



TAPAL ENERGY (PRIVATE) LIMITED

Corporate Office: F-25 • Block 5 • Rojhan Street
Kehkashan • Clifton • Karachi - 75600 • Pakistan
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THE REGISTRAR
National Electric Power Regulatory Authority
NEPRA Tower, G-5/1
Islamabad
Email: registrar@nepra.org.pk
Tel: 051 920 6500

Date: 07th June, 2022
TEL/NEPRA/014/22

Dear Sir,

SUBJECT: SUBMISSION OF REFERENCE TARIFF PETITION AND REQUEST FOR GRANT OF PROVISIONAL TARIFF - TAPAL ENERGY (PRIVATE) LIMITED 123.50 MW (NET) PLANT AT DEH GONDPASS, TAPO GABOPAT, HUB RIVER ROAD, TALUKA & DISTRICT KARACHI (WEST), KARACHI, PAKISTAN

We, TAPAL ENERGY (PRIVATE) LIMITED (a company duly established and existing under the laws of Pakistan with its corporate office located at F 25, Block 5, Kehkashan, Clifton, Karachi, Pakistan) (the "Licensee"), being the holder of generation license No. IPGL/010/2003, submit to the NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (the "Authority"), for the Authority's kind consideration, an application (together with the information and annexures attached thereto) for a new reference tariff (the "Reference Tariff Petition"). The Reference Tariff Petition is to cater for sale of electricity from the Company's 126 (Gross) MW thermal power generation facility ("Facility") for an additional term of two years (commencing on June 20, 2022) under the power purchase agreement with K- Electric Limited ("KE") dated April 29, 2022 ("PPA") ("Application").

SUBMISSION OF REFERENCE TARIFF PETITION

2. In relation hereto, we certify that the Application is 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 "NEPRA Act") and its rules and regulations, and we undertake and confirm that the information provided in the attached documents-in-support is true and correct to the best of our knowledge and belief. The Reference Tariff Petition (including its annexures) is submitted in triplicate, together with:

- (a) a Bank Draft No. 01570318 dated June 07, 2022 amounting to PKR 1,869,444/- (Pakistani Rupees One Million Eight Hundred Sixty Nine Thousand Four Hundred and Forty Four only) drawn in favour of the Authority, as the application fee for the Reference Tariff Petition (as communicated to the Licensee by the Authority);
- (b) board resolution of the Licensee; and
- (c) statement of authorized representatives of the Licensee, the same being:



**TAPAL
ENERGY**

- (i) MR. TABISH TAPAL (the chief executive officer of the Licensee); and
- (ii) MR. MUSTAFA LAKDAWALA (the chief financial officer of the Licensee).

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

WITHDRAWAL OF AN EARLIER TARIFF PETITION

3. The Company had previously requested the Authority for grant of a reference tariff to cater for the extended term of its power purchase agreement *vide*: (i) a Tariff Petition dated March 10, 2022; (ii) an addendum filed *vide* a 'communication' dated March 16, 2022; (iii) an addendum filed *vide* a 'communication' dated April 27, 2022 ((i), (ii), (iii), hereinafter collectively referred to as the "**Earlier Petition**").

4. Based on telephonic conversation with your good offices it came to our attention that the Authority has taken a view that the Earlier Petition had some technical shortcomings, therefore, in view of the above resubmission of the subject Reference Tariff Petition as a fresh petition and in the interest of expediency in proceeding with the tariff proceedings the Company hereby withdraws the Earlier Petition and its accompanying annexures.

REQUEST FOR GRANT OF A PROVISIONAL TARIFF

5. Pursuant to Rule 4(7) of the National Electric Power Regulatory Authority (Tariff Standards and Procedure) Rules, 1998 ("**Tariff Rules**") the Company hereby requests the Authority to exercise its powers and grant a provisional approval of tariff (the "**Provisional Tariff Approval**") based on the Reference Tariff Petition. Such Provisional Tariff Petition will allow the Company to continue the supply of power to KE during the period between the expiry of its existing tariff (i.e. June 19, 2022) till the Authority arrives at its final determination with regard to the Company's Reference Tariff Petition (the "**Interim Period**").

6. For ease of reference Rule 4(7) of the Tariff Rules is reproduced hereinbelow:

Rule 4(7)- The Authority may, while admitting a petition, allow the immediate application of the proposed tariff subject to an order for refund for the protection of consumers, or for satisfactory security to be provided for refund, while the proceedings are pending before the Authority.

Given the above provisions in the applicable rules, the Authority may allow the immediate application of the Reference Tariff Petition while the subject proceedings are pending. The need for providing such a provisional tariff is detailed herein below.

