



Gul Ahmed Energy Limited

F-NEPRA-L22-00095

To,
The Registrar,
National Electric Power Regulatory Authority,
NEPRA Tower, Attaturk Avenue (East), Sector G-5/1
Islamabad, Karachi

Dear sir,

SUBJECT: GUL AHMED ENERGY LIMITED ("COMPANY") – REFERENCE TARIFF

We, Gul Ahmed Energy Limited, a company duly established under laws of Pakistan with its registered office located at Plot No. 8, Sector Model Village, Humak, Islamabad, Pakistan (the "Licensee"), being the holder of generation license No. IPGL/09/2003 submit to National Electric Power Regulatory Authority (NEPRA) (the "Authority") for the Authority's kind consideration and approval, the application (together with the information and annexures attached thereto) for the reference tariff petition (the "Reference Tariff Petition") to cater for extended term of its power purchase agreement with K-Electric Limited (the "Application").

In relation hereto, we certify that the documents annexed with and in support of this Application are prepared and submitted in conformity with the applicable laws of Pakistan, including the "Regulation of Generation, Transmission, and Distribution of Electric Power Act, 1997" (the "Act") and its rules and regulations, and we undertake and confirm that the information provided in the attached documents is true and correct to the best of our knowledge and belief. The Reference Tariff Petition and its annexures thereto are submitted in triplicate, together with:

- A Bank Draft / Cheque bearing Reference No. 00914379 dated 12th September 2022, amounting to PKR 1,869,444/- (Pakistani Rupees One Million Eight Hundred Sixty-Nine Thousand Four Hundred and Forty-Four only) drawn in favor of the Authority, as the application fee for the Reference Tariff Petition;
- Extract of the Board Resolution of the Licensee; and
- Statement of the Authorised Representative of the Licensee.

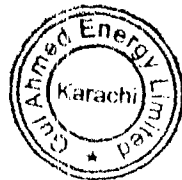
In light of the submissions set out in the Reference Tariff Petition and the information attached thereto, the Authority is kindly requested to process the Application at the earliest, thereby enabling the Licensee to proceed further.

We look forward to providing the Authority with all assistance required in respect of processing this Application.

Yours sincerely,

For and on Behalf of
Gul Ahmed Energy Limited

Danish Iqbal
Chief Executive/ Authorised Representative



For info & n. (e.p.d.) 21/9/22
- Di (C.O.)
- w.p. 1
- P.D. 6 CT
- SA (C. 2 E)
- n.p.

12th September, 2022

cc Chairman
- m. C. 2 E / (C.A.)
- m. C. 2 E / (T)

REGISTRAR OFFICE
Diary No: 9622
Date: 21-9-2022

BEFORE
THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)

TARIFF PETITION
FOR
REFERENCE GENERATION TARIFF

PURSUANT TO
ENABLING PROVISIONS OF NEPRA ACT 1997
READ WITH ENABLING PROVISIONS OF
RULES & REGULATIONS MADE THEREUNDER

ON BEHALF OF

GUL AHMED ENERGY LIMITED

FOR NEPRA'S APPROVAL OF REFERENCE GENERATION TARIFF
FOR
GUL AHMED ENERGY LIMITED

RELATING TO A THERMAL POWER GENERATION FACILITY OF 136.17 MW (GROSS)

LOCATED AT

KORANGI INDUSTRIAL TOWNSHIP, KARACHI, SINDH, PAKISTAN

DATED: SEPTEMBER 12TH, 2022

LEGAL & REGULATORY CONSULTANT

HAIDERMOTA & CO.

KARACHI OFFICE
PLOT 1010, 4TH FLOOR, AL MURTAZA
LANE 1, PHASE VIII, DEFENCE HOUSING
AUTHORITY KARACHI, PAKISTAN
TEL: +92-21-111520000
FAX: +92-21-35871054
EMAIL: hmco@hmco.com.pk

COMPANY

GUL AHMED ENERGY LIMITED

PRINCIPLE OFFICE
7TH FLOOR, AL-TUJARA CENTRE, 32-1-A,
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FAISAL ROAD, KARACHI, PAKISTAN
TEL: +92-21-34540270-73
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EMAIL: office@gaenergy.com



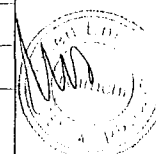
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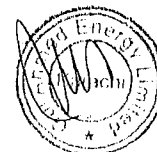


GLOSSARY

TERM	DEFINITION
1994 Power Policy	'Policy Framework and Package of Incentives for Private Sector Power Generation Projects in Pakistan' dated March 1994.
Applicable NEPRA Laws	NEPRA Act and rules and regulations made thereunder.
Authority	National Electric Power Regulatory Authority.
Board	The board of directors of the Company.
BOO	Build Own Operate.
Capacity Charge	The capacity charge component of the Reference Generation Tariff.
Company	Gul Ahmed Energy Limited, a company duly established and existing under the laws of Pakistan with its corporate office located at 7 th Floor, Al-Tijarah Centre, 32-1-A, Block 6, P.E.C.H.S, Main Shahra-E-Faisal Road, Karachi, Pakistan.
Cost of Working Capital Component	The working capital cost component of the Capacity Charge.
CPI	Consumer Price Index.
Energy Charge	The energy charge component of the Reference Generation Tariff.
EPC	Engineering, procurement, and construction.
Extension Commencement Date	November 3, 2022
Facility	The Company's 136.17 (Gross) thermal power generation facility located at the Site.
FIFO	First In First Out.
Fixed O&M Cost Component	The fixed operations and maintenance cost component of the Capacity Charge.
Fuel Cost Component	The fuel component of Energy Charge.
GAEG	Gul Ahmed Energy Group.
Generation License	Generation license No. IPGL/09/2003, issued by the Authority to the Company on August 26, 2003, the term whereof was further extended up-to August 25, 2029 pursuant to Authority's approval dated March 19, 2020, bearing reference No. NEPRA/R/LAG-10/9084-89, attached as ANNEXURE F (<i>COPY OF GENERATION LICENSE</i>).
GoP	The Government of Pakistan.
GST	General Sales Tax.
Insurance Cost Component	The insurance cost component of the Capacity Charge.
IPPs	Independent power producers.
KE	K-Electric Limited, a public limited company established and existing under the laws of Pakistan with its registered office at KE House, 39-B, Sunset Boulevard, Phase-II, Defence Housing Authority, Karachi, Pakistan.
KE Capacity Factor Confirmation	KE's e-mail dated September 08, 2022 attached as ANNEXURE E (<i>KE CAPACITY FACTOR CONFIRMATION</i>)
KE Power Purchase Consent	KE's letter dated April 13, 2022 bearing reference No. CEOSEC_246_1302022, as ANNEXURE D (<i>KE POWER PURCHASE CONSENT</i>).
KIBOR	Karachi Inter Bank Offered Rate.
LHV	Lower Heating Value.
NEPRA Act	Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

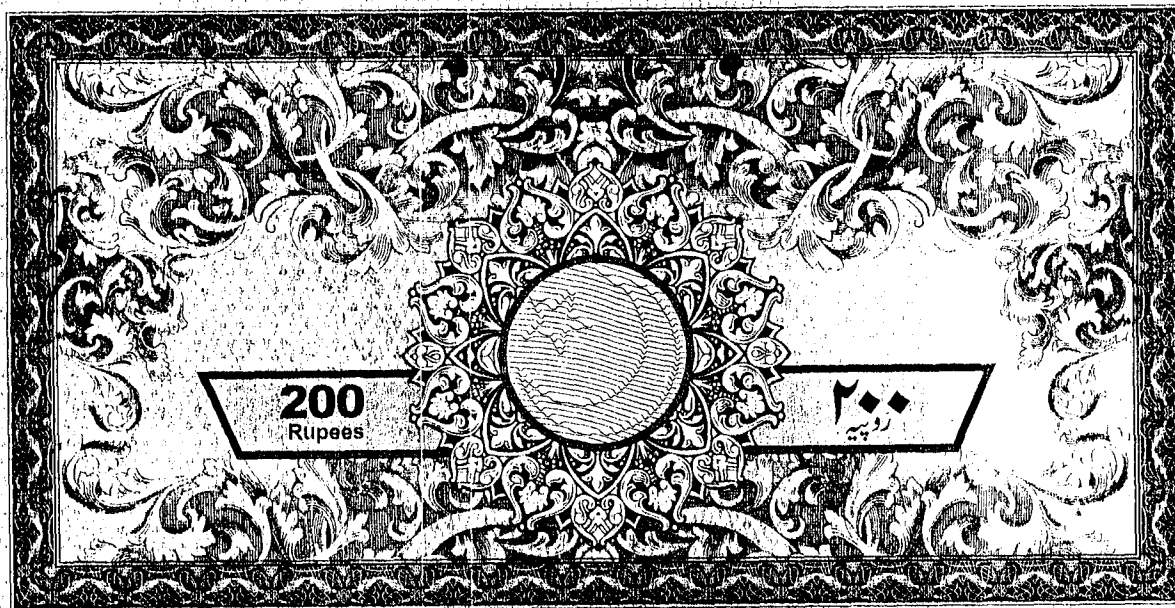


O&M	Operations and maintenance.
Original Power Purchase Agreement	Power Purchase Agreement dated June 07, 1995, executed between KE and the Company.
Reference Date	June 30, 2022
Reference Generation Tariff	The tariff to be approved, granted, and determined by the Authority pursuant to the Petition.
Reference Generation Tariff Table	The Reference Generation Tariff Table as set out in Section 7.3 and ANNEXURE H (REFERENCE GENERATION TARIFF TABLE) .
RFO	Residual Fuel Oil.
ROE	Return on Equity.
RULA	Remaining useful life assessment.
RULA Study Report	'Remaining Useful Life Assessment (RULA) Study Report' dated February 4, 2019, commissioned by M/s Continental Marine Energy Sdn Bhd (CME), Malaysia.
Site	Korangi, Industrial Township, Karachi, Sindh, Pakistan.
Specific FMEs	Has the meaning given to it in paragraph 10.2.1.
Tariff Determination	Authority's tariff determination dated June 03, 2020, bearing reference No. NEPRA/R/SA(Tariff)/TRF-464/GAEL-2019/14142-14144.
Tariff Petition	This tariff petition being filed by the Company for approval and grant of a reference generation tariff for the Facility.
Three Year Extension Term PPA	Has the meaning given to it in paragraph 2.2.9.
Two Year Extension Term	The seven hundred and thirty-day period commencing from November 03, 2022.
Variable O&M Cost Component	The variable O&M component of the Energy Charge.
USD	United States Dollars.



**COPY
OF
AFFIDAVITS OF AUTHORIZED REPRESENTATIVES OF
GUL AHMED ENERGY LIMITED**



**SARDAR ALI STAMP VENDOR**Licence # 18, Shop # 58, SITE Market
SITE Karachi

S No. DATE

ISSUED WITH ADDRESS..... G. SHAHID ALI

THROUGH WITH ADDRESS..... Advocate

PURPOSE..... Log. # 133

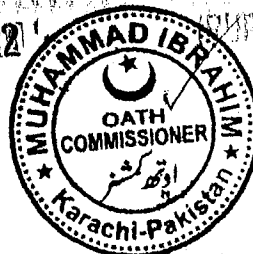
VALUERS..... 9621

STAMP VENDOR'S SIGNATURE.....

Stamp Paper is not valid for Divorce & Financial purpose

20 AUG 2022

RUPEES TWO HUNDRED ONLY



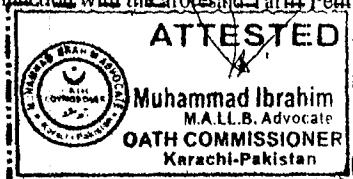
BEFORE

THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

AFFIDAVIT of Mr. Danish Iqbal son of Mr. Iqbal Alimohamed, resident of KDA Scheme I Extension, House No. B-70, KDA I, Karachi East, Pakistan and holding CNIC No. 42201-4584613-1 (the "Deponent"), being the Chairman & Chief Executive Officer of Gul Ahmed Energy Limited (a company duly established and existing under the laws of Pakistan with its principal office located 7th Floor at Al-Tijarah Centre, 32-1-A, Block - 6, P.E.C.H.S, Main Shahrah-e-Faisal, Karachi, Pakistan and registered office located at Plot No. 8, Sector Model Village, Humak, Islamabad, Pakistan).

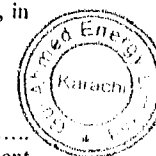
I, the above-named Deponent, do hereby solemnly affirm and declare that:

- I am the Chairman/ Chief Executive of Gul Ahmed Energy Limited (a company duly established and existing under the laws of Pakistan with its principal office located at 7th Floor Al-Tijarah Centre, 32-1-A, Block - 6, P.E.C.H.S, Main Shahrah-e-Faisal, Karachi, Pakistan and registered office located at Plot No. 8, Sector Model Village, Humak, Islamabad, Pakistan) (the "Petitioner").
- For the purposes of preparation, finalization, submission and filing (including all matters in respect of the same), on behalf of the Petitioner of the accompanying tariff petition (including all supporting documents attached thereto) dated 12 September, 2022, (the "Tariff Petition") before the National Electric Power Regulatory Authority (the "Authority") and for the purposes of further representing the Company and performing all acts and deeds, on behalf of the Petitioner, in respect of the Tariff Petition, I am the principal authorized representative/attorney of the Petitioner in terms of the authority and powers vested in and conferred on me, the Deponent, vide the duly passed resolution(s) of the Board of Directors (the "Board") of the Petitioner dated 27th May, 2022.
- The contents of the accompanying Tariff Petition are true and correct to the best of my knowledge and belief, and nothing material or relevant thereto has been concealed or withheld therefrom.
- All further documentation and information to be provided by me, the Deponent, on behalf of the Petitioner, in connection with the aforesaid Tariff Petition shall be true and correct to the best of my knowledge and belief.



Verification

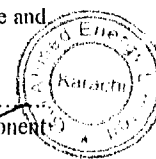
Signature of Deponent



- It is hereby verified on solemn affirmation at Karachi, Pakistan on this 12th day of September, 2022, that the contents of the above Affidavit are true and correct to the best of my knowledge and belief, and that nothing material or relevant thereto has been concealed or withheld therefrom to the best of my knowledge and belief.



Signature of Deponent



**COPY OF
EXTRACT OF
RESOLUTION PASSED BY
BOARD OF DIRECTORS OF
GUL AHMED ENERGY LIMITED**





Gul Ahmed Energy Limited

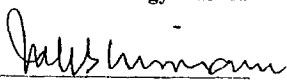
**CERTIFIED EXTRACT OF THE RESOLUTION PASSED BY THE BOARD OF DIRECTORS
OF GUL AHMED ENERGY LIMITED HELD ON FRIDAY, 27 MAY, 2022, AT 7th FLOOR, AL-TIJARAH CENTRE,
32-1-A, BLOCK-6, PECHS, KARACHI**

RESOLVED THAT, Gul Ahmed Energy Limited (a company duly established and existing under the laws of Pakistan with its registered office located at Plot No. 8, Sector Model Village, Humak, Islamabad, Pakistan) (the "Company"), having extended the current term of the power purchase arrangement by two (2) years (the "Two Year Extension Term PPA") dated 29 April, 2022 (on such terms as are mutually agreed and subsequently approved by the board of directors of the Company (the "Board")) to be executed with K-Electric Limited (a public limited company duly established and existing under the laws of Pakistan with its registered office located at KE House, 39-B, Sunset Boulevard, Phase-II, Defence Housing Authority, Karachi, Pakistan) ("KE") in respect of its 136.17 MW (Gross) thermal power generation facility located at Korangi Industrial Township, Karachi, Sindh, Pakistan, Be And Is Hereby Authorized to prepare, finalize, deliver, file, apply, submit, and further pursue pursuant to the applicable laws of Pakistan, including the 'Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997' (the "NEPRA Act") and the rules and regulations made thereunder (the "Applicable NEPRA Laws"), a tariff petition (together with all documents attached thereto) (the "Tariff Petition") before the National Electric Power Regulatory Authority (the "Authority") for the Authority's approval and in relation thereto, enter into and execute all required documents, make all filings, attend all hearings, provide all required information and pay all applicable fees, in each case, of any nature whatsoever.

FURTHER RESOLVED THAT, in respect of the matters relating to the Tariff Petition, (i) Mr. Danish Iqbal (being the Chairman / Chief Executive officer of the Company and having CNIC No. 42201-4584613-1) and (ii) Mr. Ubaid Amanullah (being the Chief Operating Officer of the Company and having CNIC No. 42301-8209569-7) Be And Are Hereby singly and jointly appointed as authorized representatives of the Company and are Hereby authorized and empowered for and on behalf of the Company, as the Company duly appointed Authorized Representatives, to address, perform, negotiate, decide, execute, implement and/or undertake all matters of any nature whatsoever in relation to the Tariff Petition including, without limitation:

- (i) review, execute, submit, and deliver the Tariff Petition and any related documentation required by the Authority for its approval of the Tariff Petition including any contracts, documents, powers of attorney, affidavits, statements, letters, forms, applications, deeds, guarantees, undertakings, approvals, memorandum, amendments, letters, communications, notices, certificates, request statements and any other instruments of any nature whatsoever;
- (ii) represent the Company in all negotiations, representations, presentations, hearings, conferences and/ or meetings of any nature whatsoever with any entity (including, but in no manner limited to the Authority, KE, any private parties, companies, partnerships, individuals, governmental and/or semi-governmental authorities and agencies, ministries, boards, departments, regulatory authorities and/or any other entity of any nature whatsoever);
- (iii) sign, execute and deliver, for and on behalf of the Company, all necessary documentation (including any contracts, documents, powers of attorney, affidavits, statements, letters, forms, applications, deeds, guarantees, undertakings, approvals, memorandum, amendments, letters, communications, notices, certificates, request statements and any other instruments of any nature whatsoever), pay the necessary fees, appear before any entity (including the Authority, KE, any private parties, companies, partnerships, individuals, governmental and/or semi-governmental authorities and agencies, ministries, boards, departments, regulatory authorities and/ or any other entity of any nature whatsoever), as required from time to time, and do all acts necessary for processing and further approval of the reference tariff, as applied pursuant to the Tariff Petition, by the Authority;
- (iv) further sub-delegate any or all of the aforementioned powers and authorities to one or more officers of the Company or any other person or persons, singly and/ or jointly; and
- (v) do all such acts, deeds and things as may be necessary for carrying out the purposes aforesaid and give full effect to the above resolutions.

Certified to be a True Copy
For and on Behalf of
Gul Ahmed Energy Limited


Muhammed Amin Bhimani
Company Secretary



SECTION 1

DETAILS OF THE COMPANY



1. DETAILS OF COMPANY

1.1 NAME & ADDRESS

GUL AHMED ENERGY LIMITED
7th Floor Al-Tijarah Centre,
32 - 1 - A, Block - 6,
P.E.C.H.S, Main Shara-e-Faisal,
Karachi, Pakistan
TEL: +92-2134540270-73
FAX: +92-21-34540274

1.2 AUTHORIZED REPRESENTATIVES

1.2.1 **MR. DANISH IQBAL**

Chairman & Chief Executive
Gul Ahmed Energy Limited
Email: danish.iqbal@gaenergy.com

1.2.2 **MR. UBAID AMANULLAH**

Chief Operating Officer
Gul Ahmed Energy Limited
Email: ubaid.amanullah@gaenergy.com

1.2.3 **MR. MUHAMMED AMIN BHIMANI**

Chief Financial Officer / Company Secretary
Gul Ahmed Energy Limited
Email: amin.bhimani@gaenergy.com

1.2.4 **MR. MUHAMMED YOUSUF AZIZ**

Senior Manager Finance & Corporate
Gul Ahmed Energy Limited
Email: yousuf.aziz@gaenergy.com

1.2.5 **MR. SAAD IQBAL**

Attorney
Gul Ahmed Energy Limited
Email: saadiqbal@metro-group.com.pk

1.2.6 **MR. SULEMAN MODI**

Commercial Manager
Gul Ahmed Energy Limited
Email: suleman.modi@gaenergy.com



SECTION 2
INTRODUCTION TO THE COMPANY
&
THE PROJECT



2. INTRODUCTION TO COMPANY & THE PROJECT

2.1 THE COMPANY & PROJECT DEVELOPMENT BACKGROUND

GUL AHMED ENERGY LIMITED (a company duly established and existing under the laws of Pakistan with its principle office located at 7th Floor Al-Tijarah Centre, 32 - 1 - A, Block - 6, P.E.C.H.S, Main Shara-e-Faisal, Karachi, Pakistan and registered office located at Plot No. 8, Sector Model Village, Humak, Islamabad, Pakistan) (the "Company"), being the petitioner under this tariff petition ("Tariff Petition") for approval and grant of a reference generation tariff ("Reference Generation Tariff"), was set up and established on July 20, 1994, for the purposes of undertaking the project (the "Project") relating to the development, setting up, implementation, construction and operation of a 127.5 MW (Net) thermal power generation facility (the "Facility") located at Korangi, Industrial Township, Karachi, Sindh, Pakistan (the "Site").

2.1.1 The Company's shareholding pattern and constitutional documents are attached herewith as follows:

- (i) ANNEXURE A (*Shareholding Pattern*);
- (ii) ANNEXURE B (*Memorandum and Articles of Association*); and
- (iii) ANNEXURE C (*Certificate of Incorporation*).

2.1.2 The Project is being undertaken and implemented pursuant to the Government of Pakistan's (the "Govt") 'Policy Framework and Package of Incentives for Private Sector Power Generation Projects in Pakistan' formulated in March 1994 (the "1994 Power Policy"). Key milestones relating to the developmental phase of the Project are noted below:

MILESTONE	DATE OF ACHIEVEMENT
Submission of application	September 12, 2022
Issuance of Letter of Interest	July 14, 1994
Issuance of Letter of Support	May 31, 1995
Date of Financial Closing	September 30, 1995
Commercial Operations Date	November 3, 1997


2.1.3 The Company procured a license in 2003 vide License No. IPGL/09/2003 dated August 26, 2003 (the "Generation License") from the National Electric Power Regulatory Authority ("Authority") under the 'Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997' (the "NEPRA Act") and the rules and regulations made thereunder. The term thereof was further extended by the Authority for a period of 10 years, i.e. up to August 25, 2029, vide Approval No. NEPRA/R/LAG-10/9084-89, dated March 19, 2020.

2.2 THE CONTRACTUAL ARRANGEMENTS

2.2.1 For the purposes of developing the Project under the 1994 Power Policy, the Company entered into, *inter alia*, the following contractual arrangements:

CONTRACTUAL ARRANGEMENT	DATE OF EXECUTION
IMPLEMENTATION AGREEMENT	June 29, 1995
ORIGINAL POWER PURCHASE AGREEMENT	June 7, 1995
FUEL SUPPLY AGREEMENT	July 19, 1995
GOP GUARANTEE	March 20, 1996

2.2.2 In addition, the Company also entered into:

- (i) engineering, procurement, and construction arrangements for the Facility with world-class EPC contractors being a consortium of two companies, Tomen Corporation (Tomen Power Singapore PTE Limited) and Wartsila Diesel OY with the main OEM being Wartsila and  and
- (ii) long term operations and maintenance contractual arrangements with Wartsila Pakistan (Private) Limited.

