall be deemed to be duly given to him on the day on which the advertisement appears.

NOTICE TO JOINT HOLDER

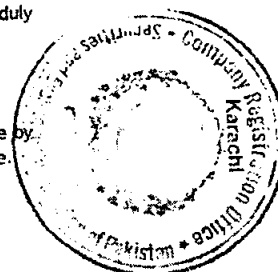
99. A notice shall be deemed to be given by the Company to the joint-holder of a share by giving the notice to the joint-holder named first in the Register in respect of the share.

NOTICE TO PERSONS ENTITLED BY TRANSMISSION

100. A notice may be given by the Company to the persons entitled to a share in consequence of the death or insolvency of a Member by sending it through the post in a prepaid letter addressed to them by name, or by the title or representatives of the deceased, or assignee of the insolvent, or by any like description, at the address if any in Pakistan supplied for the purpose by the persons claiming to be so entitled, or (until) such an address has been so supplied by giving the notice in any manner in which the same might have been given if the death or insolvency had not occurred.

NOTICE OF GENERAL MEETING

101. Notice of every General Meeting shall be given in same manner herein before authorized to (a) every Member of the Company except those Member who, having no registered address within Pakistan, have not supplied to the Company an address within or outside Pakistan for the giving of notices to them and also to (b) every person entitled to a share in consequence of the death or insolvency of Member, who but for his death or insolvency



TRUE COPY
Rashid Mohiuddin
RASHID MOHIUDDIN
 Manager
 Corporate Affairs
 K-ELECTRIC LIMITED

would be entitled to receive notice of the meeting, and (c) to the auditors of the Company for the time being.

**NO SHAREHOLDERS TO ENTER THE
PREMISES OF THE COMPANY WITHOUT PERMISSION**

102. No Member or other person (not being a Director) shall be entitled to enter the property of the Company, or to inspect or examine the Company's premises or properties of the Company, without permission of the Board or the Chairman, or Chief Executive, and to require disclosure of any information respecting any details of the Company's trading, or any matter which is or may be in the nature of a trade secret, mystery of trade or secret to/of the conduct of the business of the Company and which in the opinion of the Board or the Chief Executive will be inexpedient in the interest of the Members to communicate.

SECRECY

103. Every Director, Chief Executive, Chairman, Manager, Auditor, Trustee, Member of Committee, Officer, Servant, Agent, Accountant, or other person employed in the business of the Company shall, if so required by the Board before entering upon his duties, sign a declaration in the form approved by the Board pledging himself to observe strict secrecy representing all transactions of the Company with the customers and the state of accounts with individuals and in matters relating thereto, and shall by declaration pledge himself not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required so to do by the Board, or by any Annual General Meeting, or by a court of law, and except so far as may be necessary in order to comply with any provisions in these presents contained.

**WINDING UP
DISTRIBUTIONS OF ASSETS ON WINDING UP**

- 104(i) If the Company shall be wound up, (whether voluntarily or otherwise) the liquidators may, with the sanction of a Special Resolution and any other sanction required by the Ordinance, divide amongst the Members in specie at kind, the whole or any part of the assets of the Company, whether they consist of property of same kind or not.

For purpose aforesaid, the liquidator may set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the Members or different classes of Members.

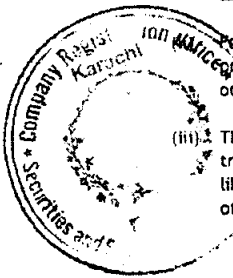
- (iii) The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trust for the benefit of the contributories as the liquidator, with the like sanction, thinks fit but so that no Member shall be compelled to accept any shares or other securities whereon there is any liability.

INDEMNITY

105. Every Director, Chief Executive, Chairman, Manager or Officer of the Company or any person (whether an officer of the Company or not) employed by the Company as Auditor or Adviser, shall be indemnified out of the funds of the Company against any liability incurred by him as such Director, Chief Executive, Chairman, Manager, Officer, Auditor, or Adviser in defending any proceedings, whether civil or criminal, in which judgment is given in connection with any application under Section 488 of the Ordinance in which relief is granted to him by Court.

INDIVIDUAL RESPONSIBILITY OF DIRECTORS

106. No Director, Chief Executive, Chairman, or other officer of the Company will be liable for the acts, receipts, neglects or defaults of any other Director or Officer or for joining any



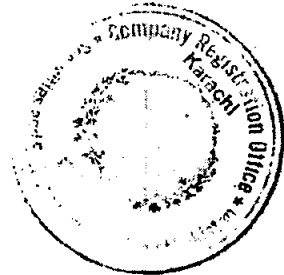
TRUE COPY
Rashid Mohiuddin
RASHID MOHIUDDIN
Manager
Corporate Affairs
ELECTRA LIMITED

receipt or other act for conformity, or for any loss or expense happening to Company through the insufficiency or deficiency of title to any property acquired by order of the Directors, Chief Executive, Chairman, or other officer for or on behalf of the Company, or for the insufficiency or deficiency of any security in or upon which any of the moneys of the Company shall be invested, or for any loss or damage arising from the bankruptcy, insolvency or tortuous act of any person with whom any money, securities or effect shall be deposited, or for any loss occasioned by any error of judgment or oversight on his part, or for any other loss, damage or misfortune whatever which shall happen in the execution of duties of his office or in relation thereto, unless the same happens through his own willful act, default or dishonesty.

WE, the several persons whose names and addresses are subscribed, are desirous of being formed a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the Capital of the Company set opposite our respective names.

Dated this Sixth Day of September, 1913

Name of Subscriber	Address and Description of Subscriber	Number of Ordinary Shares taken by each Subscriber	Witness to Signature
T.L.F. Beaumont	Merchant, Karachi	1 (one)	
Ghulamali G. Chagla	Merchant, Karachi	1 (one)	
Nadirshaw E. Dinshaw	Merchant, Karachi	1 (one)	
W.U. Nicholas	Merchant, Karachi	1 (one)	
B. Frank Jones	Merchant, Karachi	1 (one)	
Chettaram Dulloomal	Merchant, Karachi	1 (one)	
Abdool Rahim Saleh Mahomed	Merchant, Karachi	1 (one)	



Certified to be true Copy
 17/9/13
 Additional Joint Registrar of Companies

TRUE COPY

Rashid Mohiuddin
RASHID MOHIUDDIN
 Manager
 Corporate Affairs
 K-ELECTRIC LIMITED



Karachi Electric Supply Company Ltd.

formerly: Karachi Electric Supply Corporation Ltd.

2nd Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

CERTIFIED TRUE COPY OF THE SPECIAL RESOLUTIONS
PASSED AT THE EXTRA-ORDINARY GENERAL MEETING OF
THE MEMBERS OF THE COMPANY HELD ON 22 JANUARY 1999

"RESOLVED that the authorized capital of the company be and is, hereby, increased from Rs.2,500,000,000 (Rupees Two Billion Five Hundred Million) to Rs.10,000,000,000 (Rupees Ten Billion)."

"FURTHER RESOLVED that Clause V of the Memorandum of Association of the company be and is, hereby, substituted with the following: -

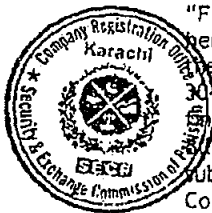
"The share capital of the company is Rs.10,000,000,000 (Rupees Ten Billion) divided into 1,000,000,000 ordinary shares of Rs.10/- each."

"FURTHER RESOLVED that Article No.6 of the KESC Articles of Association be and is, hereby, substituted with the following: -

"The authorized capital of the Company is Rs.10,000,000,000 (Rupees Ten Billion) divided into 1,000,000,000 ordinary shares of Rs.10/- each."

"RESOLVED that the conversion of Government of Pakistan interest bearing loans of Rs.3,045,123 Billion into equity and the issue of further capital to that extent without making a rights issue be and is, hereby, approved subject to the approval of the Federal Government / Corporate Law Authority as required u/s 86 of the Companies Ordinance 1984."

"FURTHER RESOLVED that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, approve the terms (other than as specified herein) of and effect issuance of 30,512,300 ordinary shares of Rs.10/- each fully paid up at par in full & final settlement of G.O.P. loans of Rs.3,045,123,000 (Rupees Three Billion Forty-Five Million One Hundred Twenty Three Thousand only) subject to completion of all legal requirements envisaged under Companies Ordinance 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the company."



TRUE COPY
Witnessed
and Certified
for the
Karachi Electric Supply Company Ltd.

Handwritten signature
Secretary
Karachi Electric Supply Corp.



Karachi Electric Supply Company Ltd.

formerly: Karachi Electric Supply Corporation Ltd.

2nd Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

**CERTIFIED TRUE COPY OF THE SPECIAL RESOLUTIONS
PASSED AT THE ANNUAL GENERAL MEETING OF THE
MEMBERS OF THE COMPANY HELD ON 27 FEBRUARY 2001**

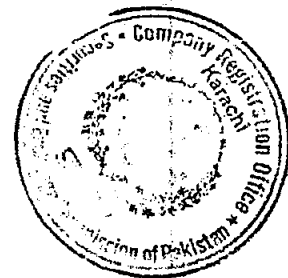
"RESOLVED that the authorized capital of the company be and is, hereby, increased from Rs.10,000,000,000 (Rupees Ten Billion) to Rs.50,000,000,000 (Rupees Fifty Billion)"

"FURTHER Resolved that Clause V of the Memorandum of Association of the Company be and is, hereby, substituted with the following: -

"The share capital of the company is Rs.50,000,000,000 (Rupees Fifty Billion) divided into 5,000,000,000 ordinary shares of Rs.10/- each."

"FURTHER Resolved that Article No.6 of the KESC Articles of Association be and is, hereby, substituted with the following: -

"The authorized capital of the Company is Rs.50,000,000,000 (Rupees Fifty Billion) divided into 5,000,000,000 ordinary shares of Rs.10/- each."



TRUE COPY

RECEIVED
Karachi Electric Supply Corporation Ltd.
Karachi
K-ELECTRIC LIMITED



Karachi Electric Supply Company Ltd.

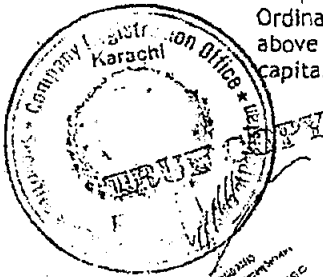
formerly: Karachi Electric Supply Corporation Ltd.

2nd Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

CERTIFIED TRUE COPY OF THE RESOLUTIONS
PASSED BY KESC SHAREHOLDERS AT THE ANNUAL
GENERAL MEETING OF KESC HELD ON 29 DECEMBER 2001

"RESOLVED that the conversion of GOP Subordinated Loan and KESC Debt Servicing Liabilities amounting to Rs.17,834.56 million into equity and the Issue of further capital to that extent without making a Right Issue be and is, hereby, approved subject to the approval of the Federal Government / Securities & Exchange Commission of Pakistan (SECP) as required u/s 86 of the Companies Ordinance 1984"

"FURTHER Resolved that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, approve the terms (other than as specified herein) of and effect issuance of 1,783,456,000 ordinary shares of Rs.10/- each fully paid up at par in full & final settlement of GOP Subordinated Loan and KESC Debt Servicing Liabilities of Rs.17,834.560,000 (Rupees Seventeen Billion Eight Hundred Thirty-Four Million Five Hundred Sixty Thousand only) subject to completion of all legal requirements envisaged under Companies Ordinance 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the Company."



Witnessed this
29th December 2001
at Karachi
K.E.S.C. LIMITED



[Signature]
Corporate Secretary
K.E.S.C. Ltd.



Karachi Electric Supply Company Ltd.
formerly: Karachi Electric Supply Corporation Ltd.

2nd Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

**CERTIFIED TRUE COPY OF THE RESOLUTIONS
 PASSED BY KESC SHAREHOLDERS AT THE EXTRA-ORDINARY
 GENERAL MEETING OF KESC HELD ON 27 MAY 2002**

- A. (1) "RESOLVED that the authorized capital of the Company be and is, hereby, increased from Rs.50,000,000,000 (Rupees Fifty Billion) to Rs.100,000,000,000 (Rupees One Hundred Billion)."

- (2) "FURTHER Resolved that Clause V of the Memorandum of Association of the Company be and is, hereby, substituted with the following: -

"The share capital of the Company is Rs.100,000,000,000 (Rupees One Hundred Billion) divided into 10,000,000,000 ordinary shares of Rs.10/- each."

- (3) "FURTHER Resolved that Article No.6 of the KESC Articles of Association be and is, hereby, substituted with the following: -

"The authorized capital of the Company is Rs.100,000,000,000 (Rupees One Hundred Billion) divided into 10,000,000,000 ordinary shares of Rs.10/- each."

- B. (1) "RESOLVED that Banks Loans amounting to Rs.22.107 billion obtained by KESC and guaranteed by GOP, be converted into GOP Loans subject to completion of all legal and statutory requirements."

- (2) "RESOLVED that the conversion of GOP Loans amounting to Rs.65.340,773 billion (including GOP Guaranteed Banks Loans of Rs.22.107 billion as at (1) above and loans of Rs.7.893 billion which are in the process of disbursement to meet KESC operating cash shortfall) into equity and the issue of further capital to that extent without making a Right Issue be and is, hereby, approved subject to the approval of the Federal Government / Securities & Exchange Commission of Pakistan as required u/s 84 of the Companies Ordinance 1984."



TRUE COPY
 27/05/2002
 Director General (Legal Services)
 Securities & Exchange Commission
 KARACHI
 K-ELECTRIC LIMITED

- (3) "FURTHER Resolved that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, approve the terms (other than as specified herein) of and effect issuance of 6,534,077,300 ordinary shares of Rs.10/- each fully paid up at par in full & final settlement of GOP Loans of Rs.65,340,773,000 (Rupees Sixty Five Billion Three Hundred Forty Million Seven Hundred Seventy Three Thousand only) subject to completion of all legal requirements envisaged under Companies Ordinance 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the Company."

- C. (1) "RESOLVED that subsequent to completion of the conversion of GOP and GOP Guaranteed Loans of Rs.65,340,773 billion into equity in accordance with requirements of applicable law, the capital of the Company be reduced (subject to the requirements of the Companies Ordinance, 1984) by canceling the issued and paid up capital of the Company which has been lost or is unrepresented by available assets to the extent of Rs.6.50 on each of the issued shares of the Company at such time and reducing the nominal value thereof to Rs.3.50 each."

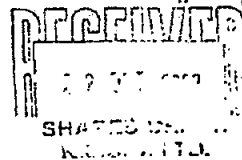


"FURTHER RESOLVED that the Directors of the Company, acting singly or jointly, be and are hereby, authorized to do all acts, deeds and things and to take all necessary steps to effect the reduction of capital approved in paragraph (1) above including, without limitation, the filing of a petition to seek the confirmation of the Court to the said capital reduction in accordance with the requirements of the Companies Ordinance 1984 and all acts, deeds and things ancillary or incidental thereto."

THIRTEEN
DIRECTORS
Dated: 14th March, 1984
K-ELECTRIC LIMITED



SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN



ACKNOWLEDGEMENT OF FILING

[See - regulation - 8 (2)]

No. K-376/Com/2002

Dated: 18.10.2002

In the matter of

Karachi Electric Supply Corporation Limited
Almari House, Abdulhadi Haroon Road, Karachi

The receipt of the undermentioned document(s) filed / registered / recorded, pursuant to the provisions of the Companies Ordinance, 1984 (XLVII of 1984) is hereby acknowledged:-

1. Form-26 dated 28.05.2002 and as approved by the Hon'ble High Court of Sindh.
2. Certified true copy of the order of the Honourable High Court of Sindh at Karachi dated 11.10.2002 in J.Misc No. 48 of 2002 regarding the reduction in issued and paid up capital to the extent of Rs.6.50/- on each of the issued shares of the company and reducing the nominal value thereof to Rs.3.50/- each.



Fee Rs.400/-

(LIAQAT ALI DOLLA)
 JOINT REGISTRAR OF COMPANIES

TRUE COPY

RECEIVED
 18.10.2002
 SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN

2ND Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

Company Registrar
Karachi
2.
Resolved to
hereby sub
"The span
Hundred e
each."

- 3.50 each
- THEY
- WILL
- BE
- RECEIVED BY THE UNITED STATES DEPARTMENT OF COMMERCE





Karachi Electric Supply Company Ltd.
formerly: Karachi Electric Supply Corporation Ltd.

2nd Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

CERTIFIED TRUE COPY
 OF THE RESOLUTIONS PASSED BY KESC SHAREHOLDERS
 AT 94TH ANNUAL GENERAL MEETING OF THE COMPANY
 HELD ON 02 DECEMBER 2004

Resolved that the conversion of KESC's debt amounting to Rs.15,283,738,365 billion into GOP's equity in KESC and the issue of further capital to that extent without making a Right Issue be and is hereby, approved subject to the approval of the Federal Government / Securities & Exchange Commission of Pakistan (SECP) as required u/s 86 of the Companies Ordinance 1984.



Further Resolved that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, approve the terms (other than as specified herein) of and effect issuance of 4,366,782,390 ordinary shares of Rs.3.50 each in full & final settlement of KESC's debt payable to GOP amounting to Rs.15,283,738,365 billion, subject to completion of all legal requirements envisaged under Companies Ordinance 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the Company.



OSWALD PEARL
 COMPANY SECRETARY
 (OSWALD PEARL) KESC SUPPLY CORP. LTD.
 CORPORATE SECRETARY

TRUE COPY
 [Signature]
 Authorized
 Director of the Company
 KESC SUPPLY CORP. LTD.



Karachi Electric Supply Company Ltd.

formerly: Karachi Electric Supply Corporation Ltd.

2nd Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

CERTIFIED TRUE COPY
OF THE RESOLUTIONS PASSED BY KESC SHAREHOLDERS
AT EXTRA-ORDINARY GENERAL MEETING HELD ON 02 MARCH 2006

- I. "RESOLVED THAT Clause V of the Memorandum of Association of the Company be and is, hereby, substituted with the following: -

Clause V: The share capital of the Company is Rs. 100,000,000,000 (Rupees One Hundred Billion Only) divided into the following kinds of shares: -

- i. Share Capital of Rs. 90,000,000,000 (Rupees Ninety Billion Only) divided into 25,714,285,714 ordinary shares of Rs. 3.50 each.
- ii. Share Capital of Rs. 10,000,000,000 (Rupees Ten Billion only) divided into 2,857,142,857 Redeemable Preference Shares of Rs. 3.50 each."

- II. "FURTHER RESOLVED THAT Article No. 6 of KESC Articles of Association be and is, hereby, substituted with the following: -

Article 6: The authorized share capital of the Company is Rs. 100,000,000,000 (Rupees One Hundred Billion Only) divided into the following kinds of shares: -

- i. Share Capital of Rs. 90,000,000,000 (Rupees Ninety Billion only) divided into 25,714,285,714 ordinary shares of Rs. 3.50 each.
- ii. Share Capital of Rs. 10,000,000,000 (Rupees Ten Billion only) divided into 2,857,142,857 Redeemable Preference Shares of Rs. 3.50 each."

- III. FURTHER RESOLVED THAT Article 7(ii) of KESC Articles of Association be and is, hereby, modified by way of incorporating / adding new paragraphs in the end as narrated below: -

- The Redeemable Preference shares shall be entitled to a preferential dividend at a rate fixed at the General Meeting of the Company.
- The preferential dividend shall be cumulative.
- The preference shareholder(s) shall only be entitled to preferential dividend and shall not be entitled to any other dividend (whether cash, bonus shares, right shares etc.) to which ordinary shareholders may become entitled from time to time.

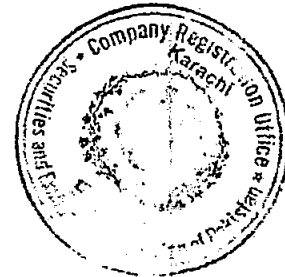


TRUE COPY

Witnessed by
 Chairman
 Karachi Electric Supply Co. Ltd.



- The Redeemable Preference Shares shall be redeemed on redemption date or shall be converted into ordinary shares as deemed expedient by the Board of Directors. The Board of Directors shall also finalize other modalities & mechanism with regard to issue of Redeemable Preference Shares, payment of preferential dividend, redemption, conversion etc.
 - Redeemable Preference shareholders shall not be entitled to attend or vote at the meetings of shareholders of the company."
- IV. "FURTHER RESOLVED THAT after completing all necessary legal & statutory requirements and obtaining prior approval of Securities & Exchange Commission of Pakistan (SECP), Redeemable Preference Shares having a cumulative value of Rs.6000 million divided into 1,714,285,713 Redeemable Preference Shares of Rs.3.50 each, be offered as Right Shares to the ordinary shareholders of the Company @ 13.02% of their shareholding bearing cumulative preferential dividend @ 3% per annum."
- V. "FURTHER RESOLVED THAT Directors of the Company be and they are hereby, authorized to take all necessary actions for offering / issuance of the above Redeemable Preference Shares and also to finalize modalities & mechanism including disposal of fractional & unsubscribed Redeemable Preference Shares.



(Signature)
 (OSWALD PEARL)
 CORPORATE SECRETARY
 OSWALD PEARL
 CORPORATE SECRETARY
 KARACHI 1116, AL-SUPPLY COMPLEX, 1700



TRUE COPY
(Signature)
 DR. ABUL KALAM
 Chairman, SECP
 KARACHI 1116, AL-SUPPLY COMPLEX, 1700



Karachi Electric Supply Company Ltd.
formerly: Karachi Electric Supply Corporation Ltd.

2ND Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

CERTIFIED TRUE COPY
 OF SPECIAL RESOLUTIONS PASSED AT
 THE EGM OF THE COMPANY ON 30 APRIL 2007



- a. Resolved that the issue of further capital to the extent of USD 50 Million to be converted to equivalent PKR at applicable exchange rate on the date of subscription with a cap of USD 1 = PKR 90 viz. additional share capital in PKR upto a maximum of 4500 million, to International Finance Corporation (IFC) & Asian Development Bank (ADB) (USD 25 million each) without making a Right Issue be and is, hereby, approved subject to the approval of the Federal Government / Securities & Exchange Commission of Pakistan (SECP) as required u/s 86(1) of the Companies Ordinance 1984.
- b. Further Resolved that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, approve the terms (other than as specified herein) of and effect issuance of 963,597,430 ordinary shares @ Rs.4.67 each including premium of Rs.1.17 per share to IFC (481,798,715) & ADB (481,798,715), subject to completion of all legal requirements envisaged under Companies Ordinance 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the Company.
- c. That a separate Resolution will be passed as and when the option to subscribe for KESC shares is exercised by IFC & ADB latest by upto 15 December 2010.



TRUE COPY

Witnessed by
 Secretary
 KARACHI ELECTRIC SUPPLY COMPANY LTD.

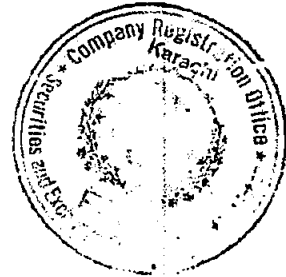
Witnessed by
 Chief Legal Advisor &
 Company Secretary
 KARACHI ELECTRIC SUPPLY COMPANY LTD.



Karachi Electric Supply Company Ltd.
formerly: Karachi Electric Supply Corporation Ltd.

2nd Floor, Handicraft Bldg., Abdullah Haroon Road, Saddar, Karachi-74400

CERTIFIED TRUE COPY
 OF SPECIAL RESOLUTIONS PASSED AT THE AGM
 HELD ON 30 OCTOBER 2007



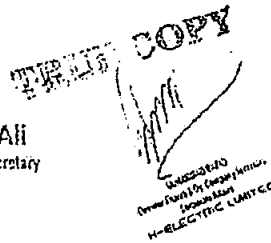
RESOLVED THAT the name of Company be and is hereby changed as "Karachi Electric Supply Company Limited" after obtaining requisite statutory approvals pursuant to the Companies Ordinance 1984.

RESOLVED FURTHER THAT name of the Company in Clause-I of Memorandum of Association, Article 3 of Articles of Association and wherever appearing in Memorandum & Articles of Association of the Company be changed to read as Karachi Electric Supply Company Limited.

Chief Executive Officer and Company Secretary be and are hereby authorized to take steps necessary for change of name.



Uzma Amjad Ali
 Uzma Amjad Ali
 ED (Legal) & Company Secretary
 KESC Limited



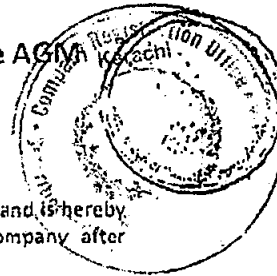
Karachi Electric Supply Company Limited
(Formerly: Karachi Electric Supply Corporation Limited)



7th Floor, State Life Building, Pl. 11
Abul Kalam Avenue, East
Karachi

Telephone: +92 21 620 5535
Fax: +92 21 620 5547
Web site: www.kesc.com.pk

**Special Resolutions Passed at the AGM
held on 29.11.2008**



RESOLVED THAT Article 69-A, as set out below, be and is hereby added to the Articles of Association of the Company after Article-69: -

69-A. The meetings of the Board of Directors and Committees of Directors in emergent situations may be held through tele / video conferencing pursuant to such conditions and guidelines specified by SECP from time to time.

TRUE COPY

AGM 2008
and Local Director's
Company Secretary
K-ELECTRIC LIMITED

[Signature]

UZMA ANJUM ALI
Chief Executive Officer
& Company Secretary, K-ELECTRIC



Company Secretary
K-ELECTRIC LIMITED

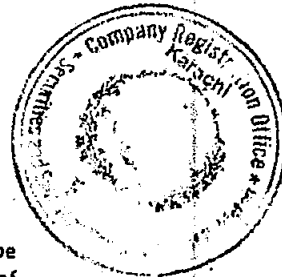


Karachi Electric Supply Company Limited

6th Floor, State Life Building
Abdullah Haroon Road
Karachi

Telephone: + 92 (21) 920 5136
Facsimile: + 92 (21) 920 5147
Web site: www.kesc.com.pk

**Certified True Copy of
Special Resolutions passed at KESC AGM
held on 26 October 2009, at Navy Welfare Centre,
Liaquat Barracks, Karachi**



Resolved that the issue of further capital to the extent of USD 50 Million to be converted to equivalent PKR at applicable exchange rate on the date of subscription with a cap of USD 1 = PKR 90 viz. additional share capital in PKR upto a maximum of 4500 million, to International Finance Corporation (IFC) & Asian Development Bank (ADB) (USD 25 million each) without making a Right Issue be and is, hereby, approved subject to the approval of the Federal Government / Securities & Exchange Commission of Pakistan (SECP) as required u/s 86(1) of the Companies Ordinance 1984.

Further Resolved that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, to approve the terms (other than as specified herein) of and effect issuance of upto 1,300,000,000 ordinary shares at a price of not less than Rs.3.50 per share to IFC (up to 650,000,000 shares) & ADB (up to 650,000,000 shares), subject to completion of all legal requirements envisaged under Companies Ordinance 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the Company.

That the date of subscription of these shares by IFC and ADB shall be no later than July 2012.



CERTIFIED TRUE COPY

Uzma Ali

UZMA ALI
Chairman
Chair &
Secretary
KESC

SECP
Karachi
KARACHI
KARACHI
KARACHI

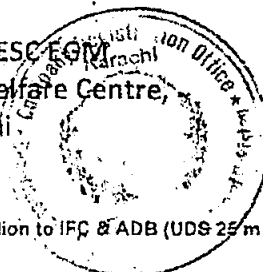


Karachi Electric Supply Company Limited

6th Floor, State Life Building # 11
Abdullah Haroon Road
Karachi

Telephone: + 92 (21) 546 7072
Facsimile: + 92 (21) 920 5147
Web site: www.kesc.com.pk

Certified True Copy of Special Resolutions passed at KESC EOM Held on 20 January 2010, at Navy Welfare Centre, Liaquat Barracks, Karachi.



- (i) Issue of additional share capital of upto USD 50 million to IFC & ADB (USD 25 m each) without making a right issue.
- Resolved that the issue of further capital to the extent of USD 50 Million to be converted to equivalent PKR at applicable exchange rate on the date of subscription viz. additional share capital in PKR up to an estimated PKR 4500 million, to International Finance Corporation (IFC) & Asian Development Bank (ADB) (USD 25 million each) without making a Right Issue be and is, hereby, approved subject to the approval of the Federal Government/ Securities & Exchange Commission of Pakistan (SECP) as required u/s 86(1) of the Companies Ordinance, 1984.
 - Further Resolved that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, to approve the terms (other than as specified herein) of and effect issuance of upto 1,300,000,000 ordinary shares at a price of not less than Rs. 3.50 per share to IFC (up to 650,000,000 shares) & ADB (up to 650,000,000 shares), subject to completion of all legal requirements envisaged under Companies Ordinance, 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the Company.
 - That the date of subscription of these shares by IFC and ADB shall be no later than 31 December 2012.
- (ii) Amendment in Articles of Association of the Company.
- FURTHER RESOLVED by way of a Special Resolution that the Articles of Association of the Company be amended as follows:
- The word "three" appearing in Article 26 of the Articles of Association of the Company be substituted and replaced with the word "four".
 - Article 69-B, as set out below, be added to the Articles of Association of the Company immediately after Article 69-A:

"69-B. The Directors shall meet together at least once in every quarter of every financial year."



Signature
Name of the Director
KARACHI ELECTRIC SUPPLY COMPANY LIMITED

UDMA ANJAD ALI
Chartered Accountant
(Company Secretary)



- c. The word "four" appearing in Article 70 of the Articles of Association of the Company be substituted and replaced with the word "six".
- d. The word "three" appearing in Article 92 of the Articles of Association of the Company be substituted and replaced with the word "four".