7. The Company's present reference tariff (determined by the Authority *vide* tariff determination dated No. NEPRA/R/SA(Tariff)/TRF-460/TEPL-2018/14643 dated June 9,



**TAPAL
ENERGY**

2020) is to expire on June 19, 2022 (the “**Current Tariff**”). The Company and KE have executed the PPA, to cover the period permitted by the Current Tariff, with the option for further extensions in the term. The Generation Licence of the Company (Generation Licence No. IPGL/010/2003) already caters for the operations of the Company’s facility till June 19, 2029. KE continues to be desirous of purchasing electricity from the Company after the lapse of the Current Tariff and hence the Reference Tariff Petition is being filed.

8. Since the expiration of the Current Tariff is near i.e. in twelve days, the Company requests the grant of the Provisional Tariff Approval for the Interim Period on an urgent basis so that the Company can continue to supply electricity to KE.

9. It is emphasized, that during the peak months, the Facility runs as a base load plant for KE and dispatches at the capacity factor of 80% to 90% and plays a crucial role in the contribution of power during Karachi’s peak summer months. The Authority will note that the Facility has been successfully operating for over two decades, catering for KE’s consumer requirements and has met its generation obligations for over 24 years. In addition to being a reliable and consistent source of electricity, we also play a very significant role in the supply of power to the west side of KE’s transmission network, as our entire generation is supplied to KE’s grid stations of Baldia and Hub – both, critical power grids to major industrial and commercial customers of KE.

10. KE has recognised our key role in contributing power and the Facility’s critical part in its embedded generation plan. In this regard, KE’s letter no. BD/MZ/NEPRA-0680/2022-3005 dated June 2, 2022 is attached herewith demonstrating the crucial position of the Company’s facility in the KE distribution system.

11. The Company considers that the proposed tariff under the Reference Tariff Petition takes into consideration present-day circumstances, current costs, such as current market conditions, current costs of operations, actual operations, production and dispatch, as well as recent technical assessments of the Facility. As detailed in the Reference Tariff Petition, KE has drastically reduced the dispatch factor from 71% (as per the Current Tariff) to 30.38% for the first year and 29.58% for the second year of the two years extended term. Therefore, for the Company to be able to sustain itself and its Facility in the production of electricity, it is humbly prayed that the Provisional Tariff Approval be based on the Reference Tariff Petition which is in line with Rule 4(7) of the Tariff Rules which provides for immediate application of the “*proposed tariff*”.

12. We hope that the Authority finds that we have adequately presented our case for the grant of the Provisional Tariff Approval for the Interim Period, considering the upcoming expiry of the Current Tariff and the needs of the city of Karachi and its citizens during the peak summer months.



**TAPAL
ENERGY**

PRAYER

13. In conclusion, we request:

- (a) Admission of the subject Reference Tariff Petition by the Authority, in lieu of withdrawal of the Earlier Petition; and
- (b) Grant of the Provisional Tariff Approval for the Interim Period, on a priority basis to avoid interruption of the supply of power from the Facility from June 20, 2022.

As always, the Company is available to provide any further assistance or address any further queries, as required by the Authority.

Yours sincerely,

For and on behalf of
TAPAL ENERGY (PRIVATE) LIMITED

Mustafa Lakdawala
Chief Financial Officer

c.c: (Without Attachments)

- (i) Mr. Muhammad Yousuf, Director Tariff, National Electric Power Regulatory Authority NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad, Pakistan.
- (ii) Mr. Mudassir Zuberi, Head of Business Development, K- Electric Limited, KE House, 39-B Sunset Boulevard, Phase II Defence Housing Authority Karachi, Pakistan



TAPAL ENERGY (PRIVATE) LIMITED

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Fax : +92-21-35876991 & 35876993
Email : telcoff@tapalenergy.com.pk

CERTIFIED TRUE COPY OF RESOLUTION
OF THE BOARD OF DIRECTORS OF
TAPAL ENERGY (PRIVATE) LIMITED
PASSED ON APRIL 15, 2022

“It is hereby unanimously resolved that:

(A) **Tapal Energy (Private) Limited** (a private company duly established and existing under the laws of Pakistan with its registered office located at 155-A, Street no. 37, Sector F-10/1, Islamabad, Pakistan) (the “**Company**”), being currently in the process of extending the current term of the power purchase arrangement by two (2) years (the “**Two Year PPA Term Extension**”) (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 126 MW (Gross) thermal power generation facility located at Deh Gondpass, Tapo Gabopat, Hub River Road, Taluka & District Karachi (West), 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.