- 2.2.3 The Company, through its experienced and highly skilled in-house resources, has been operating and maintaining the Project and the Facility (including its efficiency and reliability) since the commissioning date. The successful operations of the Project and the Facility are a testament to the Company's in-house team's excellence.
- 2.2.4 The power purchase agreement dated June 7, 1995 ("**Original Power Purchase Agreement**") executed between the Company and K-Electric Limited (formerly Karachi Electric Supply Corporation Limited, a public limited company duly established and existing under the laws of Pakistan with its registered office located at KE House, 39-B, Sunset Boulevard, Phase-II, Defence Housing Authority, Karachi, Pakistan) ("**KE**") in relation to the Project expired on November 2, 2019, following which the above framework of contractual arrangements also expired therewith.
- 2.2.5 Considering the shortfall of power in KE's systems and based on the mutual agreement between the Company and KE, KE issued a letter of interest to the Company to procure power from the Company for a further period of 5 years through extending the term of their power purchase arrangement.
- 2.2.6 Upon receipt of the letter of interest from KE:
- (i) the Company commissioned the 'remaining useful life assessment' to the renowned engineering consultant, M/s Continental Marine Energy Sdn Bhd (CME), Malaysia, who authored the 'Remaining Useful Life Assessment (RULA) Study Report' dated February 4, 2019 ("**RULA Study Report**");
 - (ii) the Company filed the 'Licensee Proposed Modification of Generation License' before the Authority *vide* its application dated February 06, 2019, seeking an extension of 10 years in the term of the Generation License; and
 - (iii) the Company applied for a cost-plus tariff for a 5-year power purchase agreement extension term *vide* its tariff petition No. F/NEPRA/L19/00489 dated February 03, 2019, before the Authority.
- 2.2.7 Considering the remaining useful life of the plant and satisfactory performance of the Company, the Authority extended the term of the Generation License for 10 years, that is up to August 25, 2029, *vide* approval No. NEPRA/R/LAG-10/9084-89.
- 2.2.8 Additionally, after a series of applications and review requests filed by the Company, the Authority issued its tariff determination No. NEPRA/R/SA(Tariff)/TRF-464/GAEL-2019/14142-14144 dated June 3, 2020, for a 3 year power purchase agreement extension term ("**Tariff Determination**") as against the Company's request for 5 years.
- 2.2.9 Pursuant to Section 4.1(c) of the Original Power Purchase Agreement, and in accordance with the Tariff Determination, the Parties have continued their 'power sale arrangement' from November 2, 2019, as per the power purchase agreement dated April 29, 2022 (the "**Three Year Extension Term PPA**").

2.3 THE PROJECT SPONSORS

The Project's sponsors consist of a highly skilled and experienced group of companies that are well-versed with the energy sector and through the subject Project have brought their global skills and expertise to Pakistan. Their investment in Pakistan's energy sector under the first power policy i.e., the 1994 Power Policy and their continued work in Pakistan is a testament to their dedication to the continued growth of Pakistan's energy sector.

2.3.1 GUL AHMED ENERGY GROUP

GUL AHMED ENERGY GROUP ("**GAEG**") holds 100% shareholding in the Project and is one of the largest groups in Pakistan, having diversified business portfolios in energy, textile, beverages, real estate, and capital market. The Gul Ahmed Group has been in existence since 1948 and is one of the leading groups in the Pakistani business circle. The Gul Ahmed Energy Group's history

mirrors the success story of power generation in Pakistan. The Group initiated its business as a thermal power producer almost two decades ago, being the brainchild of (Late) Mr. Iqbal Alimohamed – the founder and former Chairman of Gul Ahmed Energy limited, the pioneer in power producer in Pakistani markets with over \$254 Million of assets under management. He served as the Chairman of M/S Thar Energy Limited and was a director on the board of Hub Power Company Limited. Additionally, he also acted as the Chief Executive Officer and Chairman of the Gul Ahmed Textile Mills, Chairman of the Board of Directors of My Bank, Chairman of the Board of Directors of Excel Insurance Limited, Director of Faysal Asset Management Limited, and Director of Kot Addu Power Company Limited.

As one of the first entrepreneurs in the Wind Power industry in Pakistan, Mr. Danish Iqbal is currently serving as the Chairman of Metro Power Group, Gul Ahmed Energy and its subsidiaries which include 50 & 60 Megawatt (MW) Wind Power projects. He completed his Bachelor of Science in Business Administration, majoring in Management & Marketing from American University in Sharjah, UAE. His journey in the energy sector started from Gul Ahmed Energy in 2005, when he oversaw financial investments and operations for its 136 MW Thermal Power plant. Well known for his strategies and innovative approach and with over 15 years' experience in the Power Sector, under his leadership and direction, both groups of companies expanded to renewable energy ventures, with four wind power plants at a total capacity of 210 MWs. In 2021, he was appointed as Chairman after serving as Executive Director at Gul Ahmed Energy. He is also the founder of the Pakistan Wind Energy Association which has 18 Wind Power projects under its umbrella and served as its Chairman till 2020.



SECTION 3
BACKGROUND TO THIS TARIFF PETITION



3. BACKGROUND TO THIS TARIFF PETITION

3.1 THE POWER PURCHASE AGREEMENT

3.1.1 For the purposes of, *inter alia*, sale of the power generated by the Facility and to set out the terms and conditions relating to the same, the Company and KE finalized an agreement entitled 'POWER PURCHASE AGREEMENT' (i.e., the Three-Year Extension Term PPA). It is highlighted, specifically for the purposes of this Tariff Petition, that the current term of the said power purchase agreement as set out therein in terms of its Section 2.2 (*Term*), is thirty- six consecutive months commencing from November 03, 2019, unless terminated earlier.

3.1.2 In addition, it is noted that the Three Year Extension Term PPA also contemplates a mechanism for renewal of its term prior to its expiry pursuant to Section 2.2(b) thereof, which states as follows:

"In the event that either Party: (i) requests for an extension of the Term under this Agreement or (ii) proposes to execute a new agreement with the other Party on revised tariff upon expiry of the Term; the Parties shall, in each case, be required to enter into discussions at least eight (8) Months before the expiry of this Agreement and approach NEPRA six (6) Months before the expiry of this Agreement for necessary approvals as required under the applicable Laws."

3.2 THE EXTENSION OF THE TERM OF THE POWER PURCHASE AGREEMENT

3.2.1 Considering, *inter alia*, that the Company has successfully operated its Facility, has catered for KE's consumer requirements by generating average around **703.69GWh** per annum up to June 2022, and has met its generation obligations for over 24 years. Now, the Company and KE (pursuant to Section 2.2(b) of the Three Year Extension Term PPA) have agreed to extend the term of the power purchase arrangement for an additional period, which shall commence on, November 3, 2022 (the "**Extension Commencement Date**").

3.3 THE KE CONSENT

3.3.1 KE granted its Power Purchase Consent to the Company, upon Company's request, for a further extension of the term, such that the additional term of the power purchase arrangement between the Company and KE extends for 2 years i.e., till November 02, 2024 ("**Two Year Extension Term**") with the option of successive extensions on a year-to-year basis (the "**KE Power Purchase Consent**"). A copy of the KE Power Purchase Consent is attached hereto at **ANNEXURE D (KE POWER PURCHASE CONSENT)**.

3.4 THIS PETITION FOR APPROVAL OF REFERENCE GENERATION TARIFF

3.4.1 Based on the KE Power Purchase Consent and in view of the submissions set out herein, the Company has prepared and hereby submits before the Authority this Tariff Petition for approval of the Reference Generation Tariff that will apply during the Two-Year Extension Term.

3.4.2 At the outset, the Company takes this opportunity to elaborate on the imperative nature of the Authority determining a distinct tariff for the Two Year Extension Term.

3.4.3 In this regard, please find enclosed an email from KE dated September 08, 2022 ("**KE Capacity Factor Confirmation**"), through which KE has informed the Company of its anticipated off take for the Two-Year Extension Term, which translates to an annual capacity factor of 40% for both the first year (November 03, 2022 – November 02, 2023) and the second year (November 03, 2023 – November 02, 2024), as **ANNEXURE E (KE CAPACITY FACTOR CONFIRMATION)**.

3.4.4 Pursuant to the KE Capacity Factor Confirmation, the Company hereby requests the Authority to allow a tariff for the Two Year Extension Term. For Authority's reference, the Company has provided data pertaining to the actual off-take take by KE, for the past 33 months, vide Table (i) and Table (ii) below:

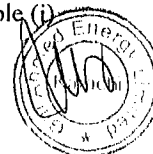


TABLE (I) – DISPATCH/OFF-TAKE DATA BASED ON PPA TERM TIME DURATION					
DESCRIPTION	FROM NOVEMBER 03, 2019, TO NOVEMBER 02, 2020	FROM NOVEMBER 03, 2020, TO NOVEMBER 02, 2021	FROM NOVEMBER 03, 2021, TO JULY 31, 2021	PROJECTED AUGUST 01, 2021 TO NOVEMBER 02, 2022	TOTAL
Capacity – MW	127.50	127.50	127.50	127.50	127.50
No. of Days	366	365	271	94	1096
Actual Dispatch - MWh	483,211	656,170	524,880	175,417	1,839,678
Actual Dispatch Factor %	43.34%	58.46%	63.51%	60.99%	54.85%
Authority's Determination %					64.2%

TABLE (II) – DISPATCH/OFF-TAKE DATA BASED ON FISCAL YEAR TIME-DURATION					
DESCRIPTION	AS PER FY 2019 TO 2020	AS PER FY 2020 TO 2021	2021-22		TOTAL
			AS PER FY 2021 TO 2022	PROJECTED JULY 01, 2022 TO NOVEMBER 02, 2022	
Capacity - MW	127.50	127.50	127.50	127.50	127.50
No. of Days	366	365	365	125	1221
Actual Dispatch -MWh	496,139	673,228	705,429	236,385	2,111,181
Actual Dispatch Factor %	44.25%	60.30%	63.30%	61.80%	56.50%

3.4.5 The above data demonstrates that the actual off-take during the Three Year Extension Term is on average **54.85%** (using the Three Year Extension Term time duration), and **56.50%** (using the Fiscal Year time duration), in comparison to the capacity factor of **64.2%** determined by the Authority under the Reference Tariff Determination.

3.4.6 Therefore, based on afore-stated facts, actual off-take data and the KE's 40% anticipated capacity factor provided to the Company for the Two Year Extension Term, the Company most humbly requests the Authority for the grant of Reference Generation Tariff, to enable the Licensee to receive adequate compensation for its costs, and to allow its Complex to continue operations in the public interest on a prudent and commercially viable basis. In this respect, we draw your attention to Rule 17(3) of the National Electric Power Regulatory Authority (Tariff Standards and Procedure) KRules, 1998, which state the factors to be taken into account for a suitably revised Tariff Determination:

"Tariffs shall be determined, modified or revised on the basis of and in accordance with the following standards, namely:-

(i) tariffs should allow licensees the recovery of any and all costs prudently incurred to meet the demonstrated needs of their customers, provided that, assessments of licensees, prudence may not be required where tariffs are set on other than cost - of - service basis, such as formula-based tariffs that are designed to be in place for more than one years;

(iii) tariffs should allow licensees a rate of return which promotes continued reasonable investment in equipment and facilities for improved and efficient service;



...

(v) tariffs should reflect marginal cost principles to the extent feasible, keeping in view the financial stability of the sector;

...

(viii) tariffs may be set below the level of cost of providing the service to consumers consuming electric power below the consumption levels determined for the purpose from time to time by the Authority, as long as such tariffs are financially sustainable."

3.5 SUBMISSION

- 3.5.1 Pursuant to the applicable laws of Pakistan, including the NEPRA Act and the rules and regulations made thereunder, the Company hereby submits for the Authority's kind and gracious consideration this Tariff Petition, and prays the Authority approves the Reference Generation Tariff to cater for and which shall apply, in each case, for the Two-Year Extension Term.
- 3.5.2 This Tariff Petition is submitted in triplicate.
- 3.5.3 This Tariff Petition is being submitted with the required fee (as communicated by the Authority) through a non-refundable bank draft/pay order/cheque in the amount of PKR 1,869,444/- (Pakistani Rupees One Million Eight Hundred Sixty-Nine Thousand Four Hundred and Forty-Four Only) dated September 12, 2022, drawn in favor of the Authority.



SECTION 4

THE FACILITY



4. THE FACILITY

4.1 THE FACILITY TECHNICAL SUMMARY

- 4.1.1 The Facility owned, operated, and maintained by the Company has, over two decades, been a source of supply of reliable power generation for KE and is exemplary in the country's power sector. Briefly, the salient technical features of the Facility, as certified and confirmed in the detailed and exhaustive RULA Study Report, duly submitted with the Authority during the application for the tariff of Three Year Extension Term PPA, and while applying for the extension in the term of the Generation License of the Company up to August 25, 2029, are provided below for the Authority's reference:

FACILITY GROSS CAPACITY	136.17 MW
NET DEPENDABLE CAPACITY	127.50 MW
FUEL & TECHNOLOGY	Residual Furnace Oil (RFO)
FACILITY CONFIGURATION	9*15.128 MW DG sets, 3*Power Transformers, 1*Grid station, and 4*Transmission lines
FACILITY DESIGN LIFE	32 Years

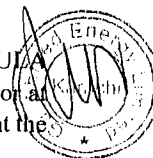
- 4.1.2 Further, it is highlighted that the Facility (as confirmed by the RULA Study Report):

- (i) was designed, engineered, and constructed by a consortium of two companies, Tomen Corporation (Tomen Power Singapore PTE Limited) and Wartsila Diesel OY being the engineering, procurement, and construction contractors;
- (ii) was designed for continuous operation on heavy fuel oil with start and stops on light fuel oil;
- (iii) is equipped with fuel handling, storage, and purification system;
- (iv) has an operation method that is automatic, with automatic synchronizing and load sharing using a PLC based control system; and
- (v) generates power at 11 kV, which is stepped up to 132 kV through 3 main transformers and subsequently supplied to KE's grid system.

- 4.1.3 In addition, for the Authority's benefit and reference, without, in any way limiting the comprehensive analysis presented in the RULA Study Report, key extracts from the RULA Study Report are set out below:

- a) *"The overall condition of Engines is 'Good', and the expected remaining life is 10 years as a minimum with a very high degree of confidence."*
- b) *"The power transformers are newly installed and are expected to have a full remaining useful life of greater than 12 years."*
- c) *"The utilities, storage tanks, vessels, boilers were also condition assessed and are found in very good condition with expected remaining life of 12 years."*

- 4.1.4 Considering the aforesaid, the matters set out herein and the conclusions drawn in the RULA Study Report, the Company expects and intends to operate the Facility for another 10 years or at the very least the Two-Year Extension Term. Thus, the Company submits to the Authority, that the



Company is desirous of continuing to generate power for onward sale to KE, and thus requests approval of the Reference Generation Tariff to ensure effective and efficient implementation of the Two-Year Extension Term – it being clearly evident, as confirmed by, *inter alia*, the RULA Study Report, that the remaining power generation life of the Facility is beyond the period contemplated by the Two Year Extension Term.



SECTION 5

THE GENERATION LICENSE



5. THE GENERATION LICENSE

5.1 THE GENERATION LICENSE

The Company procured a generation license in 2003 vide License No. IPGL/09/2003 dated August 26, 2003 (the "Generation License") from the National Electric Power Regulatory Authority ("Authority") under the 'Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997' (the "NEPRA Act") and the rules and regulations made thereunder. The term thereof was further extended by the Authority for a period of 10 years, i.e. up to August 25, 2029, vide Approval No. NEPRA/R/LAG-10/9084-89, dated March 19, 2020. The copies of the Generation License, and its extension are duly attached as *ANNEXURE F (COPY OF GENERATION LICENSE)*.



SECTION 6

KEY CONSIDERATIONS



6. KEY CONSIDERATIONS

6.1 DEMAND FOR ELECTRICITY

- 6.1.1 The power supply shortages in Pakistan over the years have resulted in extensive hours of power outages across the country. However, the power crisis has hit Karachi evidently more than other parts and the city faces an ongoing shortage of power supply with black-outs being prevalent time and time again.
- 6.1.2 It is highlighted that KE, being the only distribution / transmission company, which has the exclusive right and legal capacity to distribute / transmit electricity in its territorial area including Karachi, continuously faces challenges in meeting the ever-growing electricity demands of the financial hub and economic lifeline of Pakistan. In pursuing its need for power to meet the ever-increasing demand from its customers, KE has issued its consent vide the KE Power Purchase Consent to the Company, whereby it shall continue to purchase power from the Company for at least 2 more years (via the Two-Year Extension Term) beyond the Three Year Extension Term PPA.
- 6.1.3 The Authority's approval of the Reference Generation Tariff and the subsequent implementation by KE and the Company of the Two-Year Extension Term will ensure continued supply of reliable electricity to the consumers of KE until November 2, 2024 – a critical consideration in light of the exclusive right, current power generation capacity and demand in KE's distribution area(s).

6.2 THE COMPANY – A RELIABLE SOURCE OF POWER GENERATION

- 6.2.1 The Company has successfully operated its Facility; has catered for KE's consumer requirements by exclusively generating average around **703.692 GWh** per annum since its commissioning in 1997, and has met its obligations under the Original Power Purchase Agreement and the Three Year Extension Term PPA for over 24 years, the Company holds a very significant role in supply of power to the eastern side of KE's transmission network as the entire power generated by the Company is transmitted to KE's grid stations of Korangi Town, Landhi Town and Airport Grid (area surrounding Jinnah International Airport) – the same being the power suppliers to major industrial and commercial customers of KE. The monthly load pattern of dispatch from the Facility over the last 3 years is set out in the dispatch graph ("**Dispatch Graph from July 2019 to August 2022**") attached herewith as **ANNEXURE G** for the Authority's reference, evidencing the Facility's contribution during the peak summer months and the Company's role as part of the embedded generation projects of KE.
- 6.2.2 Additionally, the Facility has been used a 'black start facility' by KE, enabling the grid power systems to recover from a blackout in various instances of widespread power outage, which has been duly acknowledged by KE. The Facility's continued operations during the Two-Year Extension Term will be available to KE in case any such outage or blackout occurs.
- 6.2.3 In the absence of the Company continuing to supply electricity to KE, the KE distribution system will face a shortage in electricity supply, as there is insufficient generation capacity at present available to purchase. As per KE's estimates, there is currently a shortfall against the peak demand of KE. If the Company did not supply electricity to KE, the result would be a shortfall directly impacting the critical load clusters at Korangi Town, Landhi and area surrounding the Airport grid (area surrounding Jinnah International Airport).

6.3 THE COMPANY – AN EXPERIENCED POWER PRODUCER

- 6.3.1 The Company has been in the business of generating and selling electricity since 1997. The Company, with its extensive experience of over 24 years, has not only satisfied its obligations but has also established itself as an experienced and reliable power producer in Pakistan's power generation industry. The Company is established amongst the IPP's over the years, the Company's excellence in power generation is widely recognized – with its business practices being considered as a gold standard in the industry.

- 6.3.2 It is stressed for the Authority's cognizance that the Company's continuous supply of affordable and reliable electricity to KE and its consumers, in comparison to other sources, is indispensable for the megacity's power supply needs. Unlike the complexities and long gestation periods involved in the development of a new power generation facility, the Project, being operational now for over two decades, has all arrangements and infrastructure requirements in place to continue uninterrupted power generation for servicing the consumers of Pakistan's largest city. The continued supply of power for the Two-Year Extension Term shall not require additional lending from financiers in respect of any capital costs (and thus no new foreign or local debt shall be sought) nor shall valuable time and resources be used to procure financing and achieve financial close.
- 6.3.3 Moreover, the use of the Company's Facility as a black start facility by KE, in case of widespread power outage, has been provided in the past and shall continue to be provided to KE during the intended Two-Year Extension Term.
- 6.3.4 With an offtake arrangement already in place, and KE itself being strongly in favor of continuing the offtake arrangement with the Company, the overwhelming advantages of the proposed Two Year Extension Term are submitted to be duly considered by the Authority for the benefit of the consumers, and in the Authority's approval of the subject Reference Generation Tariff.

6.4 THE FACILITY

- 6.4.1 As highlighted in Section 4 (*The Facility*) of this Tariff Petition, the Facility's remaining useful life has been quantified and certified for a period of 10 years, which is well beyond the period relating to the Two-Year Extension Term. With efficient and reliable European equipment and machinery being fundamental to the Company's success as a power producer for over 24 years, it is submitted that due consideration is given by the Authority to the benefits that will be driven from the continued use of the Facility.

6.5 LOCAL FUEL SOURCE

- 6.5.1 Given that the prevalent GOP policy does not permit the establishment of new RFO plants, nor the import of RFO, any new power generation facility would need to operate on an alternative fuel. In this regard it is highlighted that the Facility is currently operating on local RFO procured from local refineries which is more competitively priced than other raw materials used in thermal power plants (i.e., imported RFO and imported LNG).
- 6.5.2 It is also established that reliance on local gas is not a viable long-term solution for thermal power generation. In this regard, it is emphasized that during the winter months of 2021-2022 there was an extreme shortage of gas and in this lean period at times the Facility was operating at more than 90% capacity, with reliance on local RFO.
- 6.5.3 Additionally, it is highlighted that the Company is not breaching the GoP's policy of not allowing new RFO plants being developed, as it is only continuing operations of its existing Facility, which is essential in order to cater to Karachi's growing population and KE's continued increase in the demand of electricity till new projects have been successfully established and commissioned, which will take several years.

6.6 THE TWO-YEAR EXTENSION TERM

- 6.6.1 It is submitted that with the current state of the well-maintained and 'debt free' Facility and no major or extravagant capital expenditures required for the continued use of the Facility, KE's consumers will directly benefit during the high demand months of KE, from the electricity supplied by the Company during the period of the Two-Year Extension Term.

6.7 ALL REQUISITE INFRASTRUCTURE & ARRANGEMENTS ALREADY IN PLACE

- 6.7.1 Unlike the complexities and long gestation periods involved in the development of a new power generation facility, the Project, being operational now for the last 24 years, has all the requisite contractual arrangements and other infrastructure requirements in place to continue power generation for servicing the consumers of Pakistan largest city. It is noted that implementation of the Two-Year Extension Term will neither require a financial close from lenders nor construction of any new transmission lines. With an offtake arrangement already in place and KE itself being a

strong supporter of and proposing the Two-Year Extension Term, the true benefits of the proposed Two Year Extension Term are submitted for due consideration by the Authority, for the benefit of the consumers, and for the Authority's approval of the Reference Generation Tariff.