1) **Appointment of four (4) executive directors and sanction of the Company in general meeting to hold the offices of profit with the Company.**

RESOLVED that the following persons, being Directors of the Company, are hereby accorded the sanction of the Company in General Meeting to hold the offices of profit with the Company as set out below:

Name	Office of Profit
(a) Mr. Zulfiqar Haider Ali	Head of Special Projects
(b) Syed Arshad Masood Zahidi	Chief Strategic Officer - Gen & Trans.
(c) Syed Nayyer Hussain	Chief Strategic Officer - Distribution
(d) Mr. Muhammad Tayyab Tareen	Group Head HR Management / Group CFO

FURTHER RESOLVED that the Directors of the Company be and are, hereby, authorized to take all necessary steps, subject to all requirements under the Companies Ordinance, 1984 and the Memorandum and Articles of Association of the Company are authorized to take all necessary steps and seek all necessary regulatory and other approvals necessary or conducive for the purpose of the above Resolutions listed at No.2, 3 & 4.

---XX---XX---



[Signature]
YUSUF ALI
 Director General

TRUE COPY

[Signature]
 Director General
 Ministry of Industries and Commerce
 Government of Pakistan





Karachi Electric Supply Company Ltd.

3rd Floor, K.E.S.C. House, 39-B, Sunset Boulevard, Phase-II,
Dulhania Housing Authority, Karachi.
Tel: 35647017 Fax: 35647155 Email Address: moonis.shvi@kesc.com.pk

Certified True Copy of
Special Resolutions passed at KESC AGM
Held on 21 October 2010, at Navy Welfare Centre,
Liaquat Barracks, Karachi

To approve increase in the Authorized Capital of the Company

- a. RESOLVED that the authorized capital of the Company be and is, hereby, increased from Rs.100,000,000,000 (Rupees One Hundred Billion Only) to Rs.125,000,000,000 (Rupees One Hundred Twenty Five Billion Only).
- b. FURTHER Resolved that Clause V of the Memorandum of Association of the Company be and is, hereby, substituted with the following: -

"The share capital of the Company is Rs.115,000,000,000 (Rupees One Hundred Fifteen Billion Only) divided into 32,857,142,857 ordinary shares of Rs.3.50 each."

"The share capital of the Company is Rs.10,000,000,000 (Rupees Ten Billion Only) divided into 2,857,142,857 Redeemable Preference Shares of Rs.3.50 each."

- c. FURTHER Resolved that Article No.6 of the KESC Articles of Association be and is, hereby, substituted with the following: -

"The share capital of the Company is Rs.115,000,000,000 (Rupees One Hundred Fifteen Billion Only) divided into 32,857,142,857 ordinary shares of Rs.3.50 each."

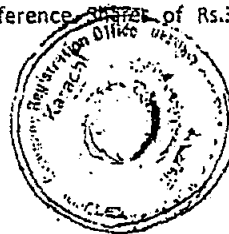
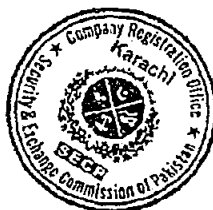
"The share capital of the Company is Rs.10,000,000,000 (Rupees Ten Billion Only) divided into 2,857,142,857 Redeemable Preference Shares of Rs.3.50 each."

SYED MOONIS ABDULLAH ALVI
Company Secretary
KESC Limited

TECHNICAL
DIRECTOR

WITNESSED
MEMBERS OF THE BOARD
KARACHI ELECTRIC SUPPLY CO.

---XX---XX---





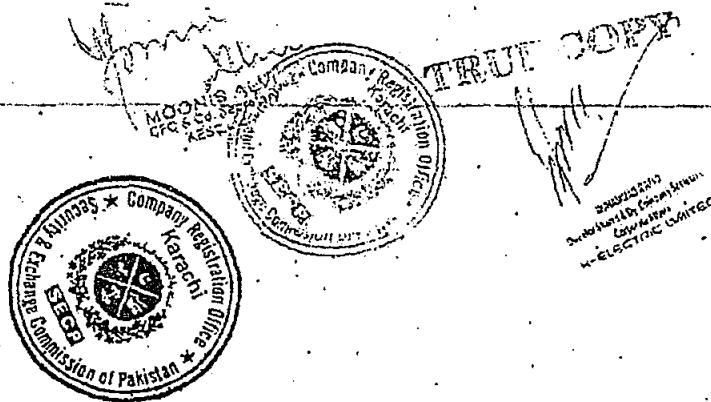
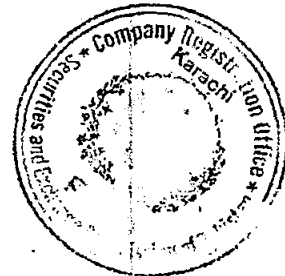
Karachi Electric Supply Company Ltd.

Office & Postal address: K.E.S.C House, 39-B, Sunset Boulevard, Phase-II,
Defence Housing Authority, Karachi.
Tel: 35547017 Fax: 35547155 & 99205147. Email Address: moonis.alvi@kesc.com.pk

Certified True Copy of Resolutions passed at the Extraordinary General Meeting (EGM) of the Company held on 08 October 2012

IFC & ADB Loans - Modification in Special Resolutions passed at EGM on 20 January 2010

1. To consider and approve issuance of additional share capital to International Finance Corporation (IFC) & Asian Development Bank (ADB) as a consequence of increase in the exchange rate ceiling from PKR 90 for USD 1 to PKR 105 for USD 1:-
 - * To consider and pass the following as Special Resolutions by way of amendment to the Special Resolutions passed by the Shareholders of the Company at the Extraordinary General Meeting of the Company held on 20 January 2010, on the same subject, with our without modification:
 - a. Resolved that the issue of further capital to the extent of USD 50 Million to be converted to equivalent PKR at applicable exchange rate on the date of subscription viz. additional share capital in PKR up to an estimated PKR 5250 million (US\$ 1= PKR 105), to International Finance Corporation (IFC) & Asian Development Bank (ADB) (USD 25 million each) without making a Right Issue be and is, hereby, approved subject to the approval of the Federal Government/ Securities & Exchange Commission of Pakistan (SECP) as required u/s 86(1) of the Companies Ordinance, 1984.
 - b. Further Resolved that the Directors of the Company be and are, hereby, authorized to take all necessary steps in this regard, to approve the terms (other than as specified herein) of and effect issuance of up to 1,500,000,000 ordinary shares at par value, agreed at the time of signing the Loan Agreements and Subscription Agreements in May 2010, to IFC (up to 750,000,000 shares) & ADB (up to 750,000,000 shares), subject to completion of all legal requirements envisaged under Companies Ordinance, 1984 and KESC Memorandum & Articles of Association. The above shares will rank pari passu in every respect with the existing capital of the Company.
 - c. That the date of subscription of these shares by IFC and ADB shall be no later than 31 December 2012.



20/10/2012
Submitted to the Registrar
of Companies
K-ELECTRIC LIMITED



Karachi Electric Supply Company Ltd.

3rd Floor, K.E.S.C House, 39-41, Sindh Road, Phase-II,
Defence Housing Authority, Karachi.
Tel: 32647017 Fax: 32647155 & 3264 7159, Email Address: moonis.alvi@kesc.com.pk



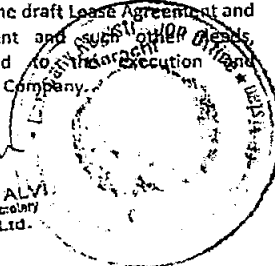
**Certified True Copy of
Special Resolutions passed at KESC EGM
held on 23 August 2013, at Navy Welfare Centre,
Liaquat Barracks, Karachi**

Long Term Lease Agreement (the Agreement) to be entered into between KESC and K-Energy (Pvt.) Limited in relation to Unit-3 and Unit-4 of Bin Qasim Power Station-I (BQPS-I) of the Company for coal conversion project

RESOLVED THAT in order to effect the proposed procurement of 2 X 210 MW coal based cheap power from M/s. K-Energy (Pvt.) Limited, an Independent Power Producer (IPP) and a private limited company registered under the Companies Ordinance 1984, approval of the General Meeting be and is hereby granted that a long term Lease Agreement ("the Agreement") be entered into between KESC and K-Energy (Pvt.) Limited in relation to Unit-3 and Unit-4 of Bin Qasim Power Station-I (BQPS-I) of the Company as per the proposed salient features and key terms & conditions of the Agreement set out in the annexed Statement u/s 160(1)(b) and THAT the Agreement will be finalized and executed after obtaining all requisite approvals including but not limited to NEPRA and KESC's existing Lenders, and also completing all legal requirements and corporate actions.

RESOLVED FURTHER THAT Chief Executive Officer (CEO) and Chief Business Development Officer (CBDO) of the Company be and are hereby jointly authorized to finalize the lease agreement after NEPRA's comments on the draft Lease Agreement and take all necessary actions and execute the Agreement and such other deeds, documents, instruments etc. incidental and related to the execution and implementation of the Agreement for and on behalf of the Company.


MOONIS ALVI
Company Secretary
KESC Ltd.



KESC

Karachi Electric Supply Company Limited

3rd Floor, K.E.S.C House, 39-B, Sunset Boulevard, Phase-II, Defence Housing Authority, Karachi.
Tel: 32647011 Fax: 99105165 & 32647159. Email Address: moonis.alvi@kesc.com.pk

**CERTIFIED TRUE COPY OF RESOLUTIONS PASSED AT THE
ANNUAL GENERAL MEETING (AGM) HELD ON 29 OCTOBER 2013
AT 10:30 A.M. AT NAVY WELFARE CENTRE, LIAQUAT BARRACKS, KARACHI**

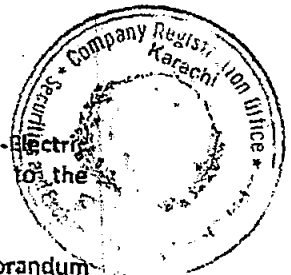
Resolved that the name of Company be and is hereby changed as "K-Electric Limited" after obtaining requisite statutory approvals pursuant to the Companies Ordinance 1984.

RESOLVED FURTHER THAT name of the Company in Clause-I of Memorandum of Association, Article-3 of Articles of Association and wherever appearing in Memorandum & Articles of Association of the Company be changed to read as K-Electric Limited.

Chief Executive Officer and Company Secretary be and are hereby authorized to take steps necessary for change of name.



MOONIS ALVI
Company Secretary
KESC Ltd.





**Certified True Copy of Special Resolutions
passed at the Annual General Meeting (AGM) of the Company
held on 19 September 2017 at 11:00 a.m. at Pearl Continental (PC), Karachi**

Amendments in KE's MEMARTS, pursuant to SECP Regulations / Directives

RESOLVED THAT subject to necessary approvals, Articles of Association of the Company be and are hereby amended as follows:

i) To add new article 47-A under the heading "Proxy"

47-A: "A member may opt for e-voting in a general meeting of the Company in accordance with the provisions and requirements under the Companies (E-Voting) Regulations 2016 notified by SECP on 22 January 2016 and any other provision, condition and requirement as notified by SECP from time to time in this respect, shall be deemed to be incorporated in these Articles of Association, irrespective of other provisions of the Articles of Association and notwithstanding anything contradictory therein. Members may appoint members as well as non-members as PROXIES for the purposes of e-voting to the extent permitted under the applicable laws."

ii) To add new article 50-A under the heading "Form of Proxy"

50-A: "An instrument of proxy in relation to e-voting shall be in the following form or a form as near thereto as may be:

"We _____ of _____ being a member of K-Electric Limited, holder of _____ ordinary share(s) as per registered Folio/Account No. _____ hereby opt for e-voting through intermediary and hereby consent the appointment of execution officer (Mr. _____) as my/our proxy and will exercise e-voting as per the Companies (E-voting) Regulations 2016 and hereby demand for poll for resolutions.

My secured email address is _____, please send login details, password and electronic signature through email."

iii) To add new article 26-A under the heading "General Meetings/Annual General Meetings"

26-A: "The Company may provide video conference facility to its members for attending the general meetings at places other than the town where general meeting is convened subject to fulfillment of such conditions, consent and meeting the requirements relating to number of members and time limit as notified by SECP vide circular no.10 of 2014 dated 21 May 2014 and any other conditions / guidelines notified by SECP from time to time."



iv) To add new article 94-A under the heading "Copies of Directors' Report and Balance Sheet to be sent to Members"

94-A: The Company may, with prior consent of the member(s), circulate notices of general meetings and annual balance sheet and profit and loss account, auditors' report and directors' report (annual audited accounts) to its member(s) through email. Further, the Company may, with consent of the members obtained in general meeting in accordance with the provisions of SECP's SRO No.470(1)/2016 dated 31 May 2016 and subject to compliance with the conditions specified therein, and any other conditions / instructions as notified by SECP from time to time in this respect, circulate the annual balance sheet and profit and loss accounts, auditors' report and directors' report (annual audited accounts) to its members through CD/DVD/USB at their registered addresses. However, if a member prefers to receive hard copies for all the future annual audited accounts then such preference of the member shall be given to the Company in writing and thereafter the Company shall provide hard copies of all the future annual audited accounts to such member.

RESOLVED FURTHER THAT the Chief Executive Officer and/or the Company Secretary, be and are jointly or severally authorized to take such other steps, execute such other documents and make necessary corporate and other actions & statutory filings as may be necessary / expedient for the purpose of giving effect to the above resolutions and all other matters incidental or ancillary thereto.

Muhammad Rizwan Dalia
Director Finance & Company Secretary



SEC/Registrar/22/1219
22 November 2022

1531491
Securities & Exchange
Commission of Pakistan
Dist. No.

22 NOV 2022

CRO KARACHI

The Registrar of Companies
Company Registration Office
Securities & Exchange Commission of Pakistan
4th Floor, State Life Building No.2
Wallace Road

Karachi

Subject: Filing of Form-A under section 130(1) of the Companies Act 2017

Dear Sir,

In compliance with the provision of Section 130(1) of the Companies Act 2017, we are pleased to enclose herewith Annual Return of K-Electric Limited ("KE" or "the Company") on prescribed Form-A made as of 26 October 2022, the date of Annual General Meeting of the Company for financial year 2021-22. This Form is being filed manually since we unable to file the same online in view of pending observations in certain Forms-29.

The documents being submitted along with the Return are itemized in the enclosed list of Annexures. Original paid challan for Rs. 1,320/-, being the filing fee for the above is also enclosed.

We would request you to acknowledge the above and issue us your official receipt for our record.

Yours faithfully,

Rashid Mohiuddin
Manager, Corporate Affairs

Encl.: As above

KE

Form A

THE COMPANIES ACT, 2017
THE COMPANIES (GENERAL PROVISIONS AND FORMS) REGULATIONS, 2018
[Section 130(1) and Regulation 4]

ANNUAL RETURN OF COMPANY HAVING SHARE CAPITAL

PART-I

Please complete in typescript or in block capitals.

1.1 CUIN (Registration Number)

0	0	0	0	0	0	2
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1.2 Name of the Company

K-Electric Limited

1.3 Fee Payment Details 1.3.1

Challan No.

1.3.2 Amount

PKR 660/-

1.4 Form A made up to

2	6
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1	0
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2	0	2	2
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1.5 Date of AGM

2	6
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1	0
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2	0	2	2
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PART-I

Section-A

2.1 Registration office address

KE House, 39-B, Sunset Boulevard, Phase-II, DHA, Karachi

2.2 Email Address

rizwan.pesnani@ke.com.pk

2.3 Office Tel. No.:

(021) 3263 7133 / 3870 9132

2.4 Office Fax No.:

(021) 9920 5192

2.5 Principal line of business

Generation, Transmission & Distribution of Electricity within the licensed area.

2.6 Mobile No. of Authorized officer
 (Chief Executive/ Director/ Company
 Secretary/ Chief Financial Officer)

0322-0836294

2.7 Authorized Share Capital

Classes and kinds of Shares	No. of Shares PKR	Amount PKR	Face Value PKR
Ordinary Shares	32,857,142,857	115,000,000,000	3.50
Redeemable Preference Shares	2,857,142,857	10,000,000,000	3.50

2.8 Paid up Share Capital

Classes and kinds of Shares	No. of Shares PKR	Amount PKR	Face Value PKR
Ordinary Shares	27,615,194,246	96,653,179,861	3.50

TRUE COPY
 RASHID MOHIUDDIN
 Manager
 Corporate Affairs
 K-ELECTRIC LIMITED

2.9 Particulars of the holding / subsidiary company, if any		
Name of holding company	Holding	% of shares held
KES Power Limited (KESP), Floor 4, Willow House, Cricket Square, Grand Cayman, Cayman Islands	18,335,542,678	66.40%

2.10 Chief Executive Officer

Name	Syed Moonis Abdullah Alvi														
Address	House No. 65/2, Street No.24, Khayaban-e-Badban, Phase-V, DHA, Karachi.														
NIC No.	4	2	2	0	1	-	6	8	8	6	1	9	1	-	3

2.11 Chief Financial Officer

Name	Muhammad Aamir Ghaziani														
Address	House No. 74 L-1, Block-2, PECHS, Karachi.														
NIC No.	4	2	3	0	1	-	1	1	8	9	3	3	1	-	3

2.12 Company Secretary

Name	Rizwan Pesnani														
Address	Alpine Homes, Plot F-13, House No. 5, Block-5, Clifton, Karachi														
NIC No.	4	2	2	0	1	-	0	5	4	9	1	8	6	-	1

2.13 Legal Advisor

Name	Messrs. Abid S. Zuberi & Co.												
Address	Suite 208, Clifton Centre, DC-1, Block-5, Kehkashan Clifton, Karachi												

2.14 Particulars of Auditor(s)

Name	Address
Messrs. A.F. Ferguson & Co., Chartered Accountants	State Life Building No. 1-C, I.I. Chundrigar Road, P.O. Box 4716, Karachi-74000

2.15 Particulars of Shares Registrar

Name	CDC Share Registrar Services Limited (CDCSRSL)
Address	CDC House, 99 "B", Block-B, S.M.C.H.S., Main Shahrah-e-Faisal Karachi.
e-mail	info@cdcsrcsl.com

TRUE COPY
Rashid Muhammad
 RASHID MUHAMMAD
 Manager
 Corporate Affairs
 K-ELECTRIC LIMITED

Section-B**2.16 List of Directors as on the date of annual return**

S#	Name	Address	Nationality	NIC No. (Passport No. if foreigner)	Date of appointment or election
1	Mark Gerard Skelton	27 Lowden Road, London SE24 OBJ, Great Britain	British	125479178	29 July 2022
2	Syed Moonis Abdullah Alvi	House No. 65/2, Street No.24, Khayaban-e-Badban, Phase-V, DHA, Karachi.	Pakistani	42201-6886191-3	29 July 2022
3	Adeeb Ahmad	House 3-A, 9th South Street, Phase 2 DHA, Karachi.	Pakistani	90303-9398449-7	29 July 2022
4	Arshad Majeed Mohmand	House No. 8, Hayatabad Phase-6, Street No. 1, Sector F-2 Peshawar	Pakistani	17301-6779543-7	29 July 2022
5	Dr. Imran Ullah Khan	House No. Cat-II, Street No. 11, Sector I-8/1, Islamabad	Pakistani	61101-9393634-9	29 July 2022
6	Mubasher H. Sheikh	National Industries Group Intersection of Jahra and Airport Road Beside Keifan Bridge, Opp. City Centre. Next to Red Crescent Bldg Shuwalkh, Kuwait	Pakistani	90309-0106966-1	29 July 2022
7	Muhammad Kamran Kamal	House no 61/2, street 5, off. Khayaban-e-Momin , DHA, Phase V, Karachi	Pakistani	35201-8831928-7	29 July 2022
8	Muhammad Zubair Motiwala	House No. C-1, Dhoraji Colony, Bahadurabad, Karachi	Pakistani	42000-0497186-9	29 July 2022
9	Saad Amanullah Khan	House No. 105/2, Khayaban-e-Badban, Phase-V, DHA, Karachi	Pakistani	42301-0870735-9	29 July 2022
10	Shan A. Ashary	12th Floor, Vision Tower, Business Bay, P.O. Box No. 212468, UAE, United Arab Emirates	Pakistani	423011-994845-9	29 July 2022

TRUE COPY
Rashid H. Memon
Managing Director
Corporate Affairs
K-ELECTRIC LIMITED

2.17 List of members & debenture holders on the date up to which this Form is made

2.17 List of members & debenture holders on the date up to which this Form is made

S#	Folio#	Name	Address	Nationality	No. of shares held/debenture	NIC No. (Passport No. if foreigner)
		List attached at				
		Annex-A	Ordinary Physical Shareholders			
		Annex-B	Ordinary Shareholders in CDS			
		Annex-C to Annex-H	SUKUK Holders			
		Members holding 10% or more ordinary shares				
		* KES Power Ltd	CDC A/c # 3277-88836		18,335,542,678	66.40%
		* President of Pakistan / GOP	Folio # 328		6,726,912,278	24.36%

2.18 Transfer of shares (debentures) since last Form A was made

S#	Name of Transferor	Name of Transferee	Number of shares transferred	Date of registration of transfer
Details attached at				
		Annex-I	Ordinary Shares	
		Annex-J to Annex-O	SUKUK Holders	

PART-III

3.1

Declaration:

I do hereby solemnly, and sincerely declare that the information provided in the form is:

- true and correct to the best of my knowledge, in consonance with the record as maintained by the Company and nothing has been concealed; and
- hereby reported after complying with and fulfilling all requirements under the relevant provisions of law, rules, regulations, directives, circulars and notifications whichever is applicable.

3.2 Name of Authorized Officer with Designation/ Authorized Intermediary

Rizwan Pesnani
Company Secretary, KE

3.3 Signature

Rizwan Pesnani

3.4 Registration No. of Authorized Intermediary, If applicable

N.A.

3.5 Date

1 1

1 1

2 0 2 2

INSTRUCTIONS FOR FILLING FORM-A

- The Form shall be made up to the date of last AGM of the Company or the last date of the calendar year where no AGM is held during the year.
- Under S. No. 2.17 above, the aggregate number of shares held by each member should be stated.
- When the shares are of different classes the columns should be subdivided so that the number of each class held, is shown separately against S. No. 2.7, 2.8 and 2.17

TRUE COPY
RASHID MOHIUDDIN
Manager
Corporate Affairs
K-ELECTRIC LIMITED

4. If the space provided in the Form is insufficient, the required information should be listed in a separate statement attached to this return which should be similarly signed.
5. In case a body corporate is a member, registration number may be mentioned instead of NIC number.
6. In case of foreign nationals, indicate "passport number" in the space provided for "NIC No." Pakistani nationals will only indicate "NIC No."
7. This form is to be filed within 30 days of the date indicated in S. No. 1.4

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[illegible]

1.1.1	Company Name	Company Name
1.1.2	Company Address	Company Address
1.1.3	Company Phone	Company Phone
1.1.4	Company Fax	Company Fax
1.1.5	Company Email	Company Email
1.1.6	Company Website	Company Website
1.1.7	Company Logo	Company Logo
1.1.8	Company Seal	Company Seal
1.1.9	Company Stamp	Company Stamp
1.1.10	Company Certificate	Company Certificate
1.1.11	Company License	Company License
1.1.12	Company Registration	Company Registration
1.1.13	Company Incorporation	Company Incorporation
1.1.14	Company Articles of Incorporation	Company Articles of Incorporation
1.1.15	Company Bylaws	Company Bylaws
1.1.16	Company Minutes	Company Minutes
1.1.17	Company Financial Statements	Company Financial Statements
1.1.18	Company Tax Returns	Company Tax Returns
1.1.19	Company Insurance Policies	Company Insurance Policies
1.1.20	Company Employment Contracts	Company Employment Contracts
1.1.21	Company Vendor Contracts	Company Vendor Contracts
1.1.22	Company Customer Contracts	Company Customer Contracts
1.1.23	Company Lease Agreements	Company Lease Agreements
1.1.24	Company Loan Agreements	Company Loan Agreements
1.1.25	Company Partnership Agreements	Company Partnership Agreements
1.1.26	Company Joint Venture Agreements	Company Joint Venture Agreements
1.1.27	Company Merger Agreements	Company Merger Agreements
1.1.28	Company Acquisition Agreements	Company Acquisition Agreements
1.1.29	Company Divestiture Agreements	Company Divestiture Agreements
1.1.30	Company Restructuring Agreements	Company Restructuring Agreements
1.1.31	Company Reorganization Agreements	Company Reorganization Agreements
1.1.32	Company Liquidation Agreements	Company Liquidation Agreements
1.1.33	Company Bankruptcy Agreements	Company Bankruptcy Agreements
1.1.34	Company Settlement Agreements	Company Settlement Agreements
1.1.35	Company Arbitration Agreements	Company Arbitration Agreements
1.1.36	Company Mediation Agreements	Company Mediation Agreements
1.1.37	Company Conciliation Agreements	Company Conciliation Agreements
1.1.38	Company Dispute Resolution Agreements	Company Dispute Resolution Agreements
1.1.39	Company Non-Dispute Resolution Agreements	Company Non-Dispute Resolution Agreements
1.1.40	Company Confidentiality Agreements	Company Confidentiality Agreements
1.1.41	Company Non-Disclosure Agreements	Company Non-Disclosure Agreements
1.1.42	Company Invention Agreements	Company Invention Agreements
1.1.43	Company Patent Agreements	Company Patent Agreements
1.1.44	Company Trademark Agreements	Company Trademark Agreements
1.1.45	Company Copyright Agreements	Company Copyright Agreements
1.1.46	Company Trade Secret Agreements	Company Trade Secret Agreements
1.1.47	Company Intellectual Property Agreements	Company Intellectual Property Agreements
1.1.48	Company Real Estate Agreements	Company Real Estate Agreements
1.1.49	Company Vehicle Agreements	Company Vehicle Agreements
1.1.50	Company Equipment Agreements	Company Equipment Agreements
1.1.51	Company Technology Agreements	Company Technology Agreements
1.1.52	Company Software Agreements	Company Software Agreements
1.1.53	Company Hardware Agreements	Company Hardware Agreements
1.1.54	Company Network Agreements	Company Network Agreements
1.1.55	Company Security Agreements	Company Security Agreements
1.1.56	Company Safety Agreements	Company Safety Agreements
1.1.57	Company Health Agreements	Company Health Agreements
1.1.58	Company Environmental Agreements	Company Environmental Agreements
1.1.59	Company Social Responsibility Agreements	Company Social Responsibility Agreements
1.1.60	Company Sustainability Agreements	Company Sustainability Agreements
1.1.61	Company Governance Agreements	Company Governance Agreements
1.1.62	Company Ethics Agreements	Company Ethics Agreements
1.1.63	Company Compliance Agreements	Company Compliance Agreements
1.1.64	Company Anti-Corruption Agreements	Company Anti-Corruption Agreements
1.1.65	Company Anti-Money Laundering Agreements	Company Anti-Money Laundering Agreements
1.1.66	Company Anti-Terrorism Agreements	Company Anti-Terrorism Agreements
1.1.67	Company Anti-Smuggling Agreements	Company Anti-Smuggling Agreements
1.1.68	Company Anti-Counterfeiting Agreements	Company Anti-Counterfeiting Agreements
1.1.69	Company Anti-Fraud Agreements	Company Anti-Fraud Agreements
1.1.70	Company Anti-Identity Theft Agreements	Company Anti-Identity Theft Agreements
1.1.71	Company Anti-Phishing Agreements	Company Anti-Phishing Agreements
1.1.72	Company Anti-Spamming Agreements	Company Anti-Spamming Agreements
1.1.73	Company Anti-Hacking Agreements	Company Anti-Hacking Agreements
1.1.74	Company Anti-Malware Agreements	Company Anti-Malware Agreements
1.1.75	Company Anti-Virus Agreements	Company Anti-Virus Agreements
1.1.76	Company Anti-Spyware Agreements	Company Anti-Spyware Agreements
1.1.77	Company Anti-Ransomware Agreements	Company Anti-Ransomware Agreements
1.1.78	Company Anti-DDoS Agreements	Company Anti-DDoS Agreements
1.1.79	Company Anti-SQL Injection Agreements	Company Anti-SQL Injection Agreements
1.1.80	Company Anti-XSS Agreements	Company Anti-XSS Agreements
1.1.81	Company Anti-CSRF Agreements	Company Anti-CSRF Agreements
1.1.82	Company Anti-Session Hijacking Agreements	Company Anti-Session Hijacking Agreements
1.1.83	Company Anti-Brute Force Agreements	Company Anti-Brute Force Agreements
1.1.84	Company Anti-Password Guessing Agreements	Company Anti-Password Guessing Agreements
1.1.85	Company Anti-Email Spoofing Agreements	Company Anti-Email Spoofing Agreements
1.1.86	Company Anti-Phone Spoofing Agreements	Company Anti-Phone Spoofing Agreements
1.1.87	Company Anti-Fax Spoofing Agreements	Company Anti-Fax Spoofing Agreements
1.1.88	Company Anti-Text Message Spoofing Agreements	Company Anti-Text Message Spoofing Agreements
1.1.89	Company Anti-Voice Mail Spoofing Agreements	Company Anti-Voice Mail Spoofing Agreements
1.1.90	Company Anti-Video Conference Spoofing Agreements	Company Anti-Video Conference Spoofing Agreements
1.1.91	Company Anti-Webcam Spoofing Agreements	Company Anti-Webcam Spoofing Agreements
1.1.92	Company Anti-Microphone Spoofing Agreements	Company Anti-Microphone Spoofing Agreements
1.1.93	Company Anti-Keyboard Spoofing Agreements	Company Anti-Keyboard Spoofing Agreements
1.1.94	Company Anti-Mouse Spoofing Agreements	Company Anti-Mouse Spoofing Agreements
1.1.95	Company Anti-Touchscreen Spoofing Agreements	Company Anti-Touchscreen Spoofing Agreements
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1.1.99	Company Anti-Bluetooth Spoofing Agreements	Company Anti-Bluetooth Spoofing Agreements
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1.1.101	Company Anti-4G/LTE Spoofing Agreements	Company Anti-4G/LTE Spoofing Agreements
1.1.102	Company Anti-5G Spoofing Agreements	Company Anti-5G Spoofing Agreements
1.1.103	Company Anti-Satellite Spoofing Agreements	Company Anti-Satellite Spoofing Agreements
1.1.104	Company Anti-GPS Spoofing Agreements	Company Anti-GPS Spoofing Agreements
1.1.105	Company Anti-Inertial Navigation System Spoofing Agreements	Company Anti-Inertial Navigation System Spoofing Agreements
1.1.106	Company Anti-Compass Spoofing Agreements	Company Anti-Compass Spoofing Agreements
1.1.107	Company Anti-Barometer Spoofing Agreements	Company Anti-Barometer Spoofing Agreements
1.1.108	Company Anti-Air Pressure Spoofing Agreements	Company Anti-Air Pressure Spoofing Agreements
1.1.109	Company Anti-Temperature Spoofing Agreements	Company Anti-Temperature Spoofing Agreements
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1.1.111	Company Anti-Wind Speed Spoofing Agreements	Company Anti-Wind Speed Spoofing Agreements
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1.1.113	Company Anti-Rainfall Spoofing Agreements	Company Anti-Rainfall Spoofing Agreements
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1.1.117	Company Anti-Aurora Spoofing Agreements	Company Anti-Aurora Spoofing Agreements
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1.1.124	Company Anti-Energy Spoofing Agreements	Company Anti-Energy Spoofing Agreements
1.1.125	Company Anti-Information Spoofing Agreements	Company Anti-Information Spoofing Agreements
1.1.126	Company Anti-Consciousness Spoofing Agreements	Company Anti-Consciousness Spoofing Agreements
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PATTERN OF SHAREHOLDING

as at June 30, 2022

Categories of Shareholders	Shareholders	Shares Held	Percentage
Government Holding			
The President of Pakistan	1	6,726,912,278	24.36
Directors and their spouse(s) and minor children			
Khalid Rafi	1	500	0.00
Syed Asad Ali Shah	1	1,000	0.00
Executives	3	102	0.00
Associated Companies, undertakings and related parties			
KES Power Limited	1	18,335,542,678	66.40
NIT and ICP	3	46,870	0.00
Banks Development Financial Institutions, Non-Banking Financial Institutions	45	326,556,349	1.18
Insurance Companies	21	22,612,340	0.08
Modarabas and Mutual Funds	35	227,960,258	0.83
General Public			
a. Local	25,242	1,535,342,195	5.56
b. Foreign	406	22,948,761	0.08
Foreign Companies	50	358,460	0.00
Others	284	416,912,455	1.51
Total	26,093	27,615,194,246	100.00

Shareholders holding 10% or more	Shares Held	Percentage
THE PRESIDENT OF PAKISTAN	6,726,912,278	24.36
KES POWER LIMITED	18,335,542,678	66.40

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	222,584	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
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.