6.8 DEVELOPMENT & CONTINUED DEPLOYMENT OF EXCEPTIONAL HUMAN RESOURCES

- 6.8.1 The Company has, over the years, developed highly skilled, experienced, and exceptional human capital, which continues to form the backbone of the Project's success and excellence. While the Company entered into operations and maintenance contractual arrangements with Wartsila Diesel Pakistan (Private) Limited for the operations and maintenance of the Facility in the initial years, the Company has been carrying out the operations and maintenance of the Facility solely through its technically trained in-house resources as well. The Company's in-house resources include experienced and highly skilled personnel capable of performing the operations and maintenance of the Facility, including out-sourced services in relation to overhauls, major and routine maintenances from the original equipment manufacturers such as ABB, Wartsila, Albario, and Siemens etc. The performance of the Facility is a testament to the Company's in-house team's excellence and, as a result, implementation of the Two-Year Extension Term will ensure continuation of such un-paralleled efforts.

6.9 INITIAL PROJECT COST & FINANCING

- 6.9.1 It is noted that the initial cost of development and setting up the Project was funded on the basis of a debt-to-equity ratio of 75:25. Further, it is submitted that while the entire debt was retired by the Company by February 2009, the initial equity of USD 43.513 million, considering the Project was set up on a Build Own Operate ("BOO") basis, was never redeemed, and still remains invested in the Project. The Company, subject to approval of the Reference Generation Tariff and the execution of the Two-Year Extension Term, aims to retain the equity in the Project and form, at the very minimum, the basis of continued operations during the Two-Year Extension Term. The benefits of retaining the existing equity in the Project are elucidated for the Authority's benefit, below.
- 6.9.2 If the Company is not permitted to supply electricity to KE, KE will need to procure electricity from a new power generation facility – currently there is no such facility available. In the unlikely event a facility becomes available prior to expiry of the current term of the PPA, given the constraints on the availability of local financing, the foreign debt would be major component of the new project's costs. It is highlighted that, as the Company's Facility is already operating, no foreign debt component is involved.

6.10 SUMMARY OF KEY CONSIDERATIONS

- 6.10.1 The key considerations in respect of the granted of the Reference Generation Tariff, discussed in further detail in this Section 6, are summarized below for the Authority's ease of reference:
- **Shortfall Mitigation:** KE's Power Purchase Consent reflect the fact that the Facility is an integral part of KE's plan for electricity supply for the next few years. The Authority's approval of the Reference Generation Tariff and the subsequent implementation by KE and the Company of the Two-Year Extension Term, will ensure uninterrupted and continuous supply of reliable electricity to the vital consumers (Airport and industrial areas of Korangi and Landhi) of KE until – a critical consideration in light of the current power generation capacity and demand in KE's distribution area.
 - **Continuous and Uninterrupted Supply of Power:** Unlike the complexities and long gestation periods involved in the development of a new power generation facility, the Project, being operational now over two decades, has all requisite arrangements and infrastructure requirements in place to continue uninterrupted power generation for servicing the consumers of Pakistan's largest city. Supply of power for the Two-Year Extension Term will neither require a financial close from lenders nor construction of any new transmission lines.
 - **Lower Tariff Available from Existing Plant:** As mentioned above, in the absence of the Company not operating the Facility at the end of the term of the Two-Year Extension Term, KE would be faced with the situation of having to enter into power purchase agreements with new power generation facilities. Any new facility will have higher capital costs, a debt financing component in respect such capital costs and consequently a higher tariff.



- **Reliance of Local Fuel Source:** The Facility is able to generate electricity based on locally produced RFO which is competitively priced, compared to other fuel sources used in thermal power generation and a more viable and sustainable fuel source than local gas. Moreover, given the demand-supply gap for local RFO, limited exports, and limited storage facilities of local RFO producers, the use of locally produced RFO by the Facility is benefiting the local RFO market.
- **Optimization of Human Resources:** Continued operation of the Facility will ensure optimization of the existing resources developed by the Company. Such resources include continued use of the highly skilled, experienced, and exceptional human capital.
- **No New Foreign Debt:** Given that there will no foreign debt servicing component in the Project, the consumers of KE will ultimately benefit from the continued use of the Facility, as compared to the untimely induction of a new, capital intensive, generation facility.
- **Consumer Benefit:** Given the combination of a well-maintained and 'debt free' Facility, with no major capital expenditures required for the continued use of the Facility, KE's consumers will directly benefit from the low cost of electricity supplied by the Company during the period of the Two-Year Extension Term.

SECTION 7
REFERENCE GENERATION TARIFF SUMMARY



7. REFERENCE GENERATION TARIFF SUMMARY

7.1 THE REFERENCE GENERATION TARIFF COMPONENTS

7.1.1 In view of the Authority's previous tariff determinations in case of the Company and the prevailing regime for thermal independent power producers IPPs in Pakistan, the Reference Generation Tariff is broken down in the following two key components:

- (i) the energy charge component of the Reference Generation Tariff (the "Energy Charge"); and
- (ii) the capacity charge component of the Reference Generation Tariff (the "Capacity Charge").

7.2 SUMMARY

7.2.1 Based on the Reference Date of June 30, 2022 ("Reference Date") (subject to indexation at the start of Two-Year Extension Term period and at a plant dependable capacity of 127.50 MW (net at reference site conditions) and detailed financial analyses, the proposed Reference Generation Tariff is hereunder:

	ENERGY CHARGE	CAPACITY CHARGE	TOTAL REFERENCE GENERATION TARIFF
	PKR/kWh	PKR/kW/h	PKR/kWh
PROPOSED TWO YEAR EXTENSION TERM TARIFF FOR FIRST YEAR AT 40% CAPACITY FACTOR	38.1354	4.2210	42.3564
PROPOSED TWO YEAR EXTENSION TERM FOR SECOND YEAR TARIFF AT 40% CAPACITY FACTOR	38.1354	4.2210	42.3564
THREE YEAR EXTENSION TERM PPA INDEXED TARIFF AS ON JUNE 2022 AT 64.20% CAPACITY FACTOR	37.5289	2.2329	39.7618

7.3 THE REFERENCE GENERATION TARIFF TABLE

7.3.1 The Reference Generation Tariff Table is prepared at following reference parameters prevailing on June 30, 2022.

ANNUAL DISPATCH FACTOR AS INDICATED BY KE FOR FIRST YEAR OF THE PROPOSED TWO-YEAR EXTENSION TERM	40%
ANNUAL DISPATCH FACTOR AS INDICATED BY KE FOR SECOND YEAR OF THE PROPOSED TWO-YEAR EXTENSION TERM	40%
PPA TERM	2 years
REFERENCE DATE	June 30, 2022
START OF THE TWO-YEAR EXTENSION TERM	November 03, 2022
FUEL PRICE (EXCLUDING GST)	168,264.237
KIBOR RATE	15.16%
CONSUMER PRICE INDEX	175.71
INDEXATION ASSUMPTIONS	Reference parameters to be indexed with actual parameters prevailing on November 03, 2022.

For the Authority's benefit and approval, the detailed table setting out the Reference Generation Tariff (the "Reference Generation Tariff Table") is attached hereto at ANNEXURE H (REFERENCE GENERATION TARIFF TABLE).



SECTION 8

ENERGY CHARGE



8. ENERGY CHARGE

8.1 SUMMARY

8.1.1 The Energy Charge component of the Reference Generation Tariff is based on the actual kWh off-take, and consists of:

- (i) the fuel component (the “**Fuel Cost Component**”); and
- (ii) the variable O&M component (the “**Variable O&M Cost Component**”).

8.1.2 A summary of the Energy Charge is provided in the following table:

ENERGY CHARGE PKR/kWh			
PERIOD	FUEL COST COMPONENT	VARIABLE O&M COST COMPONENT	TOTAL ENERGY CHARGE
PROPOSED REFERENCE TARIFF FOR TWO YEAR EXTENSION TERM – YEAR ONE	36.7754	1.3600	38.1354
PROPOSED REFERENCE TARIFF FOR TWO YEAR EXTENSION TERM – YEAR TWO	36.7754	1.3600	38.1354
INDEXED TARIFF OF THE TARIFF DETERMINATION* (FOR INFORMATION)	36.6405	0.8884	37.5289

**Three Year Extension Term Reference Tariff as indexed at Reference Date Parameters prevailing on June 2022 as are applied in calculation of the proposed Two-Year Extension Term Reference Tariff.*

8.2 FUEL COST COMPONENT

8.2.1 ASSUMPTIONS

The basis for calculation of Fuel Cost Component have been adopted from the Tariff Determination wherein the Authority had previously used an average of a 5 years' performance data starting from 2014 up to 2018.

This is explained in the following chart detailing the historical performance of the Company over the Three-Year Extension Term PPA.

Item	Metric	Actual			Last 3 years Average
		Jul-2019 to Jun-2020	Jul-2020 to Jun-2021	Jul-2021 to Jun-2022	
Lower Calorific Value of Fuel - Average	Btu/Kg	38,165.82	38,270.66	38,373.28	38,269.92
Furnace Oil Consumed	Tons	108,834.93	147,129.24	153,967.43	136,643.87
Export	MWh	496,138.94	673,228.14	705,429.00	624,932.03
Heat Rate	Btu/kWh	8,356.99	8,359.74	8,375.83	8,364.18
Plant Efficiency	%	40.83%	40.81%	40.74%	40.79%
Authority Determined Plant Efficiency	%	40.73%	40.73%	40.73%	40.73%

In order to make the tariff reflective of the actual performance of the Facility, the Company requests the use of the actual data of performance recorded during the Three-Year Extension Term PPA, which is tabulated in the above chart for ease of reference.



Based on the Facility's capacity on full load factor, about six hundred and ninety tons of RFO per day is required for power generation at the Facility, which is currently transported to the Site by tank lorries.

The cost of fuel consumption for the Facility, at actual thermal efficiency of 40.79% (LHV) recorded during the Three-Year Extension Term PPA, represents the Fuel Cost Component of the Energy Charge. The main assumptions used to arrive at the Fuel Cost Component are provided below:

THERMAL EFFICIENCY	40.79%
RFO PRICE	PKR 168,264.237/- per ton (including transportation cost of PKR 541.0970 per ton – subject to adjustments per actuals). General Sales Tax ("GST") is not included in the RFO price and shall be a pass-through to KE at actual
HEAT RATE (LHV)	8364.18 BTU/kWh
OUTPUT CAPACITY	127.5 MW (net at Site reference conditions)
CALORIFIC VALUE (LHV)	38,269.92 BTU/Kg
GST ON FUEL	the actual GST charged on the Fuel Cost Component of Tariff is to be claimed at actuals from KE through monthly supplemental invoice.

8.2.2 INDEXATION & ESCALATION

The Fuel Cost Component shall be adjusted on account of:

- (i) Fuel price variation of fuel consumed using First In First Out ("FIFO") method during period of Two-Year Extension Term; and
- (ii) the actual transportation charges.

8.2.3 INDEXATION FORMULA

The Fuel Cost Component shall be indexed based on the following formula:

$$\frac{FC_{(Rev)}}{CV_{(Rev)}} = \text{Relevant Reference Generation Tariff Component} * \frac{FP_{(Rev)}}{FP_{(ref)}} * \frac{CV_{(Ref)}}{CV_{(Ref)}}$$

Where:

- $FC_{(Rev)}$ = Revised Fuel Cost Component
- $FC_{(Ref)}$ = Reference Fuel Cost Component
- $FP_{(Ref)}$ = Reference Ex-GST delivered RFO price of PKR 168,264.237/- per ton
- $FP_{(Rev)}$ = Revised Ex-GST delivered RFO price per ton
- $CV_{(Rev)}$ = Revised LHV actual calorific value
- $CV_{(Ref)}$ = Reference LHV calorific value of 38,269.92 BTU/Kg

8.3 VARIABLE O&M COST COMPONENT

8.3.1 ASSUMPTIONS

This component includes the cost of lubricants, chemicals, consumables, and spares consumed in



generation of power and are directly related to the electricity actually generated. The rate will be indexed to the prevailing Consumer Price Index ("CPI") of Pakistan. GST charged at prevailing rates on this component shall be pass-through at actuals and is to be claimed through separate monthly supplemental invoice(s).

The basis for calculation of Variable O&M Cost Component is the estimated cost of consumables, spares and major/minor overhauls planned during the Two-Year Extension Term, due at the intervals, as per the original equipment manufacturer (OEM) recommended maintenance cycle and technical limits of our plant & machinery, becoming due at a dispatch factor of 40%.

Details of the Variable O&M Cost Component is set forth below:

DESCRIPTION		PROPOSED
Oil and Lubricants including diesel	Rs '000	197,888
Stores, spares and loose tools	Rs '000	324,657
Provision for obsolescence of spares	Rs '000	3,750
Capital Spares	Rs '000	80,673
Total	Rs '000	606,968
Rs/kWh cost @ 40% dispatch factor	Rupees	1.3600

In the instant case, the term of the extended power purchase agreement is intended to be 2 years. With the dispatch factor anticipated by KE, and hyper inflation/super-commodity cycle trends prevalent in the international markets, the Company requests that the projected cost of maintenance detailed above (based on the maintenance plan developed for the anticipated capacity factor given by KE and also considering the technical limits and maintenance cycle recommended by the OEM, for the major components) should be considered to be fair and just, ensuring the recovery of real cost anticipated at the KE recommended dispatch during the Two Year Extension Term.

It is reiterated that the Company has only claimed the amount for the Variable O&M Cost Component that is required for the actual major and minor overhauls falling due in accordance with the machine hours clocked during the Two-Year Extension Term at a capacity factor of 40% for the corresponding period.

8.3.2 INDEXATION AND ESCALATION

The Variable O&M Cost Component of the Energy Charge shall be quarterly indexed to the CPI of Pakistan, as notified by the Federal Bureau of Statistics.

8.3.3 INDEXATION FORMULA

The Variable O&M Cost Component shall be indexed based on the following formula:

$$V O\&M_{(Rev)} = \text{Relevant Reference Generation Tariff Component} * \frac{CPI_{(Rev)}}{CPI_{(Ref)}}$$

Where:

- $V O\&M_{(Rev)}$ = the revised Variable O&M Cost Component of Tariff
- $V O\&M_{(Ref)}$ = the reference Variable O&M Component
- $CPI_{(Rev)}$ = the average revised CPI (General) for the preceding quarter
- $CPI_{(Ref)}$ = the reference CPI (General) of 175.71 for June 30, 2022.



SECTION 9

CAPACITY CHARGE



9. CAPACITY CHARGE

9.1 SUMMARY

9.1.1 The Capacity Charge component of the Reference Generation Tariff is conventionally payable on the basis of available capacity declared periodically from the Extension Commencement Date. However, due to the decision of the Authority in the Tariff Determination to only allow a take and pay tariff to the Company, the fixed cost recovery components of the Company are calculated on PKR/kWh basis on KE anticipated capacity factor of 40% for the Two Year Extension Term duration. The Capacity Charge component of the Reference Generation Tariff comprises of the following components:

- (i) the fixed operations and maintenance cost (the "Fixed O&M Cost Component");
- (ii) the insurance cost (the "Insurance Cost Component");
- (iii) the cost of working capital (the "Cost of Working Capital Component"); and
- (iv) the return on equity (the "ROE").

9.1.2 A summary of the Capacity Charge component of the proposed Reference Generation Tariff is provided in the table below:

PERIOD	FIXED O&M COST COMPONENT	INSURANCE COST COMPONENT	COST OF WORKING CAPITAL COMPONENT	ROE COMPONENT
	PKR/kW/h	PKR/kW/h	PKR/kW/h	PKR/kW/h
First Year of Two-Year Extension Term Reference Tariff @ 40% Dispatch Factor	1.0445	0.3681	1.5181	1.2903
Second Year of Two-Year Extension Term Reference Tariff @ 40% Dispatch Factor	1.0445	0.3681	1.5181	1.2903
INDEXED TARIFF OF LAST NEPRA TARIFF DETERMINATION @ 64.20% DISPATCH FACTOR*	0.6359	0.1819	0.6113	0.8039

*Reference tariff has been indexed at parameters prevailing on June 30, 2022 (assumed for this Petition), which is based on the adjustment/indexation mechanism provided in the Tariff Determination.

9.2 FIXED O&M COST COMPONENT

9.2.1 ASSUMPTIONS

The Fixed O&M Component of the Capacity Charge represents the fixed costs of the management and staff of the Project; fixed cost of staff for operations and maintenance and firefighting; administration; security; transportation; staff meals; overheads; office costs; environmental monitoring fee, audit fee, tax consultancy; legal fees etc.

The basis of our calculation is adopted from the Tariff Determination, wherein the Authority had taken an average of last 5 years' performance data starting from 2015 up to 2019 (*being the actual data of immediately preceding 5 years*). Accordingly, the same philosophy has been adopted and the actual data for the cost incurred during the last 3 years of operations starting from 2019 up to 2022 (*being the actual data of immediately preceding 3 years*) has been taken into consideration in the following table:

9.2.2 FIXED O&M

DESCRIPTION	2019-20	2020-21	2021-2022	PROJECTED FROM JULY 2022 TO OCTOBER 2022	LAST 3 YEARS AVERAGE

Salaries, Wages and Other Benefits	275,533,000	282,405,274	299,445,000	100,877,560	311,013,815
Travelling and Entertainment	2,116,604	370,808	1,603,531	454,549	1,477,285
Rent, rates, and Taxes	18,503,382	21,704,523	22,550,470	6,973,153	22,662,747
Printing and Stationery	975,122	909,693	930,237	312,784	1,016,547
Postage, telephone, and fax	1,516,999	1,377,000	1,665,000	494,702	1,643,342
Vehicle running and maintenance	19,024,000	18,927,999	24,014,000	9,309,331	22,982,666
Repair and Maintenance	4,131,819	5,288,780	4,229,000	1,504,025	4,925,873
Legal and Professional	107,393,495	7,736,106	4,404,000	10,807,071	42,546,301
Utilities	22,299,734	7,491,715	10,792,000	5,216,462	14,831,932
Auditor's remuneration	1,414,400	1,400,000	1,250,000	479,167	1,474,592
Security Expenses	2,034,026	2,031,445	2,429,914	931,467	2,397,995
Cleaning Charges	4,891,272	4,651,174	5,390,118	2,066,212	5,494,074
CSR Activities	-	-	3,500,000	-	1,166,667
Entertainment	452,448	148,086	463,789	177,786	399,221
Fees & subscription	10,530,003	4,687,120	6,949,000	2,442,274	7,999,276
Fixed Assets	772,862	1,282,445	2,277,602	-	1,444,303
Trade Receivables written-off	25,042,600	14,080,000	24,430,000	-	21,184,200
Others	2,287,913	2,266,823	926,000	630,575	1,984,556
Total	498,919,680	376,758,991	417,249,661	142,677,117	466,645,390

The proposed cost for the year 2022-2024 has been assumed on the basis of average cost incurred over the last 3 years, which will be adjusted to match the currently prevailing high inflation rates by way of applying the CPI cost indexation factor to this reference cost at the start of the term of Two-Year Extension Term.

9.2.3 INDEXATION & ESCALATION

The following indexation shall be applicable to the Fixed O&M Cost Component at the start of the term of Two-Year Extension Term:

"The Fixed O&M Cost Component shall be quarterly indexed (first quarter starting from the date commencing at the start of the Two-Year Extension Term) to the CPI of Pakistan, as notified by the Federal Bureau of Statistics".

9.2.4 INDEXATION FORMULA

9.2.5 The Fixed O&M Cost Component shall be quarterly indexed based on the following formula:

$$FO\&M_{(L,Rev)} = \text{Relevant Reference Generation Tariff Component} * \frac{CPI_{(Rev)}}{CPI_{(Ref)}}$$

Where:

$FO\&M_{(Rev)}$ = the revised Fixed O&M Component of the Tariff



FO&M_(Ref) = the reference Fixed O&M Component of the Tariff Purchase Price quarterly indexed to CPI of Pakistan.

CPI_(Rev) = the average revised CPI (General) for the preceding quarter.

CPI_(Ref) = the reference CPI (General) 175.71 of June 30, 2022

9.3 INSURANCE COST COMPONENT

9.3.1 ASSUMPTIONS

The Insurance cost component consists of the customary industry wide covers taken for all-risk insurance/reinsurance for the Project, as well as for business interruption insurance. The insurance cost amounting to **USD 798,219/-** considered per year for the Two-Year Extension Term is based on actual average United States Dollar based annual premium paid over the last 3 years and assuming that the Authority will allow adjustment of this component to its actual cost paid to the insurance company as per prevailing international insurance market pricing for the required coverage. The Company's Project is currently covered by insurance policies from Adamjee Insurance Company Limited being reinsured with reputable A+ rated international underwriters.

The insurance cost component consists of the customary industry-wide coverages as below:

1. Property All Risks including Business Interruption;
2. Terrorism & SRCC including subsequent business interruption; and
3. Third Party Liability.

The Company invites quotes from top local insurance companies, who provide quotes to us on basis of terms they procure from the international reinsurance market, considering the domestic insurance market does not have the capacity to themselves underwrite the risk of a power plant and risks with high values.

While the Company's insurance policies are issued by a local company in rupees but it is essential that the coverage of plant and machinery is maintained on new replacement value basis in USD throughout the policy period. Therefore, the premium is quoted in USD but paid in equivalent PKR on the date of payment made by the Company.

Based on the above, the insurance cost amounting to **USD 798,219/-** as considered per year for the Two-Year Extension Term is based on the actual insurance cost incurred last year, and as per the current trend of the insurance market.

The international insurance market is getting harder for Pakistan's infrastructure sector considering the large nature of claims worth millions of Dollars that have been reported in the recent past.

It is assumed that the authority will allow adjustment of this component as per the prevailing market practice explained above for the necessary coverage required for safe & continued operations of the Project.

9.3.2 INDEXATION & ESCALATION

The Insurance Cost Component shall be indexed to the actual insurance cost for the cover required under contractual obligations with KE allocated over the capacity factor determined by the Authority.

9.3.3 INDEXATION FORMULA

Insurance component of reference tariff shall be adjusted as per actual cost paid by the Company according to the following formula:

$$AIC = Ins (Ref) / P (Ref) * P (Act)$$

Where

AIC = Adjusted insurance component of tariff

Ins (Ref) = Reference insurance component of tariff

P (Ref) = Reference premium



P (Act) = Actual premium

9.4 COST OF WORKING CAPITAL COMPONENT

9.4.1 The bases of calculation as applied by the Authority during the Tariff Determination of the Three-Year Extension Term PPA has been maintained.

9.4.2 ASSUMPTIONS

A working capital (the "Working Capital") of PKR 3.95 billion is required to finance:

- (i) the inventory level of RFO equivalent to 15 days of generation at 100% load factor at the fuel prices prevailing on June 30, 2022; and
- (ii) receivables from KE along with GST for credit period of 25 days allowed to KE from the date of invoicing;

The cost of Working Capital is calculated at 17.16% comprising of 3 months Karachi Inter Bank Offered Rate ("KIBOR") 15.16% + 2% spread.

9.4.3 INDEXATION & ESCALATION

The Cost of Working Capital Component of the Capacity Charge shall be quarterly indexed (first quarter commencing from the start date of the Two-Year Extension Term), to:

- (i) the average of fuel price of closing fuel inventory on the last day of the preceding quarter; and
- (ii) 3 months KIBOR prevailing on the last day of the preceding quarter.

9.5 RETURN ON EQUITY

9.5.1 ASSUMPTIONS

The Authority, in its Tariff Determination has calculated the ROE component on the basis of shareholder's equity of PKR 4,803.84 million, calculated as based on the investment in the Project of USD 43.513 million, and converting equity at the rate of PKR 110 to USD 1. The Authority calculated the ROE at the rate of 12% on the shareholders' equity which resulted in the annual ROE of PKR 576.46 million.

The ROE component of the Capacity Charge calculate on the basis adopted by the Authority in the Tariff Determination, amounts to PKR 1.2903/kWh at the following parameters:

INTERNAL RATE OF RETURN	12%
REPAYMENT OF CAPITAL	None
BASE EQUITY AFTER NEERA TARIFF DETERMINATION	PKR 4,803.84 million
ABSOLUTE ANNUAL RETURN IN RUPEES AT 12%	PKR 576.46 million

It is therefore prayed that the Authority may calculate the ROE at the KE anticipated dispatch factor of 40%, and allow the tariff of PKR 1.2903/kWh for the duration of the Two Year Extension Term.



SECTION 10
CRITICAL ADJUSTMENTS
&
PASS THROUGH ITEMS



10. CRITICAL ADJUSTMENTS & PASS THROUGH ITEMS

10.1 ADJUSTMENTS & PASS THROUGH ITEMS

10.1.1 The following adjustments and pass through items shall form an integral part of the basis on which the Reference Generation Tariff has been prepared:

- (i) The Reference Tariff Table shall be reworked at the Extension Commencement Date to adjust the factors prevailing on the Reference Date to those prevailing on the Extension Commencement Date.
- (ii) Cost of any delay in payments by KE beyond its due date which has not been factored in the calculation of Reference Tariff and shall be allowed or accounted for as an additional payment in accordance with the agreed provisions pertaining to the cost of delay in payments covered in the Two Year Extension Term, as customary in such agreements.
- (iii) Any taxes and levies etc. not factored in the Reference Generation Tariff calculation shall be treated as a pass-through item.

10.2 FORCE MAJEURE EVENTS

10.2.1 The Company requests the Authority that where force majeure events triggered by a "Change in Law" or 'changes in Government policies or Laws of Pakistan' (as defined in the Two Year Extension Term) (the "Specific FMEs");

- (i) lead to suspension of operations or inability to make partial/complete capacity available, then the capacity payments for the unavailable capacity is allowed as a pass-through item till the time normal operations of the Facility resume; and
- (ii) lead to restoration to be undertaken, then the Authority is required to determine a supplemental tariff in relation to cost of restoration or cost of additional consumables, which, in each case, is then allowed as a pass-through item.

10.2.2 The afore-stated items are to be allowed during the Two-Year Extension Term because neither KE, being the power purchaser, nor the Company, being the power supplier, have any control over such Specific FMEs. Further, as a market practice, the Specific FMEs are allowed as pass-through items in projects involving Central Power Purchasing Agency Guarantee as the off-taker and the GoP as a party.

10.2.3 It is further submitted that if the Company is able to recover against the Specific FMEs (including its related consequences) and is able to resume its power supply, then the consumers are the real beneficiary since no new asset is required to be constructed and the power can be restored as soon as the Facility is restored or is able to restart.

10.3 AFFECTS RESULTING FROM THE TWO YEAR EXTENSION TERM

10.3.1 As noted in Section 3.2 (The Extension of the Term of Power Purchase Agreement) above, the detailed terms and conditions for the Two-Year Extension Term are still awaited – terms that may possibly, as a result of the risk allocation contained therein or from additional cost contemplated from Two-Year Extension Term, have an effect on the proposed Reference Generation Tariff. Therefore, it is submitted before the Authority that any cost or risks emanating from such Two-Year Extension Term not already factored in the Reference Generation Tariff calculation will be, fundamentally, assumed to be a pass-through item and/or shall result in a supplemental tariff for the Company.



SECTION 11

GENERAL ASSUMPTIONS



11. GENERAL ASSUMPTIONS

11.1 FOREWORD

11.1.1 The following have been assumed while calculating the Reference Generation Tariff and changes in any of these assumptions will result in changes in the Reference Generation Tariff.

11.2 ASSUMPTIONS

11.2.1 No corporate income tax and no minimum turnover tax have been assumed.

11.2.2 The key assumptions are based on actual information available on the Reference Date.

11.2.3 The Base CPI at the reference date for all Tariff Component is 175.71 as published by Federal Bureau of Statistics, Pakistan in their publication for the month of June 30, 2022.

11.2.4 The two year extension in the term of the power purchase agreement, commencing on November 03, 2022 and expiring on November 02, 2024, has been assumed.

11.2.5 GST on electricity output is assumed to be pass-through at actual and in accordance with the special procedure given in the Sales Tax Act, 1990.

11.2.6 Any change in taxes/duties shall be claimed as per actuals and will be a pass through to be paid by KE.

11.2.7 The prevailing statutory obligation to pay the Worker's Profit Participation Fund and Worker's Welfare Fund by the Company shall continue to be treated as a pass through and are to be claimed at actuals.

11.2.8 The price of RFO is assumed to be PKR 168,264.237/- per ton, excluding GST which includes the transportation cost of fuel to the site at PKR 541.0970 per ton, subject to adjustment at actuals.

11.2.9 The exchange rate has been assumed to be PKR 206.00 to USD 1.

11.2.10 All risks emanating from the Two Year Extension Term (considering that the Company has to-date not received any final terms and conditions draft thereof) will be treated as pass through items and/or shall result in a supplemental tariff for the Company.

11.2.11 In relation to a disputed pass through item, KE shall not make deductions or withhold any of the disputed amount from the Company until final determination is made by the Authority, as that adversely impacts the Company's Working Capital. Once the Authority has made its final determination, KE may, if applicable, make the relevant deduction, withhold the Company's subsequent payment.

11.2.12 Anticipated average Site conditions that have been used in the calculation of net output and heat rate are at an altitude of 65 meter above sea level, average ambient temperature of 30 degrees centigrade and 80% average relative humidity. If there is any change in the foregoing assumptions, the plant output and heat rate will be adjusted accordingly.

11.2.13 Facility availability of 92% for 336 complex days is assumed.

11.2.14 'Annual Scheduled and Maintenance Outages', excluding outages on account of KE, shall be allowed up to 701 complex hours subject to technical limits and without any liquidated damages.

11.2.15 All invoicing and payment terms are assumed to be with a credit period of 25 days subject to terms and conditions given in the Two Year Extension Term.

11.2.16 All of the above assumptions and terms and conditions shall be incorporated in the Two Year Extension Term between the Company and KE.



SECTION 12
CONCLUSION

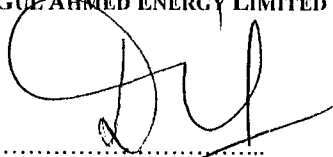


12. CONCLUSION

In light of the submissions, the financial analysis and information contained in this Tariff Petition, along with the Annexures attached hereto, this Tariff Petition is submitted for the Authority's approval of the Reference Generation Tariff.

It is also hereby requested that this Petition of the Reference Generation Tariff be allowed in accordance with the Applicable NEPRA Laws, along with other enabling provisions of law.

Respectfully submitted,
FOR AND ON BEHALF OF THE COMPANY,
GUL AHMED ENERGY LIMITED



.....
DANISH IQBAL
C.E.O. AND CHAIRMAN

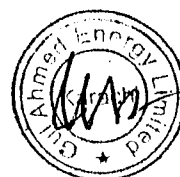


INDEX

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ANNEXURE A
SHAREHOLDING PATTERN



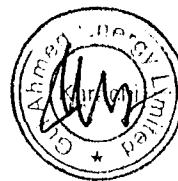
PATTERN OF SHAREHOLDINGS AS ON 30 JUNE 2021

Category No.	Category of Shareholders	No. of Shareholders	Total Shares held	Percentage
1	Directors, Chief Executive Officer and their spouse and minor children	55	113,927,775	67.68%
2	Others - Foreign Investors	3	54,400,651	32.32%
		58	168,328,426	100.00%

No. of Shareholders	Shareholdings		Total Shares held
	From	To	
1	1	100,000	74,928
52	100,001	5,000,000	93,749,873
3	5,000,001	10,000,000	21,657,787
1	10,000,001	25,000,000	21,495,733
1	25,000,001	35,000,000	31,350,105
58			168,328,426



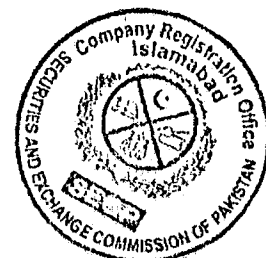
ANNEXURE B
MEMORANDUM & ARTICLES OF ASSOCIATION



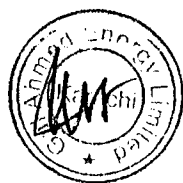
**The Companies Ordinance, 1984
(Company Limited By Shares)**

**MEMORANDUM OF ASSOCIATION
OF
GUL AHMED ENERGY LIMITED**

- I. The name of the Company is GUL AHMED ENERGY LIMITED.
- II. The Registered Office of the Company will be situated in the Federal Capital Territory of Islamabad.
- III. (A) The objects for which the Company is established is to set up and operate, whether directly or indirectly, itself or through a subsidiary or associated undertaking or any other company, electric power generating projects for generating and supplying of electric power and to carry out all necessary power stations, cables, wires, lines, accumulators, lamps and works and to generate accumulate distribute and supply electricity and to light industries and places, both public and private, cities, towns, streets, docks, markets, theatre, building and for all other purposes for which electric energy can be employed.
- (B) The Company shall be authorized:
 1. To own, purchase/acquire, hire, take on lease, build, erect, install, establish, operate, use, repair, maintain and dispose of factories, machineries, plants, laboratories, equipments, apparatus and other facilities.



2. To purchase, take on lease, or in exchange, or otherwise acquire, any land to sell, mortgage; to construct, alter, repair, pull down, decorate, maintain, furnish, fit up and improve buildings, and enter into contracts and arrangements of all kinds with building property owners, and any other party.
3. To purchase, acquire, take on lease or tenancy, sell, dispose of, mortgage and acquire options over any property, immovable/ movable, or rights of any kind, and develop, improve, turn to account, deal with, mortgage, sell or otherwise dispose of the same in such manner, as may be thought expedient.
4. To apply for, purchase, or otherwise acquire, and protect and renew in any part of the world any patents, patent rights, copyrights, trademarks, designs, licenses, concessions and the like, conferring any exclusive or non-exclusive or limited rights to their use, or any secret or other information as to any invention, process, matter or things which may seem capable of being used for the purpose of the Company, or the acquisition of which may seem calculated directly or indirectly to benefit the Company, and to use, exercise, develop to grant licenses in respect of, or otherwise turn to account the property, rights or information so acquired, and to expend money in experimenting upon, testing or improving any such patents, inventions or rights.
5. To enter into an agreement or any arrangement for sharing profits, union of interest, co-operation, joint-ventures, reciprocal concessions, or otherwise.



any company, association, firm or person for any purpose which the Company thinks expedient. .

6. To open any current, overdraft, cash credit account or fixed account in any bank and to pay money into and draw money from any such account.
7. To borrow and secure payment of money borrowed by the Company or any of its subsidiaries or associated undertakings or any other company by (i) issue of perpetual or redeemable and convertible or non-convertible PTCs, TFCs, debentures and their stocks, bonds, promissory notes, bills of exchange, usance bills and such other securities; (ii) furnishing guarantees and undertakings, depositing securities, shares and documents of title; (iii) hypothecating, charging and mortgaging properties and assets (both present and future) of the Company and creating pledge on such properties and (iv) appointing attorneys, giving them powers of executing documents, having them registered, selling and managing the properties, undertaking any business of the Company and furnishing and creating such other securities as may be considered expedient or otherwise execute, complete and deliver agreements and such other documents as may be required.
8. To guarantee the payment of money and the performance of contracts or engagements of the Company or any of its subsidiaries or associated undertakings or any other company and to secure the payment of money and the performance of any contracts or engagements entered into by this Company or any of its subsidiaries or associated undertakings or any other company and to discharge



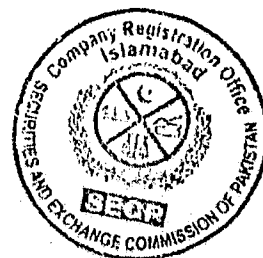
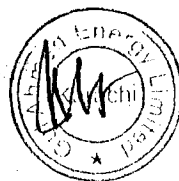
any debt or any obligations of or binding upon this Company or any of its subsidiaries or associated undertakings or any other company by a mortgage, pledge or charge upon all or any part of the undertaking, property and rights of the Company (either present or future or both), or by the creation or issue of bonds, debenture stock, or any other securities or by any other means.

9. To guarantee the payment of money unsecured or secured by or debenture stocks, contracts, mortgages, charges, obligations, instruments and securities of the Company and generally to guarantee to become sureties for the performance of any contracts or obligations concerning the business of this Company or any of its subsidiaries or associated undertakings or any other company.
10. To draw, make, accept, endorse, seal, execute, negotiate, purchase, hold and dispose of cheques, promissory notes, bills of exchange, drafts, charter parties, bills of lading, warrants and other negotiable documents and contracts, deeds and other instruments and to cancel and carry such instruments, relating to the business of the Company.
11. To apply for, purchase or otherwise acquire any patents, brevetted invention, licenses, concessions, and the like conferring any exclusive or non-exclusive or limited rights to use, or any secret or other information as to any invention which may seem capable of being used for the purposes of the Company or the acquisition of which may seem calculated, directly or develop or grant ~~licenses~~ in



respect of or otherwise turn to account the property, rights or information so acquired.

12. To remunerate Directors, officials, agents, employees and servants of the Company and others and to benefit employees or ex-employees of the Company, and to grant pensions, gratuities and allowances and to provide bonuses, amenities and conveniences of all kinds and for the purpose of this paragraph the words "employees" and "ex-employees" shall include respectively, present and former directors and other officers, agents, employees, trainees, and servants.
13. To improve, develop, sell, exchange, taken on lease, mortgage, pledge, hypothecate, assign, transfer, or deal with all or any part of the property and assets, immovable/ movable, corporeal or incorporeal, tangible or intangible, and any right, title and interest therein of the Company, including rights, licenses, privileges, concessions and franchises as may seem expedient.
14. To payout of the funds of the Company all expenses which the Company may lawfully pay with respect to the formation, promotion and registration of the Company or the issue of its capital, including brokerage and commissions for obtaining applications for or taking placing or underwriting or procuring the underwriting of shares, debentures, other securities of the Company.
15. To pay for rights or property acquired by the Company and to remunerate any persons or company whether by cash payment or by the allotment of

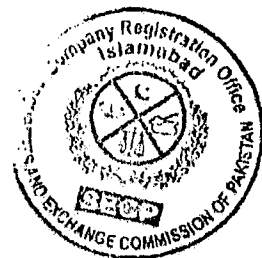


shares, debentures or other securities of the Company as fully paid up.

16. To adopt such means of making known the services and products of the company as may seem expedient and in particular by undertaking educational training and demonstration programmes and by advertising in the press, by circulars and exhibitions of works of art or interest, by publication of books and periodicals and by granting prizes, rewards and donations.
17. To aid, pecuniarily or otherwise, and association, body or movement having for an object the solution settlement, or surmounting of industrial or labor problems or troubles or the promotions of industry or trade.
18. To sell, improve, develop, exchange, take on lease, mortgage, dispose of, turn to account or otherwise deal with all or any part of the property and rights of the Company.
19. To distribute among the Members in specie any property of the Company, or any proceeds of sale of disposal of any property of the Company but so that no distribution amounting to a reduction of capital be made except with the sanction (if any) for the time being required by law.
20. To sell or dispose of the undertaking of the Company or any part thereof for such consideration as the Company may think fit.



21. To borrow or raise moneys, either against security or without security, in such manner as the Company or its directors may think fit and in particular by sale, negotiations, transfer, issue or against the security of bills of exchange, promissory notes and other negotiable, transferable or other instruments, debentures or issue of debentures, debenture-stocks, bonds, obligations, mortgages and securities of all kinds, either perpetual or otherwise, secured or unsecured and to secure the repayment of any moneys borrowed, raised or owing by the Company on any of the specific property, assets and rights (present and future) including the uncalled capital of the Company, and to secure similarly any other debt or obligation of the Company or its subsidiaries or associated undertakings and to guarantee the performance by the Company or any other body corporate or other person whatsoever of any obligation undertaken by the Company or by such body corporate or person.
22. To form, constitute, float, lend money to assist and control companies, associations or undertakings engaging in any industrial, commercial or business activities.
23. To invest in, subscribe to or acquire any shares, stocks, debentures, debenture stocks, bonds, mortgage, obligations and other securities by subscription, tender, purchase, exchange or otherwise out of the funds of the Company, either conditionally or unconditionally and to guarantee the subscription thereof.
24. To undertake any takeover bids, mergers, amalgamations, acquisitions, rehabilitation or



restructuring with or in respect of any business, company, body corporate or other person, whether incorporated or not by acquisition of its assets and liabilities, and whether as a going concern or as part of the concern, and to promote or procure incorporation, formation or setting up of concerns and undertakings for engaging in any industrial, commercial or business activities.

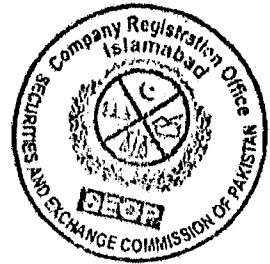
25. To negotiate, enter into and perform agreements and contracts of every kind and description with any company, firm or person whatsoever for any lawful purpose, without any limit as to amount, and to obtain from such company, firm or person any rights, privileges, contracts, concessions and dispose of them or turn to account the same.
26. To do all or any of the above things, either as principals, agents, contractors, or in conjunction with others, and either by or through agents, sub-contractors, trustees or otherwise, and either alone or in conjunction with others, and to do all such things as are incidental or conducive to the attainment of the objects as specified above.

It is hereby undertaken that the company shall not engage in banking business or business of any investment company or insurance or leasing or in any unlawful business and that nothing contained in the object clause shall be so construed to entitle it to engage in such business.

IV. The liability of the members is limited.



V. The Authorised Capital of the Company is Rs. 1,850,000,000 (Rupees One Billion Eight Hundred Fifty Million only) divided into 185,000,000 Ordinary shares of Rs. 10/-(Rupees Ten) each with power to increase or reduce the said Capital and divide the Ordinary Shares into various classes in accordance with provisions of the Companies Ordinance, 1984.



We, the several person whose names and addresses are subscribed are desirous of being formed into 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:

Name and Surname (Present and former) in full (Block Letter)	Father's / Husband's Name in full	Nationality with any former Nationality	Occupations	Residential Address (in full)	Number of shares taken by each subscriber	Signature
MR. IQBAL ALIMOHAMMED	HAJI ALIMOHAMMED	Pakistani	Industrialist	118, Garden East, Karachi	One	
MR. BASHIR H. ALIMOHAMMED	HAJI ALIMOHAMMED	Pakistani	Industrialist	B-37, K.D.A. Scheme No. 1, Karsaz Road, Karachi.	One	
MR. ABDUL RAZZAK	HAJI SATTAR	Pakistani	Industrialist	115, Garden East, Karachi.	One	
MR. MOHAMMED ASIF	A. GHIAFFAR	Pakistani	Industrialist	238, Garden East, Karachi.	One	
MR. SIRAJ	HAJI KASSAM TELI	Pakistani	Industrialist	117/1, Garden East, Karachi	One	
MR. YASIN	HAJI KASSAM TELI	Pakistani	Industrialist	117/1, Garden East, Karachi	One	
MR. JUNAID	HAJI LATIF	Pakistani	Industrialist	239/2, Garden East, Karachi.	One	
MR. UBAID	AMANULLAH	Pakistani	Industrialist	239/1, Garden East, Karachi	One	

Dated: 11th day of July, 1994

Witnesses to the above Signature:

NAME: FATHER NAME: OCCUPATION: NATIONALITY: FULL ADDRESS:

Zaheer Ahmed Mohammad Musa Chartered Accountant Pakistani

Sattar Chambers,
29-West Wharf Road Karachi

CERTIFIED TO BE TRUE COPY



No. ADI 9685

Dated 1/4/96

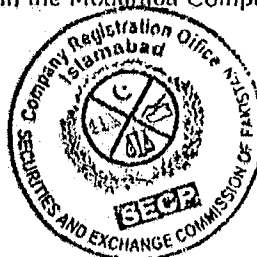
Joint Registrar
Company Registration Office Islamabad



The Companies Ordinance, 1984
(Company Limited By Shares)

**ARTICLES OF ASSOCIATION
OF
GUL AHMED ENERGY LIMITED
PRELIMINARY**

1. The regulations contained in Table A in the First Schedule to the Companies Ordinance, 1984, shall not apply to the Company except in so far as the same may be expressly incorporated or deemed to be incorporated in these Articles or made expressly applicable by the said Ordinance or any statutory modification thereof.
2. In these Articles, unless the context or subject matter otherwise requires:
 - i. "Board" means Board of Directors for the time being.
 - ii. "Chief Executive" means the Chief Executive for the time being of the Company as defined in Section 2 (1) (6) of the Ordinance.
 - iii. "Company" means the GUL AHMED ENERGY LIMITED.
 - iv. "Debenture" and "Debenture Holders" includes debenture/stock and debenture stock holder respectively.
 - v. "Director" means a director for the time being of the Company.
 - vi. "Dividend" includes bonus.
 - vii. Executors include administrators.
 - viii. "In Writing" and "Written" includes printing, lithography, typewriting and other modes of representing or reproducing words in a visible form.
 - ix. "Modaraba", "Modaraba company" and "Modaraba Certificate" have the meaning respectively assigned to them in the Modaraba Companies and



- x. Modaraba Floatation and Control Ordinance, 1980.
- xi. "Month" means calendar month according to the English Calendar.
- xii. The Office means Registered Office for the time being of the Company.
- xiii. The Ordinance means the Companies Ordinance, 1984.
- xiv. "PTC" and "TFC" means Participation Term Certificate and Term Finance Certificate respectively.
- xv. "Proxy" includes Attorney, duly constituted under a Power of Attorney.
- xvi. "The Register" means the register of members to be kept pursuant to Section 147 of the Companies Ordinance, 1984.
- xvii. "Seal" means the Common seal of the Company.
- xviii. "Special Resolution" has the meaning assigned there to by Section 2 (1) (36) of the Companies Ordinance, 1984.
- xix. "Security Sharing Agreement" means the agreement dated 29 July, 1996, so entitled and entered into between the Company, International Finance Corporation (IFC), ING Bank NV (ING), Citibank N.A., Citicorp Trustee Company Limited as the Security Trustee for IFC and ING (herein referred to as the Security Trustee which expression shall include its successors in interest, transferees and assignees).
- xx. Securities include Shares, Modaraba Certificate, PTCs, TFCs and Debenture Certificate.