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)	16,489	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.



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.

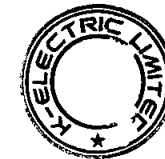


**Annual Forecasted Monthly Demand, Units Sent Out (SO) and Load Shed
From FY 24 to FY 30**

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.



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 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 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 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 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 granted 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 grant of this license to the Licensee is 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 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

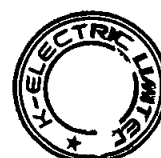
- 9.1.** The Licensee shall supply, for such period as may be specified in the license, electric power in its Service Territory to all consumers who fulfill the Consumer Eligibility Criteria for supply of electric power from Electric Power Supplier in a safe, secured, reliable and efficient manner on 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 the 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

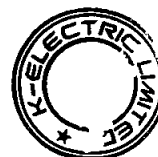
The Licensee shall participate in such measures and activities as may be initiated by the Authority for the development of uniform industry standards and codes of conduct in accordance with the applicable documents.

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 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.

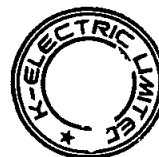


Article 16
Provision of Information

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

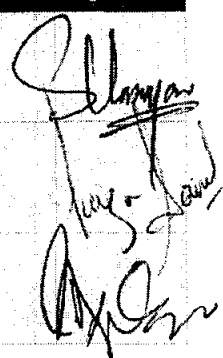
- 17.1.** The Licensee shall make available complaint-handling mechanisms that provide consumers with expeditious, fair, transparent, inexpensive, accessible, speedy and effective dispute resolution.
- 17.2.** Any complaints regarding billing, non-compliance of instructions with respect to metering, 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 the Licensing Regulations, shall be referred to the Authority.





LEARNING & DEVELOPMENT POLICY

VERSION HISTORY

Version	Date	Created By	Approved By	Signature
1.0		HR – Learning & OD	Shehryar Aman, DGM Learning & OD	
			Faiza Savul, Head of CoE	
			Muhammad Rizwan Dalia, Chief People Officer	

CHANGED VERSION

Version	Date	Created By	Changes
1.0	8 th Feb'22	HR – Learning & OD	2.1. All active employees at KE are covered under the ambit of this policy other than people who have either applied for LPR or are serving their notice period
			5.2. The training request will be approved subject to availability of L&D budget for the respective function and relevancy of the program to the current job role
			6.1.1. In case the employee doesn't show up to the scheduled training or fails to inform PC and L&D team with in the stated time frame (i.e. 07 days prior to the start date of training), a Justification approved by the respective departmental head & CXO will have to be emailed to PC Learning and L&D within 07 working days after the training has commenced.



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This Learning & Development (L&D) Policy includes the purpose and principles of L&D and guidelines for employees to access and maximize opportunities to grow both personally and professionally.

1 PURPOSE

- 1.1. To help and support all employees in attaining, honing, and demonstrating the K-Electric values, behaviors, knowledge, and skills needed in their role.
- 1.2. To support and drive employee performance and contribute towards company objectives.
- 1.3. To provide a positive driver for employee engagement so they feel valued and involved.
- 1.4. To help develop skills that meet current and future needs, responding effectively and efficiently to changes in the structure and operating environment.

2 SCOPE

This Learning & Development Policy and Procedure cover the following:

- 2.1. All active employees at KE are covered under the ambit of this policy other than people who have either applied for LPR or are serving their notice period
- 2.2. Responsibilities of individual employees, their Line Managers, and L&D in implementing key aspects of the training cycle
- 2.3. A detailed guide to L&D training governance policy for employees and the L&D team
- 2.4. Procedure to meet individual's learning and development requirements
- 2.5. Responsibilities implemented owing to COVID SOP

3 RESPONSIBILITIES FOR LEARNING & DEVELOPMENT (L&D)

L&D is about understanding the organization strategy and its future capability needs to identify learning priorities across the organization. On an individual level, it's about creating learning environments where employees can continuously develop to be their best. In order to achieve this goal, the employees, their line managers and L&D have the following responsibilities:

3.1. EMPLOYEES:

It is the responsibility of each employee to:

- 3.1.1. Agree on an annual L&D plan with their line manager.
- 3.1.2. Discuss learning and development achievements & progress at mid-year, annual performance appraisals and one to one meeting throughout the year with line manager.
- 3.1.3. Accept/Declined the calendar 07 days prior to the training invites for the trainings which are assigned by L&D against the competencies as per the approved LNA.
- 3.1.4. Inform L&D team, People Connect Learning and line manager before commencement of training as mentioned in Training Governance Clause
- 3.1.5. Ensure to provide feedback against the training quality and effectiveness on the feedback form on AZM Learning (LMS) no later than 3 days after receiving the feedback notification. Training Certificates will only be furnished after the completion of feedback activity.
- 3.1.6. Make sure to collect the training certificate after receiving the email from People Connect Learning. L&D will not be responsible for any misplacement of certificate if not collected within a



week of the email received.

- 3.1.7. In case of system-based training, get the required software installed from IT at least a day before the training is scheduled to be held.
- 3.1.8. In case of a public program, initiate TRF and get it approved from line and skip managers at least 1 week before the training. Follow the Guide to Raise TRF to initiate TRF.
- 3.1.9. In case the learning need is not identified at the time of Learning Need Assessment (LNA), the employee shall get the request approved from his/her line manager, skip manager and CXO at least 1 week prior to the training date, provided the function pertaining to the employee has budget available to cover this cost.
- 3.1.10. Ensure compliance to Covid SOP for Training, KE Dress Code Policy & KE Values within the AZM Learning Premises.

3.2. LINE MANAGERS:

It is the responsibility of line managers to:

- 3.2.1. Identify the learning needs for the team to meet individual, departmental and organizational objectives.
- 3.2.2. Undertake a pre and post learning activity discussion with team to agree and record the objectives and impact/benefits of the learning interventions.
- 3.2.3. Ensure that all team members that are nominated and assigned the trainings against their LNA attend the training timely
- 3.2.4. Inform People Connect Learning and L&D team before commencement of training as mentioned in Training governance clause.
- 3.2.5. Ensure proper handing and taking over of job responsibilities during training period of employee to avoid any hindrance in business operations.

3.3. LEARNING & DEVELOPMENT TEAM:

It is the responsibility of L&D Team to:

- 3.3.1. Ensure that all learning interventions are mapped against each employee as per the competencies of job roles before the start of Fiscal Year.
- 3.3.2. Update the learning library/catalogue to be available on SuccessFactors Learning Management System (LMS).
- 3.3.3. Explore and connect with the right vendors & trainers for the learning interventions and share the vendor assessment with the procurement team.
- 3.3.4. Vet the training content before the start of the training program, to ensure that training meets the identified training objective.
- 3.3.5. Ensure that training calendar for whole year of all In-house Trainings must be available on SuccessFactors Learning Management System (LMS).
- 3.3.6. Roll out training invites 03 weeks prior to the training is scheduled to be held.
- 3.3.7. Calendar invites must be sent out 02 weeks prior to the date training is scheduled to be held
- 3.3.8. A reminder to those who have not responded to the calendar invite must be sent 1 week prior to the date training is scheduled for.
- 3.3.9. Inform the participant 05 days prior to the training, in case of any replacement of nomination.



- 3.3.10. Share the attendance of each training with CXO's Coordinators keeping relevant HRBP in CC.
- 3.3.11. Mark the attendance on LMS within a week after completion of training.
- 3.3.12. Share training updates with CXOs quarterly
- 3.3.13. Arrange training certificates from vendors for respective trainings and hand over to People Connect to distribute to participants

4. PLANNING THE LEARNING & DEVELOPMENT (L&D) NEEDS

Learning and development needs are identified at each job level as per the relevant competencies and collectively these are summarized in the Learning and Development Plan, following below mechanism:

- 4.1. Each line manager with the employee identify the learning and development needs of his/her team as per the competencies against two types of learning categories:
 - 1. Functional
 - 2. Behavioral
- 4.2. The identification of needs must arise from the staff Goal Setting Meetings, where employee and his/her line manager discuss and agree on employee's tasks towards meeting the organizational objectives, the competencies of the job role and his/her personal development needs.
- 4.3. Based on the information acquired, a training plan is designed which is then reviewed and approved by the Head of Department and finalized after approval
- 4.4. To achieve the agreed outcome, each learning and development activity may require different approaches and resources. These may include:
 - 1. In-house - External Trainer
 - 2. In-house – Internal Trainer
 - 3. Public Program
 - 4. E-Learning

L&D Team explores the most effective way from the above approaches to make each learning intervention more efficient and resourceful.

5. INTERNATIONAL TRAINING & CERTIFICATION:

K-Electric encourages employees to enhance knowledge and skills and to network with other professionals, thus improving potential for future opportunities. For professional development purposes, employees may need to attend learning events/programs like international conferences and seminars, or certifications conducted by local or international professional associations that will enable them to stay connected with best industry practices. Therefore, the focus of this is to outline parameters for attending the above-mentioned learning opportunities. This policy supports 3E (Education, Exposure and Experience) Learning Model to ensure consistency and efficiency of work processes.

5.1. SCOPE

This covers the following professional development mediums:

- 5.1.1. Professional Certifications both local and international (Exams & Preparatory courses)
- 5.1.2. Professional Certification Courses offered by an accredited institution, including E-learning
- 5.1.3. International seminars and conferences

5.2. SPONSORSHIP AMOUNT AND ELIGIBILITY

SPONSORSHIP AMOUNT		
AMs to DGMs	Up to \$3,000	Company sponsored
GMs and above	Up to \$6,000	Company sponsored
<p><i>*The above amount covers the cost of the program/event/certification and exam.</i></p> <p><i>*Travel/M meal & other Logistics will be charged to employee's departmental budget.</i></p> <p><i>*Any additional amount will be self-financed by the employee.</i></p>		
ELIGIBILITY CRITERIA		
<p>To be eligible for availing this sponsorship, the employee must meet the following criteria:</p> <ul style="list-style-type: none"> • Minimum of 2 years of working experience with K Electric • PMF rating should be Strong and above (Last 2 years) • No Disciplinary action in last one year • The training request will be approved subject to availability of L&D budget for the respective function and relevancy of the program to the current job role <p><i>*Any exceptions to the above criteria will be subjected to CPO's and CEO's approval</i></p>		

5.3. CONDITIONS

- 5.3.1. In case the cost of the program applied for is above \$2,000, the applicant will be required to sign a contract with K-Electric before enrollment process. Based on the contract, employee shall stay with K-Electric for minimum two years, starting from the time of completion of the program.
- 5.3.2. In case of resignation before completion of two-year term, incurred investment (fee and travelling charges if any) will be recovered from the employee through Full & Final Settlement as follows:
 1. Resignation before completion of 1 year – (Full deduction of incurred investment)
 2. Resignation after completion of 1 year – (Deduction on pro-rated basis)
- 5.3.2. In case of a certification where an examination is involved, employee will have to pass the exam and share the certificate with L&D team to avail sponsorship.
- 5.3.3. The training request will be approved subject to availability of L&D budget for the respective function.

5.4. PROCESS

- 5.4.1. To avail the sponsorship, employee shall raise the External Training Request Form (TRF) on AZM Learning.
- 5.4.2. In case of international travelling, CEO's approval will be taken after CPO's approval.
- 5.4.3. Once TRF and all necessary approvals have been received, the employee will be enrolled in the requested professional development program.
- 5.4.4. In case of Professional Certifications, payment shall be made by the employee initially which will be reimbursed by the company once the employee receives the certificate.



5.5. ADDITIONAL INFORMATION

- 5.5.1. K-Electric will not be responsible for payment of late fees/fines associated with certification applications/ withdrawals.
- 5.5.2. Please note that airfare for all L&D related travel will be economy class.
- 5.5.3. For sponsorship request to be completed, the employee must provide the following documents:

Before the certification course/ exam:

- 1. Approval of External Training Request on AZM Learning SuccessFactors
- 2. A description of the number/type of pre-requisite courses to be eligible for the certification
- 3. The total cost to complete the certification

After the certification course/ exam:

- 1. Transfer of learning through a project / initiative proposal within 3 months to be shared with L&D team and line.
- 2. Upon satisfactory completion of the certification exam and/or coursework, the employee must provide documentation to support completion and payment in order to receive the sponsorship.
- 3. All claims for certification sponsorship are to be supported by evidentiary documentation such as original receipts, approved expense claim form, certification of completion and score card/ result sheet.

6. TRAINING GOVERNANCE

This sets forth the policy and procedures for employee's conduct and expectations leading to and during the training to promote the culture of learning, growth and to minimize any last-minute intimations/changes.

6.1. ABSENCE

"Absence" is defined as the failure of an employee to attend the complete duration of scheduled training, other than instances where the employee informs PC Learning and L&D (via email) of his/her unavailability for the scheduled training 7 days prior to the training keeping line manager in loop.

Furthermore, the below mentioned points elaborate on absenteeism criteria, timelines and action required.

- 1. In case the employee doesn't show up to the scheduled training or fails to inform PC and L&D team with in the above stated time frame (i.e. 07 days prior to the start date of training) ,a Justification approved by the respective Departmental head & CXO will have to be emailed to PC Learning and L&D within 07 working days after the training has commenced.
- 2. No rescheduling of training for the employee with unexcused absence will be arranged in the same fiscal year. Only in cases where employee has provided the approved justification from (Departmental head & CXO) rescheduling of the training may be arranged in the same fiscal year based on budget availability.
- 3. Irreversible Advisory Note will be issued to the employee who fail to provide approved justification from (Departmental head and CXO) with in the time frame as stated above clauses # 6.1.1. and the same will be filed in his/her employee file.



6.2. TARDINESS & EARLY OUT

1. Participants who reach the training session 30 minutes after the commencement of the training must email PC Learning and L&D an approved justification of the tardiness by the line manager.
2. The approved justification must be emailed to PC Learning and L&D during the first half of the training.
3. Employees who would need to leave during the training session must email approved justification by line manager to PC Learning and L&D before exiting the session and will be considered as excused absence.

7. TRAINING POSTPONED SOP:

In case of postponement of training due to unforeseen circumstances, the same will be communicated to the People Connect Learning after which the participants will be reached out via email or message broadcast to inform them of the cancellation.

All participants are requested to check their emails and messages before coming to the training.

8. L&D COVID-19 SOPS:

In order to combat COVID-19, following precautionary measures are mandatory to be taken while entering and during trainings in L&D premises:

- 8.1. Employee must email/bring along vaccination card/certificate (first shot receipt is also acceptable) to be shown at the entrance of the training room. Strict compliance to this SOP must be followed.
- 8.2. Employee showing symptoms (flu, cough, difficulty in breathing or fever) should not be attending the classroom session, every individual should be self-assessing themselves before coming to work.
- 8.3. Personal protective equipment must be used throughout the session, employees without masks will not be allowed to enter the premises.
- 8.4. Distance must always be observed by following the seating arrangements strictly. Only 2/3 participants per table will be allowed.
- 8.5. Participants are required to take along any notebooks, pens and personal material used by them, post session.
- 8.6. Handshakes, hugs and physical group activities are strictly prohibited. Employees are requested to not engage in group conversations even outside the training room.
- 8.7. There would be no water bottles available in the training room. Paper cups have been made available and shall be used at the water dispenser outside for drinking water.
- 8.8. If mineral water bottles are required in the training, an email must be sent at least a day before the session of the same so arrangement can be made.

Note: These guidelines should be read in conjunction with the Advisories issued on COVID-19 and other such instructions issued from Health Care and respective HSE.

9. TRAINING REQUISITION FORM (TRF)

In case of Public Program, user must initiate TRF and get it approved from Line and skip managers 01 week

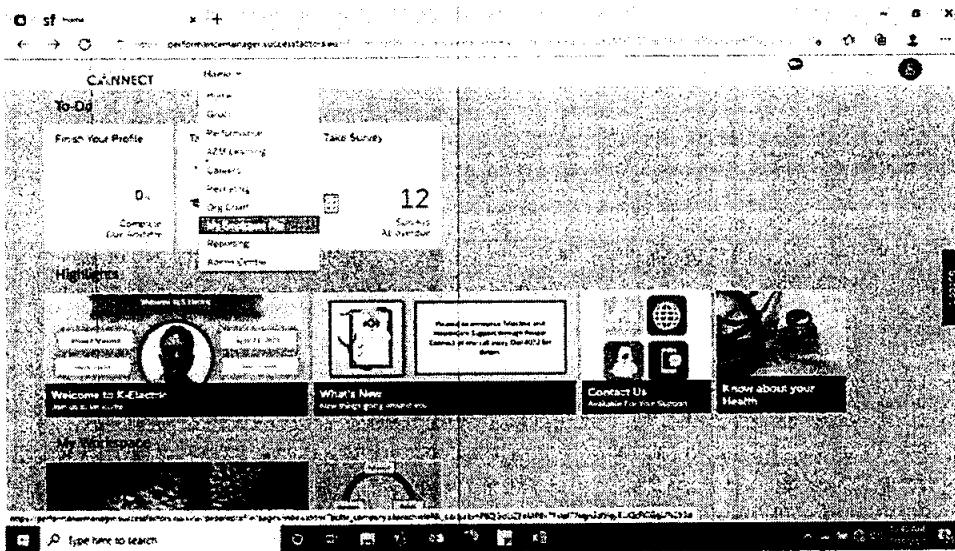


K-Electric Learning & Development Policy

before the training. Below are the steps that guide the users to raise TRF conveniently:

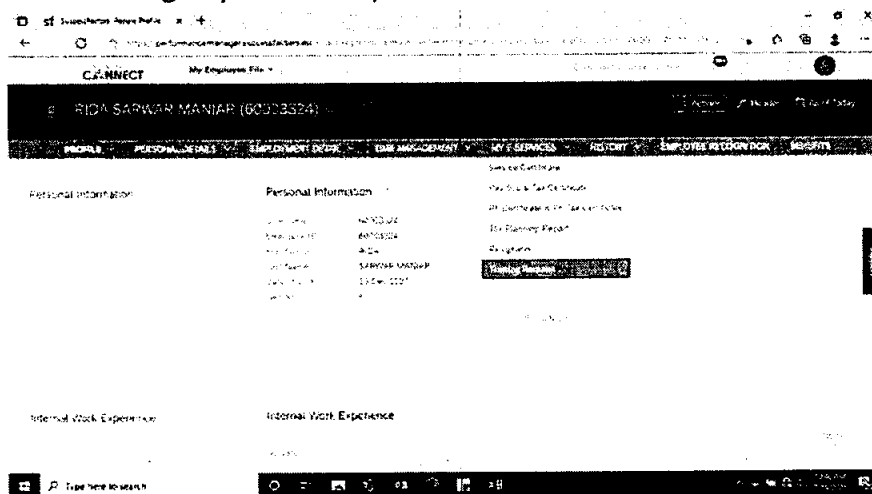
9.1. Step 1:

Go to My Employee File from EC Home Page,



9.2. Step 2:

Select Training Request from My E Services tab:





9.3. Step 3:

Click on the edit (pen) icon appearing against Training Request form:

9.4. Step 4:

Fill the desired details of Trainings in TRF



9.5. Step 5:

After filling the form, click on save button to submit the TRF request to your line manager for further approval process.

A screenshot of a web browser displaying a 'Transfer Request Form'. The form is titled 'Transfer Request Form' and contains several sections: 'Employee's Name', 'Employee's Designation', 'Total Cost (including all overheads)', and 'Remarks'. There are 'Cancel' and 'Save' buttons at the bottom right of the form. The browser's address bar shows a URL starting with 'performance'. The Windows taskbar is visible at the bottom of the screen.

DISCLAIMER:

Any exceptions or amendments to this policy at any given point of time will be accepted with the approval of Chief People Officer.



Registrar

National Electric Power Regulatory Authority

Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
 Ph: +92-51-4200500, Fax: +92-51-2600028
 Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/DG(CAD)/TCD-10/17187-13

March 26, 2021

1.	Chief Executive Officer, Faisalabad Electric Supply Company Ltd. Abdullahpur, Canal Bank Road Faisalabad	2.	Chief Executive Officer, Gujranwala Electric Power Company Ltd. 565/A, Model Town G.T. Road, Gujranwala
3.	Chief Executive Officer, Hyderabad Electric Supply Co. Ltd. WAPDA Offices Complex, Hussainabad, Hyderabad	4.	Chief Executive Officer Islamabad Electric Supply Co. Ltd. Street # 40, Sector G-7/4, Islamabad.
5.	Chief Executive Officer, Lahore Electric Supply Company Ltd. 22-A, Queens Road, Lahore	6.	Chief Executive Officer Multan Electric Power Co. Ltd. MEPCO Headquarter, Khanewal Road Multan
7.	Chief Executive Officer, Peshawar Electric Supply Company Ltd. WAPDA House, Shami Road, Sakhi Chashma, Peshawar	8.	Chief Executive Officer Quetta Electric Supply Company Ltd. Zarghoon Road, Quetta
9.	Chief Executive Officer, Sukkur Electric Power Company Ltd. Administration Block, Thermal Power Station, Old Sukkur	10.	Chief Executive Officer Tribal Areas Electricity Supply Company Limited (TESCO) Room No. 216, 1 st Floor, WAPDA House, Shami Road, Sakhi Chashma, Peshawar
11.	Chief Executive Officer, K-Electric Limited (KELCO) KE House, Punjab Chowk, Phase-1, 39-B, Sunset Boulevard, F-7/2, Defence Housing Authority, Islamabad		

SUBJECT: CLARIFICATION OF THE DECISION OF THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

Reference is made to the decision of the National Electric Power Regulatory Authority dated January 13, 2021, regarding the tariff of electricity for the distribution companies for the year 2021-22.

2. NEPRA has decided to increase the tariff of electricity for the distribution companies for the year 2021-22.

3. The tariff of electricity for the distribution companies for the year 2021-22 is as follows:

- vii. Cost deposit cases.
- viii. Charging of GST.
- ix. Reconnection (RCO) charges.
- x. Depreciation of Dedicated Distribution System (DDS).
- xi. Adjustment of amount in cost deposit cases at the time of financial closure.
- xii. Fixed/MDI charges.
- xiii. Provision of details of estimates to the applicants/consumers.
- xiv. Accidentally striking of vehicles with Distribution System.

3. In order to discuss the above issues in detail a consultative session was held on March 11, 2021 at NEPRA Head Office Islamabad wherein all distribution companies and other stakeholders participated. In light of the feedback received during the said session, clarification w.r.t. the above is enclosed at (Annex-I).

4. All Distribution companies including K-Electric are directed to implement the same in letter and spirit. Further, DISCOs, including K-Electric, are also directed to place the CSM at their website along with enclosed clarification.

Encl: As above


 (Shakil Ahmed)
 Additional Director
 Registrar Office

Copy to:

1. Chief Engineer/ Customer Services Director, Faisalabad Electric Supply Company (FESCO) Abdullahpur, Canal Road, Faisalabad	2. Chief Engineer/ Customer Services Director, Gulistanwala Electric Power Company and 65/A, Model Town, Gulistanwala
3. Chief Engineer/ Customer Services Director, Hyderabad Electric Supply Company WAPDA Offices Complex, Hussainabad, Hyderabad	4. Chief Engineer/ Customer Services Director, Mianwali Electric Supply Company B-7/4, Sector G-7/4, Mianwali
5. Chief Engineer/ Customer Services Director, Lahore Electric Supply Company 22-A, Queens Road, Lahore	6. Chief Engineer/ Customer Services Director, Multan Electric Supply Company 22-A, Queens Road, Multan
7. Chief Engineer/ Customer Services Director, Rawalpindi Electric Supply Company 22-A, Queens Road, Rawalpindi	8. Chief Engineer/ Customer Services Director, Sargodha Electric Supply Company 22-A, Queens Road, Sargodha

9	Chief Engineer/ Customer Services Director, Sukkur Electric Power Company Ltd. Administration Block, Thermal Power Station, Old Sukkur.	10	Chief Engineer/ Customer Services Director, Tribal Areas Electricity Supply Company Limited (TESCO) Room No. 213, 1 st Floor, WAPDA House, Shami Road, Sakhi Chashma, Peshawar.
11	Mr. Ayaz Jaffer Ahmed, Director (Finance & Regulations) K-Electric Ltd. KE House, Punjab Chowrangi, 39 - B, Sunset Boulevard, Phase-II Defence Housing Authority, Karachi.	12	Chairman (ABAD) St.1/D, Block 16, Gulistan-e-Johar, Karachi.
13	Mr. Zeeshan Saleem, Saima Real Estate Builders & Developers, Survey No.72, Deh Jam Chakro, Opposite Sectro 1-A/4, North Karachi	14	Engr. M. Idris Khan, Synergy Engineering Consultant, 92-C Block-6 P.E.C.H.S Karachi.
15	Ahmed Sons, Builders & Developers Faham Centre, Commercial Plot No. 15/142, Defense Officers Housing Scheme, Hyderabad Cantt.	16	Muhammad Hanif Memon, A-1, 1 st Floor Topra Plaza, SB-27/28 Block 13-C, Opp. Urdu Science Collage, University Road, Gulshan-e-Iqbal Karachi.

1) LOAD ASSESSMENTI. APPLICATION OF DIVERSITY AND DEVELOPMENT FACTORS

Prior to the circulation of CSMP July 2020, the application of diversity and development factors were taken in consideration by all Distribution companies and K-Electric (KE) for ultimate load assessment. However, after review of CSM, the said factors are not being applied by DISCOs. KE, however, has the same factors are being applied by rest of the DISCOs. This was also discussed in the consultative session held on March 11, 2021 at NEPRA head office Islamabad with all Distribution Companies and other stake holders. In future, the following formula will be applicable for assessment of ultimate load demand:

Total Ultimate Assessed Load =

$$\frac{\text{Total Sum of Load (as given in CSM)} \times \text{Development Factor}}{\text{Diversity Factor}}$$

Where:

a) Development Factor

i. Housing societies/schemes-----85%

ii. Multi-story buildings/commercial plazas/high-rise buildings-----100%

b) Diversity Factor-----125%

II. AIR RAID SHELTERS

This issue was raised by K-Electric. It is clarified that where building has air raid shelter and a car ramp is provided then the load will be assessed for air raid shelter however, if stairs are available instead of car ramp then it will be considered as commercial space and the load will be assessed accordingly.

III. MEZZANINE FLOOR

The Mezzanine floor which has been provided with concrete slabs and divided into two floors, the load shall be assessed for two separate floors, otherwise it will be taken as single floor.