Words importing the Singular number also include the plural number and vice versa.

Words importing the masculine gender include all other genders.

Words importing persons include firms, associations, Companies and Corporations.

Words and phrases defined in the Ordinance shall have the same meaning when used herein.



- 3. None of the funds of the Company shall be employed directly or indirectly in the purchase of or lent on the security of shares of the Company, and the Company, shall not except as authorised by Section 95 of the Ordinance, give any financial assistance for the purpose of or in connection with any purchase of shares in the Company.

SHARES

- 4. The authorised capital of the Company is Rs. 1,850,000,000 (Rupees One Billion



Eight Hundred Fifty Million only) divided into 185,000,000 ordinary shares of Rs. 10/= (Rupees Ten) each. Minimum subscription at which the Directors shall proceed to allotment shall be Rs. 500,000.

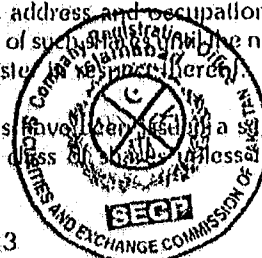
5. The shares shall be under the control of the Directors, who may allot or otherwise dispose off the same to such persons on such terms and conditions as the Directors think fit.
6. If two or more persons are registered as joint holders of any share, any of such persons may give effectual receipts for any dividends or other moneys payable in respect of such share.
7. Save as herein otherwise provided, the Company shall be entitled to treat the registered holder of any share and shall not, except as ordered by a court of competent jurisdiction, or as by statute required, be bound to recognize any equitable or other claim or interest in such share on the part of any other person.

SHARE CERTIFICATES

8. Every person whose name is entered as a member in the register of members shall without payment be entitled to a certificate under the Seal specifying the share or shares held by him and the amount paid thereon including in particular and without limitation such legends as the Company shall be obligated to affix to certain of the certificates by law or as the Company shall have agreed to affix pursuant to any contractual arrangements in this respect. 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.
9. If a share certificate is defaced, lost or destroyed, it may be renewed on payment of such fee as may be prescribed if any and on such terms, if any as to evidence and indemnity as the Directors think fit.
10. As regards allotment from time to time, the Directors shall duly comply with the provisions of Section 67 to 73 of the Ordinance.
11. Each share in the Company shall have a distinctive number.

TRANSFER OF SHARES

12. The transfer of shares shall be effected by an instrument in Writing in the usual common form, modified so as to suit the circumstances of the parties.
13. The instrument of transfer of a share shall be duly stamped and shall be executed both by the transferor and the transferee whose execution shall be attested by at least one witness who shall add his address and occupation, and the transferor shall be deemed to remain the holder of such share until the name of the transferee shall have been entered in the Register.
14. Wherever shares of different classes have been issued, a separate instrument of transfer shall be required for each class of shares unless the Directors resolve

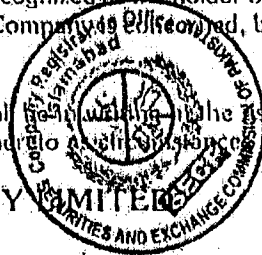


otherwise.

15. The Directors may decline to recognize any instrument of transfer, unless the instrument of transfer is deposited at the office or such other place as the Directors may appoint, accompanied by the certificate or certificates of shares to which it relates, and such other evidence (if any) as the Directors may reasonably require to show the right of the transferor to make the transfer, and if the instrument of transfer is executed by some other person on his behalf, the authority of that person so to do.
16. If the Directors refuse to register a transfer they shall within 30 days after the date on which the transfer was lodged with the Company send to the transferee and the transferor notice of the refusal as required by the Ordinance.
17. The Directors may on giving seven days previous notice by advertisement in some newspaper circulating in the Province in which the office is situated and in the province in which the Stock Exchange on which the Company is listed is situate, close the transfer book and register of members during such time as the Directors think fit, not exceeding as a whole forty-five days in each year, and not exceeding thirty days at a time.
18. Neither the Company nor its Directors shall incur any liability for registering or acting upon a transfer of shares apparently made by sufficient parties, although the same may, by reason of any fraud or other cause not known to the Company or its Directors, be legally inoperative or insufficient to pass the property in the shares proposed or professed to be transferred, and although the transfer may as between the transferor and transferee be liable to be set aside, and notwithstanding that the Company may have notice that such instrument of transfer was signed or executed and delivered by the transferor in blank as to the name of transferee or the particulars of the shares transferred, or otherwise in defective manner, and in every such case the person registered as transferee, his executors, administrators and assignees alone shall be entitled to be recognized as the holder of such shares and the previous holder shall, so far as the Company is concerned, be deemed to have transferred his whole title thereto.
19. The instrument of transfer of any share shall be in the usual common form or in the following form, or as near thereto as circumstances will admit:

GUL AHMED ENERGY LIMITED

I _____ of _____ in consideration of the sum of Rs. _____ paid to me by or here in after called the said transferee, do hereby transfer to the said transferee share (or shares) numbered _____ to _____ (both inclusive) in the undertaking called GUL AHMED ENERGY LIMITED to hold upto the said transferee, his executors, administrators, and assigns, subject to the several conditions on which I, held the same immediately before the execution hereof, and I, the said transferee, do hereby agree to take the said share (or shares) subject to the conditions aforesaid.



In witness whereof we have put our hands the _____ days _____ 19 _____

Witnesses:

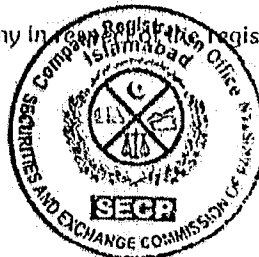
1. _____ Transferor

2. _____ Transferee

20. All instruments of transfer which shall be registered shall be retained by the Company, but any instrument of transfer which the Directors may decline to register shall be returned to the person depositing the same. Any instrument of transfer retained may be destroyed after three years from the date of registration.

TRANSMISSION OF SHARES

21. In the case of death of a shareholder, the survivor where the deceased was joint holder, and the executors or administrators or nominees under Section 80 of the Ordinance of the deceased where he was a sole or only surviving holder, shall be the only persons recognized by the Company as having any title to his shares but nothing herein contained shall release the estate of a deceased holder (whether sole or joint) from any liability in respect of any share solely or jointly held by him.
22. Any person becoming entitled to a share in consequence of the death, bankruptcy or insolvency of a member may, subject as hereinafter provided, either be registered himself as holder of the share upon giving to the company notice in writing of such desire, or transfer such share to some other person. All the limitations, restrictions, and the provisions of these Articles relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice of transfer as aforesaid as if the death or insolvency of the member had not occurred and the notice of transfer was a transfer executed by such member.
23. The Company shall not be bound to recognize an executor or administrator unless he shall have obtained probate or letters of administration or other legal representation, as the case may be, provided nevertheless that it shall be lawful for the Directors in their absolute discretion to dispense with the production of probate or letters of administration or such other legal representation upon such terms as to indemnity or otherwise as the Directors may decide.
24. Save as otherwise provided by or in accordance with these Articles, a person becoming entitled to a share in consequence of the death or insolvency of a member shall be entitled to receive and may give a discharge for all dividends and other moneys payable in respect of the shares, and shall be entitled to attend and to vote at any general meeting as if he were the registered holder of such share, provided that seventy-two hours at least before the time of holding the meeting or adjourned meeting at which he proposes to vote he shall satisfy the Directors as to his right, or the Directors shall have previously admitted his rights, to vote at every meeting in respect thereof.
25. There shall be paid to the Company in _____ registration of any probate,



letters of administration certificate of marriage or death, power of attorney or other document relating to or affecting the title to any shares, or for making any entry in the register affecting the title of any share, such fee, as the Directors may from time to time, require or prescribe.

26. Any committee or guardian of a lunatic or infant member or any person becoming entitled to transfer shares in consequence of the death or bankruptcy or insolvency of any member upon producing such evidence that he sustains the character in respect of which he proposes to act under this Article, or of his title, as the Directors think sufficient, may with the consent of the Directors (which they shall not be under any obligation to give) be registered as a member in respect of such shares, or may subject to the regulations as to transfer hereinbefore contained, transfer such shares. This Article is hereinafter referred to as "The Transmission Clause".
27. All instruments of transmission which shall be registered shall remain in the custody of the Company for such period as the Directors may determine but any instrument of transmission which the Directors may decline to register or act upon shall be returned to the person depositing the same.
28. The Directors shall have the same right to refuse to register a person entitled by transmission to any shares or his nominee, as if he were the transferee named in an ordinary transfer presented for registration.

ALTERATION OF CAPITAL

29. The Company in general meeting may from time to time by ordinary resolution increase its authorised capital by such sum to be divided into shares of such amounts as the resolution shall prescribe.
30. Unless otherwise determined by the Company in general meeting any original shares for the time being unissued and any new shares from time to time be created shall be offered to the members in proportion, as nearly as may be to the number of shares held by them. Such offer shall be made on all free certificates, the number of shares to which the member is entitled, and within a time within which the offer, if not accepted, will be deemed to be declined and after the expiration of such time, or on the receipt of an intimation from the member to whom the offer is made that he declines to accept the same, the Directors shall dispose of such shares in accordance with the provisions of section 86 of the Ordinance. The Directors may dispose of any such new or original shares as aforesaid which, by reason of the proportion borne by them to the number of persons entitled to such offer as aforesaid or by reason of any other difficulty in apportioning the same, cannot in the opinion of the Directors be conveniently offered in manner herein before provided.
31. All new shares shall be subject to the provisions of these Articles with reference to transfer, transmission or otherwise.
32. The Company may, by ordinary resolution:



- (a) consolidate and divide all or any of its share capital into shares of larger amounts than its existing shares (subject, nevertheless to the provisions to Section 92 of the Ordinance).
 - (b) cancel any shares which, at the date of passing of the resolution, have not been taken or agreed to be taken by any person and diminish the amount of its capital by the amount of the shares so canceled, or
 - (c) sub-divide its shares, or any of them into shares of smaller amount than is fixed by the Memorandum of Association (subject nevertheless, to the provisions to Section 92 of the Ordinance).
33. The resolution whereby any shares are sub-divided may determine that as between the holders resulting from such sub-division, one or more of such shares shall have some preference or special advantage as regards dividend, capital, voting, or otherwise over or as compared with the others or other, subject nevertheless to the provision of Section 92 of the Ordinance.
34. Subject to confirmation by the Court, the Company may by Special Resolution reduce its share capital in any manner authorised by the Ordinance.
35. Subject to the provision of the Ordinance whenever the capital is divided into different classes of shares all or any of the rights and privileges attached to each class (unless otherwise provided by the terms of issue of the shares of the class) may be modified, commuted, affected, abrogated or dealt with by agreement between the Company and any persons purporting to contract on behalf of that class, provided such agreements are (i) ratified in writing by the holders of at least three fourths in nominal value of the issued shares of the class or (ii) confirmed by a special resolution passed at a separate general meeting of the holders of shares of that class and all the provisions hereinafter contained as to general meetings shall, mutatis mutandis, apply to every such meeting, except that the quorum thereof shall be members holding or representing by proxy one-fifth of the nominal value of the issued shares of the class and that holders of shares of that class present in person or by proxy may demand a poll. This Article is not by implication to curtail the power of modification which the Company would have if this Article were omitted.

GENERAL MEETING

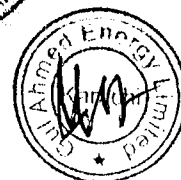
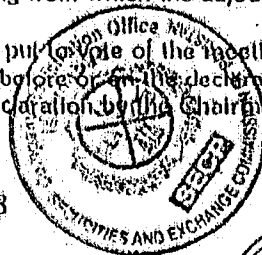
36. The Company shall hold its annual general meeting within eighteen months from the date of its incorporation and thereafter once at least in every calendar year within a period of six months following the close of the financial year and not more than fifteen months after the holding of its last preceding annual general meeting. The Company shall hold a statutory meeting in accordance with Section 157 of the Ordinance.
37. All general meetings of the Company, other than the annual general meeting, referred to in section 158 and the statutory meeting mentioned in section 157 of the Ordinance shall be called extra ordinary meetings.



38. The Directors may at any time call an extraordinary general meeting of the Company to consider any matter, which requires the approval of the Company in a general meetings, and shall, on the requisition of the members representing not less than one tenth of the voting power on the date of the deposit of the requisition, forthwith proceed to call an extraordinary meeting.

PROCEEDINGS OF GENERAL MEETINGS

39. Twenty-one day's clear notice at the least specifying the place, the day and the hour of meeting and, in case of special business the general nature of that business, shall be given in manner provided by the Ordinance for the general meeting, to such persons as are, under the Ordinance or the regulation of the Company, entitled to receive such notice from the Company; but the accidental omission to give notice by any member shall not invalidate the proceedings at any general meeting.
40. All business shall be deemed special that is transacted at an extraordinary general meeting, and 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 report of the Directors and auditors, the election of Directors, the appointment of, and the fixing of the remuneration of the auditors.
41. No business shall be transacted at any general meeting unless quorum of members as specified in Section 160(2)(a) of the Ordinance i.e. not less than three members present personally who represent not less than twenty five percent of the total voting power either of their own account or as proxies.
42. If, within half an hour from the time appointed for the meeting, a quorum is not present, the meeting, if called upon the requisition of members, shall be dissolved; in any other case it shall stand adjourned to the same day in the next week at the same time and place, and if at the adjourned meeting, a quorum is not present within half an hour from the time appointed for the meeting, the member or members present shall be a quorum and may transact the business for which the meeting was called.
43. The Chairman of the Board of Directors, if any shall preside as Chairman at every general meetings of the Company, but if there is no such Chairman, or if at any meeting he is not present or is unwilling to act as Chairman, and if none of the Directors is present or unwilling to act as Chairman, the member or members present shall choose one of their number to be Chairman.
44. The Chairman may, with the consent in any meeting at which a quorum is present (and shall if so directed by the meeting), adjourn the meeting from time to time but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place.
45. At any general meeting a resolution put to vote of the meeting shall be decided on a show of hands unless a poll is (before or after the declaration of the result of the show of hands) demanded. A declaration by the Chairman that a resolution

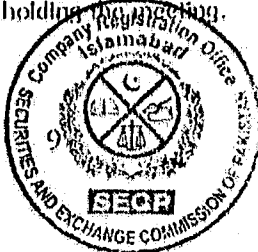


has, on the show of hands been carried or carried unanimously, or by a particular majority, or lost and an entry to that effect in the book of the proceedings of the Company shall be conclusive evidence of the fact, without proof of the number or proportion of the votes recorded in favour of, or against, that resolution.

46. Before or on the declaration of the result of the voting on any resolution on a show of hands, a poll may be ordered to be taken by the Chairman of a meeting of his own motion and shall be ordered to be taken by him on a demand made in that behalf by the persons or person specified in Section 167 of the Ordinance.
47. A poll demanded on the election of a Chairman or on a question of adjournment shall be taken forthwith and a poll demanded on any other question shall be taken at such time, not more than fourteen days from the day on which it is demanded, as the Chairman of the meeting may direct.
48. When a poll is taken, the Chairman or his nominee and a representative of the members demanding the poll shall scrutinize the votes given on the poll and the result shall be announced by the Chairman.
49. Subject to the provision of the Ordinance, the Chairman shall have power to regulate the manner in which a poll shall be taken.
50. The result of the poll shall be deemed to be the decision of the meeting on the resolution on which a poll was taken. The demand of a poll may be withdrawn. In case of any dispute as to the acceptance or rejection of a vote, the Chairman shall determine the same, and such determination made in good faith shall be final and conclusive.

VOTE OF MEMBERS

51. On a show of hands every member present in person or by proxy and entitled to vote shall have one vote for every share of which he is the holder and on a poll every member present in person or by proxy shall have one vote for every share of which he is the holder.
52. In the case of joint holders of a share 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 of members.
53. 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 a show of hands or on a poll, by his committee, curator bonis or other person appointed by such court, and such committee, curator bonis or other person may on a poll vote by proxy, provided that such evidence as the Directors may require of the authority of the person claiming to have the right to vote shall have been deposited at the office or at such other place as the Directors may appoint not less than forty eight hours before the time for holding the meeting.

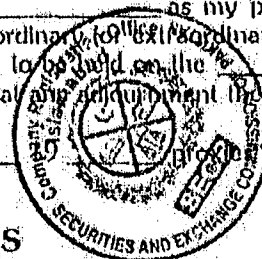


54. No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered, and every vote not disallowed at such meeting shall be valid for all purposes. Any objections made under the provisions of this Article shall be referred to the Chairman of the meeting whose decision shall be final and conclusive.
55. On a poll votes may be given either personally or by a proxy who need to be a member of the Company. A person entitled to more than one vote need not use all his votes or cast all the votes he uses in the same way.
56. The instrument appointing a proxy shall be in writing under the hand of the appointer or of his attorney duly authorised in writing, or if the appointer is a corporation either under the common seal or under the hand of an officer of an attorney so authorised. Members not resident in Pakistan may appoint and revoke proxies by telegram.
57. Any person duly appointed for that purpose shall be entitled to act at that meeting as the representative of a corporation under Section 162 of the Ordinance.
58. The instrument appointing a proxy and the power of attorney or other authority (if any), under which it is signed or a notarially certified copy of such power or authority, shall be deposited at the office or such other place as the Directors may appoint not less than forty-eight hours before the time appointed for holding the meeting or adjourned meeting at which the person named in the instrument proposes to vote and in default thereof the instrument of proxy may at the discretion of Directors be treated as invalid. The authority of the proxy shall be deemed to include the right to demand or join in demanding a poll, and generally to speak, vote and to act at the meeting in the same manner and extent as the member giving the proxy.
59. An instrument of proxy may be in the following form or in any other form which the Directors shall approve:

GUL AHMED ENERGY LIMITED

I, the undersigned, being a member of the above named Company hereby appoint _____ of _____ Whom
 failing _____ of _____ as my proxy
 to vote and act for me, and on my behalf, at the ordinary or extraordinary as
 the case may be) general meeting of the Company, to be held on the _____
 day of _____ 19 _____ and at any adjournment thereof.

Dated this _____ day of _____
 not be witnessed.



BORROWING POWERS

60. The Directors may borrow from members, Banks or Financial Institutions or other persons and may themselves lend any sum of money for purposes of the Company.



61. The Directors may secure payment of money in a manner and on terms and conditions as they think fit and in particular by (i) entering into Mudaraba contracts, (ii) issue of perpetual or redeemable and convertible or non convertible PTCs, TFCs debentures and their stocks, bonds, promissory notes, bills of exchange, usance bills and such other securities, (iii) furnishing guarantees and undertaking; depositing securities, shares and documents of title; (iv) hypothecating, charging and mortgaging properties and assets (both present and future) of the Company and creating liens on and pledging such properties; and (v) appointing attorneys, giving them powers of executing documents, having them registered, selling and managing the properties, undertaking any business of the Company and furnishing and creating such other securities as may be considered expedient; and for all the aforesaid purposes or otherwise execute, complete and deliver agreements and such other documents as may be required.
62. The Company may raise and secure payment of any sum by issue of TFCs or PTCs. The TFCs/PTCs may be issued at a discount, premium or otherwise with special privileges as to redemption, conversion into shares with voting rights and their subsequent reconversion into PTCs.
63. PTCs, TFCs, debentures, stocks thereof, bonds and other securities may be made assignable free from any equities between the Company and person to whom the same may be issued.
64. The Directors, shall cause a proper register to be kept in accordance with Section 125 of the Ordinance, of all mortgages and charges specially affecting property of the Company and shall comply with requirements of Section 121 and 122 of the Ordinance, in regard to registration of mortgages and charges therein specified and requirements of section 130 of the Ordinance, as to keeping a copy of every instrument creating mortgages or charge at the office, and requirements of Section 132 as to giving limitation of payment of satisfaction of charges or mortgages created by the Company.
65. Registers of holders of TFCs and debentures may be closed for any period not exceeding, in whole, thirty days in any year. Subject as aforesaid every such register shall be open to inspection of registered holders of PTCs, TFCs and debentures and of any member; but the Company may impose any reasonable restriction so that at least two hours in each day, when such register is open are appointed for inspection.
66. Subject to the provisions of Section 76 of the Ordinance, no transfer of PTCs, TFCs or debentures shall be registered unless a proper instrument of transfer duly stamped and executed by transferor and transferee has been delivered to the Company together with certificate of concerned securities.
67. If the Directors refuse to register transfers of PTCs, TFCs or debentures they shall within thirty days from the date on which instrument of transfer was lodged with the Company, send to the transferee and transferor a notice showing the reason of refusal as required under Section 78 of the Ordinance.
68. The Company shall comply with provisions of Section 136 of the Ordinance for



allowing inspection of copies kept at the office in pursuance of Section 130 of the Ordinance and allowing inspection of Register of PTC, TFC or debenture holders, in pursuance of Section 136 of the Ordinance.

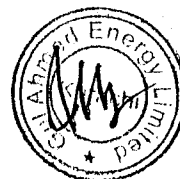
69. The Company shall comply with provisions of Section 136 of the Ordinance for supplying copies of Register of PTC, TFC and debenture holders or trust deed for securing issue of PTC, TFC or debenture.
70. Trustees for the PTC, TFC and Debenture Holders shall have the same right to receive and inspect balance sheet and profit and loss accounts of the Company and reports of Auditors and other reports as are possessed by holders of Ordinary Shares in the Company.
71. Subject to the provisions of the Ordinance, no loan or guarantee or security for loan shall be made directly or indirectly by the Company for or on behalf of any member of the Company unless the same shall have been approved by a three fourths majority of the Directors.

DIRECTORS

72. The number of Directors of the Company shall not be less than seven and more than twelve save as otherwise provided in the Ordinance, a Director shall be a member of the Company. The subscribers to the Memorandum of Association shall be the first Directors of the Company.
73. Any casual vacancy arising from the death, resignation or removal of a Director shall be filled by the remaining Directors Provided that no such vacancy shall be deemed to have occurred so as to require that it be filled where the provisions of Article 87(g) result in the vacation of office by a Director if and so long as the Security Trustee appoints pursuant to the provisions of Article 89 and the powers conferred by Clause 5.2(b)(ii) of the Security Sharing Agreement at least the same number of Directors as it names in the notice under Clause 5.02(b)(i) of the Security Sharing Agreement.
 - (a) Directors shall be entitled to be paid their reasonable traveling hotel and other expenses incurred in consequence of their attendance at Board meetings, and otherwise in the execution of their duties as Directors.
 - (b) If any Director, being willing, shall be called upon to render such services, as Managing Director or otherwise for any of the purposes of the Company, the fixed sum or by a percentage of shares or profits or by remuneration shall be addition to his shares in the Company.