IV. ASSESSMENT OF LOAD

Description	Size of Plot		Load Assessment
	Marla	Square yard	
Individual Houses	03 Marla	75	3.35 kW
	05 Marla	125	5.0 kW
	07 Marla	175	5.30 kW
	10 Marla	250	6.60 kW
	12 Marla	300	7.35 kW
	14 Marla	350	8.75 kW
	01 Kanal	500	10.5 kW
	02 Kanal	1000	12.5 kW

Area	Maximum Load Assessment	
	Urban/Upper Areas	Rural/Lower Areas
Upto 700 Sq.ft.	100 w/100 sq.ft + 25 % flats with 1 AC of 1.5 kW	100 w/100 sq.ft with 10% flats with 1 AC of 1.5 kW
701-900 Sq.ft.	150 w/100 sq.ft + 50 % flats with 1 AC of 1.5 kW	125 w/100 sq.ft with 20% flats with 1 AC of 1.5 kW
901-1200 Sq.ft.	175 w/100 sq.ft + 100 % flats with 1 AC of 1.5 kW	150 w/100 sq.ft + 30 % flats with 1 AC of 1.5 kW
1201-1500 Sq.ft.	175 w/100 sq.ft + 100 % flats with 2 ACs of 1.5 kW each	150 w/100 sq.ft + 50 % flats with 1 AC of 1.5 kW
Above 1500 Sq.ft.	200 w/100 sq.ft + 100 % flats with 2 ACs of 1.5 kW	175 w/100 sq.ft + 100 % flats with 1 AC of 1.5 kW

NOTE: The above AC load shall not be applied to those buildings which are centrally air conditioned with no provision of individual ACs.

GRID SHARING CHARGES FOR MULTI-STOREY/HIGH RISE BUILDINGS ETC.

All small buildings are being treated as multi-storey/high rise buildings. It is clarified that any building having ground plus three storey will not be considered as multi-storey/high rise building and as such no grid sharing charges will be applicable in such buildings.

APPROVAL OF LAY OUT PLAN FOR MULTISTOREY/ HIGH-RISE BUILDINGS ETC. IN APPROVED HOUSING SCHEMES/ SOCIETIES.

- As earlier described, houses located inside approved housing societies/ multi-storey buildings etc., are exempted from provision of approved map or approved site plan or approved layout plan or NOC by the civic agency/ authority for obtaining connections. However, multi-story/ high-rise buildings located inside the approved housing society/ scheme; are required to provide approved map/site plan/ layout plan or NOC by the civic agency/ authority or by the concerned society for obtaining connections.
- Multi-story/ high-rise buildings located in the rural areas are also required to provide approved map/site plan/ layout plan or NOC by the concerned civic agency/ authority for obtaining connections.
- In a premises where already a regular connection exists, there will be no requirement of NOC by the concerned civic agency for another connection or extension/ reduction of load or change of tariff or change of name irrespective of the area unless there is a restriction on provision of connections in any specific area by a competent Court of law.
- Areas which are not under the administrative control of the concerned civic agency and the connections are being given through a vend list in such areas there will be no requirement of NOC for those applicants who are settlers having addresses of the said areas on their identity cards.

LOCATION OF GRID STATION

Grid station for the multi-storey/ high-rise buildings, where no grid station is available, shall be provided. Grid station shall be provided at the location of the building. However, if the location of the grid station is not suitable for the building, the grid station shall be provided at the location of the building, which is nearest to the building.

- A grid station can be constructed under the provisions of NEPRA Consumer Eligibility Criteria as Sponsored Dedicated Distribution System by number of housing schemes/ societies/ multi-story/ high-rise buildings, jointly.

5) REQUIREMENT OF SPACE FOR SUB-STATION

NEPRA is in receipt of complaints that KE demands space for sub-station where load is above 400kW for general consumers and 450kW for industrial consumers whereas there is no such practice in other DISCOs. KE was violating its policy by imposing penalty however, this practice has been stopped. In order to rectify this anomaly, the consumers requiring transformer capacity upto 630kVA are not required to provide space for substation, however provision of a suitable hazard free space and right of way for installation of transformer upto 630 kVA will be the responsibility of the consumer/applicant. Further in case of sub-station there is no requirement of any specific place however, the consumer has to provide an appropriate space where a sub-station can easily be installed, repaired and replaced.

6) INSTALLATION/CONSTRUCTION OF LT/HT LINES & TRANSFORMERS

Installation/construction of LT/HT lines & Transformers is to be done by the concerned DISCO or through its approved contractor. Installation of HT/LT line or transformer by any person without prior approval of the DISCO is construed to be illegal abstraction of electricity whether connected or not connected to the Distribution network and the same may be considered direct theft of electricity. Such cases will be dealt under the relevant provisions of Consumer Service Manual (CSM).

7) COST DEPOSIT CASES

It has been observed that some cost deposit cases are submitted to the Board of Directors of distribution companies for approval which causes delay in provision of connection. Further there is anomaly in financial power limits between the DISCOs. As per Consumer Service Manual (CSM) CDO has full powers for sanctioning of connections. In view of the said, there is no requirement to obtain approval of the BoD in cost deposit cases where 100% payment is made by the consumer/ applicant.

8) CHARGING OF GST

The CSM is silent on the cost of material in case of distribution companies however, in case of KE it has been observed that consumers are charged GST separately on the material however no evidence / receipt of tax collected is provided to the consumers. KE is therefore required to either issue separate receipts / evidence of tax paid by the consumers or provide an option to the consumers to directly submit their tax to FBR and submit its receipt to KE. KE is required to modify its tax scheme in line with other DISCOs.

9) RECONNECTION (RCO) CHARGES

DISCOs are charging RCO charges without physically removing the meter. RCO charges can only be imposed/collected for reconnection if supply of electricity is permanently disconnected as per policy given in the CSM 2021.

10) DEPRECIATION OF DEDICATED DISTRIBUTION SYSTEM (DDS)

On account of removal or replacement of dedicated distribution system or any part thereof on account of permanent disconnection / extension / reduction of load / change of tariff / shifting of site etc, the life period of transformer be taken as 20 Years for calculation of depreciation at 5% per annum. However, in any case the depreciated value of material should not be less than 10% of the initial cost.

11) **ADJUSTMENT OF AMOUNT IN COST DEPOSIT CASES AT THE TIME OF FINANCIAL CLOSURE.**

It has been observed that DISCOs do not refund/adjust the cost of the material at the time of financial closure in cost deposit cases where value is more than 10% of the total estimate. DISCOs are required to adjust or refund the amount of the material as per actual cost even if it is below 10%.

12) **FIXED / MDI CHARGES**

If due to any reason the charges i.e. MDI, fixed charge, multiplying factor, power factor penalty, tariff category etc. have been skipped by DISCOs for any reason, the difference of these charges can be raised within one year for maximum period of six months, retrospectively.

13) **PROVISION OF DETAILS OF ESTIMATES TO THE APPLICANTS/CONSUMERS**

Complaints have been received against DISCOs regarding non-provision of detail of estimates/demand notices. It may be ensured that in cost deposit cases, the complete details/estimates/bill of quantities (BoQs) are provided to the applicants/consumers along with demand notices. No estimate/demand notice shall be issued without any details.

14) **ACCIDENTLY STRIKING OF VEHICLES WITH DISTRIBUTION SYSTEM**

It has been observed that whenever any vehicle hits the distribution lines accidentally, the DISCOs do not restore supply immediately due to which public at large suffer. In case of damage to common distribution system by any vehicle accidentally, the DISCOs are required to proceed as under:

1. Restore Electricity Supply at the earliest at their own cost.

2. Form a departmental enquiry to establish whether it was purely an accident or was done intentionally.

3. In case of mala fide action, the DISCOs may take action against the responsible person and recover the cost of damage/repair.

4. In case no mala fide action is proved, the DISCO will repair/replace the distribution system at its own under maintenance head.

5. Cases under process be dealt with in light of above. Further in cases where the applicants have paid estimate in full or partially and the work has not yet been completed, the estimate be revised in light of above provisions on request basis.

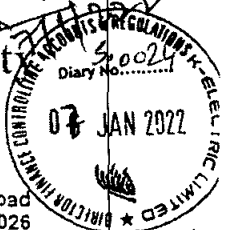


Registrar

National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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 Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk



No. NEPRA/DG(CAD)/TCD-10/135-56

January 5, 2022

MOST IMPORTANT

1. Chief Executive officer, Islamabad Electric Supply Company (IESCO) Street # 40, Sector G-7/4, Islamabad.
2. Chief Executive officer, Peshawar Electric Supply Company Limited (PESCO), WAPDA House, Shami Road, Sakhi Chashma, Peshawar.
3. Chief Executive officer, Gujranwala Electric Power Company Limited (GEPCO), 565/A, Model Town, G.T. Road, Gujranwala.
4. Chief Executive officer, Hyderabad Electric Supply Company Limited (HESCO), WAPDA Offices Complex, Hussainabad, Hyderabad.
5. Chief Executive officer, Sukkur Electric Power Company Limited (SEPCO), Administration Block, Thermal Power Station, Old Sukkur.
6. Chief Executive officer, Faisalabad Electric Supply Company Limited (FESCO), AbdullahPur, Canal Bank Road Faisalabad.
7. Chief Executive officer, Lahore Electric Supply Company Limited (LESCO), 22-A, Queens Road, Lahore.
8. Chief Executive officer, Multan Electric Power Company Limited (MEPCO), MEPCO Headquarter, Khanewal Road, Multan.
9. Chief Executive officer, Quetta Electric Supply Company Limited (QESCO), Zarghoon Road, Quetta.
10. Chief Executive officer, Tribal Areas Electric Supply Company Limited (TESCO), Room No. 213, 1st Floor, WAPDA House, Shami Road, Sakhi Chashma, Peshawar.
11. Chief Executive officer, K-Electric Limited (KEL), KE House, Punjab Chowrangi, 39-B, Sunset Boulevard, Phase-II, DHA, Karachi.

SUBJECT: REGULATORY FRAMEWORK FOR ELECTRIC VEHICLES CHARGING STATIONS

Reference is made to the hearing held on September 08, 2021 via Zoom Application regarding the subject matter.

2. The Authority has approved a regulatory framework for electric vehicle charging stations. Accordingly, a new Chapter i.e. Chapter No.16 has been framed and the same is enclosed for incorporation in Consumer Service Manual (CSM) and compliance with immediate effect.

Encl: As above.

(Shakil Ahmed)
 Additional Director
 Registrar Office

Copy to:

- i. C.E./CSD, Islamabad Electric Supply Company (IESCO), Street # 40, Sector G-7/4, Islamabad
- ii. C.E./CSD, Sukkur Electric Power Company Limited (SEPCO), Administration Block, Thermal Power Station, Old Sukkur

- iii. C.E./CSD, Faisalabad Electric Supply Company Limited (FESCO), Abdullah Pur, Canal Bank Road Faisalabad
- iv. C.E./CSD, Lahore Electric Supply Company Limited (LESCO), 22-A, Queens Road, Lahore
- v. C.E./CSD, Multan Electric Power Company Limited (MEPCO), MEPCO Headquarter, Khanewal Road, Multan
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- viii. C.E./CSD, Peshawar Electric Supply Company Limited (PESCO), WAPDA House, Shami Road, Sakhi Chashma, Peshawar
- ix. C.E./CSD, Hyderabad Electric Supply Company Limited (HESCO), WAPDA Offices Complex, Hussainabad, Hyderabad
- x. C.E./CSD, Gujranwala Electric Power Company Limited (GEPCO), 565/A, Model Town, G.T. Road, Gujranwala
- xi. Mr. Ayaz Ahmed Jaffar, Director (Finance & Regulations) K-Electric, KE House, Punjab Chowrangi, 39-B, Sunset Boulevard, Phase-II, DHA, Karachi



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ADMIN MAIL SECTION KE HO GIZRI 07 JAN 2022 Diary No.....180..... K-ELECTIC LIMITED
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CHAPTER 16

Public Electric Vehicle Charging Stations

16.1 This chapter has been inserted in this Manual on Public Electric Vehicle Charging Station (PEVCS) to consolidate some of the relevant provisions exclusively applicable to PEVCS. Notwithstanding this chapter, all the applicable laws and provisions in this Manual shall apply to PEVCS.

16.2 Definitions

The Definitions given in Chapter 1 are applicable herewith. However, the definitions of the terms used specifically in this chapter are given below:

16.2.1 **"electric vehicle or EV"** means a vehicle that uses electric motors and motor controllers for propulsion, and contains an energy storage device, such as a rechargeable battery to store electricity and use it as a transportation fuel to power its electric motors and motor controllers, which is manufactured primarily for use on public streets, roads or highways and charges its battery by plugging into the national distribution facilities;

16.2.2. **"electric vehicle supply equipment or EVSE"** means a complete assembly consisting of conductors, connectors, devices, apparatus, and fittings installed specifically for power transfer and information exchange between a branch electric circuit and an electric vehicle.

16.2.3 **"EV Services"** means the charging of a battery of an EV User by an EVSE at a PEVCS.

16.2.4 **"EV User"** means any person who owns, charges, or operates an EV.

16.2.5 **"Margin"** means an amount (in PKR) announced by NEPRA as a rate per unit of electric power (kWh) to be billed by a PEVCS from time to time from an EV User and duly notified and displayed on the NEPRA website.

16.2.6 **"public EV charging station or PEVCS"** means any premises where an EVSE is located for recharging of an EV by the public and which allows any EV User or operator to access and use the charging station free of cost or on payment;

16.3 PEVCS's Connection and Category

16.3.1 PEVCS shall be deemed to fall within the category of "commercial" consumer and be subject to the relevant tariff as announced by NEPRA and to all the applicable laws and relevant terms and conditions and more specifically chapter 7 of this Manual.

16.3.2 PEVCS shall be subject to all the provisions of chapter 2 and chapter 11 of this Manual, Performance Standards (Distribution) Rules (PSDR), 2015 and Distribution Code for obtaining a connection and submitting the requisite application forms stated therein.

16.3.3 For each EVSE installed at a PEVCS a separate connection will be required and shall be approved under chapter 2 unless DISCO makes an exception subject to any conditions the DISCO deems necessary.

16. 4 Maximum Margin

16.4.1 PEVCS shall not bill an EV User above the Maximum Margin for each unit of electric power (kWh) used in the delivery of EV Services.

16.4.2 DISCO shall ensure that a PEVCS shall not bill more than the Maximum Margin from EV Users and shall comply with the terms and conditions as notified by the Authority.

16.4.3 PEVCS shall display on the premises, website, and any online tool (as applicable) at a prominent and visible place the Margin applicable from time to time for the benefit of the EV Users. The Margin should be displayed in such a manner to ensure that the EV User is made aware before using the EV Services of the Margin applicable per kWh.

16.4.4 If a PEVCS is found to have billed an EV User a rate higher than the Margin for EV Services, then DISCO shall be under an obligation to report this infraction to the Authority. The Authority may itself or may require DISCO to take any measures against the owner(s) of the PEVCS amongst others imposing any financial penalties including taking measures to prevent the PEVCS owner(s) in the future owning, managing, or indirectly being involved in the running of a PEVCS.

16. 5 Metering

16.5.1 PEVCS shall be subject to all the requirements stated in chapter 4 and chapter 6 of this Manual as well as PSDR and Distribution Code.

16.5.2 PEVCS will install any and all meters as required to ensure that the number of kWh consumed by the PEVCS in total and by each EV User for charging the EV at the PEVCS can be accurately measured. PEVCS shall be required to follow any directions given by DISCO in this regard.

16.5.3 DISCO shall inspect the functioning of any meter forming part of EVSE to ensure it accurately measures the number of kWh consumed by an EV User and DISCO may recommend any alterations in the metering equipment to protect its integrity and accuracy.

16.5.4 If DISCO detects any defect or interference with the EVSE, which has or can cause wrong billing to EV Users, then DISCO shall require PEVCS to take all steps to rectify the defect/interference and further shall take any penal measures applicable under this Manual

16.6 Billing



PEVCS shall be at liberty to design any bill/invoice which is to be given to the EV User for the EV Services.

16.7 Safety and Technical Standards for PEVCS and EVSE

16.7.1 Safety Standards for PEVCS

DISCO shall ensure PEVCS are installed according to manufacturer's instructions and applicable legal requirements during construction and installation and shall be in compliance with the highest safety, industrial and technical standards/codes issued by any regulatory body of Pakistan, including Pakistan Standards & Quality Control Authority, recommendations provided by the manufacturer, or DISCO or requirements incorporated into this Consumer Services Manual, from time to time for EVSE and for the overall premises on which the PEVCS is located/installed.

16.7.2 PEVCS shall adhere to all the technical and safety requirements stated in this Manual and more specifically chapter 12 as well as PSDR, Distribution Code and Power Safety Code.

16.7.3 PEVCS and the EVSE must conform to all approved and prevailing technical and safety standards approved by National Energy Efficiency and Conservation Authority (NEECA)/Pakistan Standards, Quality Control Authority (PSQCA) and manufacturer's recommendations.

16.7.4 The owner of PEVCS shall ensure that:

- a) Display safe charging tips/instructions for Operator and EV User.
- b) Display fixed "Danger Sign" at places where an immediate hazard/ danger exists such as panel, substation, transformer, etc. Display fixed "Caution Sign" at places where it is required to warn against potential hazards or to caution against unsafe practices.
- c) Danger and Caution Signs shall be clear, easy to understand, and the words shall be in Urdu, English, and/or in a language understood by locals and workers. The signs shall be readable at a minimum distance of 5 feet.
- d) Fire Prevention system for charging station shall be provided with manufacturer's instruction and applicable legal requirements.
- e) The enclosure of the charging station shall be made of fire retardant material with self-extinguishing media.
- f) Fire detection, alarm, and control system shall be provided as per manufacturer's instructions, Pakistan Building Codes and other applicable national and provincial legal requirements.

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16.7.5. Design

The owner of PEVCS shall ensure that:

- a) It coordinates with the DISCO to obtain EVSE installation requirements, specifications, and other relevant information and documents. This includes any interconnection documents required by the DISCO for new service requests and sites requiring a service upgrade;

Provided that the DISCO shall be bound to provide such information and documents in response to the request free of cost within seven working days.

- b) the installation, design, and site layout shall consider the potential risk of ignitable fumes such as gasoline dispensers and therefore must comply with relevant safety requirements.
- c) the installation, design, and site layout shall consider the potential risks during the installation, operation, and maintenance of the EVSE and all support equipment including wiring, conduit, and protection devices;
- d) the design shall consider protection against vehicle impact and EVSE shall be installed in a position to minimize the likelihood of damage from vehicle impact;

Provided that in case the likelihood of damage from vehicle impact cannot be minimized, use of additional protection barriers shall be installed following IEC 62262 i.e. a typical protection against mechanical stress impact for EVSE installed outdoors is IK10.

- e) The electric vehicle parking place shall be such that the connection on the vehicle when parked for charging shall be within five meters from the electric vehicle charging point.
- f) Electric vehicle charging stations shall be designed, installed, tested, certified, inspected, and connected as per manufacturer's instructions/specifications by following the applicable law and international standards such as IEEE, IEC, ASTM, BS, NFPA, UL, or ISO, etc.
- g) Hazardous live parts shall not be accessible to protect persons against electric shock.
- h) Every part of the electric apparatus shall be securely guarded and fenced unless they are safe by position or construction.

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- i) Electric vehicle charging station shall be provided with protection against the overload of input supply and output supply fittings.
- j) Electric vehicle charging points shall be installed so that any socket-outlet of supply is at least 800 millimeters above the finished ground level.
- k) A cord extension set or second supply lead shall not be used in addition to the supply lead for the connection of the electric vehicle to the electric vehicle charging point and it shall be so constructed so that it cannot be used as a cord extension set.
- l) Where the connection point is installed outdoors, or in a damp location, the equipment shall have an ingress protection code at least IPX4 as defined in IEC standard 60529".
- m) A lightning protection system shall be provided for the electric vehicle charging station.
- n) The electric vehicle charging station shall be equipped with a protective device against the uncontrolled reverse power flow from the vehicle.
- o) The electric vehicle charging station shall have protection to prevent overvoltage/overloading of the battery.
- p) The electric vehicle charging point shall not be energized until it is connected to the vehicle.
- q) Identify, install and maintain the protective system for abnormal conditions (short-circuits, overcurrent, fault or overloading, etc.) including the grounding of circuits, apparatus, and infrastructures to interrupt all live connections, including the neutral. ELCBs (earth leakage circuit breakers), RCDs (residual current devices), and RCCBs (residual current circuit breakers) shall be used as per design in circuits to prevent fires and shocks in electrical installations. Protections/ controls/ interlocks shall be intact and shall not be bypassed or modified without approval from the designer.
- r) Install and maintain earthing/grounding system for the charging station and bonding system for the vehicle. The resistance shall be as per design or manufacturer's instruction or Distribution design code of Distribution Code. In the absence of grounding and bonding instruction, the earthing resistance shall be not more than 5 Ohms and the transformer shall be not more than 2.5 Ohms to determine the integrity of the grounding path to ensure protection from shock hazards. Verify integrity of earthing/ grounding and bonding by

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continuity test and resistance measurement after 12 months and critical care shall be after 6 months. Provide nameplate/ tag to all equipment with numbers for tracking of earthing/ grounding and bonding testing record, etc. The original record of testing shall be retained and preserved for three (03) years.

- s) Electric vehicle charging station shall be provided with an earth continuity monitoring system that disconnects the supply if the earthing connection to the vehicle becomes ineffective.
- t) All apparatus of charging stations shall have the insulation resistance value as per manufacturer's instructions/specifications or as stipulated in the relevant IEC 61851-1 standard.
- u) Power supply cables used in charging stations or charging points shall conform to manufacturer's instructions/specifications or IEC 62893-1 standard.

16.7.6 Installation

EVSE shall:


- a) be installed in a position to avoid obstruction to public or private footpaths and it shall not be installed in such a position that causes an unnecessary trip hazard.
- b) have electrical wiring routed and suitably clipped or enclosed in a containment system to avoid creating a potential trip hazard and contact risk to the public. Wire routing requiring a conduit shall either be installed underground at the appropriate depth following local requirements or along walls or ceilings when necessary.
- c) be installed to minimize the distance between the EV inlet and the charging equipment. The cord installed for charging vehicles shall have appropriate length to ensure minimum distance;
- d) be installed with precautions to ensure that live parts i.e. hot wires/loaded circuits are either not accessible or cannot be touched during installation, operation, and maintenance;
- e) be designed and installed to enable maintenance and service work to be carried out safely;
- f) be designed and installed to comply with the requirements for health, safety, and environment as set out in this Manual, PSDR and Distribution Code;
- g) be designed to prevent unauthorized usage of the charging facilities such as housing the socket outlet in a padlocked box or using an access card for energizing charging facility etc. may be provided as necessary especially for outdoor installations;
- h) be installed with sufficient space around it to allow for adequate ventilation and cooling of the equipment (e.g. DC charging equipment incorporating

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rectifiers). The designer and installer of the EV must refer to the manufacturer's installation and operating instructions supplied and comply with requirements stated in relevant standards;

- i) have all associated equipment an IP rating suitable for the installation location; for indoor locations, minimum ingress protection of IP44 shall be used; for outdoor locations, minimum ingress protection of IP55 shall be used;
- j) comply with the relevant quality and safety standards.
- k) the connector type installed shall comply with IEC 62196 (Type 2 for level 2 charging and CCS2 (Combined Charging System) for DC (Direct Current) charging.
- l) Entry of unauthorized visitors and access of stray or street animals shall be controlled in hazardous areas.
- m) The EVSE installed at existing petrol/gas stations shall be located outside the hazardous zone;

16.7.7 Operations

- a) EVSE shall be set up in compliance with relevant standards and codes to ensure proper calibration, accurate metering, and transparency;
 - b) EVSE shall be capable to provide a technical basis for billing options, metering accuracy, and network connectivity;
 - c) EVSE shall be capable of upgrades to enable Smart-grid-capability through Open Charge Point Protocol (OCPP) transmission and an integrated 4G/5G modem;
 - d) EVSE shall not create faults (typically through a circuit breaker/overcurrent protection), harmonics, and frequency misbalance in the distribution network;
 - e) EVSE shall have the capability to detect and monitor faults and generate signals/alarms in case of any fault is detected as required under international standards like I1772. It shall be capable to react to critical as well as small residual faults, reporting it and deliberately terminating the charging process before the residual current device (RCD) is tripped;
 - f) EVSE shall be connected to energy management systems (EMS) through the standardized EEBUS protocol for energy management, data exchange, and control;
 - g) EVSE shall be capable to have bi-directional communication with the vehicle as well as intelligent connection to EMS, monitoring the internal hardware of the charging system, the user interfaces as well as the charging socket and the charging cable. However, it shall be ensured that the EVSE shall not back-feed the grid in the case of an outage;
 - h) the charging infrastructure results in maximum availability and safety for both the charging infrastructure and the electric vehicle to be charged.
- 


- i) A portable socket-outlets or adaptor shall not be used for electric vehicle charging.

16.7.8 Maintenance, Inspection, and Testing

- a) The owner of the charging station shall ensure the electrical and mechanical isolation before performing any servicing or maintenance at the charging station, where the unexpected energizing, start-up, or release of any type of energy (electrical, kinetic, potential, thermal, chemical) could occur, cause damage to equipment, and injury to personnel.
- b) The owner of the charging station shall plan and conduct periodic preventive maintenance based on the manufacturer's instructions/manual.
- c) The owner of the charging station shall ensure that the inspection and testing shall be done as specified in the manufacturer's instructions/manual at specified intervals.
- d) The owner of the charging station shall arrange inspection and testing by the Electrical Inspector or Third Party Inspector. The report of inspection / testing may be submitted to DISCO.
- e) The owner of the charging station shall ensure that inspection and testing of the charging station shall carry out every year or at the time of any major breakdown.
- f) The original record of inspection, maintenance, and testing shall be retained and preserved by the owner for three (03) years.

16.8 Complaints

EV Users may raise any complaints against the PEVCS and DISCO under chapter 10 and chapter 15 of this manual. An EV User shall be deemed to be a consumer for purposes of raising any complaint.





Registrar

National Electric Power Regulatory Authority

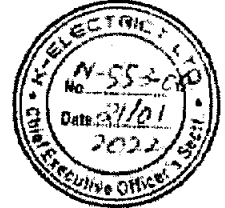
Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
 Ph: +92-51-9206500, Fax: +92-51-2600026
 Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/DG(CAD)/TCD-07/834-46

Chief Executive Officer,
 Hyderabad Electric Supply Co. Ltd.
 WAPDA Offices Complex,
 Hussainabad, Hyderabad

Subject: **CLARIFICATION REGARDING ASSESSMENT OF LOAD**
 HESCO-06/01/2022



Reference is made to HESCO's letter No. CEO/HESCO/CE(P&E)/DM(MID)/DB/6570, dated December 15, 2021 regarding the subject matter.

2. HESCO vide above referred letter has sought clarification regarding load assessment. HESCO has enquired about method of assessment of load of commercial plots and reserved plots in housing schemes whose purpose of use are not mentioned/declared in the approved layout plan. HESCO has further enquired about charging of grid sharing charges including transmission charges and provision of piece of land for housing scheme having different name of same owner situated nearby/adjacent areas.

3. Foregoing in view, the following is clarified:

- i) The purpose of use of reserved plots is usually mentioned in the layout plan approved by civic agency i.e Hospital, School, Community Centers, Parks etc, therefore the load of such plots be assessed as per criteria laid down in Consumer Service Manual.
- ii) Regarding Commercial plots, the sponsor is required to intimate to distribution companies about the covered area and number of floors to be constructed in future. Therefore, the prospective load is to be assessed accordingly. However, if the sponsor violates the intimated load mentioned in the design book and increases the covered area in future, then in such a case the entire load is to be reassessed afresh and all the charges laid down in Consumer Service Manual (CSM) be recovered from the sponsor.
- iii) If there are different housing schemes, having different names approved by the concerned civic agency, adjacent to each other belonging to same owner/company/partners; the load of such schemes is to be considered/assessed in totality. As such, the grid sharing charges including transmission line charges and piece of land, if applicable is to be obtained in accordance with their load as per CSM. However, if two housing schemes owned by same sponsor/owner/ company/partners are located at a distance from each other and are not adjacent and have been approved individually by the concerned civic agency; in such cases, the schemes are to be treated separately.

- iv) Further, if a housing scheme is already approved and later the same is extended by adding additional land then the load of the total scheme is to be reassessed and accordingly grid sharing charges including transmission line charges and piece of land, if applicable is to be obtained in accordance with provisions of CSM.

19.01.21
(Syed Zawar Haider)
Additional Director
Registrar Office

Copy to:

1. Chief Executive Officer, Faisalabad Electric Supply Company Ltd. Abdullahpur, Canal Bank Road Faisalabad	2. Chief Executive Officer, Gujranwala Electric Power Company Ltd. 565/A, Model Town G.T. Road, Gujranwala
3. Chief Executive Officer, Hyderabad Electric Supply Co. Ltd. WAPDA Offices Complex, Hussainabad, Hyderabad	4. Chief Executive Officer Islamabad Electric Supply Co. Ltd. Street # 40, Sector G-7/4, Islamabad.
5. Chief Executive Officer. Lahore Electric Supply Company Ltd. 22-A, Queens Road, Lahore	6. Chief Executive Officer Multan Electric Power Co. Ltd. MEPCO Headquarter, Khanewal Road Multan
7. Chief Executive Officer, Peshawar Electric Supply Company Ltd. WAPDA House, Shami Road, Sakhi Chashma, Peshawar	8. Chief Executive Officer Quetta Electric Supply Company Ltd. Zarghoon Road, Quetta
9. Chief Executive Officer, Sukkur Electric Power Company Ltd. Administration Block. Thermal Power Station. Old Sukkur.	10. Chief Executive Officer Tribal Areas Electricity Supply Company Limited (TESCO) Room No. 213, 1 st Floor, WAPDA House, Shami Road, Sakhi Chashma,
11. Chief Executive Officer K-Electric Limited (KEL) KE House, Punjab Chowrangi, 39 - B, Sunset Boulevard, Phase-II Defence Housing Authority, Karachi.	Chief Executive Officer (P&E), K-Electric Limited (KEL) WAPDA Water Wing Complex, Hussainabad, Hyderabad.