POWERS AND DUTIES OF DIRECTORS

74. The business of the Company shall be managed by the Directors who may pay all expenses incurred in promoting and registering the Company, and may exercise all such powers of the Company, and may exercise all such powers of the Company as are not by the Ordinance or any statutory modification thereof for the time



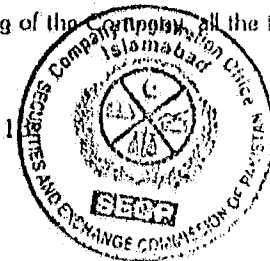
being in force, or by these regulations required to be exercised by the Company in the general meeting, subject nevertheless to the provisions of the Ordinance or to any of these regulations being not inconsistent with the aforesaid provision, as may be prescribed by the Company in general meeting but no regulation made by the Company in general meeting shall invalidate any prior act of the Directors which would have been valid if that regulation had not been made.

PROCEEDING OF DIRECTORS

76. The Directors may meet together for the dispatch of business, adjourn or otherwise regulate their meetings, and proceedings, as they think fit, and may determine the quorum necessary for the transaction of business. The quorum for Directors meeting shall be one third of total number of Directors or four whichever is greater.
77. Questions arising at any meeting shall be decided by a majority of votes.
78. A Director may, at any time summon a meeting of Directors. It shall be necessary to give notice of a meeting of Directors to any Director for the time being absent from Pakistan, at such facsimile number or other contact number or address as he shall from time to time provide to the Company.
79. The Chairman shall be elected amongst the Directors who shall preside all meetings of Directors as Chairman but if no such Chairman is elected or in any meeting the Chairman is not present or is unwilling to act as Chairman, the Directors present may choose one of their members to be Chairman of the Meeting.
80. A meeting of the Directors at which a quorum is present, shall be competent to exercise all or any of the authorities, powers, and directions by or under the Articles of the Company for the time being vested in or exercisable by the Directors generally.
81. The Directors may delegate all or any of their powers to the Chief Executive (by whatever name called) as they think fit and may from time to time, revoke such delegation subject to the agreement with the Chief Executive or Managing Director (by whatever name called).
82. Except for the matters specified in Section 196 of the Ordinance, a resolution in writing signed by all the Directors for the time being in office shall be as valid and effectual as if it had been passed at a meeting of the Board duly called and constituted. For this purpose, it shall be permissible to circulate the text of the proposed resolution duly signed by the Chief Executive and obtain the signatures of all the other Directors thereon separately by fax (the signed original whereof shall be sent in due course by mail or courier to the Company for its record) and such resolution shall be effective as soon as the text of the resolution signed by each of the other Directors shall have been faxed to and received by the Company.

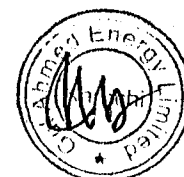
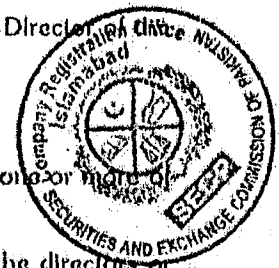
RETIREMENT & ELECTION OF DIRECTORS

83. At the first annual general meeting of the Company, all the first Directors shall



stand retired from office, and Directors shall be elected in their place in accordance with Section 178 of the Ordinance, for a term of three years. Notwithstanding that the number of persons offering themselves for election as Directors is not more than the number of Directors fixed under Article 72, the number of votes cast in favour of each candidate and the name of the member casting such votes shall be recorded in the minutes of the meeting.

84. A retiring director shall be eligible for re-election.
85. The Directors of the Company shall, subject to section 174 of the Ordinance, fix the number of elected directors of the Company not later than thirty-five 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 by ordinary resolution of a general meeting of the Company.
86. No person shall be appointed as a Director of the Company if he:
 - (a) is minor;
 - (b) is found to be of unsound mind;
 - (c) is adjudged insolvent by a court of competent jurisdiction;
 - (d) has been convicted by a court of law for an offense involving moral turpitude;
 - (e) has been debarred from holding such office under any provisions of the Ordinance;
 - (f) has betrayed lack of judicial behavior and a declaration of this effect has been made by the Court under section 217 of the Ordinance at any time during the preceding five years.
 - (g) is not a member of the Company; provided that clause (g) shall not apply in the case of;
 - (i) a whole-time Director who is an employee of the Company.
 - (ii) a Chief Executive.
 - (iii) a person representing one or more creditors as a Director of the Company.
87. A Director shall ipso facto cease to hold office if:
 - (a) he becomes ineligible to be appointed a director on any one or more of the grounds enumerated in Articles 86; or
 - (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; or

- (c) The Directors by notice in writing to the Company resigns of his office; or
- (d) he is removed from office by resolution in general meeting, under Section 181 of the Ordinance; or
- (e) he or any firm of which he is 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 (by whatever name called) or a legal or technical adviser or a banker; or
 - ii) accepts a loan or guarantee from the Company in contravention of Section 195 of the Ordinance.
- f) any other event mentioned in Section 188 of the Ordinance occurs; or
- g) he is named in any notice received by the Company from the Security Trustee pursuant to and under the terms of Clause 5.2(b)(i) of the Security Sharing Agreement.

88. The Company shall keep at its registered office a register of its Directors and officers including the Chief Executive (by whatever the name called), secretary, Chief accountant, auditors and legal adviser, containing with respect to each of them the following particulars, that is to say:-

- a) In the case of an individual, his present name in full, any former name or surname in full his father's name, in the case of a married woman or a widow, the name of her husband or deceased husband, his usual residential address, nationality and if that nationality is not the nationality of origin, his nationality of origin, and his business occupation, if any, and if he holds any other directorship or other office the particulars of such directorship or office;
- b) In the case of a corporation, its corporate name and registered or principal office, and full name, address and nationality of each of its directors; and
- c) In the case of a firm, the full name, address, and nationality of each partner, and the date on which each became a partner.

The Company shall otherwise comply with the provisions of Section 205 of the Ordinance, as regards returns to the Registrar and giving inspection of the register.

In addition to the Directors elected or deemed to have been elected by shareholders, the Company may have Directors nominated by or on behalf of the "Company's



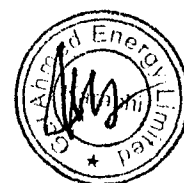
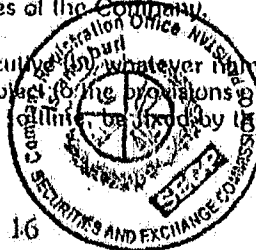
creditors or other special arrangements by virtue of any contractual arrangements and any such contractual arrangements with respect to the appointment of Directors by creditors or other special interests approved by the Board shall be binding on the Company and every person then or at any time thereafter holding the office of Director.

ALTERNATE DIRECTORS

89. A Director may, with the approval of the Board, appoint any person (including another Director) to be his alternate Director and such an alternate Director shall be entitled to notice of meetings of the Directors and to attend and vote thereat accordingly and generally to exercise all the rights of such absent Director subject to any limitations in the instrument appointing him. For the purpose of the proceedings at such meetings, the provisions of these Articles shall apply as if any alternate Director (instead of his appointer) were a Director. An alternate Director shall not require any share qualification and he shall ipso facto vacate office as and when his appointer (a) vacates office as a Director; (b) removes the appointee from office; or (c) returns to Pakistan. Provided upon each occasion upon which the appointer thereafter leaves Pakistan again, and unless the appointer shall have informed the Company to the contrary, he shall be deemed to have reappointed the appointee as his alternate Director and no further approval of the Board shall be required unless the appointer desires to approve another person not previously approved by the Board as his alternate. If an alternate Director shall be himself a Director, his voting rights shall be cumulative but he shall not be counted more than once for the purposes of quorum. Any appointment or removal under this Article shall be effected by notice in writing under the hand of the Director making the same.

CHIEF EXECUTIVE OR MANAGING DIRECTOR

90. The Directors shall appoint a Chief Executive (by whatever name called in accordance with the provisions of Sections 198 & 199 of the Ordinance).
91. A Chief Executive shall while he continues hold that office subject to the terms of any contract between him and the Company, be subject to the same provisions as to resignations and removal as the other Directors of the Company and if he ceases to hold the office of Director from any cause he shall ipso facto and immediately cease to be Chief Executive.
92. With a view to enable the smooth and efficient functioning of the Company it is clarified that the Chief Executive (by whatever name called) shall be responsible subject to the supervision and control of the Board for the general day-to-day management of the Company and of its business transactions and in the best interests of the Company and do all such actions as may be required, and shall have control over all the employees of the Company.
93. The remuneration of a Chief Executive (by whatever name called) or a Director holding an office of profit shall, subject to the provisions of any contract between him and the Company, from time to time be fixed by the Directors, and be by



way of fixed salary, or percentage of profit, or by both, as provided in such contract.

MINUTES

94. The Directors shall cause minutes to be duly entered in books provided for the purpose:
- of all names of the Directors present at each meeting of the Directors and committee of Directors, if any;
 - of all orders made by the Directors and committee of Directors;
 - of all resolutions and proceedings of general meetings and of meetings of the Directors and Committee. Any such minutes of any meeting of the Directors, or any committee, or of the Company, if purporting to be signed by the Chairman of such meeting, or by the Chairman of the next succeeding meeting shall be receivable as prime evidence of the matters stated in such minutes.
95. Until the contrary is proved, every general meeting of the Company or meeting of Directors or committee of Directors in respect of the proceedings whereof minutes have been so made shall be deemed to have been duly called and held, and all proceedings had thereat to have been duly held, and all appointments of Directors or any liquidators made thereat shall be deemed to be valid.
96. The books containing the minutes of proceedings of the general meetings of the Company and those of the meetings of the Directors and committee of Directors shall be kept at the registered office of the Company and shall be open to inspection by members between such hours of working as the Directors may prescribe.

SEAL

97. The Directors shall provide for the safe custody of the Seal, and the Seal shall never be used except by the authority of the Directors, previously given, and in the presence of the Chief Executive (by whatever name called) or anyone of the Directors duly authorised by the Board who shall sign every instrument to which the Seal is affixed.

DIVIDEND AND RESERVES

98. Clause 63 to 70 of Table A shall apply.
99. Notice of the declaration of any dividend, whether interim or otherwise shall be given to the holders of registered shares in the manner hereinafter provided. Unless otherwise directed, any dividend may be paid by cheque or warrant sent through the post to the registered address of the member or other person entitled pursuant to any directions or order in writing received by the Company, or in the case of joint holders, to the registered address of that whose name stands first



In the register in respect of joint holding; and every cheque or warrant so sent shall be made payable to the order of the person to whom it is sent.

ACCOUNTS

100. Clauses 71 to 77 of Table A shall apply.

AUDITORS

101. Auditors shall be appointed and their duties regulated in accordance with Section 252 & 255 of the Ordinance. The Company shall at each annual general meeting appoint an auditor to hold office till the conclusion of the next annual general meeting.

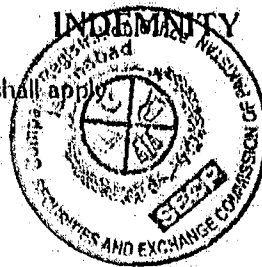
NOTICE

102. Clauses 79 to 83 of Table A shall apply, save that any Director or member resident out of Pakistan shall be entitled to receive notices and such notices shall be delivered by facsimile or courier at the facsimile number or address provided to the Company from time to time by such Director or member.

WINDING UP

103. Clause 84 of Table A shall apply.

104. Clause 85 of Table A shall apply.



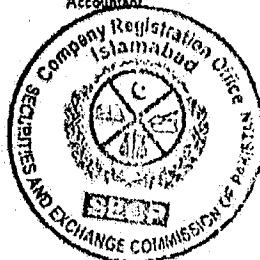
We, the several person whose names and addresses are subscribed are desirous of being formed into a Company in pursuance of this Articles of Association, and we respectively agree to take the Number of shares in the capital of the Company set opposite our respective names:

Name and Surname (Present and former) in full (block letters)	Father's/Husband's Name in full	Nationality with any former Nationality	Occupations	Residential Address (in full)	Number of Shares taken by each Subscriber	Signature
MR. IQBAL ALIMOHAMMED	HAJI ALIMOHAMMED	Pakistani	Industrialist	118, Garden East, Karachi.	One	
MR. BASHIR H. ALIMOHAMMED	HAJI ALIMOHAMMED	Pakistani	Industrialist	D-37, K.D.A. Scheme No. 1, Karsar Road, Karachi.	One	
MR. ABDUL RAZZAK	HAJI SATTAR	Pakistani	Industrialist	115, Garden East, Karachi.	One	
MR. MOHAMMED ASIF	A. GHAFAR	Pakistani	Industrialist	238, Garden East, Karachi.	One	
MR. SIRAJ	HAJI KASSAM TELI	Pakistani	Industrialist	117/1, Garden East, Karachi.	One	
MR. YASIN	HAJI KASSAM TELI	Pakistani	Industrialist	117/1, Garden East, Karachi.	One	
MR. JUNAID	HAJI LATIF	Pakistani	Industrialist	239/2, Garden East, Karachi.	One	
MR. UBAID	AMANULLAH	Pakistani	Industrialist	239/1, Garden East, Karachi.	One	

Dated: 11th day of July, 1986

Witnesses to the above Signature:

<u>NAME:</u>	<u>FATHER NAME:</u>	<u>OCCUPATION:</u>	<u>NATIONALITY:</u>	<u>FULL ADDRESS:</u>
Zahoor Ahmed	Mohammed Musa	Chartered Accountant	Pakistani.	Sattar Chambers, 29-West Wharf Road, Karachi.

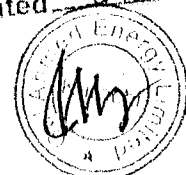


CERTIFIED TO BE TRUE COPY

Joint Registrar
Company Registration Office Islamabad

No. ADI 9685

Dated 1/4/86



ANNEXURE C
CERTIFICATE OF INCORPORATION



GOVERNMENT OF PAKISTAN



CERTIFICATE OF INCORPORATION

(Under section 32 of the Companies Ordinance, 1984 (XLVII of 1984).)

Company Registration No. K-05482 OF 1994-95

I hereby certify that GUL AHMED ENERGY LIMITED

is this day incorporated under the Companies Ordinance, 1984 (XLVII of 1984) and that

the company is limited by SHARES AS A PUBLIC COMPANY

Given under my hand at KARACHI

this 20TH day of JULY

one thousand nine hundred and NINETY FOUR

Fee Rs. 19,370/-



(NISAR AHMED KAKEPOTA)
JOINT REGISTRAR
OF COMPANIES

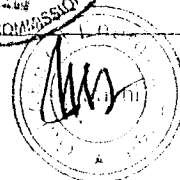
CRO-1

TRUE COPY

Company Secretary

No. ADI 9685

Dated 1/4/16



ANNEXURE D
KE POWER PURCHASE CONSENT



ANNEXURE E
KE CAPACITY FACTOR CONFIRMATION



RE: Indicative Despatch Numbers



Fahad Najmi <fahad.najmi@ke.com.pk>

To: Amin Bhimani

Cc: Danish Iqbal; Ubaid Amanullah (GAEL); Yousuf Aziz; Fahad Mazhar; Iqbal Vora, Muhammad; Aamir Rizwan Qureshi; Muhammad Bilal Mustafa; Aleena Burney; Mudassir Zuberi

Reply Reply All Forward Thu 9/8/2022 1:31 PM

Dear Amin sb,

As discussed, we have made some changes in the assumptions and reassess the expected dispatch of GAEL, the indicative dispatch for both agreement year (i.e. FY 23 & FY 24) will be approx 40%. Kindly note that these are projections based on tentative calculations and are dependent on various factors including but not limited to system demand, gas supply, supply from NTDC etc. Accordingly, these numbers may vary in future.

Regards

Fahad Najmi
Deputy General Manager
Business Development
K-Electric Limited

Switch Board: +9221 38709132 (Ext: 5346)
Cell: +92 346 8223792

1st Floor, BOC Building, KE Head Office,
39-B Sunset Boulevard, DHA Phase-II,
Karachi, Pakistan.
www.ke.com.pk



ANNEXURE F
COPY OF GENERATION LICENSE





National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

2nd Floor, OPF Building, G-5/2, Islamabad.
Ph : 9207200 Ext : 330 — Fax : 9210215
E-mail : office@nepra.isb.sdnpk.org
Direct Phone : (051) 9206500

No. NEPRA/R/LAG-10/7743-44

30.9.2003

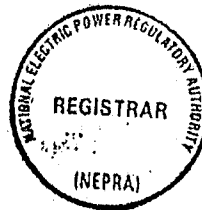
Commercial Manager & Co-ordinator,
M/s. Gul Ahmed Energy Limited
35-B, Block 6, PECHS,
Karachi-75400


Subject: **Grant of Generation Licence IPGL/09/2003**
Licence Application No. LAG 10
M/s. Gul Ahmed Energy Limited

Please refer to your application No. 549(1)/01/4144 dated 02.04.2001 for a Generation Licence.

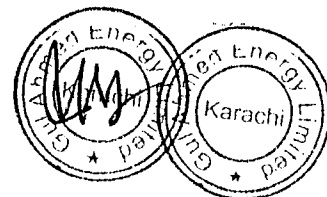
2. Enclosed here is Generation Licence No. IPGL/09/2003 granted by the Authority to M/s. Gul Ahmed Energy Ltd. The Licence is granted to you pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).
3. Please quote above mentioned Generation Licence No. in your future correspondence with the Authority.

DA/As above.




(Mahjoob Ahmad Mirza)

Copy for information to Director General, Pakistan Environmental Protection Agency,
44-E, Office Tower, Blue Area, Islamabad.



Slav No: 3059 Di: 01/08/2003

**National Electric Power Regulatory Authority
(NEPRA)
Islamabad – Pakistan**

GENERATION LICENCE

No. IPGL/09/2003

In exercise of the Powers conferred upon the National Electric Power Regulatory Authority (NEPRA) under Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), the Authority hereby grants a Generation Licence to:

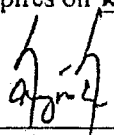
Gul Ahmed Energy Limited

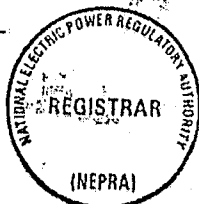
Incorporated under the Companies Ordinance, 1984
Under Certificate of Incorporation

No. K-05482 Dated 20th July 1994

to engage in generation business subject to and in accordance with the Articles of this Licence.

Given under my hand this 26th day of August, Two Thousand & Three and expires on 25th day of August, Two Thousand & Nineteen.


Registrar

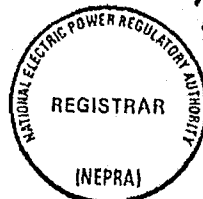


Article 1
Definitions

- (1) In this Licence:
- a. "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997);
 - b. "Agreements" means any or both of the Implementation Agreement and the Power Purchase Agreement,
 - c. "Authority" means the National Electric Power Regulatory Authority constituted under Section 3 of the Act, or any successor thereof;
 - d. "Implementation Agreement" means the Implementation Agreement dated 29th June, 1995 as amended between the Licensee and the President of Pakistan;
 - e. "Licensee" means Gul Ahmed Energy Limited;
 - f. "Power Purchase Agreement" means the Power Purchase Agreement dated 7th June 1995 as amended between the Licensee and the power purchaser thereof and for the due performance of which a sovereign guarantee has been executed by the Government of Pakistan;
 - g. "Rules" means the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000, as amended from time to time;
- (2) Words and expressions used but not defined herein bear the meaning given thereto in the Act or in the Rules.

Article 2
Application of Rules

- (1) This Licence is issued subject to the provisions of the Rules, as amended from time to time.



- (2) During the subsistence of the Agreements entered into by the Licensee prior to the enactment of the Act, nothing contained in the Rules or this Licence shall be applied in a manner which is inconsistent with the Agreements and materially increases the obligations or impairs the rights of the Licensee under the Agreements.

Article 3 Generation Facilities

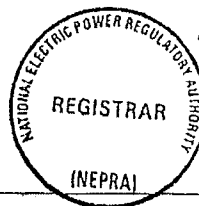
- (1) The location, size, technology, interconnection arrangements, technical limits technical functional specifications and other details specific to the generation facilities of the Licensee are set out in Schedule I to this Licence.
- (2) The net capacity of the generation facilities is set out in Schedule II hereto.

Article 4 Term

- (1) Pursuant to Rule 5 of the Rules, this Licence is granted for a term of Sixteen (16) years.
- (2) Unless revoked earlier, the Licensee may, ninety (90) days prior to the expiry of the term of the licence, apply for renewal of the Licence under the Licensing (Application and Modification Procedure) Regulations, 1999.

Article 5 Licence Fee

The Licensee shall pay to the Authority the Licence fee in the amount and manner and at the time specified in the National Electric Power Regulatory Authority (Fee) Rules, 2002.



Article 6

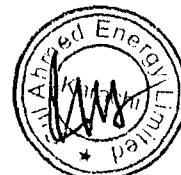
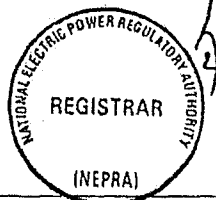
Competitive Trading Arrangement

- (1) During the subsistence of the Agreements entered into by the Licensee prior to the enactment of the Act, the Licensee shall have the option to participate in such measures as may be directed by the Authority from time to time for development of a Competitive Trading Arrangement.
- (2) Any variation or modification in the Agreements under the foregoing sub-article (1), for allowing the Licensee to participate wholly or partially in the Competitive Trading Arrangement shall be subject to mutual agreement of the parties thereto and such terms and conditions as may be approved by the Authority.
- (3) In the event that the Licensee exercises its option to participate wholly or partially in development of the Competitive Trading Arrangement under the fore-going sub-article (1), the Licensee shall in good faith work towards implementation and operation of the aforesaid Competitive Trading Arrangement in the manner and time period specified by the Authority and in doing so, the Licensee shall not by any act or omission impede the development, implementation or operation of the Competitive Trading Arrangement.

Article 7

Maintenance of Records

For the purpose of sub-rule (1) of Rule 19 of the Rules, copies of records and data shall be retained in standard and electronic form and all such records and data shall, subject to just claims of confidentiality, be accessible by authorized officers of the Authority.



Article 8

Compliance with Performance Standards

Subject to the provisions of Article 2(2), the Licensee shall comply with the relevant rules on performance standards as may be prescribed by the Authority from time to time.

Article 9

Compliance with Environmental Standards

The Licensee shall, to the full satisfaction of the relevant competent authority, comply with the environmental standards as may be prescribed by the aforesaid relevant competent authority from time to time.