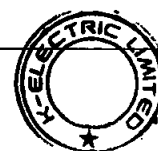


K-ELECTRIC LIMITED

APPLICATION FOR GRANT OF ELECTRIC POWER SUPPLIER
LICENSE

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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 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)

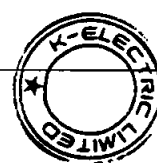
6.4%

34.9%

47.8%

11.0%

Domestic Commercial Industrial Others



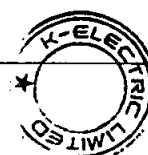
2. INTRODUCTION TO KE'S APPLICATION

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 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 order to ensure continuity of electric power services in its service territory hereby seeks grant of Electric Power Supplier License.

In view of the above, KE is hereby filing this Application (**'the Application'**) for Grant of Electric Power Supplier License in line with Regulation 3 of the NEPRA Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 (**'NEPRA AMEC Regulations'**) **for a period of twenty (20) years, in accordance with Regulation 6 of the NEPRA Licensing (Electric Power Supplier) Regulations, 2022.**

Further, it is humbly submitted that KE's request for Grant of Electric Power Supplier License 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).



3. REASONS IN SUPPORT FOR GRANT OF ELECTRIC POWER SUPPLIER LICENSE

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.

Since privatization in 2005 and upto FY 2022, KE through investments of **PKR 146,738 Million** have brought significant improvements towards distribution and supply of electric power within its service territory as further explained in Section 3.1.2 and going forward, is committed towards further improvement through a robust investment plan.

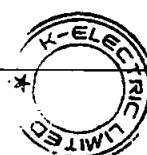
3.1 INVESTMENTS MADE SINCE PRIVATIZATION AND PERFORMANCE IMPROVEMENTS

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 the Government of Pakistan (GoP), which has resultantly benefitted the consumers as well as the GoP.

3.1.1 Generation & Transmission

Since privatization and upto FY 2022, KE 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.

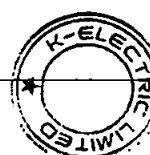
3.1.2 Distribution & Supply

KE was granted Distribution License in the year 2003, which included exclusive rights for both distribution and supply of electric power. 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, to sustain both functions and improve reliability, targeted investments amounting to **PKR 146,738 Million** have been made in simultaneity since privatization and upto FY 2022.

As a result, KE made targeted enhancements/improvements in the distribution segment¹ (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.

¹ Since privatization all investments have been done collectively for both distribution and supply functions up to FY 2022 and the same are planned on collective basis till FY 2023

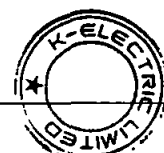


- Continued installation/replacement of Vacuum Circuit Breakers (VCB), Ring Main Unit (RMU), Earth Fault Indicators (EFI) and Load Breaker Switches (LBS) across the network.
- Raising of asset placement platforms from ground level and replacement of cables and conductors to prevent assets from flooding, 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 mentioned in Section 5 of the Prospectus enclosed as Annexure A2.



4 PROPOSED BUSINESS PLAN & BENEFITS | FY 2024 TILL FY 2030²

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 based on a phase wise strategy through ring fencing a cluster and converging all initiatives including technological interventions along with skill development to enable transformation.

Based on the above, KE plans to invest **PKR 184,650 Million³** during the period FY 2024 to FY 2030 (*this amount is at 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.

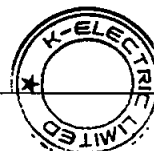
The investment plan for distribution is divided into five categories: (i) Growth, (ii) Loss Reduction, (iii) Maintenance, (iv) Safety and (v) Technology; summary of which is appended in the table below:

PKR Million

Description	Planned Investments FY 2024 to FY 2030
Growth	37,105
Loss Reduction	64,662
Maintenance	40,496

² 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.

³ Exclusive of consumer funded capex



Description	Planned Investments FY 2024 to FY 2030
Safety	25,858
Technology	16,529
Total Planned Investment	184,650

Further, it is pertinent to highlight that the 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 for the period FY 2024 to FY 2030 have been submitted vide KE letter # KE/NEPRA/BPR/2023/021 dated January 30, 2023.

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 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)⁴. 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

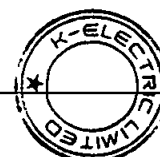
Description	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Growth	2,426	3,687	4,700	6,316	6,484	7,344	6,148	37,105

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 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

⁴ Consumer sponsored system/equipment



- Addition of 444 11kV feeders and 7,606 distribution transformers
- Capacity enhancement by 2,561 MVAs
- Addition of over 3,170 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

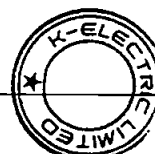
KE plans to invest **PKR 64,662 million** on loss reduction initiatives during the period from FY 2024 to FY 2030 to ensure sustainable loss reduction as well as to maintain and enhance the loss reduction improvements that KE has achieved over the years, with some investments expected to be made under 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)**

ABC has been a major contributor in KE's loss reduction journey 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 3,032 PMTs.
- ABC replacement on existing ABC PMTs.

- **Faulty Meter Replacement (FMR)**

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

Technical Loss Reduction

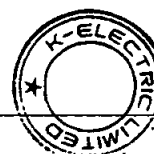
KE has identified improvement areas in distribution network and planned different initiatives for the reduction of energy losses due to technical reasons. Below initiatives pertaining to OH and UG network will contribute to technical loss reduction:

- **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 ninety-five (95) 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

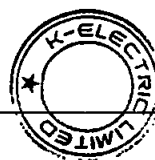
For overhauling and maintenance of its existing distribution network, KE has planned an investment of **PKR 40,496 Million**, which includes Corrective Maintenance (CM) and network rehabilitation.

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**

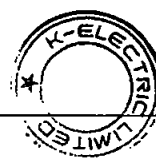
KE has also planned investments in its network through NIP, whereby, considering the current loads at the PMT level and the future load growth, enhancement, and rehabilitation of the common distribution network at LT level shall be carried out to avoid any overloading of the network. These activities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

Activities planned under network rehabilitation 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:

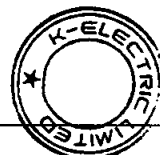
- Replacement of Knife Switches with SF6 type LBS for on-line operation and quick restoration of supply.
- Implementation of protection framework for distribution protection layers on 11kV outgoing loops to localize the faults as near as the fault point and minimize the number of consumers affected during 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

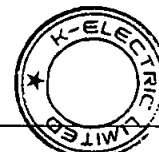
Safety initiatives shall be implemented through a focused approach covered under KE's PAPP, wherein, following three (03) sub-projects will be executed:

- 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**

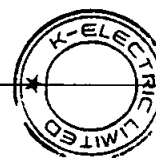
KE also plans to widen the digitization outreach of its customer services through execution of various initiatives covering the following core areas:

- 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



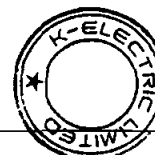
optimization, system recording of evidence (theft/ faulty meter) and route management.

- 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.

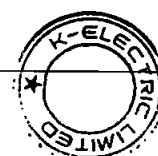
Following are the major integrations that will be carried out with ADMS implementation.

- 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

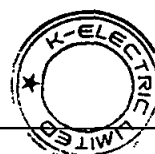


utmost interest of consumers, as in case KE is unable to invest, or make timely investment decisions, there would be potential drastic consequences for the consumers in the form of increased load-shed, cost for consumers as well reduction in quality, reliability, and availability of electricity in Karachi 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 ACQUISITION PROGRAM

KE as a Supplier of Last Resort (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 Acquisition Program 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. KE's Power Acquisition Program has already been submitted with NEPRA through KE letter # BD/MZ/NEPRA-0079/2023-2003 dated March 20, 2023 (***Power Acquisition Program for FY 2024 to FY 2030 is enclosed as Annexure A3***).



6 KE'S REQUEST

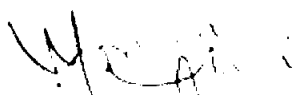
To ensure continued provision of safe, secured, reliable and efficient electric power supply within its service area in alignment with the regulatory framework as well as the approved CTBCM design and for timely execution of planned investments to facilitate infrastructural enhancements to further improve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

- Grant Electric Power Supplier License to KE for a term of twenty (20) years in line with Regulation 3 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 A1**.

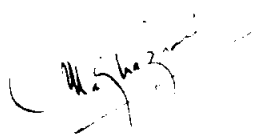
Grant of above request will enable KE to ensure continuity of power distribution in its service territory in a safe and reliable manner and is therefore in the consumer interest.

Further, it is humbly submitted that this 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 Grant of 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) the applicable provisions of the Act, Rules, Regulations from time to time and/or any determination(s) by the Authority.

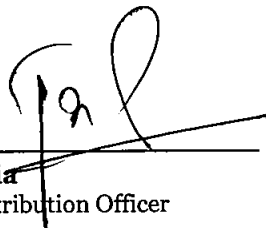
Furthermore, KE reserves the right to request NEPRA for any modification in the Application in the future including at the time of / during hearing or during processing of this Application or share additional documents in support of the Application till the time of Determination by the Honorable NEPRA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



Syed Moonis Abdullah Alvi
Chief Executive Officer



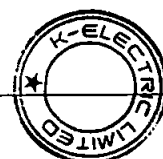
Muhammad Aamir Ghaziani
Chief Financial Officer



Amer Zia
Chief Distribution Officer



Imran Hussain Qureshi
Chief Regulatory Affairs Officer





Annexure A3

Ref No. BD/MZ/NEPRA-0979/2023-2003
March 20, 2023

Engr. Mazhar Iqbal Ranjha,
Registrar,
National Electric Power Regulatory Authority (NEPRA),
NEPRA Tower, Attaturk Avenue,
G-5/1, Islamabad.

Subject: Submission of Power Acquisition Programme

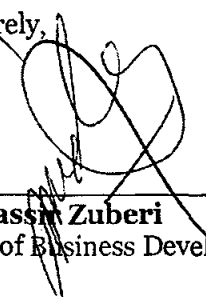
Dear Sir,

This is with reference to NEPRA letter No. NEPRA/Advisor(CTBCM)/LAD-01/3179-80 dated February 20, 2023.

We are pleased to submit KE's Power Acquisition Programme (PAP) for the period FY 2024-FY 2030 for approval of the Honorable Authority (*enclosed*).

We look forward to Honorable Authority's guidance and support and remain available for any discussion.

Sincerely,


Mudassar Zuberi
Head of Business Development

Encl: KE's Power Acquisition Programme (PAP) for the period FY 2024-FY 2030

POWER ACQUISITION PROGRAMME

(FY 2024 – FY 2030)

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PREAMBLE

The Power Acquisition Programme is developed in compliance with the requirements stipulated under NEPRA (Electric Power Procurement) Regulations, 2022 ("NEPP").

The Power Acquisition Programme 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 Power Acquisition Programme 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 Power Acquisition Programme 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 Power Acquisition Programme 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 Power Acquisition Programme is being formulated at the crucial juncture of time, when both the local and global power markets are going through unprecedented challenges such as growing emphasis on induction of renewable energy power sources to reduce the carbon footprint and address the global warming and climate 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 this Power Acquisition Programme 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 Power Acquisition Programme 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 be noted that the Power Acquisition Programme 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 as approved under IGCEP 2022-2031 along with new capacity additions of Renewables (1,100MW), Hydro (82MW) and Thermal Baseload (990MW). The data utilized for the purpose of this Power Acquisition Programme has been sourced internally or has been referenced from the assumptions taken by NTDC during the development of IGCEP 2022-2031, approved by NEPRA vide its determination dated February 01, 2023. 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 NEPP, 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 644¹ kWh compared to 1,218² 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.

1.1 Company Overview

KE is a vertically integrated power utility 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.

1.2 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 MW³ of installed capacity in its generation fleet including BQPS-III⁴. 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 2,050 MW from National Grid.

¹ NEPRA State of Industry Report 2022

² Statista.com

³ Excluding 50 MW derated capacity recouped at BQPS 1 units

⁴ BQPS-III (Unit 2) has declared COD on 9th March 2023 while BQPS-III (Unit 1) is currently under testing and commissioning.

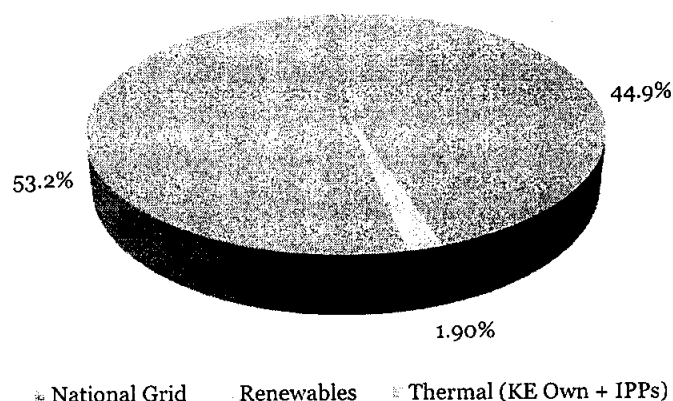
Table 1: Existing Generation Capacity in KE System

Plants	Fuel	Installed Capacity as per License (MW)	Net Capacity after Aux. consumption (MW)
BQPS-I	Natural Gas/RFO/RLNG	840	693
BQPS-II	Natural Gas/RLNG	573	494.5
BQPS-III	RLNG/HSD	942	899.6 ⁵
SGTPS	Natural Gas/RLNG	107	93
Korangi CCPP	Natural Gas/HSD/RLNG	248	220.8
KGTPS	Natural Gas/RLNG	107	92
Total KE Fleet		2,817	2,493
Gul Ahmed	Furnace Oil	136	128
Tapal Energy	Furnace Oil	126	124
SNPC-I	Natural Gas	52	51
SNPC-II	Natural Gas	52	51
FPCL	Imported 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

1.3 KE's Fuel Mix

During FY 2022, KE served a total energy of 19,802 GWh, which was generated by 1.9%⁶ renewables, 53.2% thermal (KE's own and IPPs), and 44.9% from National Grid.

Figure 1 : KE Fuel Mix 2022



⁵ Actual dependable capacity of BQPS III will be determined post commissioning of both units

⁶ Includes 44GWh of power import from net metering consumers

1.4 KE's Demand

During FY 2022, KE total demand was of 21,104 GWh, with Peak demand of 3,670 MW recorded in the month of May 2022.

Table 2: Historic Energy Demand and Served Demand

Month	Energy Demand (MWh)	Served Demand (MWh)	Peak Demand (MW)
Jul-21	2,078,126	1,963,624	3,524
Aug-21	1,918,825	1,804,129	3,149
Sep-21	2,041,709	1,924,140	3,619
Oct-21	1,868,308	1,775,507	3,246
Nov-21	1,486,434	1,405,857	2,723
Dec-21	1,221,661	1,168,611	2,200
Jan-22	1,143,037	1,088,530	2,081
Feb-22	1,208,320	1,141,352	2,357
Mar-22	1,735,003	1,629,084	3,138
Apr-22	2,059,064	1,936,358	3,361
May-22	2,191,181	2,007,198	3,670
Jun-22	2,231,711	1,957,817	3,646

2 Objective

The key objective of the Power Acquisition Programme is to develop a long term 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 Power Acquisition Programme has been prepared with the following objectives:

- a) Identification of KE's requirements
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. However, the Power Acquisition Programme is based on certain estimates/ projections that involve various economic and business uncertainties and is therefore subject to changes upon its future iterations.
- c) Reduction in generation costs
The Power Acquisition Programme 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 Power Acquisition Programme 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, 2022, KE humbly requests the Honorable Authority for resolution of other issues critical for a sustainable roll-out of wheeling regime in the country.
- d) Ensure reliability of the system
Another key consideration accounted for in this Power Acquisition Programme 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 Power Acquisition Programme

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

3.1 Technical Assumptions

Following technical assumptions have been accounted for in this Power Acquisition Programme.

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 this Power Acquisition Programme, the capacity utilization factor of 23.1%⁷ and 40.3%⁸ 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 Power Acquisition Programme, 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 on the basis of 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 Power Acquisition Programme.

⁷ Based on Actual capacity factor of Ghara Solar

⁸ Based on latest NEPRA benchmark for wind plants

4) Variable Renewable 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 Power Acquisition Programme assumes that all the proposed renewable projects, as delineated in this Programme, 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 (FY 24 – FY 30) has been developed and submitted for NEPRA's approval and the generation selected under this Power Acquisition Programme is in accordance with the availability of the grid and transmission capacities envisaged under the investment plan.

3.2 Commercial and Economic Assumptions

Following commercial and economic assumptions have been accounted for in this Power Acquisition Programme:

1) Forecasted Energy Demand

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 (*Refer Annexure I for forecasted energy demand*).

2) Forecasted Served Demand

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
- e) Non-AT&C loss-based load management.

(*Refer Annexure I for forecasted served demand*)

3) 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 approved IGCEP 2022-31.

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.

4) Contractual Assumptions:

Following contractual commitments have been assumed under this Power Acquisition Programme:

- 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 as approved in IGCEP 2022-31.
- b) Take or Pay obligations of existing fuel contracts and IPPs .

3.3 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 Honorable 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 ⁹ /PPA Expiry
1	Tapal	RFO	126	FY 24
2	BQPS 1 – Unit 1	NG/RLNG/RFO	210	FY 24
3	BQPS 1 – Unit 2	NG/RLNG/RFO	210	FY 24
4	Gul Ahmed	RFO	136	FY 25
5	BQPS 1 – Unit 5	NG/RLNG/RFO	210	FY 27

⁹ PPA of Tapal and Gul Ahmed have expired in June 2022 and November 2022 respectively and NEPRA has till date extended their Tariff till 30 April 2023. However, considering the fuel availability constraints, KE foresees that both IPPs will be required to meet its consumer demand in the Summer seasons till FY 24. Hence, Tapal and Gul Ahmed have requested for review of NEPRA's decision and requested for further extension, which is under consideration of NEPRA, and KE also requests for positive consideration in lieu of requirement of these plants at peak times in accordance with EMO and on Take and Pay basis.

4 KE Proposed Power Acquisition Programme

In accordance with Regulation 6 of NEPP, a Supplier of Last Resort shall prepare Power Acquisition Programme on annual basis. In adherence to it, KE has prepared this Power Acquisition Programme and it focuses on reduction in future generation cost by maximizing induction of renewables and use of indigenous coal for base load generation. The proposed Power Acquisition Programme 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

Expected COD	Technology Type	Installed Capacity (MW) ¹⁰
FY 25	Solar	150
FY 25	Solar	350
FY 26	Local Coal	330
FY 27	Local Coal	330
FY 27	Solar	200
FY 28	Wind	100
FY 29	Local Coal	330
FY 29	Solar	200
FY 29	Hydel	82
FY 30	Wind	100
Total		2,172

Detail of ongoing Projects (including 150 MW Winder and Bela Solar Projects, 350 MW Sindh Solar Energy Projects, 200 MW Site Neutral Hybrid Plant and 50MW Renewable Project by Ladies Fund) are enclosed as **Annexure II** of this Power Acquisition Programme. KE had also submitted a detailed plan for renewable energy additions to the Honorable NEPRA Authority in September 2022.

In addition to the ongoing projects, KE is also pursuing other projects which have been detailed in **Annexure III**. Moreover, KE is also actively evaluating the possibility of direct offtake from larger hydel projects, however they have not been included in the planning

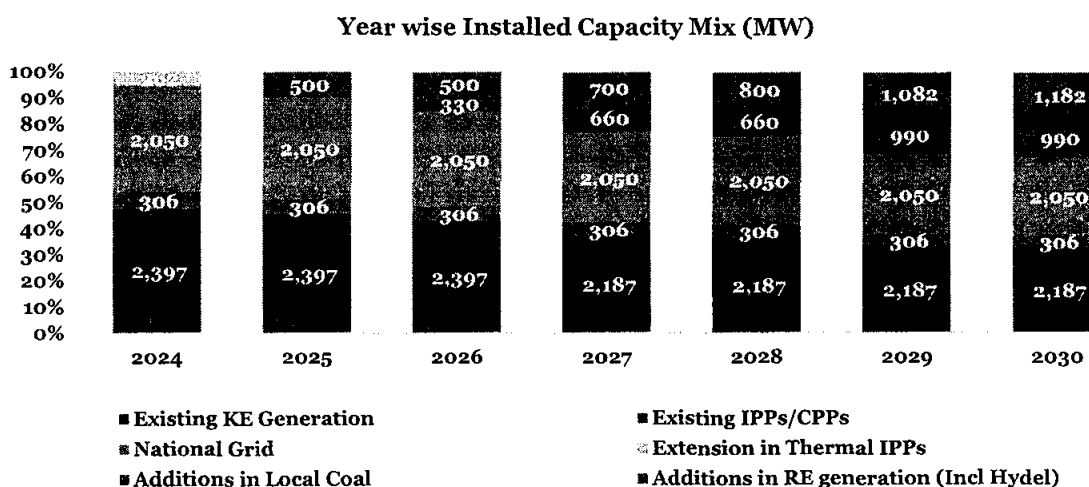
¹⁰ These additions are planned through establishment of separate SPVs and as per the procurement mechanism defined under NEPP.

horizon of this Power Acquisition Programme due to later commissioning of the projects being targeted (i.e. post FY 2030).

4.1 Capacity Additions | Installed Capacity Mix (MW)

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

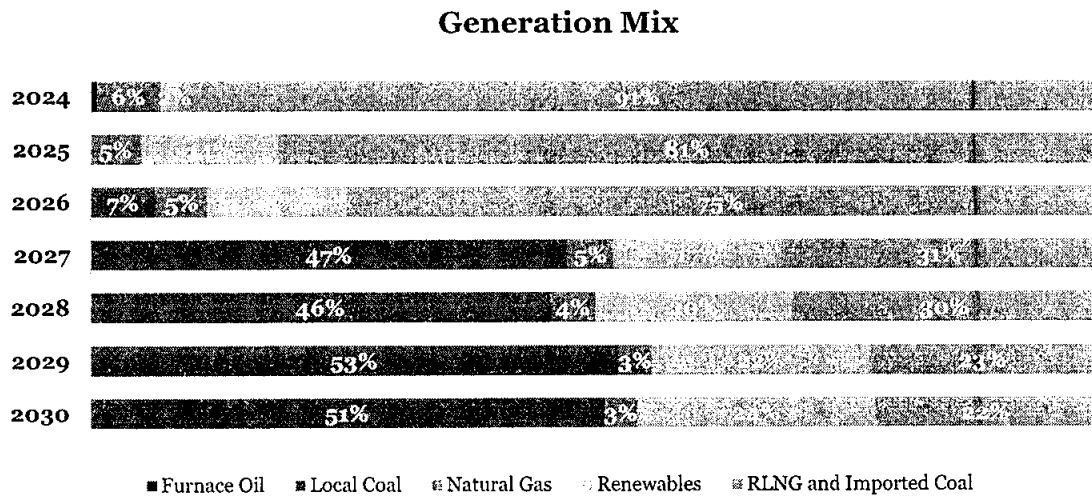
Figure 2 : Existing and Planned Additions in Installed Capacity (MW)



4.2 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 be 70%.

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



This significant shift towards renewables and indigenized fuel resources along with additional off-take 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.

4.3 Capacity Obligation under Market Commercial Code

As per Regulation 6 (1)(c) of NEPP, a Supplier of Last Resort in preparing its Power Acquisition Programme shall include capacity obligations as determined by the Market Operator in accordance with the Market Commercial Code.

In this regard, CPPA-G, in its role as Market Operator, has worked out the following Capacity Obligations for KE in accordance with the Commercial Code and has determined that KE is 100% compliant with the requirements for Capacity Obligation as stated in Table 17 under Step 3.4 of the report (enclosed as **Annexure IV**).

Table 5 : Capacity Obligation as per CPPA G Report (FY 2023-27)

Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	4,076	4,470	4,466	4,770	4,929
Capacity Obligation (MW)	3,548	3,956	4,220	3,539	2,764

4.4 Impact on Basket Price

Paradigm shift towards indigenous fuel and renewable power sources over the years will result in 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 is also actively engaged 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:

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

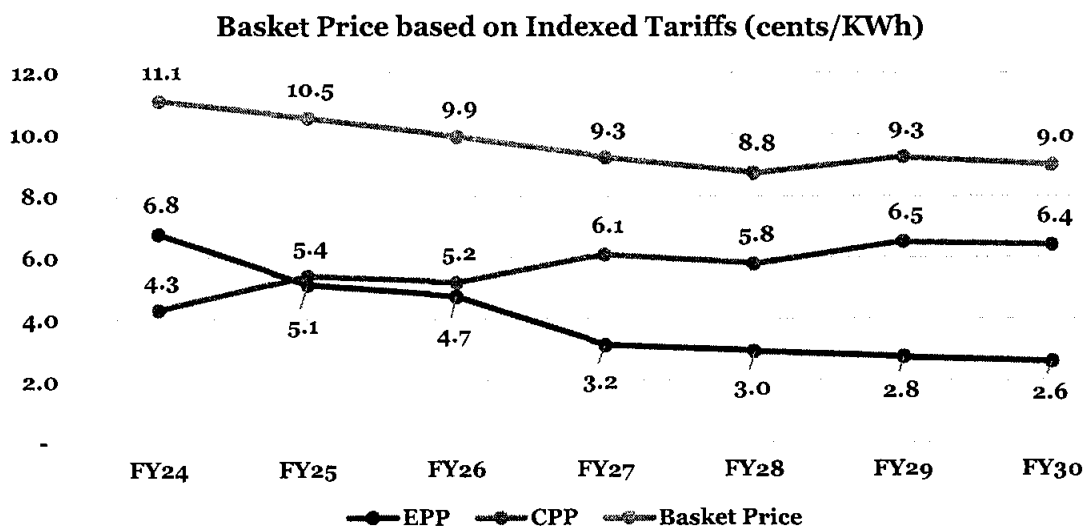
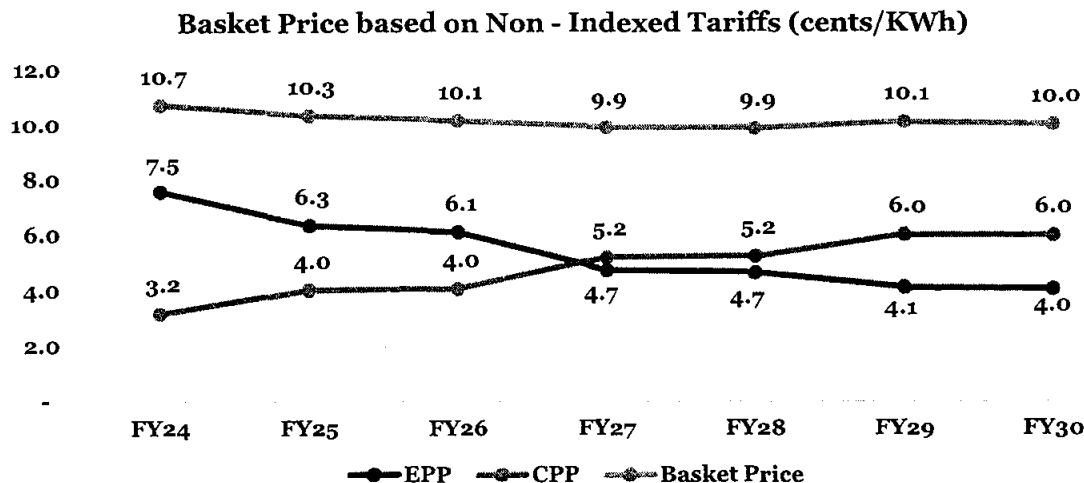


Figure 5 : Basket Price Non-Indexed Tariff (FY 2024-30)



5 Anticipated Challenges

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

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.

Moreover, with respect to supply from National Grid as envisaged under this Programme, 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 approved 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 Power Acquisition Programme.

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 VRE 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 Power Acquisition Programme 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 Power Acquisition Programme 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 Power Acquisition Programme to enable KE to continue working upon the avenues as highlighted under this Power Acquisition Programme.

Further, KE humbly submits that this Power Acquisition Programme 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 fluctuating 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.
- **Rupee devaluation:** Rupee has lost over 38 per cent of its value during FY 2023¹¹.

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 this Power Acquisition Programme and shall keep NEPRA Authority apprised of any changes in the Power Acquisition Programme on annual basis as required under the NEPP. Further, it is humbly submitted that the implementation and timely execution of this Power Acquisition Programme 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 Power Acquisition Programme. Furthermore, it is important that a level playing field is provided to the IPPs to be contracted with by KE, as envisaged under this Power Acquisition Programme, 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.

¹¹ Source: State Bank of Pakistan

7 Disclaimer

The Power Acquisition Programme has been prepared for the period from FY 2024 to FY 2030 and does not contain or determine targets or ascertain liabilities pertaining to power purchase or procurement, commissioning of future power projects assumed within the Power Acquisition Programme, regulation or determination of electricity tariff(s), performance or ascertainment of economic despatch etc. The Power Acquisition Programme 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 Power Acquisition Programme 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 Power Acquisition Programme therefrom.

8 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	Kilowatt hours
NEPRA	National Electric Power Regulatory Authority
NEPP	NEPRA (Electric Power Procurement) Regulations, 2022
NTDC	National Transmission and Despatch Company
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

Annexure I - Forecasted data for FY 24 till FY 30

Table 6 : Forecasted Energy Demand (in GWh)

Month	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
July	2,150	2,178	2,206	2,235	2,262	2,289	2,314
August	1,883	1,907	1,932	1,957	1,981	2,004	2,026
September	2,110	2,137	2,165	2,193	2,220	2,246	2,271
October	1,882	1,907	1,932	1,957	1,980	2,004	2,026
November	1,550	1,570	1,591	1,611	1,631	1,650	1,668
December	1,273	1,289	1,306	1,323	1,339	1,355	1,370
January	1,176	1,192	1,207	1,223	1,238	1,252	1,266
February	1,226	1,242	1,258	1,275	1,290	1,305	1,320
March	1,816	1,839	1,864	1,887	1,910	1,933	1,954
April	2,148	2,175	2,204	2,232	2,260	2,286	2,311
May	2,236	2,265	2,295	2,324	2,352	2,380	2,406
June	2,377	2,408	2,440	2,471	2,501	2,530	2,558

Table 7 : Forecasted Peak Demand (in MW)

Month	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
July	3,484	3,529	3,575	3,621	3,665	3,708	3,749
August	3,297	3,339	3,383	3,427	3,468	3,509	3,548
September	3,536	3,581	3,628	3,675	3,720	3,763	3,805
October	3,424	3,468	3,514	3,559	3,602	3,645	3,685
November	3,154	3,195	3,237	3,279	3,319	3,357	3,395
December	2,385	2,415	2,447	2,479	2,509	2,538	2,566
January	2,353	2,384	2,415	2,446	2,476	2,505	2,533
February	2,628	2,662	2,697	2,731	2,765	2,797	2,828
March	3,432	3,476	3,522	3,567	3,610	3,653	3,693
April	3,785	3,834	3,884	3,934	3,982	4,029	4,073
May	3,733	3,782	3,831	3,880	3,928	3,974	4,018
June	4,168	4,290	4,404	4,522	4,631	4,768	4,896

Table 8 : Forecasted Served Demand (in GWh)

Month	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
July	1,960	2,023	2,072	2,11,4	2,150	2,186	2,219
August	1,745	1,795	1,835	1,869	1,900	1,930	1,957
September	1,935	1,994	2,041	2,082	2,117	2,151	2,183
October	1,734	1,785	1,826	1,862	1,893	1,923	1,951
November	1,417	1,461	1,496	1,526	1,552	1,578	1,601
December	1,173	1,207	1,235	1,259	1,280	1,301	1,319
January	1,075	1,108	1,135	1,158	1,178	1,197	1,215
February	1,125	1,159	1,186	1,210	1,230	1,250	1,269
March	1,651	1,704	1,746	1,782	1,813	1,844	1,871
April	1,969	2,029	2,077	2,118	2,154	2,189	2,222
May	2,010	2,080	2,134	2,180	2,219	2,258	2,293
June	2,139	2,213	2,270	2,319	2,361	2,401	2,439

Table 9 : Captive Power Plant

Name of Captive	Installed Capacity (MW)	Distribution Voltage Level	Expiry of current Tariff
ISL	19	11 KV	28 th January 2028
IIL	4	11 KV	17 th April 2023
Lotte	14	220KV	29 th July 2025
Lucky	5	11KV	8 th April 2025
Total	42		

Annexure II - Details and status of Ongoing Projects

a) 150 MW Winder and Bela Solar Projects ("Solar Projects")

KE is undertaking solar project in the Lasbela region of Balochistan (50 MW at Winder and 100 MW at Bela), 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.

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 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.

Since March 2020, KE has continuously been engaged with the GOB for land allocation of the three projects. The Projects were initially conceived in equal parcels of 50 MW each at Winder, Uthal and Bela and the feasibility studies were conducted on these shortlisted sites. However, it was later informed by the Energy Department GOB that the land at Uthal is under the Forest Department and not available for the project. Hence, an alternate land was provided by GoB parallel to the existing Bela site thereby increasing the project size of the Bela project to 100 MW from 50 MW (as recommended by NEPRA).

For the final allocation of land, LEC meeting was held on 24 August 2022, whereby GOB directed to route the projects under Public Private Partnership (PPP) mode.

While the parties were under discussion on the suitable way forward, GOB, on 30 November 2022, issued the Lease Order for Bela site 1 and Winder under PPP mode. Upon extensive deliberations and discussions, it was concluded that the Solar Projects cannot be undertaken via the proposed route. Hence, the lease order for the alternate site at Bela (Bela 2) was issued without the PPP mode on 14 February 2023, while the corrigendum to the Lease Order for Winder and Bela site 1 is under process with GOB for removal of PPP mode.

Once the lease orders for the sites are provided, the same would be provided to NEPRA for adjustment of benchmark tariff, in accordance with NEPRA's earlier approval of the RFP, for the initiation of the competitive 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
NEPRA hearing on RFP	22-Sep-2021
NEPRA approval on RFP	14-Oct-2022
KE Review Petition filed on NEPRA RFP decision	14-Nov-2022
Lease Order Bela site 2	14-Feb-2023

b) 350 MW Sindh Solar Energy Projects

To increase solar power generation and access to electricity in the province of Sindh, Sindh Energy Department (SED) in collaboration with the World Bank Group (WB) will undertake as one of the components of the Sindh Solar Energy Project (SSEP), a 400 MW of Utility-Scale Solar Park to be developed by the private sector under a competitive bidding model, bifurcated into:

- Single or multiple solar projects with cumulative capacity of 350 MW to be set up in KE's service territory
- Remaining 50 MW Project in Jamshoro district, with Central Power Purchasing Agency (CPPA-G) as the power off-taker

KE, WB and SED signed a Memorandum of Understanding (MoU) on December 10, 2021 for the development of 350 MW solar projects.

SED will be the Relevant Agent for the Project and will be responsible for carrying out the competitive bidding process including the RFP submission to NEPRA, bid evaluation and contract award to the Successful Bidder(s).

The GOS has allocated 612 acres of land at Deh Metha Ghar and 600 acres at Deh Halkani for the development of the projects. The feasibility study and Grid Interconnection Study for both the sites is being finalized. The advertisement for prequalification applications was widely published in national and international newspapers on 26th January 2023. The RFP for the projects was submitted to NEPRA on 20 February 2023.

Presently, 270 MW are being developed at two sites on single axis technology and tracking is the part of the minimum technical requirement in the Request for Proposal (RFP) to enhance the reliability and availability of electricity from the Projects.

The details of the Projects are as follows:

1. Karachi Site 01 – Deh Halkani, District West, Karachi, Sindh, Pakistan (Approx. 120 MW solar PV potential- on single axis technology).
2. Karachi Site 02 - Deh Meth Ghar, District Malir, Karachi, Sindh, Pakistan (Approx. 150 MW solar PV potential - on single axis technology)

The Deh Metha Ghar and Deh Halkani sites would accommodate a capacity of c. 270 MW, additional site is being identified for the remaining 80 MW Capacity.

c) 200 MW Site Neutral Hybrid Plant

KE has submitted the RFP for the Site Neutral Hybrid Plant to NEPRA on 28 November 2022. The Project will be within a 50km radius from KE's Dhabeji Grid Station. KE has invited developers to bid for the capacity for delivery at the interconnection point, and the developers would be responsible for all the activities including procurement of land and conducting the feasibility studies. The advertisement for prequalification was published on 6th February 2023.

The capacity for this RFP is 200 MW (AC Peak) and will be developed under the NEPRA's NCBT 2017 regulations. KE will enter into an Energy Purchase Agreement with the successful bidder upon securing relevant approvals. This capacity is envisioned for commissioning beyond FY-25.

d) 82 MW Uzghor Hydel Power Plant

The proposed 82.25 MW, Turtonas-Uzghor Hydropower Project (TUHPP) is in Chitral district of KPK, located at a distance of 390 km from Islamabad, spanning over an area of 52.7 acres. It is a run of the river project, located on River Golen Gol, upstream of existing WAPDA HPP.

On December 21, 2021, KE issued a letter to indicate KE's potential interest in power procurement to the project. The project already has a generation license granted in December 2020 and has completed environmental and feasibility studies. The feasibility stage tariff was determined by NEPRA in April 2021 for which a review petition was filed by the project. NEPRA in its review determination on July 29, 2021, has directed the Project to supply power under CTCBM. TUHPP is further reviewing the decision since TUHPP will be supplying power to KE, an SoLR, for the regulated consumers, and hence will require a tariff from NEPRA.

TUHPP has further submitted the Licensee Proposed Modification (LPM) to NEPRA for change in power purchaser to KE. In this regard, KE requests NEPRA to consider their request. TUHPP has been optimized in the NEPRA approved IGCEP 2022 for KE with the targeted COD of 2029.

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.

e) 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.

NEPRA conducted a meeting on 3 October 2022 with relevant stakeholders including CPPA-G, PPIB, SEL, SECMC and KE on the matter of change of purchaser from CPPA-G to KE. NEPRA principally supported this change and the Project, however directed SEL to resolve outstanding issues with PPIB and CPPA-G before formally making any filings to NEPRA. The Authority further directed SEL to conduct EPC bidding, which is currently under evaluation.

f) 50 MW Renewable Project by Ladies Fund

KE has expressed potential interest in power procurement from 50 MW solar power project to be developed by Ladies Fund. KE engagement is conditional to the results of relevant technical studies including the Bankable Feasibility Study, load flow, short circuit and stability, and necessary regulatory approvals. The project has recently completed the pre-

feasibility which has been shared with international lenders and are now in the process of preparing bankable feasibility study. The developer has communicated that the bankable feasibility study of the project will be completed by 31st March and based upon which the tariff of the project along with other key details will be decided and communicated to the Authority.

Annexure III - Other Indicative Projects

a) 330 MW X 2 on Local Coal

KE intends to develop the project on Thar Coal at Port Qasim using advance coal technologies. The land is already available with KE. The reason for developing the project at Port Qasim is availability of water due to the vicinity of the location with the seashore, availability of interconnection and transmission facilities and expected availability of rail link prior to the start of project construction (feasibility study with Crimson Engineering under the supervision of Pakistan Railway Freight Transportation Company is underway. KE has envisioned this project to come online by FY-27/29 in the base case. In order to conduct the fast-track development of the project, KE is also in contact with the various stakeholders like technology providers, contractors, developers, and lenders to create a viable structure keeping into perspective the challenges related to financing of coal projects, due to embargos by Western countries and even China to support offshore coal projects. Being a feasible and least cost baseload option based on indigenous resources inline of Government of Pakistan's policy, it is top priority of the utility to ensure the timely development of the coal base power projects. However, given the changing international focus towards sustainable development and dwindling support available amongst the international lenders and technology pertaining to support such development, it would remain a steep challenge to timely convince all the stakeholders. KE intends to keep the Honorable Authority apprised about the progress regarding the coal power plant development.

b) Letter of Intent (LOI) Issued by KE

i) 500 MW GO Energy Floating Solar Project

KE is considering to procure upto ~ 500 MW from floating solar at Keenjhar Lake, under the ambit of new technology. The project has also been provided an LOI by GoS for the use of water body and develop this Project at Keenjhar Lake. The project is undergoing pre-feasibility and the Grid Interconnection Studies will commence shortly. KE is keen to support this Project since it is a novel and new technological approach towards solar which has been recently gaining ground globally.

ii) 500 MW Hybrid Power Project

The novel idea for developing solar PV and wind hybrid project has been pursued by an independent company and the project has completed and the feasibility study, while Grid Interconnection Study is currently underway.

c) Request for Proposal (RFP) for RE Project on Land procured by KE

Considering that Government land availability and allocation remains one of the most critical items in project development which takes substantial amount of time with the provincial government authorities for its identification, pricing, and allocation, and delays the overall project timeline significantly, KE is considering to circulate RFPs for Solar projects on land procured by KE.

KE is currently in the process of identifying suitable private land for procurement in order to initiate a competitive bidding process for a new renewable project having capacity of 250 – 300 MW.

d) Discussion with Hydel Projects

KE has also initiated discussions with large hydro developers for power off take by KE via wheeling.

KE has been engaged with PEDO for the development of hydro projects in province of KPK, for KE's off-take. A working level joint development group has been constituted, comprising of the representative from both entities. The group has conducted several meetings during which PEDO has suggested the names of certain private hydel projects, that can be considered for KE's power off-take. KE is currently evaluating the projects based upon their tariffs and development status, and plans to further engage with the project developers, to select the most optimal project for meeting KE's demand needs. KE has also executed a Memorandum of Understanding (MoU) with China Three Gorges South Asia Limited (CSAIL), to carry out the joint development of hydel power projects.

Annexure IV - Capacity Obligation Report by CPPA-G

[Enclosed Separately]

Central Power Purchasing Agency – Market Operator



Report on Compliance with Capacity Obligations

2022-2023

Disclaimer

This report is being issued by the Market Operator under the trial run plan and has no financial or any other implications for any of the Market Participants/Suppliers of Last Resort. The report is being circulated for the feedback of stakeholders to improve the process.

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Executive Summary

CPPA-G has been granted the Market Operator License by the Authority. Along with its license, the Authority has also approved the Market Commercial Code that governs the market.

The Market Commercial Code requires CPPA-G to determine the Capacity Obligations for each Market Participant and verify compliance with such obligations. The Commercial Code also requires that the Market Operator shall publish a report titled "Compliance with Capacity Obligations Report", which shall include calculations performed, the information being utilized and the results of the verification. The report shall contain separate sections for the ex-ante and ex-post verifications, and analysis and evaluations for each Market Participant individually along with a summary of the most important conclusions.

Before the CMOD, NEPRA has required CPPA-G to issue the "Compliance with Capacity Obligations Report" report on **trial basis**. In compliance to the trial run plan, CPPA-G issued the draft and final versions of the Compliance with Capacity Obligations Report using the data from the demand forecasts prepared in previous years and the IGCEP approved by the Authority in 2021. However, the EX-WAPDA DISCOs have prepared new forecasts and a new IGCEP has also been approved by the Authority. Therefore, this report is being prepared as draft report based on the revised demand forecasts of the DISCOs and the latest approved IGCEP. Also, K-Electric has provided data for calculation of their Capacity Obligations as well which was not part of the previous reports. Hence this report contains the results for K-Electric as well.

This report is being issued comprising the data inputs, calculations performed, the results of the verifications and recommendations based on the results. The report contains verification of the following types of Capacity Obligations.

- i. Ex-post Capacity Obligations
- ii. Ex-ante Capacity Obligations

This report is circulated among the stakeholders for their comments and response. The results depicted in this report have no implications on the stakeholders as it is issued for the trial purposes.

The Ex-post Capacity Obligations have been performed based on the results of the Balancing Mechanism for Capacity (BMC) for the year 2022. The Ex-ante Capacity obligations have been performed for the years **2022-2023 (Current Year)** up to **2026-2027 (Year 4)** as provided in the following table.

Table 1: Ex-Ante Capacity Obligations Horizon

Obligation Year	Financial Year
Current Year	2022-2023
Year 1	2023-2024
Year 2	2024-2025

Year 3	2025-2026
Year 4	2026-2027

The Capacity Obligations have been determined based on the Power Market Survey (PMS) methodology based demand forecasts being provided by the Ex-WAPDA DISCOs in their role as Suppliers of Last Resort. K-Electric has its own methodology for preparing of their medium-term forecasts. The details of this methodology are not known to the Market Operator. The projects planned to be procured in the future by the EX-WAPDA DISCOs have been considered as those committed projects in the approved IGCEP 2022 for which procurement process have been initiated at CPPA-G. Those committed projects for which procurement process has not been initiated at CPPA-G and DISCOs have also not provided any information on their procurement on bilateral basis have been excluded from the planned projects. K-Electric has provided its own set of data regarding its planned projects in the future which are considered while verifying compliance with the Capacity Obligations of KE. The results of the verification are given in **Table 2** below.

Table 2: Capacity Obligations Compliance Matrix

#.	Market Participant ID	Market Participant Name	Ex-Ante Compliance				
			Current Year	Year 1	Year 2	Year 3	Year 4
			2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
1	2	IESCO	Compliance	Compliance	Compliance	Compliance	Compliance
2	3	LESCO	Compliance	Minor Non Compliance	Compliance	Compliance	Compliance
3	4	HESCO	Compliance	Compliance	Compliance	Compliance	Compliance
4	5	SEPCO	Compliance	Compliance	Compliance	Compliance	Compliance
5	6	GEPCO	Compliance	Serious Non Compliance	Minor Non Compliance	Compliance	Compliance
6	7	MEPCO	Compliance	Serious Non Compliance	Serious Non Compliance	Compliance	Compliance
7	8	PESCO	Compliance	Compliance	Compliance	Compliance	Compliance
8	9	QESCO	Compliance	Compliance	Compliance	Compliance	Compliance
9	10	FESCO	Compliance	Serious Non Compliance	Compliance	Compliance	Compliance
10	11	TESCO	Serious Non Compliance	Serious Non Compliance	Serious Non Compliance	Compliance	Compliance
11	12	KE	Compliance	Compliance	Compliance	Compliance	Compliance

Factors impacting the results presented in this report:

It is clarified that this report is prepared based on the provision given in the approved Commercial Code for the trial period. During the trial period, CPPA-G has undertaken a thorough trial run of

all of the provisions of the Commercial Code and has recommended certain amendments, in consultation with different stakeholders including Ex-WAPDA DISCOs and KE, to the Authority for approval. There are few amendments which will have significant impact on the results presented in this report. These amendments and the potential impacts are described below:

1. **Change in System Peak Hours:** It is recommended to change the System Peak Hours from the current set of hours to a different one including more of night hours which may result in reduction of the Firm Capacity of Solar and an increase in the Firm Capacity of Wind which will have an impact on the result. It is expected that the Firm Capacity of Legacy Generators may increase and the non-compliance of some EX-WAPDA DISCOs may reduce.
2. **Change in Firm Capacity Certificates Methodology:** It is recommended that the Firm Capacity of thermal based generators shall be calculated based on multiplication of its dependable capacity being determined by the CPPA-G for Legacy Generator and System Operator for the future generators and their respective force out rate (FOR), given in the Legacy Contract or provided by the EPC of the plant. This will significantly increase the Firm Capacities of the thermal generators as compared to the current methodology and the non-compliance will reduce.
3. **Change in Allocation Factors:** The commercial allocation factors based on capacity invoices of the recent three years and capacity have been recommended. The non-compliance of EX-WAPDA DISCOs (if any) whose allocation factor is increased as compared to the existing one will reduce while the non-compliance of the Ex-WAPDA DISCOs (if any) whose Allocation Factor has been reduced as compared to the existing one will further increase.
4. **Finalization of terms and conditions of PPAA with KE:** The finalization of the terms and conditions of PPAA between CPPA-G and KE will have an impact on the results. If the amount finally agreed is less than 2050 MW, then this quantum will be available for allocation among the Ex-WAPDA DISCOs which will improve the non-compliance (if any) situation of the Ex-WAPDA DISCOs.
5. **Revision of allocation factors:** It has been recommended that when there is surplus capacity available from the Legacy Generator and any DISCO is in non-compliance in any year, then the Allocation Factor shall be adjusted to solve the non-compliance of that DISCO. It has been observed that sufficient capacity is available from the Legacy Generators which may solve the non-compliance of the Ex-WAPDA DISCOs (if any) once this mechanism is approved.
6. **Change in Capacity Obligations Percentages:** It is recommended that the percentage for the Capacity Obligations of Suppliers of Last Resort for the 4th and 5th year shall be increased from 80% and 60% to 90% and 80% respectively. This will increase the Capacity Obligations in the later years and may result in non-compliance for certain Ex-WAPDA DISCOs.

This report is being circulated as the draft report on the compliance with capacity obligations for feedback of the stakeholders for trial purposes.

Part 1: Introduction

As per approved design of the CTBCM and the provisions of the Market Commercial Code, all market participants representing demand must contribute, according to their share, to the secure and reliable supply of the power system by planning and contracting in advance enough available generation and reserve resources to meet their demand. The Balancing Mechanism for Capacity also contributes in achieving this objective. Also, the network service providers will contribute in achieving this objective by planning and ensuring network upgrade and expansion sufficiently in advance to ensure that the committed power is efficiently dispatched and there are no congestions and constraints in the network.

Capacity obligations is a very important aspect of the CTBCM as it ensures that sufficient capacity is procured in advance to meet the actual system needs to avoid any deficit or surplus in the future. Capacity obligations will be strictly observed, and non-compliance will be taken very seriously and will be dealt as per provisions of the Commercial Code.

For this trial run, the Capacity Obligations will only be calculated for the EX-WAPDA DISCOs and KE in their role as Suppliers of Last Resort as they will be the only market participants representing demand at the start of the market. As per the provisions of the commercial code, the Suppliers of Last Resorts are required to have enough capacity contracted in advance to cover 100% of their Capacity Obligations for the current and next 2 years, 80% for the 3rd year and 60% for the 4th year.

Part 2: Data Inputs

The following data inputs are required to determine the Capacity Obligations:

- i. **Demand Forecast of the Market Participants:** This information was obtained from the respective Suppliers of Last Resort i.e. EX-WAPDA DISCOs and KE.
- ii. **Existing Contracts of the Market Participants:** As the Ex-WAPDA DISCOs are currently procuring only from the Legacy Generators, therefore the allocation factors given in the Commercial Code were utilized to establish the contracts between the Legacy Generators and EX-WAPDA DISCOs. For K-Electric, its own Generators, its purchase from CPPA-G and its Contracts with IPPs were considered.
- iii. **Future Contracts/Projects of the Market Participants:** For EX-WAPDA DISCOs, the committed projects in the IGCEP 2022 were considered as the future/planned projects for the Ex-WAPDA DISCOs. K-Electric provided separate information for its planned projects in the future.
- iv. **Capacity Obligations Percentage for each type of Market Participant:** The values given in the commercial code were utilized for this purpose.
- v. **Transmission Losses of NTDC:** This value was obtained from the latest tariff determination of NEPRA for NTDC.
- vi. **Reserve Margin:** The value given in the Commercial Code was utilized for this purpose.

Further details regarding the process to obtain this data from different sources are given below.

Part 3: Calculation Methodology

The following steps were performed in order to determine the Capacity Obligations and then verify where market participants are compliant with such obligations or not.

Step 1: Submission of Demand Forecast by the Market Participants and its review by the Market Operator

As per provisions of the Market Commercial Code, all EX-WAPDA DISCOs were required to submit their demand forecasts for the period 2023 up to 2027 for the calculation of capacity obligations. CPPA-G issued letters to all Ex-WAPDA DISCOs to submit their demand forecast for the aforementioned period. In response to CPPA-G's request, all the EX-WAPDA DISCOs submitted their demand forecast via electronic mail. K-Electric also submitted its demand forecast electronically.

CPPA-G reviewed the demand forecasts submitted by the EX-WAPDA DISCOs and KE. During the review, the following points were observed:

For EX-WAPDA DISCOs:

- i. This forecast was developed by Ex-WAPDA DISCOs by utilizing the Power Market Survey (PMS) methodology, which is based on the bottom-up approach.
- ii. The process of preparation of demand forecast was also facilitated by NTDC.
- iii. The forecast covers the horizon from year 2021-22 up to 2031-32.
- iv. 2021-22 has been taken as the base year and the forecast horizon is ten years up to 2031-32.
- v. Table 1-1 of the submitted report contains the peak demand data which was utilized for determination of the Capacity Obligations.

For K-Electric:

- i. No details of the methodology utilized for the preparations of the medium-term forecast were provided.
- ii. The forecast covers the horizon from year the 2022-23 up to 2029-30.
- iii. No proper report on the data utilized and the results obtained was provided.

As per the draft Capacity Obligations CCOP, the following checks were performed on the submitted information and the results are summarized in **Table 3** below.

Table 3: Verification Checks applied on Demand Forecast

#.	Check	Compliance	Result
1	The demand forecast submitted by the Suppliers of Last Resort is consistent with the demand forecast submitted to the Authority in the latest approved Power Acquisition Programme;	There is no approved Power Acquisition Programme, so this check can't be performed.	N/A
2	The demand values for year 0 (current year) is consistent with the demand values registered in the previous year;	All Ex-WAPDA DISCOs and KE have assumed reasonable growth rates and the values are consistent	Passed
3	The demand values consistently increase or remain constant over the reporting period;	All Ex-WAPDA DISCOs and KE have reported consistently increasing demand.	Passed
4	The demand growth rate of the Suppliers of Last Resort is consistent with the growth rates used by the Planner in the latest approved Indicative Generation Capacity Expansion Plan;	It was observed that both growth rates are consistent.	Passed
5	The load factor (average hourly consumed energy divided by the absolute maximum demand) is not lower than 0.25 nor higher than 0.80, except in the case of Traders with contracts involving Firm Capacity for Firm Export;	The Load Factor of All Ex-WAPDA DISCOs and KE didn't provide sufficient data to calculate the load factor.	Passed
6	The absolute maximum demand and the maximum demand during System Peak Hours are not lower than 5% from the respective values registered in previous years, except in the case of Traders with Traders with contracts for Firm Export.	No Supplier of Last Resort has reported any decreasing trend in their demand forecasts.	Passed
7	The maximum demand during System Peak Hours is not lower than 85% of the absolute maximum demand	All Ex-WAPDA DISCOs and KE have reported their peak during the System Peak Hours.	Passed
8	There should be consistency between the demand forecasts of the Competitive Suppliers and the forecasts prepared by the Suppliers of Last Resort, particularly in relation to the execution/extension of Bilateral Contracts which are finalized during the reporting period by both types of suppliers.	Since no competitive supplier exists at this time, therefore, this check can't be applied	N/A

As depicted in the above table, the submitted demand forecast passed all the checks and verifications and was utilized for the calculation of the Capacity Obligations. The values utilized for this purpose are given in **Table 4**.

Table 4: Peak Demand (Load to be Served) Forecast of EX-WAPDA DISCOs and KE

Disco	Peak Demand (MW)				
	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
IESCO	2508	2616	2765	2908	3071
LESCO	5578	5844	6067	6329	6589
HESCO	1180	1223	1267	1312	1358
SEPCO	1003	1018	1033	1048	1063
GEPCO	2749	2863	3003	3142	3290
MEPCO	4808	5110	5410	5709	6039
PESCO	2526	2672	2800	2929	3024
TESCO	522	544	569	596	625
QESCO	1129	1166	1206	1247	1299
FESCO	3512	3761	3944	4126	4342
KE	3140	3501	3735	3916	4078

Step 2: Calculation of Capacity Obligations

The Capacity Obligations for each Supplier of Last Resort have been calculated in accordance with the following formula as given in Chapter 10 of the Commercial Code:

$$CO_{BS,p} = \frac{MD_{PH,p}}{(1 - T_{loss,p})} * (1 + RM_p) * OB\%_{BS,p} / 100$$

Where:

- $CO_{BS,p}$ is the Capacity Obligation of the Supplier of Last Resort " " in the period " " which will be verified by the Market Operator
- $MD_{PH,p}$ is the Maximum Demand at System Peak Hours of the Supplier of Last Resort " " in the period " " The value of $MD_{PH,p}$ will be the forecasted Maximum Demand at System Peak Hours, submitted by the involved Supplier of Last Resort to the Market Operator, for the current year and all periods immediately thereafter;
- $OB\%_{BS,p}$ is the Capacity Obligation Percentage, applicable to Suppliers of Last Resort, corresponding to period " " p "
- $T_{loss,p}$ is the value of the cap (expressed in percentage) on Transmission losses of NTDC as determined by the Authority in the latest tariff determination.
- RM_p is the Reserve Margin applicable to period "p".

The following values were utilized in order to calculate the Capacity Obligations as per above formula:

1. The Maximum Demand at the System Peak Hours of each Supplier of Last Resort (MD_{PHLP}) was obtained from the values given in **Table 4** above
2. The Capacity Obligation Percentage, applicable to each Supplier of Last Resort ($OB\%_{BSP}$) for each year was obtained from **Table 4** of the Commercial Code. The same is reproduced below.

Table 5: Capacity Obligations of Suppliers of Last Resort

Period		Capacity Obligations (In % of the registered or forecasted Maximum Demand at System Peak Hours)
Ex-post compliance with the Capacity Obligations	Previous year ⁽¹⁾	100
	Current year ⁽²⁾	100
Ex-ante compliance with the Capacity Obligations	Year 1 ⁽³⁾	100
	Year 2	100
	Year 3	80
	Year 4	60

3. The value of the cap (expressed in percentage) on Transmission losses of NTDC as determined by the Authority in the latest tariff determination was obtained from the Authority Determination **NEPRA/R/ADG(TRF)/TRF-533/NTDC-2020/17537-17539 dated September 16,2022**. This value is equal to **2.639%**.
4. For Reserve Margin (RM_p), the value of 10% as given in Clause 9.2.4.3 of the Commercial Code was utilized.

The Capacity Obligations determined for each EX-WAPDA DISCO and KE based on the data as described above have been given in **Table 6** below.

Table 6: Capacity Obligation of EX-WAPDA DISCOs and KE

#.	Market Participant ID	Market Participant Name	Current Year	Year 1	Year 2	Year 3	Year 4
			2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
1	2	LESCO	6,302.11	6,602.64	6,854.59	5,720.48	4,466.61
2	3	IESCO	2,833.58	2,955.60	3,123.94	2,628.40	2,081.80
3	4	FESCO	3,967.91	4,249.24	4,455.99	3,729.30	2,943.40
4	5	GEPCO	3,105.86	3,234.66	3,392.84	2,839.91	2,230.26
5	6	HESCO	1,333.18	1,381.76	1,431.48	1,185.85	920.57
6	7	SEPCO	1,133.21	1,150.15	1,167.10	947.24	720.60

#.	Market Participant ID	Market Participant Name	Current Year 2022-2023	Year 1 2023-2024	Year 2 2024-2025	Year 3 2025-2026	Year 4 2026-2027
7	8	MEPCO	5,432.15	5,773.36	6,112.30	5,160.09	4,093.77
8	9	PESCO	2,853.91	3,018.87	3,163.48	2,647.38	2,049.94
9	10	TESCO	589.76	614.62	642.87	538.70	423.68
10	11	QESCO	1,275.56	1,317.37	1,362.56	1,127.10	880.58
11	12	KE	3,548.09	3,955.61	4,219.54	3,539.39	2,764.22

Step 3: Ex-ante Verification of Capacity Obligations

In order to check compliance with the Capacity Obligations calculated in Step 2 above, the following information was utilized:

- For Bilateral Contracts of the Suppliers of Last Resort, the Market Operator required all Suppliers of Last Resort to submit information regarding contracts that they have bilaterally executed with the generation plants. Contracted Capacities of all such projects were considered for checking compliance with the Capacity Obligations.
- For the Legacy Contracts, the Firm Capacity Certificates were calculated using the provisions of Chapter 8 of the Commercial Code.
- For allocation of the Firm Capacity certificates of Legacy Generators, the factors given in Table 8 of Commercial Code were utilized. The table is reproduced below (**Table 15**).
- For future planned projects of Ex-WAPDA DISCOs, only those committed projects in the approved IGCEP 2022 for which the procurement process has been initiated at CPPA-G level were considered. For planned projects of KE, the information provided by KE was utilized.