Article 10

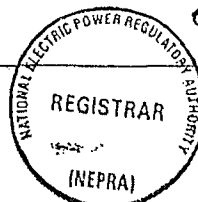
Provision of Information

Subject to the provisions of Article 2(2), the Licensee shall provide to the Authority all such information as the Authority may require.

Article 11

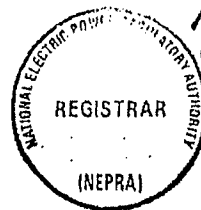
Revocation and Suspension

- (1) In exercising its powers to suspend or revoke the Licence under Section 28 of the Act, the Authority shall issue a show cause notice of a period not less than 30 days.
- (2) Pursuant to the powers under Rule 8(4), the obligations of the Licensee under Rule 8(3) stand modified to the extent of inconsistencies with the Agreements and in the event of termination of the Agreements, the Authority may revoke or suspend this Licence.



Article 12
Approvals and Authorisations

Notwithstanding the provisions of Article 11(2), the Licensee shall apply to the Authority, where required, for approvals and authorizations under the Rules, including without limitation, the approvals and authorisations under Rule 8, Rule 10 and Rule 14.



→ ✓ [Signature] ✓



Schedule I



SCHEDULE 1

POWER PURCHASE AGREEMENT

MINIMUM FUNCTIONAL SPECIFICATIONS

The Complex consists of nine (9) units of RFO (Residual Furnace Oil) fired of diesel generating set with the following design ratings:

1. Gross Capacity under ISO 3046 (Latest Version)
Diesel Generating Unit : 15.13 MW per unit x 9 units = 136.17
at Alternator Terminal MW for the Complex
2. Derating : 6.80 MW
3. Auxiliary consumption : 4.07 MW
of the Complex
4. Estimated Dependable Capacity : 125.30 MW
of the Complex at 132kV Busbar
under Reference Conditions

The proposed Site is located in Korangi, Karachi adjacent to an existing gas turbine power station owned by KESC.

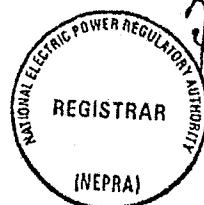
The proposed Site area is characterized by tropical climate. Average rainfall is 600mm per year, but this amount falls in short durations. Reference Conditions are as follows:

AMBIENT AIR TEMPERATURE = 30 deg. C

CHARGE AIR COOLANT TEMPERATURE = 40 deg. C

RELATIVE HUMIDITY = 80 %

A maximum earthquake design factor of 0.1 g will be utilized for the design of the plant buildings and structures and the design wind speed will be 40 m/sec.



The proposed Site is at an elevation 8 m with respect to mean sea level (MSL). All structures will have a ground floor elevation of at least 10 m above MSL. Access to the Site will be provided by Public Road.

The main power block consists of 9 units of diesel generating sets.

*
Cooling water will be supplied via a radiator system.

Each diesel generator will be nominally rated at 18,910 kVA, 0.8 lagging and 0.9 leading power factor, 11,000 V, 3 phase, 50 cycle, not less than 0.55 short circuit ratio

The Complex will be capable of operation within a voltage range of $\pm 10\%$ on the 132 kV system.

The Complex will have three generator transformers 63 MVA, 132/11 kV, ONAN/ONAF.

Interconnection with the KESC system will be via a 132kV, outdoor Conventional type substation with interrupting capacity of 31.5 kA at 132kV.

A common control room is provided to monitor and control the Complex. Operator interfaces for control of the Complex will be via control panel and PC operating stations and each generating unit can be started and stopped locally. The plant control system will include a data acquisition system.

Fuel supply to the Complex will be via tanker truck delivery. The Site will have sufficient RFO storage capacity to support operation of the Complex for the equivalent of 100 % of full load for 30 Days.

All material, plant, equipment and machinery incorporated in the construction of the Complex shall be new and unused.

* Other plant buildings and structures outside of the main power block include the following:

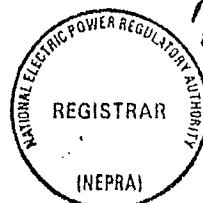
Fuel storage area

Fuel treatment plant / Water treatment plant

Water storage

Work shop / Stores

Fire fighting basin



SCHEDULE 2

TECHNICAL LIMITS

1. Design Limits

1.1 Unit Starts

- (a) The notice required by the Company to start-up the Complex and synchronize to the KESC Grid System will vary according to the length of time the Unit has been shutdown. Table 1 below shows the length of notice required against various periods of shutdown.

Table 1

Length of Shutdown	Notice required to synchronize
(i) Not more than 0.5 hours <i>2.0</i>	30 minutes
(ii) More than 0.5 hours but not more than 8 hours	60 minutes
(iii) More than 8 hours but not more than 32 hours	2 hours
(iv) More than 32 hours but not more than 150 hours	4 hours
(v) More than 150 hours	7 hours

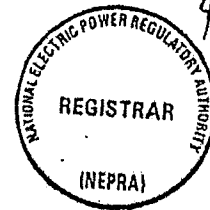
- (b) For the purposes of this Schedule start up of the Complex is classified as follows:

"Hot Start" - A start following a shutdown period as per (i) above.

"Cold Start" - A start following a shutdown period as per (ii), (iii), (iv) and (v) above.

and the reference to starts, starting or started means the process of pre heating the fuel and engine, starting and running of Diesel engine generators and synchronizing it to the KESC Grid System.

- (c) The notice required to synchronize under item (i) above shall apply provided the previous shutdown was not the result of a trip.
- (d) Starting of the Complex shall be subject to the following limits for each Unit:



Type of Starts	Table 2	Maximum number of starts per year
	Total aggregate maximum number of starts	
Hot Starts	NO TECHNICAL LIMITATIONS	
Cold Starts		

1.2 Complex loading

- (a) The Complex load ramping rate is the steady rate at which the load can be raised. The maximum load ramping rates are shown below in Table 3:

Complex Load Range %	Table 3 A	
	Cold Start % per minute	Hot Start % per minute
(i) 0 ~ 75	6	6
(ii) 75 ~ 100	5	5

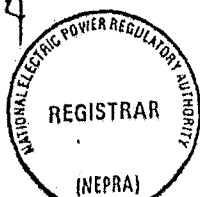
Complex load percentages in this Schedule refer to the load at the generator terminals as a percentage of gross capacity.

- (b) The unit load ramping rate is the steady rate at which the load can be raised. The maximum load ramping rates are shown below in table 3B:

Unit Load Range %	Table 3B	
	Cold Start % / minute	Hot Start % / minute
(i) 0 ~ 75	0.88	0.88
(ii) 75 ~ 100	0.7335	0.7335

Unit load percentages in this Schedule refer to the load at the generator terminals as a percentage of the Unit gross capacity.

- (c) Step changes in Despatched load of up to 20% are allowable provided that Complex load is greater than 35%. After such step change the new Complex load must be held constant for 30 minutes for stabilization purposes, or for a pro rata period for lesser step changes.



(d) The Complex can withstand a full load rejection and remain in a safe condition. *W.A.* Provided the Complex auxiliaries are operated continuously, *W.S.* The Complex can be re-synchronized within one hour provided that the reason for the load rejection has been removed.

(e) The Complex minimum continuous loading shall be 8%. *of 6000 is C. phase only for the first unit.* *W.S.*

1.3 Frequency, Power Factor, Voltage Limits and Droop Settings

(a) The Complex will operate at 100% load with a power factor in the range 0.8 lagging to 0.9 leading which range shall not be exceeded. At 0% load the Unit has a Reactive Power capability of 16 MVAR lagging or 6 MVAR leading. At 100% load the Unit has a Reactive Power capability of 11.3 MVAR lagging or 8.2 MVAR leading.

(b) The Complex can operate within the range $\pm 10\%$ on the 132 kV high voltage system which range shall not be exceeded.

(c) The Complex can operate within the frequency range 47 Hertz to 53 Hertz which range shall not be exceeded.

(d) The Complex will be subject to tripping if frequency and/or voltage fluctuations outside the ranges stated in 1.3(b) and 1.3(c) occur.

(e) The Unit governor droop is adjustable in the range 0% to 10%. The automatic voltage regulator will control the generator voltage over the range of $\pm 10\%$ of rated voltage with a droop characteristic of $\pm 0.5\%$.

1.4 General

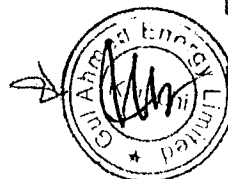
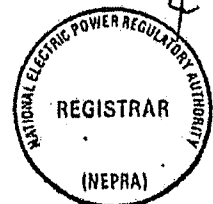
(a) The Company shall advise KESC of any temporary operating constraints and limits which may from time to time apply to the Complex.

2. Design Maintenance Limits

The cycle of Scheduled Outages is set out in Table 4 below together with a manufacturer's recommended durations for such inspections.

TABLE 4

Major items and Nature of Maintenance in 12 Months Period	Operating hours interval for each Maintenance activity	Estimated Duration of Each Activity Per Unit x times/year
Change of Lube Oil in TC	500	1.5 hrs x 16
Check of valve clearance	1000	10 hrs x 8



Check of alarm and stop devices
Cleaning of suction air filters

Inspection of injection valves 2000
Change of oil in governor
Check of overspeed devices

23 hrs x 4

Cleaning of coolers 4000
Inspection of crankshaft
Check of crankshaft alignment
Inspection of T/C
Check of water space
Inspection of one piston

115 x 2 hours

Inspection of engine driven 6000 ~ 8000
pumps
Inspection of thermostatic valve
Piston Overhaul
Cylinder head Overhaul
Turbocharger Overhaul
Injection Pump Overhaul
Inspection of main bearings
Check of damper

294 hrs x 1

Required time per unit (including other activities) : 720 hours

Scheduled Outages thereafter continue on a one-year cycle which must be maintained.
The scheduling of maintenance inspections will be compatible with regulatory requirements. All regulatory inspections will be carried out during Scheduled Outages.
In addition to the above yearly Scheduled Outage, 720 hours Scheduled Outage for Overhaul as shown in table 5 shall be allowed at every fifth (5th) year.

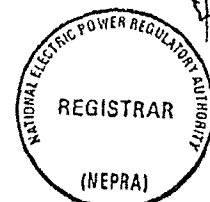
Table 5

Major items of Works 24000 ~ 32000 hrs
Change of Torsional Vibration Damper
Inspection/reconditioning of piston crown and skirts
Change of valve seat rings and valve guides
Inspection/change of intermediate gear wheel bearings
Inspection/change of camshaft bearings
Inspection/change of Big end bearings
Inspection/change of valve seats

Required time per unit : 720 hours

3. Prudent Utility Practice

Notwithstanding anything to the contrary, the Company shall operate and maintain the Complex in accordance with Prudent Utility Practices.



SCHEDULE 3

INTERCONNECTION FACILITIES AND TRANSMISSION FACILITIES

1. Interconnection and Transmission Facilities

- (a) ~~The connection between the Complex (four line bays) and KESC's 132 KV substation at~~ Karachi. The location of which will be shown on the Site plans Fig.1. (to be submitted later) The transmission line will terminate in the substation of the Complex, the location of which is shown on the Site plans Figures 1 and 2. (to be submitted later) The circuits of the transmission line will connect at terminal of line gantries provided by the Company as shown on the single line diagram of the substation at Figure 3 (to be submitted later). The boundary of responsibility between the Company and KESC will be at the top of the terminal of line gantries (the "Interconnection Point"). The Company will provide KESC with an earth connection from the earthing system of the Complex. KESC will install the Metering System which together with the transmission line referred to above within the Site boundary shall comprise the "Interconnection Facilities." This equipment will remain the property of KESC and shall be commissioned and maintained thereafter by KESC.

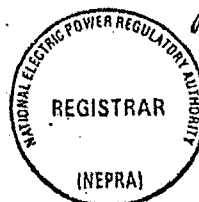
- (b) Protection. A carrier intertripping circuit for each transmission line shall be provided between the line circuit breakers at the Complex owned by the Company and the line circuit breakers at the 132kV Grid Station owned by KESC.

2. Design Data

The following design data has been provided by the Company to KESC to enable completion of KESC of the design of the Interconnection Facilities and the Transmission Facilities.

- * The connection between the Complex and KESC'S 132 KV system/network shall be between Korangi Town, Landhi and Airport Civil stations by two 132 KV double circuit transmission lines. The Company shall provide provision of work in support interconnection with KESC.

* Landhi, Korangi Town and Airport.



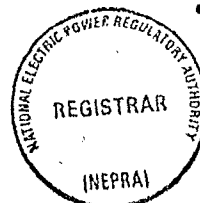
2.1. Generator Design Data (for diesel engine)

(a) Rating

Rating	18,910 kVA
Nominal Rated Capacity	18,910 kVA
Power factor	0.8 lagging 0.9 leading
Rated hydrogen pressure	N.A (Air Cooled).
Number of phases	3
Number of poles	12
Frequency	50 Hz, $\pm 6\%$
Rated speed	500 rpm
Terminal voltage	11 kV, $\pm 10\%$
Short circuit ratio at rated MVA	not < 0.55
Excitation system	Brushless

(b) Generator Reactances (at the rated MVA & kV base) (for diesel engine)

Unsaturated direct axis synchronous reactance	191 %
Saturated direct axis sub-transient reactance	24.4 %
Saturated direct axis transient reactance	36.1 %
Negative phases sequence reactance	26.6 %



Zero phase sequence reactance 8.4 %
Leakage reactance 0.01 p.u.

(c) Generator time constants (for diesel engine)

Direct axis open circuit time TDO 5.2 seconds
constant
Direct axis open circuit sub TDO 0.034 seconds
transient time constant
Direct axis short circuit sub TD 0.025 seconds
transient time constant
Direct axis short circuit TD 1.2 seconds
transient time constant

.....(d) Inertia constant

diesel engine + its generator .
J=17,200 kgm²
H=1.25 sec.

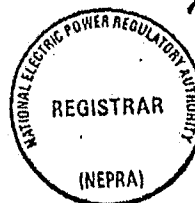
Notes : 1) The above design values will have tolerances as specified in the relevant IEC standards.

2.2 Excitation System

Excitation of the engine generator is provided by a brushless system using booster transformers. The excitation control system has two (2) voltage regulators which are automatic voltage regulator (AVR) and stand-by AVR. During normal operation, the whole excitation system is subject to automatic control by means of AVR. In case of AVR fault, stand-by AVR will be automatically connected.

Technical Characteristics

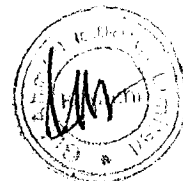
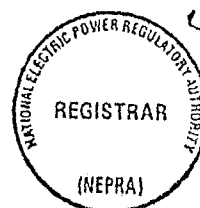
- (i) Voltage setting range for AVR operation: +/- 10 %
(ii) Voltage adjusting range for MEC operation: N.A.



- (iii) Generator terminal voltage is held within $\pm 10\%$ from no load to full load at rated frequency.
- (iv) Under the maximum direct current supplied from the excitation system for a specified time, the ceiling voltage to the generator field voltage is 2.0 p.u.
- (v) The transfer function diagram of excitation system as shown in Figure 4 (to be supplied later).

2.3 Generator Transformer

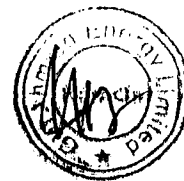
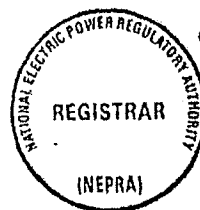
Rated Power	63 MVA
Rated voltage <i>NE OF THIS</i>	132 kV $\pm 10\%$ / 11 kV $\pm 10\%$ (± 13 Taps)
Current prim./sec.	276 / 3307 A
Frequency	50 Hz, $\pm 6\%$
Connection Group	YND11
Insulation Level	
Impulse	650 (250) / 95 kV
AC withstand	230 (95) / 38 kV
Type of Cooling	ONAN/ONAF
Temp. rise wdg. / oil	55 / 50 deg. C
Max. system short circuit power	7,200 MVA
Impedance and losses	at reference power 63 MVA
Impedance	15 % HV to LV
No load losses	40 kW
Load losses	190 kW



Aux. losses

2.2 kW

- 2.4 The governor droop will be adjustable from 0 % to 10 %, and the smallest size of step adjustment/ change of the governor droop is 0.1%. The governor droop is designed to operate over the frequency range 47 to 53 Hz.
- 2.5 The AVR droop setting is $\pm 0 \sim 10\%$ of rated voltage with a droop characteristic of $\pm 0.5\%$.





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/R/LAG-10/9084-89

March 19, 2020

Mr. Amin Bhimani,
Chief Financial Officer,
Gul Ahmed Energy Limited,
7th Floor, Al-Tijarah Centre, 32-1-A, Block 6,
P.E.C.H.S, Main Shahra-e-Faisal Road,
Karachi 75400.

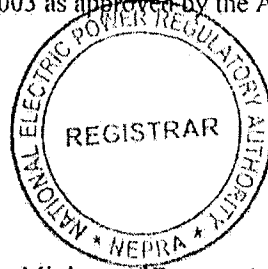
Subject: **Modification-I in Generation Licence No. IPGL/09/2003**
Licence Application No. LAG-10
Gul Ahmed Energy Limited (GAEL)

Reference: *GAEL's LPM submitted vide letter dated February 06, 2019 (received on February 08, 2019)*

The Authority has approved Modification in Generation Licence No. IPGL/09/2003 dated August 26, 2003 in respect of Gul Ahmed Energy Limited (GAEL), pursuant to Section 26 of the Regulation of Generation, Transmission, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997) read with Regulation 10(11)(a) of the NEPRA Licensing (Application and Modification Procedure) Regulations 1999.

2. Enclosed please find herewith determination of the Authority in the matter of Licensee Proposed Modification in the Generation Licence of GAEL along with Modification-I in the Generation Licence No. IPGL/09/2003 as approved by the Authority.

Encl: As above



19 03 20
(Syed Safer Hussain)

Copy to:

1. Secretary, Power Division, Ministry of Energy, A-Block, Pak Secretariat, Islamabad.
2. Managing Director, NTDC, 414-WAPDA House, Lahore.
3. Chief Executive Officer, CPPA-G, ENERCON Building, Sector G-5/2, Islamabad.
4. Chief Executive Officer, K-Electric Limited, KE House, 39-B, Sunset Boulevard, Phase-II, DHA, Karachi.
5. Director General, Environment Protection Agency, Government of Sindh, Complex Plot No. ST-2/1, Korangi Industrial Area, Karachi.

Co. Name NEPRA

Diary No. 210 Date 20-3-2020



National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter of Licensee Proposed Modification of
Gul Ahmed Energy Limited

March 19, 2020
Case No. LAG-10

(A). Background

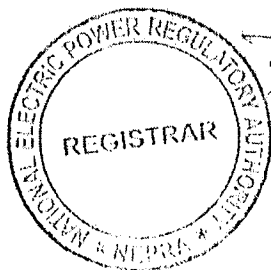
(i). Gul Ahmad Energy Limited (GAEL) holds a generation licence (No. IPGL/09/2003, dated August 26, 2003) in terms of Section-15 (now Section-14B) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "NEPRA Act").

(ii). The Authority granted the above generation licence to GAEL for its 136.17 MW Residual Furnace Oil (RFO) based generation facility/thermal power plant located at Korangi Industrial Area, Taluka & District Karachi, in the province of Sindh.

(B). Communication of Modification

(i). GAEL in accordance with Regulation-10(2) of the NEPRA Licensing (Application & Modification Procedure) Regulations, 1999 (the "Licensing Regulations") communicated a Licensee Proposed Modification (LPM) in its above-mentioned generation licence on February 08, 2019.

(ii). In the "Text of the Proposed Modification", GAEL proposed to extend the Term of its generation licence for ten (10) years and three (03) months after the expiry date of the current term of its generation licence on August 25, 2019. Regarding the "Statement of the Reasons in Support of the Modification", GAEL, *inter-alia*, submitted that the proposed modification aims to ensure that the term of the generation licence caters to the remaining useful life of the facility as, in terms of the applicable laws of Pakistan (including the NEPRA Act and the rules and



regulations made thereunder), the Authority's approval of the proposed modification is an essential requirement for effective utilization of the facility (including implementation of the PPA Term Extension) till the proposed extension in the term of the generation licence.

(iii). About the statement of "the Impact on Tariff", "Quality of Service (QoS)" and "the Performance by the Licensee of its Obligation under the Licence", GAEL stated that it has also submitted a separate Tariff Petition before the Authority for determination of its Tariff for the extension in the term of its PPA. Further, GAEL also confirmed that QoS and the performance under the existing generation licence would not be affected by the proposed modification.

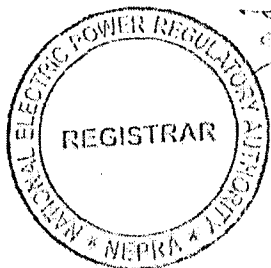
(C). Processing of LPM

(i). After completion of all the required information as stipulated under the Regulation-10(2) and 10(3) of the Licensing Regulations by the Licensee, the Registrar published the communicated LPM in one (01) English and one (01) Urdu daily newspaper on February 21, 2019, informing the general public, interested/affected parties, and different stakeholders about the said LPM as required under the Regulation-10(4) of the Licensing Regulations.

(ii). The Registrar invited comments of the said stakeholders in favor of or against the communicated LPM. Apart from the said notice in the press, separate letters were also sent to individual experts, Government ministries/attached departments and other representative organizations, etc. on February 22, 2019, inviting their views and comments for the assistance of the Authority as stipulated in Regulation-10(9) of the Licensing Regulations.

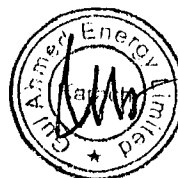
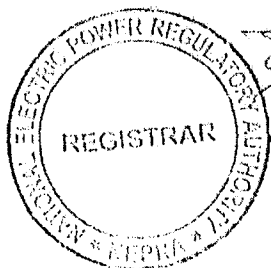
(D). Comments of Stakeholders

(i). In response to the above, comments were received from six (06) stakeholders including National Accountability Bureau (NAB), K-Electric Consumers Forum (KECF), K-Electric Limited (KEL), Energy Department Govt. of Sindh (EDGoS), Central Power Purchasing Agency Limited (CPPA-G), and National Transmission & Despatch Company Limited (NTDC). The salient points of



the comments offered by the above-mentioned stakeholders are summarized in the following paragraphs: -

- (a). NAB commented that the notice of LPM published in the press does not suggest that the extension in the period of the licence can be made through modification. Therefore, a clarification in the matter along with legal justification be provided;
- (b). KECF while offering its comments submitted that the generation facility has already completed twenty-two (22) years of its operation and has requested another term of ten (10) years i.e. up to 2029. In this regard, KECF has a number of observations in the matter including but not limited to (a). the plant operates on RFO which is the dirtiest fuel which is being discouraged; (b). Govt. of Pakistan (GoP) has banned new project on RFO and is also curtailing the same for existing plants; (c). the plant operates on an open cycle and has low efficiency; and (d). auxiliary consumption and the maintenance cost are higher as compared to other plants including that of RLNG/Gas based facilities. In view of the said, KECF does not support the LPM and request the Authority to conduct a hearing in the matter at Karachi;
- (c). KEL remarked that existing PPA executed between the parties will be expiring on November 02, 2019. In view of the prevailing supply-demand situation, KEL intends to continue purchasing electric power from the company for which a Power acquisition Request (PAR) for another five (05) years has been submitted. In view of the said, KEL supports the extension in the term of the generation Licence of GAEL;
- (d). EDGoS in its comments supported the LPM subject to fulfilment of the requirements of the relevant rules and regulations. Further, it must be ensured that that there is no

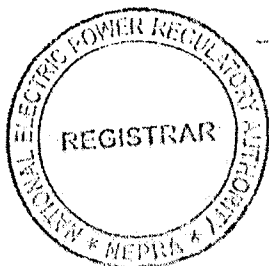


adverse impact on the QoS and tariff if the modification is allowed. The guidelines on the environment should be strictly followed and new technology be used to reduce the risk of emission of pollutants in the air.