Step 3.1: Firm Capacity Certificates of existing Legacy Generators

Following assumptions were made while considering the firm capacities of the Legacy Generators:

- Davis Energen Private Limited plant availability was zero in the last three years even though its PPA is intact. The Firm Capacity of the same has been considered zero.
- Retirements of existing Legacy Generators have been considered as per the approved IGCEP.
- Due to the non-availability of data:
 - For Gulpur Hydropower project (Mira Power Ltd), Firm Capacity factor of Malakand-III Hydropower Project of Pakhtunkhwa Energy Development Organization (PEDO) is used.
 - Tenaga Generasi Limited, Hydro China Dawood Wind Farm, and Zephyr Power Limited have been given the Firm Capacity factor of Jhimpir Wind Power Plant.
 - Firm Capacity of Bagasse based plants is taken the same as that of installed capacity.
 - AJ Power (Private) Limited and Harappa Solar (Private) Limited are given a 0.22 Firm Capacity factor.

The Firm Capacities of the existing Legacy Generators of Ex-WAPDA DISCOs have been given in Table 7 and the Firm Capacities of the existing Legacy Generators K-Electric have been given in Table 8. The list of abbreviates is placed at Annexure-A.

Table 7: Firm Capacities of Existing Legacy Generators

#.	Projects	Technology	Initial Firm Capacity (MW)	#.	Projects	Technology	Initial Firm Capacity (MW)
1	EPTL	Thermal	527.09	2	Gomal Zam	Hydel	7.87
3	FPCDL	Thermal	157.81	4	Rasul	Hydel	8.3
5	HPGCL	Thermal	161.79	6	Dargai	Hydel	14.56
7	HSR	Thermal	1158.22	8	Nandipur	Hydel	5.85
9	LPTL	Thermal	183.59	10	Shadiwal	Hydel	3.46
11	NEI	Thermal	196.7	12	Chichoki	Hydel	4.47
13	Balloki	Thermal	1000.9	14	Kuram garhi	Hydel	3.35
15	HBS	Thermal	1075.7	16	Renala	Hydel	0.97
17	NCPL	Thermal	170.89	18	Chitral	Hydel	0.97
19	NPL	Thermal	176.8	20	Jabban	Hydel	20.28
21	OPCL	Thermal	187.53	22	Jagran	Hydel	27.27
23	PQFPC	Thermal	1225.04	24	Malakand-III	Hydel	75.36
25	QATPL	Thermal	1033.06	26	New Bong Escape	Hydel	67.82
27	SPL	Thermal	189.28	28	Patrind	Hydel	129.09
29	SECL	Thermal	186.26	30	Daral khwar	Hydel	2
31	UCH-II	Thermal	335.68	32	Gul pur	Hydel	93
33	KAPCO	Thermal	1458.5	34	ACT	Wind	15.39
35*	AEL	Thermal	0	36	Artistic	Wind	24.52
37	SABA	Thermal	101.6816475	38	FFCEL	Wind	18.91
39	HUBCO	Thermal	1158.249	40	FWEL-1	Wind	20.29
41	LIBERTY	Thermal	200.863	42	FWEL-2	Wind	21.88
43	FKPCL	Thermal	113.897	44	Gul ahmad	Wind	17.72
45	ROUSCH	Thermal	410.696	46	Hawa	Wind	26.28
47	KEL	Thermal	118.027	48	Jhimpir	Wind	27.4
49	AES Lalpir	Thermal	302.4822121	50	Master	Wind	23.04
51	AES Pakgen	Thermal	303.6291582	52	Metro	Wind	18.45
53*	HCPC	Thermal	0	54	Sachal	Wind	20.47
55	UCH	Thermal	577.172	56	Sapphire	Wind	22.01

#.	Projects	Technology	Initial Firm Capacity (MW)	#.	Projects	Technology	Initial Firm Capacity (MW)
57	Guddu	Thermal	507.7416998	58	TGF	Wind	21.04
59	Guddu 747	Thermal	558.9548322	60	TGS	Wind	22.9
61	Jamshoro	Thermal	294.10	62	TGT	Wind	21.89
63	Nandipur	Thermal	445.9847094	64	Tricon-A	Wind	27.62
65	Muzaffargarh	Thermal	424.55	66	Tricon-B	Wind	27.07
67	Agar textile	SPP	12.2	68	Tricon-C	Wind	26.74
69	Lucky cement	SPP	20	70	UEP	Wind	41.15
71	Thatta Cement	SPP	18.80	72	Yunus	Wind	20.63
73	Al-noor sugar mill	SPP	36	74	ZEPL	Wind	21.7
75	kumhariwal a	SPP	2.82	76	Tenaga	Wind	27.4
77	Noon Sugar	SPP	14	78	Dawood	Wind	27.4
79	Anoond	SPP	10	80	Zephyre	Wind	27.4
81	Omni	SPP	12.8	82	JDW-II	Bagasse	26
83	Tarbela	Hydel	3,478.00	84	JDW-III	Bagasse	27
85	Tarbela Ext 4	Hydel	1,410.00	86	RYKML	Bagasse	30
87	Mangla	Hydel	1,000.00	88	Chiniot Power	Bagasse	63
89	Ghazi Brotha	Hydel	1,081.04	90	Hamza Sugar	Bagasse	15
91	Warsak	Hydel	179.77	92	Thall Power	Bagasse	25
93	Chashma	Hydel	98.44	94	Almoiz Industries	Bagasse	36
95	Jinnah	Hydel	19.18	96	Chanar Energy	Bagasse	22
97	Allai khwar	Hydel	80.21	98	Chashnupp - II	Nuclear	302.53
99	Khan khwar	Hydel	30.75	100	Chashnupp - III	Nuclear	311
101	Dubair Khwar	Hydel	111.6	102	Chashnupp - IV	Nuclear	304.58
103	Neelam jehlam	Hydel	801.98	104	K-2	Nuclear	996.15
105	Golengole	Hydel	14.29	106	Quaid e Azam	Solar	28.75
107	Apollo	Solar	28.78	108	Crest Energy	Solar	29.47
109	Best Green	Solar	28	110	Aj Power	Solar	2.64

#.	Projects	Technology	Initial Firm Capacity (MW)	#.	Projects	Technology	Initial Firm Capacity (MW)
111	Harappa	Solar	3.96	112	Master_Green	Wind	15.00
113	Tricom	Wind	15.00	114	Jhing	Hydel	12.24
115	Marala HPP	Hydel	6.48	116	Pakpattan	Hydel	2.397
117	APL	Thermal	199.70	118	AGL	Thermal	150.29
119	CPH	Thermal	1038.34	120	EPQL	Thermal	193.83
121	Chashnupp-I	Nuclear	312.20	122	Karot	Hydel	612
123	Ranolia	Hydel	14.45	124	Lucky	Thermal	607.20
125	MetroWind	Wind	18.0	126	Lakeside	Wind	15.00
127	NASDA	Wind	15.00	128	Artistic_Wind_2	Wind	15.00
129	Din	Wind	15.00	130	Gul_Electric	Wind	15.00
131	Act_2	Wind	15.00	132	Liberty_Wind-1	Wind	15.00
133	Liberty_Wind-2	Wind	15.00	134	Indus_Energy	Wind	15.00
135	Zhenfa	Solar	22.00	136	K3	Nuclear	996.15
137	Shishi	SPP	1.85				

*AEL & HCPC have their GSA expired

Table 8: Firm Capacities of KE Legacy Generators

#.	Projects	Technology	Initial Firm Capacity (MW)	#.	Projects	Technology	Initial Firm Capacity (MW)
1	BQPS1 – Unit 1	Thermal	173.22	2	BQPS1 – Unit 2	Thermal	172.76
3	BQPS1 – Unit 5	Thermal	188.35	4	BQPS1 – Unit 6	Thermal	179.60
5	BQPS2	Thermal	509.59	6	KPC	Thermal	217.53
7	KGTPS	Thermal	89.88	8	SGTPS	Thermal	93.93
9	Ourson	Solar	12.87	10	Gharo	Solar	13.70
11	FPCL	Thermal	48.34	12	SNPC	Thermal	85.62
13	Tapal	Thermal	109.92	14	Gul	Thermal	113.46

Step 3.2 Firm Capacity Certificates of planned projects

As described above, the committed projects in the approved IGCEP-2022, for which the procurement at CPPA-G level has been initiated, have been considered as planned projects for the DISCOs. These projects have also been allocated among the EX-WAPDA DISCOs using the Allocation Factors as given in of the Commercial Code and reproduced in **Table 15**. For KE, the list of projects communicated by the K-Electric was utilized. For the calculation of the Firm Capacities, the Equivalent Availability Factors as given in Table 1 of the Commercial Code (reproduced below) were utilized. For run-of-river hydro projects, a 0.85 Equivalent Availability Factor was utilized.

Table 9: Equivalent Availability Factors

Sr. No.	Generation Technology	Equivalent Availability Factor
1	Dispatchable Technologies	
1.1	Hydro with reservoir	0.92
1.2	Thermal (either liquid fuels, gas or coal fired)	0.92
1.3	Bagasse	0.92
1.4	Thermal Solar	0.87
1.5	Nuclear	0.87
2	Non-dispatchable Technologies	
2.1	Hydro run of river	Based on the feasibility study
2.2	Wind	0.30
2.3	Solar PV	0.22

The Firm Capacities of Planned Projects for Ex-WAPDA DISCOs, calculated by utilizing the above equivalent availability factors, have been given in **Table 10** below and the Firm Capacities of Planned Projects for K-Electric are provided in **Table 12**.

The following Planned Projects have been considered for the Ex-Ante Capacity Obligations as Committed Projects after evaluating their status with the CPPA-G-SPA. Those committed projects in the approved IGCEP 2022 which have no correspondence with the CPPA-G-SPA in terms of consent or initial negotiation stage are excluded from the calculations.

Table 10: Firm Capacities of Planned Projects for Ex-WAPDA DISCOs

#.	Name of Committed Project	Fuel Type	Installed Capacity (MW)	Firm Capacity (MW)	Expected Schedule of Commissioning
1	Jabori	Hydro	10.2	8.67	Apr-22
2	Thar TEL	Local Coal	330	303.6	Jul-22
3	Trimmu	CCGT_RLNG	1263	1161.96	Jul-22
4	Mangla (U #5-6)	Hydro	70	59.5	Sep-22

#.	Name of Committed Project	Fuel Type	Installed Capacity (MW)	Firm Capacity (MW)	Expected Schedule of Commissioning
5	Jamshora Coal (U #1)	Imported Coal	660	607.2	Dec-22
6	Thal Nova	Local Coal	330	303.6	Dec-22
7	Thar-I (SSRL)	Local Coal	1320	1214.4	Dec-22
8	Helios	Solar	50	11	Apr-23
9	HNDS	Solar	50	11	Apr-23
10	Meridian	Solar	50	11	Apr-23
11	Mangla (U #3-4)	Hydro	70	59.5	May-23
12	Access Electric	Solar	10	2.2	Sep-23
13	Access_Solar	Solar	11.52	2.5344	Sep-23
14	Kurram Tangi	Hydro	18	15.3	Oct-23
15	Riali-II	Hydro	7.08	6.018	Dec-23
16	Lawi	Hydro	69	58.65	Apr-24
17	Suki Kinari (U #1)	Hydro	221	187.85	May-24
18	Safe	Solar	10	2.2	Jun-24
19	Western	Wind	50	15	Jun-24
20	Mangla (U #1-2)	Hydro	70	59.5	Jul-24
21	Tarbela Ext5 (U #1)	Hydro	510	433.5	Jul-24
22	Suki Kinari (U #2)	Hydro	221	187.85	Jul-24
23	CASA-1000	Cross Border Interconnection	1000	1000	Aug-24
24	Tarbela Ext5 (U #2)	Hydro	510	433.5	Aug-24
25	Shahtaj	Bagasse	32	15	Aug-24
26	Tarbela Ext5 (U #3)	Hydro	510	433.5	Sep-24
27	Suki Kinari (U #3)	Hydro	221	187.85	Sep-24
28	Suki Kinari (U #4)	Hydro	221	187.85	Nov-24
29	Kathai-II	Hydro	8	6.8	Dec-24
30	Gwadar	Local Coal	300	276	Aug-25
31	Mangla (U #9-10)	Hydro	70	59.5	Sep-25
32	Dasu (U #1)	Hydro	360	306	May-26
33	Mohmand Dam (U #1)	Hydro	200	170	May-26
34	Dasu (U #2)	Hydro	360	306	Jul-26
35	Mohmand Dam (U #2)	Hydro	200	170	Jul-26
36	Dasu (U #3)	Hydro	360	306	Aug-26
37	Mohmand Dam (U #3)	Hydro	200	170	Sep-26
38	Dasu (U #4)	Hydro	360	306	Nov-26
39	Mangla (U #7-8)	Hydro	30	25.5	Nov-26

#.	Name of Committed Project	Fuel Type	Installed Capacity (MW)	Firm Capacity (MW)	Expected Schedule of Commissioning
40	Mohmand Dam (U #4)	Hydro	200	170	Nov-26
41	Dasu (U #5)	Hydro	360	306	Feb-27
42	Keyal Khwar (U #1)	Hydro	64	54.4	Feb-27
43	Dasu (U #6)	Hydro	360	306	May-27
44	Keyal Khwar (U #2)	Hydro	64	54.4	May-27

The following committed projects (Table 11) in the latest approved IGCEP are excluded from the planned projects for compliance with Ex-Ante Capacity Obligation as these projects have no correspondence with the CPPA-G-SPA and the Ex-WAPDA DISCOs have not communicated any information to the Market Operator regarding their procurement on bilateral basis in terms of consent or initial negotiation for their EPA/PPA. Besides that, IGCEP has also considered a 500 MW of Capacity from KAPCO beyond the expiry of its PPA, however, for this calculation, this capacity has not been included in this calculation as the Market Operator has no information regarding the procurement of this capacity at the time of preparation of this report.

Table 11: List of excluded committed projects

#.	Name of Committed Project	Fuel Type	Installed Capacity (MW)	Firm Capacity (MW)	Expected Schedule of Commissioning
1	Chianwali	Hydro	5.38	4.573	Mar-22
2	Deg Outfall	Hydro	4.04	3.434	Jun-22
3	Karora	Hydro	11.8	10.03	Aug-22
4	Koto	Hydro	40.8	34.68	Sep-22
5	Jagran-II (U #1)	Hydro	12	10.2	Apr-23
6	Jagran-II (U #2)	Hydro	12	10.2	May-23
7	Jagran-II (U #3)	Hydro	12	10.2	Jul-23
8	Jagran-II (U #4)	Hydro	12	10.2	Jul-23
9	Chamfall	Hydro	3.22	2.737	Aug-23
10	Manjhand	Solar	50	11	Sep-23
11	Siachen	Solar	100	22	Sep-23
12	Zorlu	Solar	100	22	Dec-23
13	Trans Atlantic	Wind	50	15	Jun-24
14	Gorkin Matiltan	Hydro	84	71.4	Jul-24
15	Chapari Charkhel	Hydro	10.56	8.976	Sep-25
16	Gabral Kalam	Hydro	88	74.8	Nov-27
17	Madyan	Hydro	157	133.45	Nov-27
18	Balakot	Hydro	300	255	Dec-27
19	Net Meter	Solar	370	81.4	Jul-22

#.	Name of Committed Project	Fuel Type	Installed Capacity (MW)	Firm Capacity (MW)	Expected Schedule of Commissioning
20	Net Meter	Solar	370	81.4	Jul-23
21	Net Meter	Solar	370	81.4	Jul-24
22	Net Meter	Solar	370	81.4	Jul-25
23	Net Meter	Solar	370	81.4	Jul-26
24	Net Meter	Solar	370	81.4	Jul-27
25	Net Meter	Solar	370	81.4	Jul-28
26	Net Meter	Solar	370	81.4	Jul-29
27	Net Meter	Solar	370	81.4	Jul-30

Table 12: Firm Capacities of Planned Projects of KE

#.	Name of Committed Project	Fuel Type	Installed Capacity (MW)	Firm Capacity (MW)	Expected Schedule of Commissioning
1	Project - 1	RLNG	942.4	867.008	FY-23
2	Project - 2	Solar	150	33	1-Mar-25
3	Project - 3	Solar	350	77	1-Mar-25
4	Project - 4	Local Coal	330	303.6	1-Jun-26
5	Project - 5	Local Coal	330	303.6	1-Jul-26
6	Project - 6	Solar	200	44	1-Jul-26
7	Project - 7	Wind	100	30	1-Jul-27
8	Project - 8	Local Coal	330	303.6	1-Jul-28
9	Project - 9	Solar	200	44	1-Jul-28
10	Project - 10	Hydel	82	69.7	1-Jul-28
11	Project - 11	Wind	100	30	1-Jul-29
12	Project - 12	Additional Supply from NTDC	2050	2050	1-Jun-24

Retirement Schedule:

The retirement schedule for the Legacy Generators of Ex-WAPDA DISCOs was considered as per approved IGCEP 2022. For bilateral contracts of Small Power Producers (SPPs) with HESCO, the retirement date was confirmed from the contract data shared by individual Ex-WAPDA DISCOs. K-Electric provided its own schedule for retirement of its Legacy Generators.

The retirement schedule for Legacy Generators of Ex-WAPDA DISCOs is depicted in **Table 13** and for Legacy Generator of K-Electric, the schedule for retirement is depicted in **Table 14** below.

Table 13: Retirement Plan of Legacy Generators of Ex-WAPDA DISCOs

Plant/Unit Name	Firm Capacity				PPA End Date	Rationale for Retirement	Firm Cap	Total (MW)	FCC	Retirement Year
	2023	2024	2025	2026						
KAPCO 1	400				Oct-22	PPA Expiry	1458.5	1458.5	14585	2022-2023
KAPCO 2	900									
KAPCO 3	300									
Guddu-II U (5-10)	620				Sep-40	CCOP Decision as depicted in the approved IGCEP	379.1	1097.74	10977.4	2023-2024
Jamshoro-I U1	250						294.1			
Jamshoro-II U4	200						424.55			
Muzaffargarh-I U1	210									
Muzaffargarh-I U2	210									
Muzaffargarh-I U3	210									
Muzaffargarh-I U4	320									
HESCO M/s Anoud Textile Mills Limited		10			Jun-25	HESCO Contract Expiry	10	10	100	2024-2025
HESCO M/s Omni Power Private Limited		12.8			Sep-25		12.8	12.8	128	2025-2026
HESCO M/s Lucky Cement Limited			20		Jun-26		20	20	200	2025-2026
HESCO M/s Thatta Power (Pvt.) Limited			18.8		Dec-26		18.8	18.8	188	2026-2027

Table 14: Retirement Plan of Legacy Generators of K-Electric

#..	Name	Installed Capacity (MW)	Firm Capacity MW	Retirement Year
1	Gul Ahmed	136	113.5	2024-2025
2	Tapal	126	109.9	2023-2024
3	BQPS 1 – Unit 1	210	173.2	2023-2024
4	BQPS 1 – Unit 2	210	172.6	2023-2024
5	BQPS 1 – Unit 5	210	188.4	2026-2027

Step 3.3: Allocation of Firm Capacity Certificates

The firm capacity certificates of installed and committed plants of Ex-WAPDA DISCOs are allocated among Ex-WAPDA DISCOs and a share is provided to KE. First, a fixed quantity of firm capacity certificates was subtracted for KE each year and then the remaining firm capacity certificates were allocated to Ex-WAPDA DISCOs according to the allocation factor given in the commercial code. The Factors are reproduced in **Table 15** below. According to the fixed quantity contract with KE, 12000 firm capacity certificates were subtracted from the year 2021-22. Similarly, 12000 firm capacity certificates were subtracted from the year 2022-23. From there onwards 20500 firm capacity certificates were subtracted each year. These values have been taken as incorporated by NTDC in the Power Market Survey (PMS) based consolidated demand forecast report for the NTDC System and has also been confirmed by K-Electric during the preparation of this report. The remaining Firm Capacity Certificates were allocated to each EX-WAPDA DISCO as per the Allocation Factors given in **Table 15** below.

Table 15: Suppliers of Last Resort Allocation Factors

Supplier	Allocation Factor
LESCO	21.10%
GEPCO	9.82%
FESCO	13.09%
IESCO	10.15%
MEPCO	17.06%
PESCO	12.89%
HESCO	4.79%
QESCO	5.62%
TESCO	1.74%
SEPCO	3.73%
K-Electric	As per Bilateral Contract

The allocation of the Firm Capacity Certificates to EX-WAPDA DISCOs and KE from the Legacy Generators of Ex-WAPDA DISCOs as described above is presented in **Table 16**.

Table 16: Allocation of Firm Capacity Certificates of Legacy Generator of Ex-WAPDA DISCOs

#.	Market Participant ID	Market Participant Name	Current Year	Year 1	Year 2	Year 3	Year 4
			2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
1	2	LESCO	67,783	64,285	70,478	72,164	76,712
2	3	IESCO	32,607	30,924	33,903	34,714	36,902
3	4	FESCO	42,051	39,881	43,723	44,769	47,590
4	5	GEPCO	31,546	29,918	32,801	33,585	35,702
5	6	HESCO	15,388	14,594	16,000	16,382	17,415
6	7	SEPCO	11,983	11,364	12,459	12,757	13,561
7	8	MEPCO	54,805	51,976	56,984	58,346	62,024
8	9	PESCO	41,409	39,272	43,055	44,085	46,863
9	10	TESCO	5,590	5,301	5,812	5,951	6,326
10	11	QESCO	18,054	17,122	18,772	19,221	20,432
11	12	K-Electric	12,000	20,500	20,500	20,500	20,500

Step 3.4: Ex-ante Compliance with Capacity Obligations Report

For verification of compliance, the Capacity Obligations as calculated above are compared with the Firm Capacity Certificates allocated to each EX-WAPDA DISCO and KE.

In case the value of the Firm Capacity Certificates allocated to a Supplier of Last Resort is above 98% of the Capacity Obligations of such Supplier of Last Resort, the obligations are considered fulfilled for that year. In case value of the Firm Capacity Certificates allocated to Supplier of Last Resort is lower than 98% of the Capacity Obligation, the obligation is considered not fulfilled. The non-compliance is categorized as Minor and Serious Non-Compliance as per the following criteria:

1. **Minor Non-Compliance:** When the difference between the capacity obligation and credited capacity is below 5% during the year, it is categorized as minor non-compliance.
2. **Serious Non-Compliance:** When the difference between the capacity obligation and credited capacity is above 5% during the year, it is categorized as serious non-compliance.

The calculations performed as per the mechanism described above are presented in **Table 17** below.

Table 17: Ex-ante Compliance with Capacity Obligations

	PESCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	4,140.88	3,927.16	4,305.52	4,408.47	4,686.32
Capacity Obligation (MW)	2,853.91	3,018.87	3,163.48	2,647.38	2,049.94
Difference (MW)	1,286.96	908.29	1,142.04	1,761.09	2,636.38
Difference (%)	45.09	30.09	36.10	66.52	128.61

	IESCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	3,260.66	3,092.37	3,390.31	3,471.37	3,690.16
Capacity Obligation (MW)	2,833.58	2,955.60	3,123.94	2,628.40	2,081.80
Difference (MW)	427.08	136.77	266.37	842.97	1,608.36
Difference (%)	15.07	4.63	8.53	32.07	77.26

	LESCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	6,778.31	6,428.48	7,047.83	7,216.36	7,671.17
Capacity Obligation (MW)	6,302.11	6,602.64	6,854.59	5,720.48	4,466.61
Difference (MW)	476.20	-174.17	193.24	1,495.87	3,204.55
Difference (%)	7.56	-2.64	2.82	26.15	71.74

	FESCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	4205.12	3988.09	4372.33	4476.88	4759.03
Capacity Obligation (MW)	3967.91	4249.24	4455.99	3729.30	2943.40
Difference (MW)	237.21	-261.14	-83.67	747.58	1815.64
Difference (%)	5.98	-6.15	-1.88	20.05	61.69

	GEPCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	3154.65	2991.83	3280.08	3358.51	3570.18
Capacity Obligation (MW)	3105.86	3234.66	3392.84	2839.91	2230.26
Difference (MW)	48.78	-242.83	-112.76	518.61	1339.93
Difference (%)	1.57	-7.51	-3.32	18.26	60.08

	MEPCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	5480.48	5197.62	5698.39	5834.65	6202.37
Capacity Obligation (MW)	5432.15	5773.36	6112.30	5160.09	4093.77
Difference (MW)	48.32	-575.74	-413.92	674.55	2108.60
Difference (%)	0.89	-9.97	-6.77	13.07	51.51

	SEPCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	1198.25	1136.41	1245.90	1275.69	1356.09
Capacity Obligation (MW)	1133.21	1150.15	1167.10	947.24	720.60
Difference (MW)	65.05	-13.74	78.80	328.45	635.49
Difference (%)	5.74	-1.19	6.75	34.67	88.19

	HESCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	1538.77	1459.36	1599.96	1638.22	1741.46
Capacity Obligation (MW)	1333.18	1381.76	1431.48	1185.85	920.57
Difference (MW)	205.59	77.59	168.48	452.36	820.89
Difference (%)	15.42	5.62	11.77	38.15	89.17

	QESCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	1805.41	1712.23	1877.19	1922.08	2043.22
Capacity Obligation (MW)	1275.56	1317.37	1362.56	1127.10	880.58
Difference (MW)	529.85	394.86	514.64	794.98	1162.64
Difference (%)	41.54	29.97	37.77	70.53	132.03

	TESCO				
Year	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	558.97	530.12	581.20	595.09	632.60
Capacity Obligation (MW)	589.76	614.62	642.87	538.70	423.68
Difference (MW)	-30.79	-84.50	-61.67	56.40	208.92
Difference (%)	-5.22	-13.75	-9.59	10.47	49.31

Year	KE				
	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Credited Capacity (MW)	4075.78	4469.88	4466.42	4770.02	4929.27
Capacity Obligation (MW)	3548.09	3955.61	4219.54	3539.39	2764.22
Difference (MW)	527.69	514.27	246.88	1230.62	2165.04
Difference (%)	12.95	11.51	5.53	25.80	43.92

Based on the results depicted above, the compliance status for each EX-WAPDA DISCO and KE for ex-ante Capacity Obligations has been depicted in **Table 18** below.

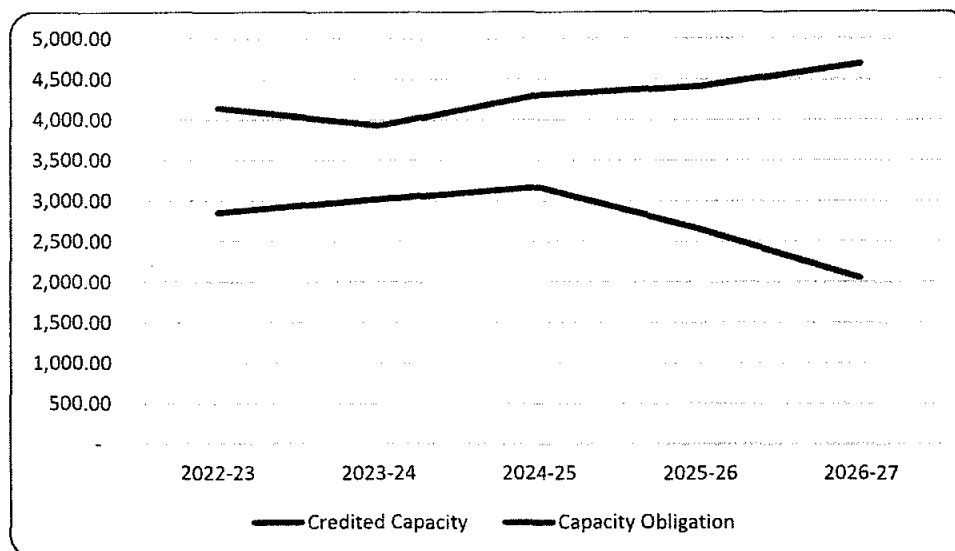
Table 18: Summary of Compliance with Capacity Obligations

#.	Market Participant ID	Market Participant Name	Ex-Ante Compliance				
			Current Year	Year 1	Year 2	Year 3	Year 4
			2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
1	2	IESCO	Compliance	Compliance	Compliance	Compliance	Compliance
2	3	LESCO	Compliance	Minor Non Compliance	Compliance	Compliance	Compliance
3	4	HESCO	Compliance	Compliance	Compliance	Compliance	Compliance
4	5	SEPCO	Compliance	Compliance	Compliance	Compliance	Compliance
5	6	GEPCO	Compliance	Serious Non Compliance	Minor Non Compliance	Compliance	Compliance
6	7	MEPCO	Compliance	Serious Non Compliance	Serious Non Compliance	Compliance	Compliance
7	8	PESCO	Compliance	Compliance	Compliance	Compliance	Compliance
8	9	QESCO	Compliance	Compliance	Compliance	Compliance	Compliance
9	10	FESCO	Compliance	Serious Non Compliance	Compliance	Compliance	Compliance
10	11	TESCO	Serious Non Compliance	Serious Non Compliance	Serious Non Compliance	Compliance	Compliance
11	12	KE	Compliance	Compliance	Compliance	Compliance	Compliance

Part 4: Results

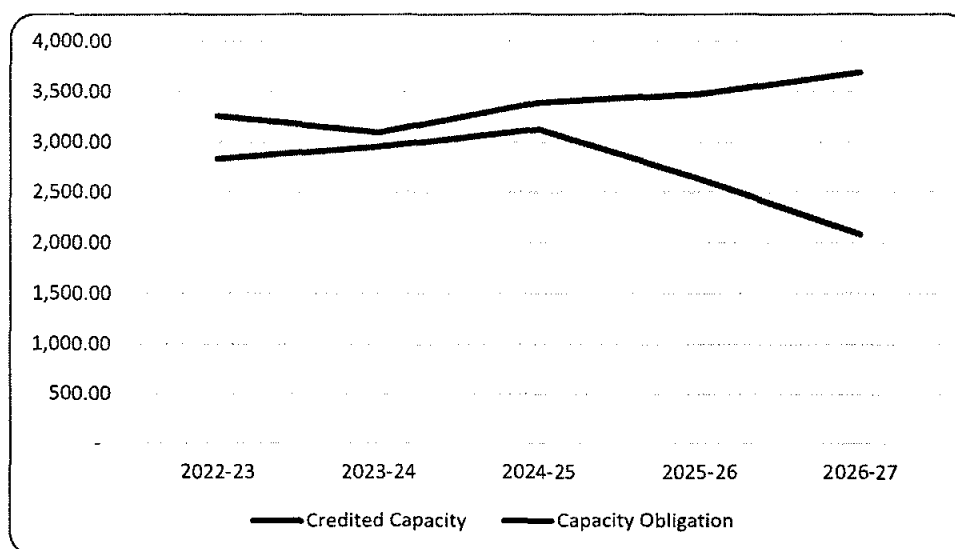
Based on the calculations performed above, detailed results have been prepared for each Market Participants. These results are depicted in the following figures.

Figure 1: Results for PESCO

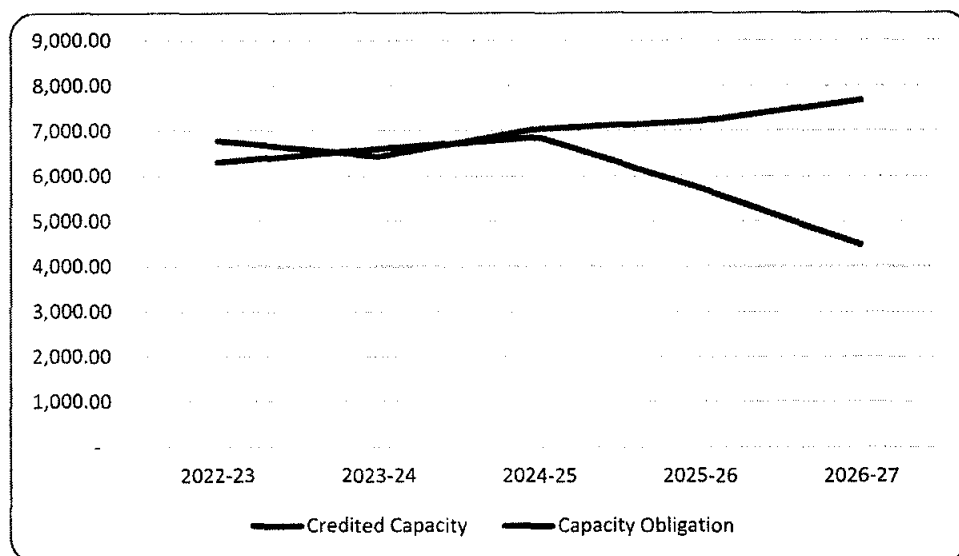


It can be observed from the above figure that PESCO is compliant in all years as its Credited Capacity covers 100% of its Capacity Obligation in all years.

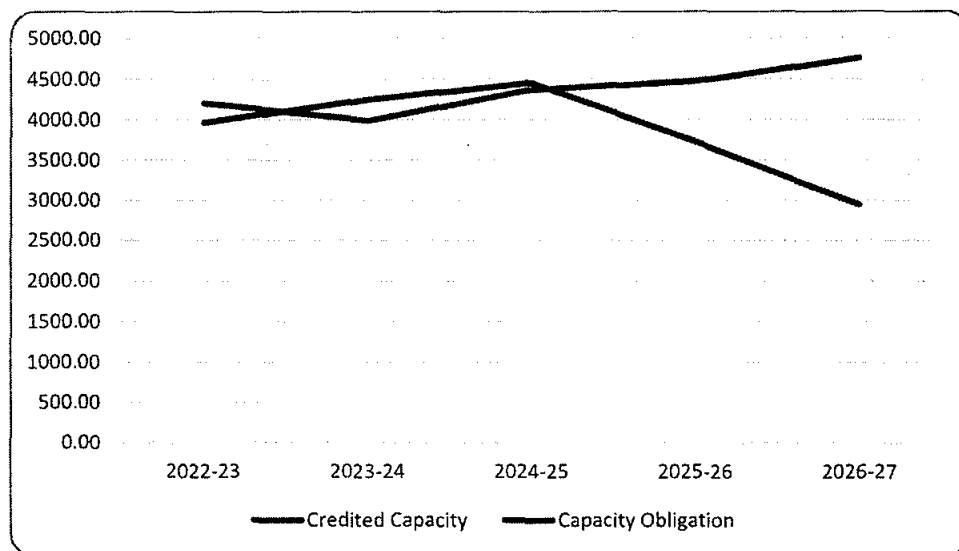
Figure 2: Results for IESCO



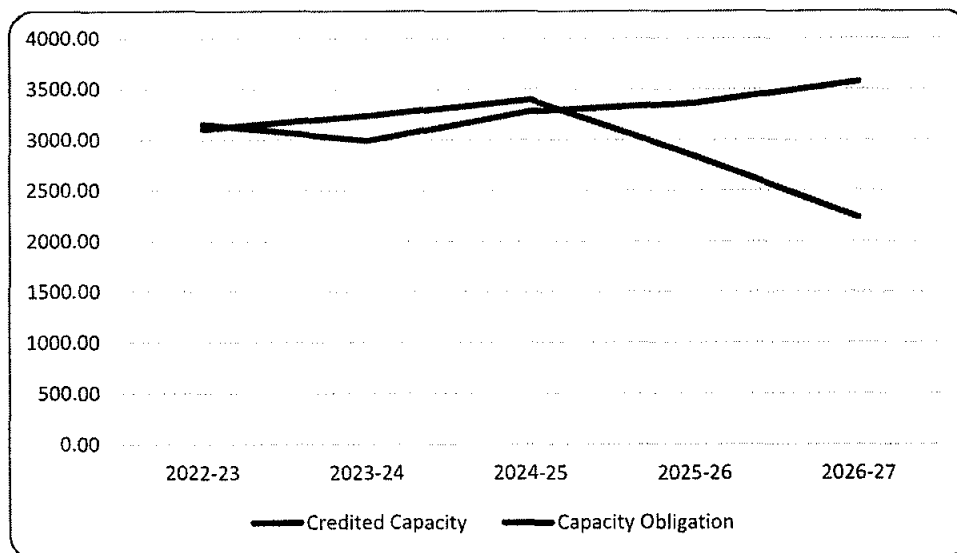
It can be observed from the above figure that IESCO is compliant in all years as its Credited Capacity covers 100% of its Capacity Obligation in all years.

Figure 3: Results for LESCO

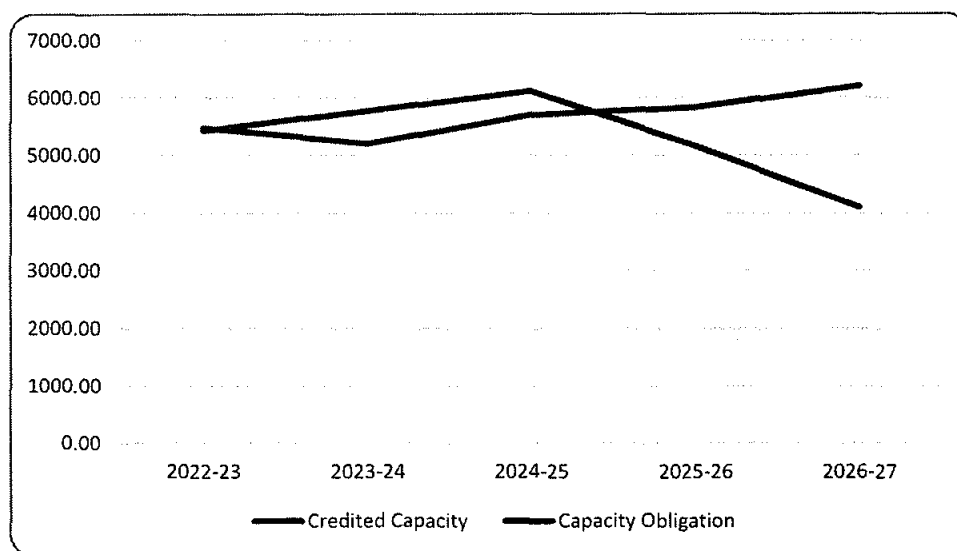
It can be observed from the above figure that LESCO is found Minor Non-Compliant in year 2023-2024 as its Credited Capacity covers 97.36% of its Capacity Obligation in that year. For the all other years, it is found Compliant.

Figure 4: Results for FESCO

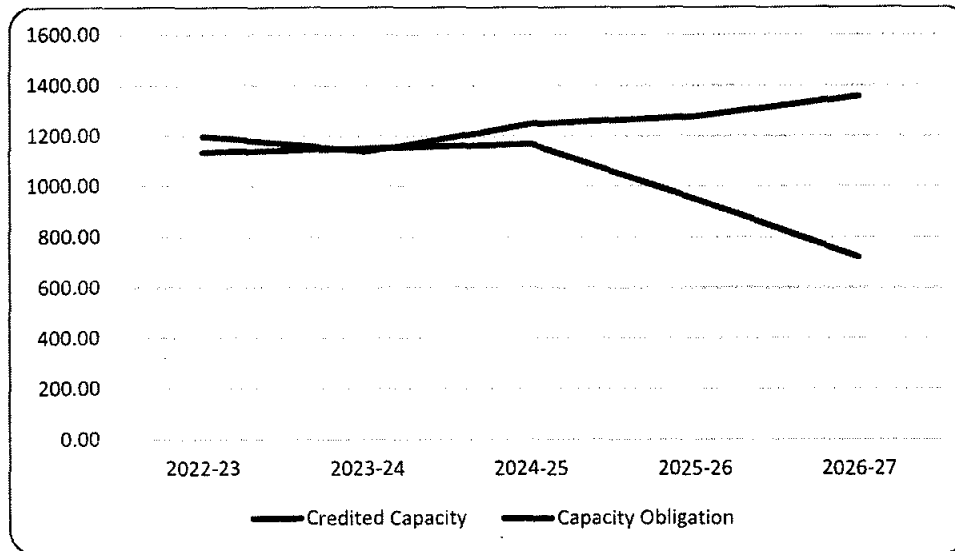
It can be observed from the above figure that FESCO is Serious Non-Compliant in year 2023-24 as its Credited Capacity only covers 94.75% of its Capacity Obligation in that year. For all other years, it is found Compliant as its Credited Capacity covers 98-100% of its Capacity Obligation.

Figure 5: Results for GEPCO

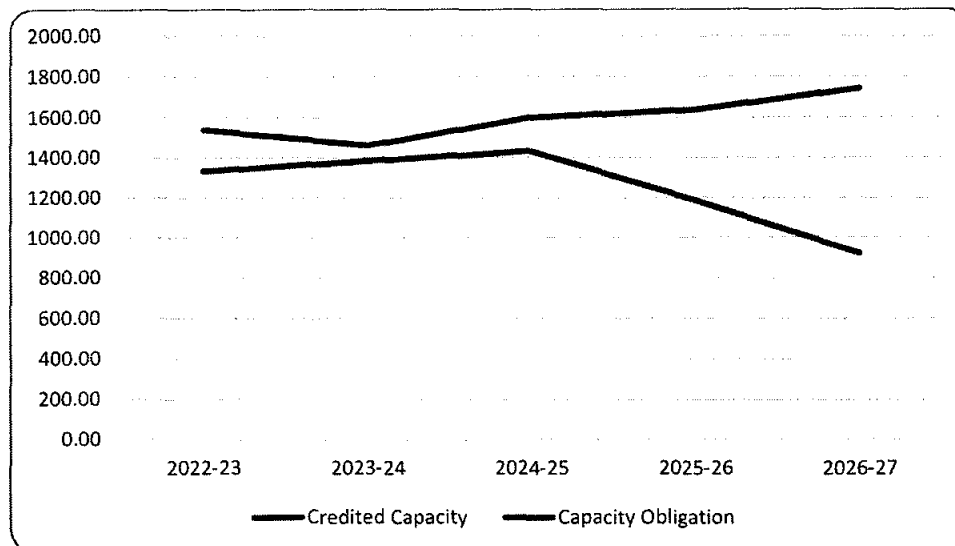
It can be observed from the above figure that GEPCO is found Serious Non-Compliant in year 2023-2024 as its Credited Capacity only covers 93.49% of its Capacity Obligation in that year. It is found Minor Non-Compliant in year 2024-2025 as its Credited Capacity only covers 97.68% of its Capacity Obligation in that year. For all other years, it is found Compliant as its Credited Capacity covers 98-100% of its Capacity Obligation.

Figure 6: Results for MEPCO

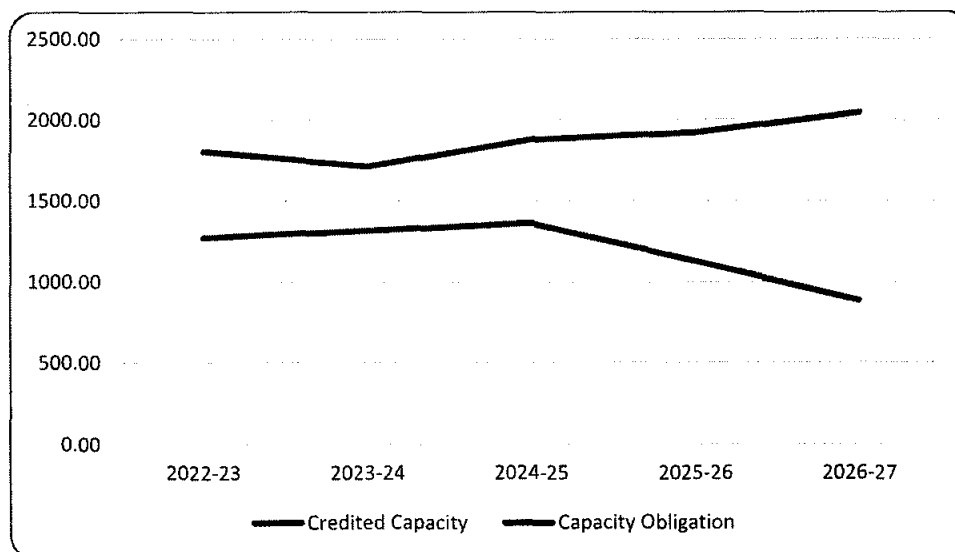
It can be observed from the above figure that MEPCO is found Serious Non-Compliant in years 2023-2024 and 2024-2025 as its Credited Capacity only covers 91.03% and 94.33% respectively of its Capacity Obligation in those years. For other years, it is found Compliant.

Figure 7: Results for SEPCO

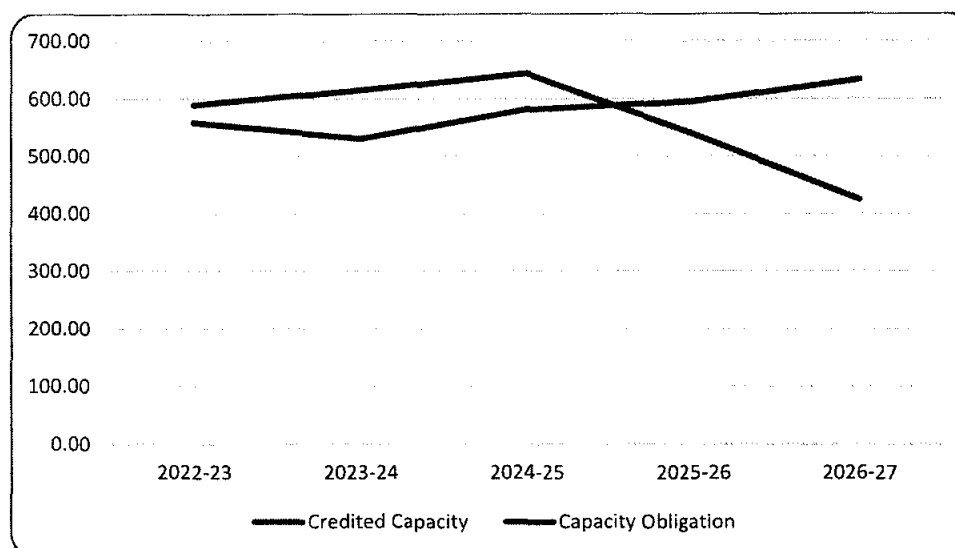
It can be observed from the above figure that SEPCO is compliant in all years as its Credited Capacity covers 98-100% of its Capacity Obligation in all years.

Figure 8: Results for HESCO

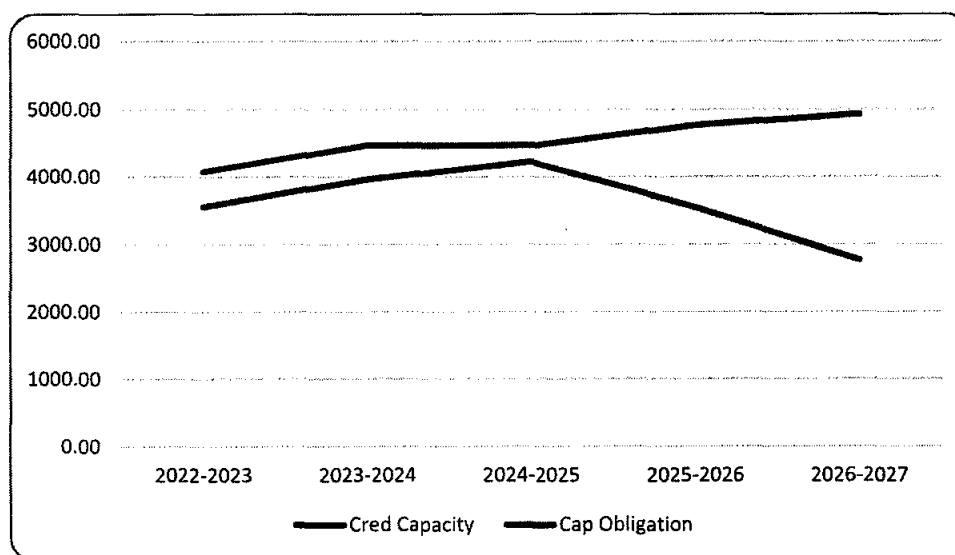
It can be observed from the above figure that HESCO is compliant in all years as its Credited Capacity covers 100% of its Capacity Obligation in all years.

Figure 9: Results for QESCO

It can be observed from the above figure that QESCO is compliant in all years as its Credited Capacity covers 100% of its Capacity Obligation in all years.

Figure 10: Results for TESCO

It can be observed from the above figure that TESCO is found Serious Non-Compliant in years 2022-2023, 2023-2024 and 2024-25 as its Credited Capacity only covers 94.78%, 86.25% and 90.41% respectively of its Capacity Obligation in those years. For the remaining years, it is found Compliant. However, it is clarified that with the revised Allocation Factors as recommended under the trial run, this situation is resolved.

Results for KE

It can be observed from the above figure that KE is compliant in all years as its Credited Capacity covers 100% of its Capacity Obligation in all years.

Part 5: Stakeholders Feedback

The following were the comments received after circulating the capacity obligation report based on 2021 IGCEP and 2021 PMS. These comments and responses are kept in mind while preparing this updated capacity obligation report.

Summary of the comments received from GEPCO:

1. "Commercial Allocation Factors" should be reviewed and rationalized as despite surplus capacity available in the system, GEPCO is declared "Serious Non-compliant".
2. The year 2021-22 should be excluded from Ex-Ante and evaluated on Ex-Post basis according to the methodology mentioned in the Commercial Code Chapter 18.
3. The definition of current year should be reviewed and to consider the "Current year is financial year immediately next following the year in which compliance with the capacity obligation is being verified". This will provide time window to the market participant in violation for buying surplus available with over compliant market participant even within the legacy contracts.
4. It is suggested that the reserve margin may be dispensed with for the calculation of capacity obligation as the capacity obligation is already based on non-coincidental peak as per MTLF of each market participant and the allocated capacity is based on proportional sum of MDI, further adjusted for the availability factor.
5. The Capacity Obligation Report has been prepared on calendar year basis, which is inconsistent aligned with all other regulatory processes. Medium Term Demand Forecast, which forms the basis of the Capacity Obligation, IGCEP, Business Plan, consumer end tariff and all other regulatory processes are based upon fiscal year, Therefore, the Capacity Obligations shall also be determined on fiscal year basis.

CPPA-G agrees with the recommendations of the GEPCO and has amended the report for observation no 2, 3, and 5 above already. The other recommendations will be presented to the Authority in the final test run report for consideration.

Summary of the comments received from SEPCO:

SEPCO has compared the values used by the Market Operator from the Commercial Metering System with the values of their LDI meter system and has commented that the values don't match.

It is hereby clarified that CPPA-G uses the hourly consumption data from the CDP meters integrated with the SMS of the MSP which is different than the one reported by the LDI meters which are installed for management purposes only. Therefore, these two values shall not be compared.

Consultative Sessions:

One consultative session was arranged for MEPCO MIRAD team on their request in which the results were explained in detail and their queries were answered briefly. Another consultative session was arranged for all power sector entities including NEPRA in which the results were presented and queries were addressed.

Part 6: Recommendations

Based on the results, the following recommendations are formulated:

- i. It has been observed that DISCOs which are compliant with their Capacity Obligations have sufficient excess amount of capacity in each year to share with the DISCOs that are in shortages. Since all DISCOs have jointly procured generation through the Legacy Contracts, therefore, a mechanism shall be worked out to allocate the excess amount to those DISCOs which are in need of it. This will avoid the risk of obligating DISCOs to procure further capacity when there is sufficient margin available in the already contracted capacity. If such re-allocation is allowed, then all DISCOs shall be compliant with their Capacity Obligations.
- ii. A recommendation has been made from GEPCO to abolish the reserve margin as the Capacity Obligations are based on the individual peaks of the DISCOs which is already greater than the coincidental system peak. CPPA-G doesn't agree with this recommendation as historical data shows that the coincidence factor is above 95% and the revised Firm Capacity calculation methodology (recommended in the trial run report) also enhances the Firm Capacity of thermal generators, hence some reserve margin need to be there for supply adequacy.

Part 6: Ex-post Compliance with Capacity Obligations

In accordance with the provisions of the Commercial Code (Clause 9.1.1.3), the results of the Balancing Mechanism for Capacity shall be used to verify the ex-post compliance with the Capacity Obligation of each Market Participant. The Balancing Mechanism for Capacity has already been executed for year 2022 as per provisions of the Commercial Code.

For ex-post compliance with the Capacity Obligations, the Capacity demanded, and Capacity provided by Market Participants is evaluated based on the results of the BMC. If the Capacity Provided (Self-owned or through purchase in Contracts) by a Market Participant is greater than the Capacity Demanded (Self consumption or through selling Capacity in Contracts) by such Market Participant, then such Market Participants will have a positive imbalance. If the Capacity Provided by a Market Participant is less than the Capacity Demanded by such Market Participant, then such Market Participants will have a negative imbalance and will pay for the shortage as per the mechanism described in the Commercial Code.

The Market Participants with negative capacity imbalances are further evaluated in such a manner that where they were able to purchase the shortage in the BMC or not. If there was enough surplus Capacity in the Balancing Mechanism for Capacity to supply to all market participants which are in shortage and the Market Participants are willing to pay the amount as determined by the Market Operator, then the ex-post compliance of such market participants will be considered fulfilled. However, if there is not enough surplus capacity in the BMC to fulfill the requirement of the market participants having negative capacity imbalances or if the market participants having negative capacity imbalances don't submit the requisite security covers to the Market Operator, then the Capacity Obligations of such market participants will be considered as not fulfilled and all such non-compliance will be categorized as Serious-Non-Compliance and will be dealt accordingly.

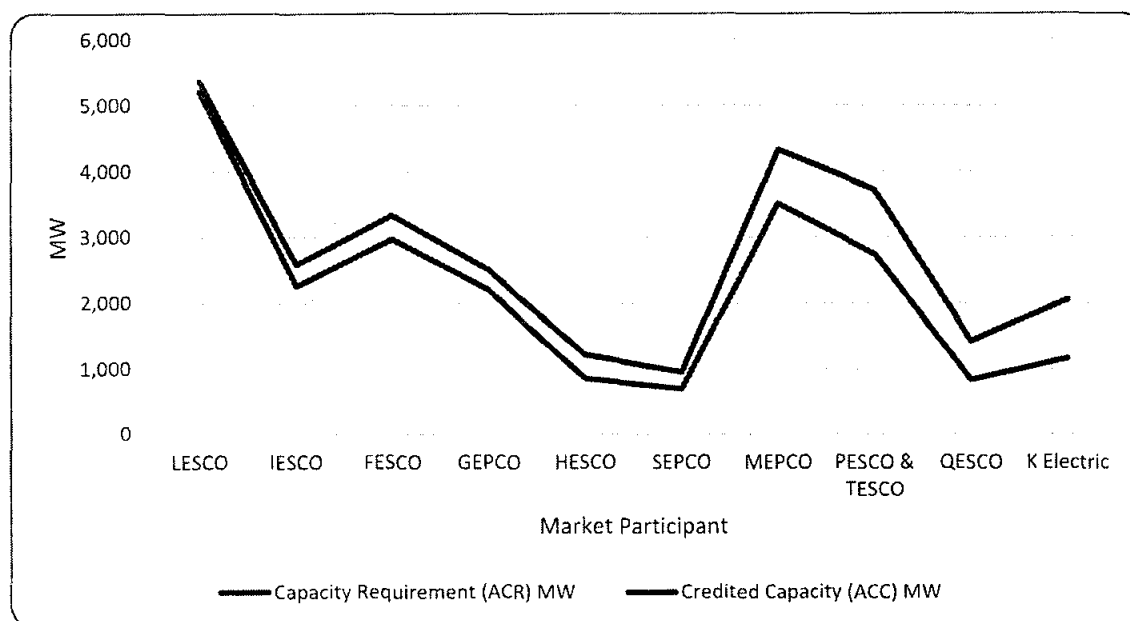
The results of the Balancing Mechanism for Capacity for the year 2022 are given in Error! Reference source not found. below.

Table 19: Results of BMC

#.	Market Participant ID	Market Participant Name	Capacity Requirement (ACR)	Credited Capacity (ACC)	Capacity Balance (CB)
			MW	MW	MW
1	2	LESCO	5,210	5,362	152
2	3	IESCO	2,256	2,579	323
3	4	FESCO	2,969	3,326	358
4	5	GEPCO	2,198	2,496	297
5	6	HESCO	848	1,217	370
6	7	SEPCO	690	948	258
7	8	MEPCO	3,510	4,335	826
8	9,11	PESCO & TESCO	2,736	3,718	982
9	10	QESCO	835	1,428	593
10	12	K Electric	1,157	2,050	893

The above results have been presented in graphical form in **Figure 11** below.

Figure 11: Results of BMC and Ex-Post Compliance with Capacity Obligations



Since all the Market Participants are in a positive imbalance in the Balancing Mechanism of Capacity and there is no Market Participant with negative capacity imbalances. So, all the Market Participants are compliant in Ex-post Compliance with Capacity Obligations as depicted in **Table 20** below.

Table 20: Ex-Post Compliance with Capacity Obligations

#.	Market Participant ID	Market Participant Name	Ex-Post Compliance 2022
1	2	LESCO	Compliance
2	3	IESCO	Compliance
3	4	FESCO	Compliance
4	5	GEPCO	Compliance
5	6	HESCO	Compliance
6	7	SEPCO	Compliance
7	8	MEPCO	Compliance
8	9	PESCO	Compliance
9	10	TESCO	Compliance
10	11	QESCO	Compliance

Annexure-A

Table 21: Abbreviations of Project's names

Abbreviation	Project Name
APL	Atlas Power Limited
AGL	Attock Generation Limited
CPH	China Power Hub
EPQL	Engro Power Qadriabad Limited
EPTL	Engro Power Thar Limited
FPCDL	Foundation Power Company Dharki Limited
HPGCL	Halmore Power Generation Company Limited
HSR	Huaneng Shandong Ruyi
LPTL	Liberty Power Tech Limited
NEL	Narowal Energy Limited
HBS	Hawaili Bahadur Shah
NCPL	Nishat Chunian Power Limited
NPL	Nishat Power Limited
OPCL	Orient Power Company Limited
PQEPC	Port Qasim Electric Power Company
QATPL	Quaid e Azam Thermal Power Limited
SPL	Saif Power Limited
SECL	Sapphire Energy Company Limited
AEL	Altern Energy Limited
LIBERTY	TNB Liberty
FKPCL	Fauji Kabirwala Power Company Limited
KEL	Kohinoor Energy Limited
HCPC	Habibullah Coastal Power Company