- (e). CPPA-G stated that the generation facility of GAEL does not fall under its purview. The generation facility is almost twenty-two (22) years old and therefore, the Authority may assess the remaining useful life along with other parameters before approval of the LPM; and
- (f). NTDC submitted that GEPL is supplying power to KEL under a Power Purchase Agreement (PPA). It is suggested that efficiency, technical, and legal viability of GEPL may be got checked from experts of CPPA-G before modification of the licence;

(ii). On the above comments of NAB, a detailed reply was sent clarifying the legal position in the matter. Afterward, no further comments/observations were received from NAB. Further, the above comments of other stakeholders were examined and in view of the observations of KECF, EDGoS, CPPA-G, and NTDC, it was considered the appropriate seeking perspective of the licensee. On the said, it was submitted that the rationale for the continued operation of the generation facility has been extensively explained in the submitted petition for determination of reference tariff dated February 13, 2019, for additional five (05) year term in respect of the Power Purchase Agreement (PPA) with KEL, however, the same is reiterated. It is widely acknowledged that in order to meet load variations in peak and off-peak hours thermal plants are an integral part of the energy mix. Given the prevalent policies in respect of thermal power generation, any new thermal power generation facility shall need to operate using an alternative fuel (other than RFO). Therefore, this raises the question of evaluating alternative fuel sources for thermal power generation.

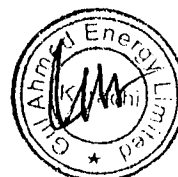
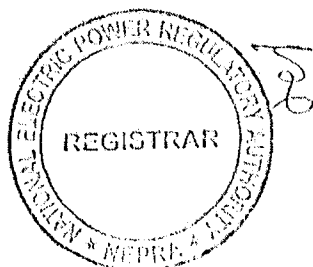
- (iii). It is established that reliance on local gas is not a viable long-term



solution for thermal power generation. In this regard, it is emphasized that during the winter months of 2018-19 there was an extreme shortage of gas and even in this lean period the generation facility was operating at around 50% despatch level, with reliance on local RFO. Moreover, an over-dependence of thermal power generation on gas is a poor allocation of resources given that indigenous gas is scarce and essential raw material for certain industrial uses. Therefore, the only remaining viable option for power generation is either RLNG or pipeline gas from neighboring countries. At present, there are only two LNG terminals of 600 MMCFD each which are meeting the requirements of Haveli Bhadur Shah (1230 MW), QATPL (1180 MW) and Baloki (1320 MW). The surplus is supplied to certain Independent Power Producers (IPPs), such as Saif Power Limited, Halmore Power Generation Company Limited, Orient Power Company, Rousch (Pakistan) Power Limited on availability basis. Although two or three more LNG terminals are being pursued for development, the same are at very initial stages and not likely to commence operations in the next three (3) to five (5) years.

(iv). As regards to the pipeline for import of gas from neighboring countries, even if all feasibilities and approvals are completed, it would require more than five (5) years for its construction and commissioning. It may be noted that the facility is currently operating on local RFO procured from local refineries which is competitively priced with other fuel sources used in thermal power plants (i.e. imported RFO and imported LNG) and the facility has adequate storage capacities to store RFO for up to thirty (30) days at full load.

(v). Moreover, whilst KECF has made references to a dwindling RFO market in Pakistan, currently, there is a surplus production of local RFO. It is noted that the recent actions of GoP seek to export RFO in order to promote the export of surplus RFO resulting from limitation of storage facilities, while the import of RFO has been put on hold. Moreover, local refineries are being encouraged to invest in improved hydrocracking and build additional storage facilities however, this will require significant time and investment. Given the relatively low export opportunities and limited storage capacity for such fuel, the local RFO market is constrained by the lack of readily available off-takers of the product. The facility, therefore, is

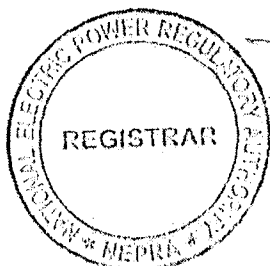


directly benefiting local refineries by purchasing local RFO and reducing the outflow of foreign exchange by utilizing a local fuel source.

(vi). About the breach of policy of GoP, it was stated that the company understands that the prevalent GoP policy does not permit the establishment of new RFO plants, nor the import of RFO, it is widely acknowledged that thermal plants are an integral part of the energy mix, in order to meet load variations in peak and off-peak hours. It is highlighted that the Company is not in breach of the GOP's policy (i.e. to not establish new RFO plants) as the policy refers to new RFO plants being developed whereas the Company is only continuing operations of its existing facility. The continued operation of the facility is essential in order to cater to the growing population of Karachi and the continued demand for electricity of KEL until new projects are successfully established and commissioned.

(vii). On the question of efficiency of Single Cycle Plant, it is highlighted that the efficiency of a "Combined Cycle Gas Turbine" (CCGT) plant is highest in baseload operations. However, considering the operational scenario of the facility, the efficiency of a CCGT plant would drastically reduce due to various limitations such as the size of the plant, high ambient temperatures, load variations, number of start-up and ramp rate, unavailability of water around the plant site, unavailability of gas, etc. Therefore, it is not prudent to design and decide on the technology without giving due considerations to the ground realities. Moreover, the Authority may consider and appreciate that the company seeks extension of the Generation License granted to the facility, which was commissioned under the 1994 Power Policy and the technology of the facility was well in line with the requirements at that time. The conversion to Combined Cycle, at this stage, makes no economic sense as the capital cost of conversion will increase the tariff and will unnecessarily burden the end consumers.

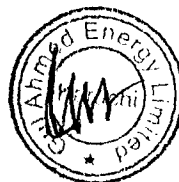
(viii). On the issue of auxiliary consumption, it was stated that the technical norm for the auxiliary consumption of small plants of CCGT in combined cycle mode is about three to four percent (3% to 4%) whereas the auxiliary consumption of our Facility, despite being a small simple-cycle plant, is around three percent



(3%). Regarding the competitive O&M, it was clarified that under the Tariff Petition, the O&M component has been claimed on the assumption that the operation and maintenance of the Facility shall be carried out utilizing the own resources of the Company, instead of a turnkey O&M service provider. In the absence of a "turnkey" third party contractor being hired for the O&M, the claim being made by the Company is resulting in lower costs, as compared to other similar generation facilities. Generally, the engine-based plants have relatively higher operation & maintenance cost as compared to gas turbine-based plants. However, the overall cost of the facility to produce power would remain relatively low (as compared to other thermal power generation facilities) as the plant is debt-free, readily available, and already connected to the system of KEL and fit for operation for another ten (10) years.

(ix). About the effect on the environment, it was submitted that compliance of the Facility with environmental standards is demonstrated by the fact that the Facility has the requisite approval of the Sindh Environmental Protection Agency (SEPA) in place. In accordance with the terms of the approval of SEPA, "Environmental Performance Monitoring" of the Facility is being carried out by independent consultants on a regular basis.

(x). Regarding comments on the compliance with the relevant rules and regulations and useful life of the Facility, it was submitted that Rule 5(1) of the Generation Rules states that the term of the generation licence will be commensurate with the maximum expected useful life of the units comprised in a generation facility. In view of the afore-stated criteria and to ensure compliance with the same, the GAEL engaged a third-party engineering consultant, namely Continental Marine Energy Sdn. Bhd., (the "RULA Expert") to carry out a detailed and exhaustive remaining useful life assessment ("RULA") study of the technical installations of the Facility. It is noted that the RULA Expert has concluded, based on its extensive analysis, that the overall condition of engines is 'Good' and the expected remaining life of the Facility is "10 years as a minimum with a very high degree of confidence".

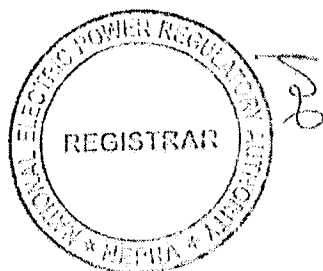


(xi). It was further submitted that there will be no adverse impact on the tariff, quality of service and performance by the Company of its obligations under the Generation Licence. The Company confirms that the quality of service and performance of the Facility will not be affected during the period of the proposed extension in the term of the generation facility. Regarding the suggestion of the GoS that new technology should be used to reduce the risk of emission of CO₂ in the air, it was submitted that the RULA Study Report illustrates that the Facility has a remaining useful life of ten (10) years, and as such the Company will be operating its existing Facility during the extended term of the Generation Licence, and no capital expenditure as such will be undertaken.

(xii). Regarding comments on the technical, financial, and legal viability of the project, it was submitted that KEL, being the off-taker of electricity from the Facility, has evaluated the viability of the PPA Term Extension and thereafter submitted a power acquisition request to the Authority vide its letter (Ref No. SBD/AR/NEPRA-0325/2019-1801) dated January 18, 2019 (the "Power Acquisition Request") for permission to acquire power from the Company for the PPA Term Extension.

(xiii). It is pertinent to highlight that unlike the complexities and long gestation periods involved in the development of a new power generation facility, the Project, being operational now for over two (2) decades, has all requisite contractual arrangements and other infrastructural requirements in place to continue power generation for servicing the consumers of Pakistan's largest city. It is noted that implementation of the extended term under the PPA will neither require a financial close from lenders nor construction of any new distribution/transmission lines. Moreover, an offtake arrangement is already in place and KEL itself is a strong supporter of the extended operations duration.

(xiv). The Authority reviewed the above submissions considered it appropriate to proceed further with the communicated LPM as stipulated in the Licensing Regulations and the Generation Rules.



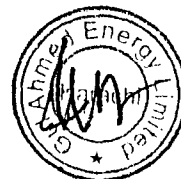
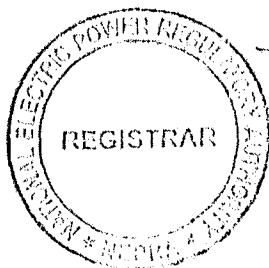
(E). Analysis of the Authority

(i). The Authority has examined the entire case in detail including the already granted generation licence, communicated LPM, comments of the stakeholders, provisions of PPA, and the relevant rules & regulations.

(ii). In this regard, it is observed that in terms of Regulation-10(5) of the Licensing Regulations, the Authority is entitled to modify a licence subject to and in accordance with such further changes as the Authority may deem fit if, in the opinion of the Authority such modification (a). does not adversely affect the performance by the licensee of its obligations; (b). does not cause the Authority to act or acquiesce in any act or omission of the licensee in a manner contrary to the provisions of the NEPRA Act or the rules or regulations made pursuant to it; (c). is or is likely to be beneficial to the consumers; (d). is reasonably necessary for the licensee to effectively and efficiently perform its obligations under the licence; and (e). is reasonably necessary to ensure the continuous, safe and reliable supply of electric power to the consumers keeping in view the financial and technical viability of the licensee.

(iii). The Authority has observed that the LPM envisages extension in the term of the generation licence. In this regard, Rule-5 (2) of the Generation Rules stipulates that on the expiry of the term of a generation licence, the Authority may renew a generation licence for such further term as it may deem appropriate. However, in consideration of the said, the Authority will consider (a). the remaining maximum expected useful life of the units comprised in the generation facility; (b). the performance of the licensee during the then expiring term, and (c). the interests of the consumers and the electric power industry as a whole.

(iv). The Authority has examined the submitted LPM in terms of the criteria given in the relevant regulations and observed that the average running of each Diesel Engine of the generation facility is around 133040 hours with the operation of the lowest used engine at 123691 hours and that of the engine having maximum use at 147034 hours. In view of the said fact, the average usage of the generation facility in terms of the years comes out to be around fifteen (15) years.



If the benchmark followed by the Authority for similar power plants is considered, then the remaining useful life of the GAEL is at-least ten (10) years. The said assessment is also corroborated by the plant assessment report prepared by an Independent Malaysian Consultant Continental Marine Energy which has concluded that the expected useful of the generation facility is ten (10) years.

(v). The Authority observes that the performance of the licensee during the previous term has been very satisfactory as has also been confirmed by the Power Purchaser i.e. KEL and the same can be gauged from the fact that a new PAR has already been submitted for consideration of the Authority. In this regard, it is pertinent to mention that the due to current supply-demand situation in the service area of KEL, allowing extension in the term of licence is vital as it will maintain a steady supply to the area which cannot be supplied by any suitable alternate source and accordingly it is in the interests of the consumers and the electric power industry as a whole allowing an extension in the term of the licence of GAEL.

(vi). The Authority has also considered the comments of the stakeholders and observed that concerns have been raised on the ground that the plant is low in efficiency and producing costly energy. Further, it has been submitted that many new efficient plants have been added in the national grid which are currently underutilized, therefore, in the overall interest of the country, the equivalent amount of power can easily be provided to KEL by the National Grid.

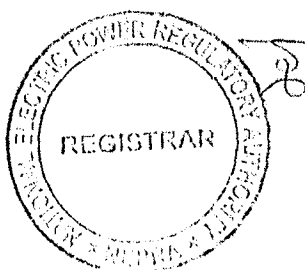
(vii). In view of the above comments of the stakeholders, the Authority directed CPPA-G to submit its analysis and recommendations on the additional supply of power to KEL to replace power supply by GAEL. Further, the Authority also directed NTDC to provide information whether equivalent power can be made available to KEL from National Grid to replace the power supplied by GAEL without any transmission constraints and in case NTDC system allows uninterrupted transmission of additional power, how much time will it take to make necessary arrangements.



(viii). In this regard, NTDC informed that the existing NTDC and KEL 220 kV transmission interface cannot support 250 MW export in addition to the existing 650 MW export to KEL in a reliable manner, especially, under N-1 contingency conditions. NTDC further submitted that in the current scenario to cater the demand and maintain the smooth running of system, KEL may operate the two IPPs (Tapal and Gul Ahmad) as Merchant IPPs on Take & Pay basis for two-three years till the up-gradation of KEL network, to take additional power through existing NTDC system interface.

(ix). In consideration of the above, the Authority considers that the supply of additional power to KEL from the National Grid will not be possible at least in the short term. Therefore, keeping in view the demand-supply situation in the service area of KEL and the remaining useful life of the generation facility, the Authority considers it appropriate to extend the term of the generation licence of GAEL to ten (10) years, i.e., till August 25, 2029. However, GAEL will be required to strictly follow the directions given by the Authority in the tariff determination regarding the supply of power to KEL. Further, the Authority considers that in order to promote competition in the market, GAEL may opt to supply to Bulk Power Consumers in its vicinity during or after the expiry of the extended term of the PPA subject to regulatory approvals.

(x). Further to the above, the Authority considers that the LPM in the generation licence of GAEL regarding extension in the useful life of the generation facility will not be affecting adversely the performance by the Licensee of its obligations but will enable the Licensee to supply to the utility. Further, the Authority also observes that the LPM has not caused the Authority to act or acquiesce in any act or omission of the licensee in a manner contrary to the provisions of the NEPRA Act or the rules or regulations made pursuant to it. The proposed LPM will be beneficial to the consumers of KEL which will face severe power supply and reliability issues if extension in the term of the licence is denied. It is observed that LPM is reasonably necessary for the licensee to effectively and efficiently perform its obligations under the licence. Further, it is reasonably necessary for the Licensee to have this LPM to ensure the continuous, safe and reliable supply of



National Electric Power Regulatory Authority (NEPRA)


Islamabad – Pakistan

Generation Licence

IPGL/09/2003

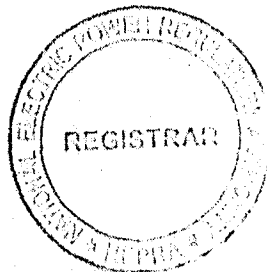
In exercise of the Powers conferred upon the National Electric Power Regulatory Authority (NEPRA) under Section-26 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, (XL of 1997), as amended or replaced from time to time, the Authority hereby modifies the term of the Generation Licence (No. IPGL/09/2003, dated August 26, 2003) granted to Gul Ahmed Energy Limited. The changes made in the Generation Licence are described in the attached Annexure-A.

This Modification-I is given under my hand on 19th of March
Two Thousand & Twenty



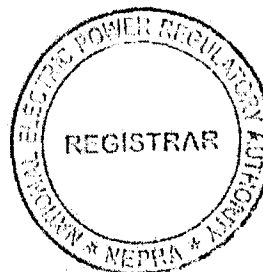
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Registrar



Generation Licence
Gul Ahmed Energy Limited
Korangi Industrial Area,
Taluka & District Karachi,
in the Province of Sindh

Annexure-A



12

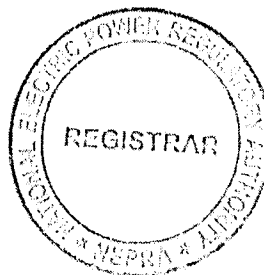
Modification-I
in Generation Licence (No. IPGL/09/2003, dated
August 26, 2003) of Gul Ahmed Energy Limited

(A). Face Sheet

- (i). On the Face Sheet (i.e. the first page of the generation licence), in the last line the phrase "expires on 25th day of August, Two Thousand & Nineteen" is deleted and is replaced by the phrase "expires on 25th day of August, Two Thousand & Twenty-Nine."

(B). Article-4

- (i). Article-4(1) of the generation licence is rephrased as "the term of this Licence is valid up to August 25, 2029."



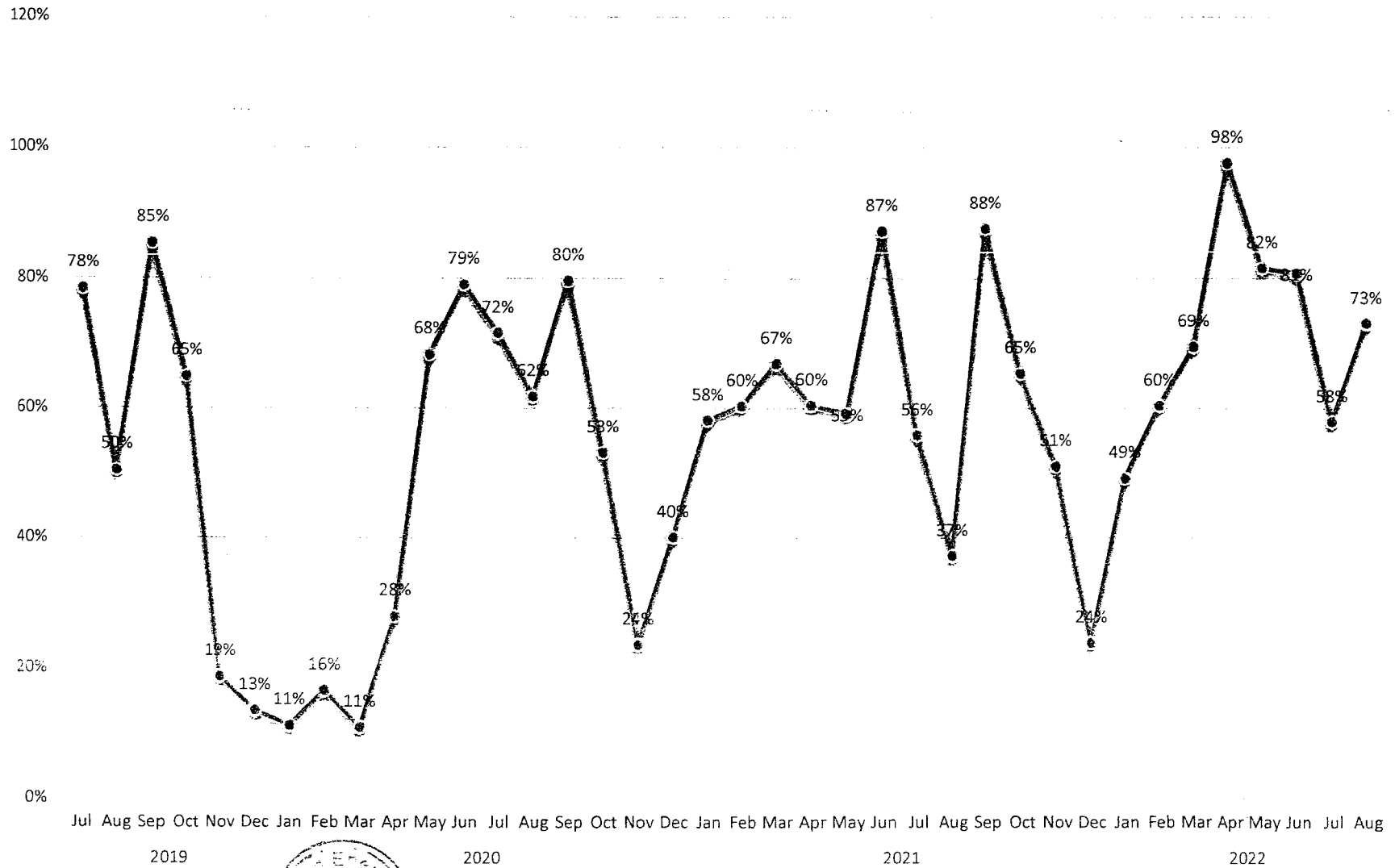
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ANNEXURE G
DISPATCH GRAPH



Dispatch (%)

Dispatch Graph from July 2019 to August 2022 (In percentage)



Years Month



ANNEXURE H
REFERENCE GENERATION TARIFF TABLE



Reference Generation Tariff

Year	ENERGY CHARGE (Rs /kwh)			CAPACITY CHARGE (CC) @ 40% (Rs. /KWh)					Total Tariff (Rs / kwh)
	Fuel Component	VARIABLE O&M	TOTAL	Fixed O&M	Cost of Working Capital	Insurance	ROE	Total Capacity Charge	
	a	b	c = a+b	d	e	f	g	h = d+e+f+g	i = c+h
1	36.7754	1.3600	38.1354	1.0445	1.5181	0.3681	1.2903	4.2210	42.3564
2	36.7754	1.3600	38.1354	1.0445	1.5181	0.3681	1.2903	4.2210	42.3564



⑦