(B) Further Resolved That, in respect of the matters relating to the Tariff Petition, **Mr. Tabish Tapal** (being the chief executive officer of the Company and having CNIC No 42301-2385059-9) and **Mr. Mustafa Lakdawala** (being the chief financial officer of the Company and having CNIC No 42201-3140375-9) **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:

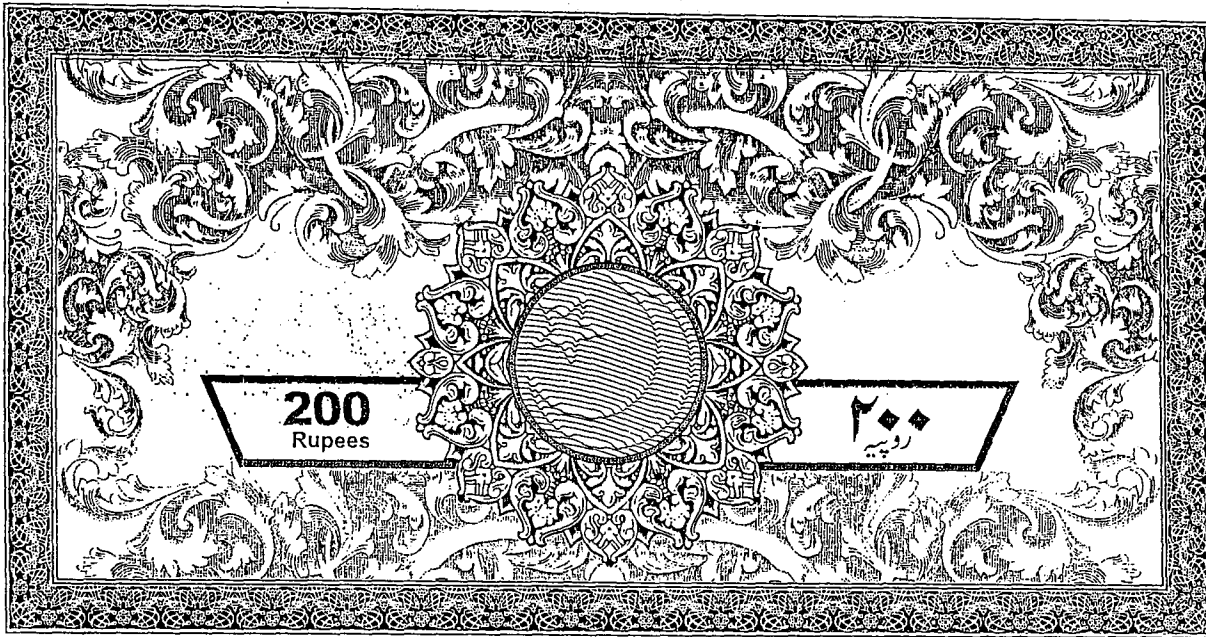
- (i) review, execute, submit, and deliver the Tariff Petition and any related documentation required by the Authority for its approval of the Tariff Petition including any



- 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.

(C) Further Resolved That this resolution supersedes the resolution dated 1st March 2022 previously passed on this subject.


Mustafa Lakdawala
Company Secretary



KASHEE RAZA STAMP VENDOR

Lic. No. 02 G-14, Spanish Homes

Phase-1 D.H.A., Karachi.

S.no. 6257 Date 17 MAY 2022

Issued To With Address..... Muhammad Wale Khan Almeri

Through With Address..... Advocate

Purpose.....

Value Rs. Attached

Stamp Vendor's Signature.....

(NOT USE FOR FREE WILL & DIVORCE PURPOSE)

17 MAY 2022



BEFORE

THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

AFFIDAVIT of MUSTAFA LAKDAWALA, son of Abid Hussain Lakdawala, resident of 14/A, Block 7/8 Overseas Housing Society, Ameer Khusro Road, Karachi and holding CNIC No. 42201-3140375-9 (the "Deponent"), being the 'CHIEF FINANCIAL OFFICER' of TAPAL ENERGY (PRIVATE) LIMITED (a company duly established and existing under the laws of Pakistan with its corporate office located at F-25, Block 5, Rojhan Street, Kehkashan, Clifton, Karachi, Pakistan).

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

- I am the 'CHIEF FINANCIAL OFFICER' of TAPAL ENERGY (PRIVATE) LIMITED (a company duly established and existing under the laws of Pakistan with its corporate office located at F-25, Block 5, Rojhan Street, Kehkashan, Clifton, Karachi, 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 June 07 2022 (the "Tariff Petition") before the NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (the "Authority") and for the purposes of further representing the Petitioner 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 April 15, 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.

[Signature]
DEPONENT

VERIFICATION

It is hereby verified on solemn affirmation at Karachi, Pakistan on this June 07 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]
ATTESTED

[Signature]



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

BD/MZ/NEPRA-0680/2022-3005
June 2, 2022

Subject: Request for Provisional Approval of the Tariff Petition Filed by Tapal Energy (Pvt.) Limited (TEL)

Dear Sir,

We write with reference to the tariff petition filed by TEL dated March 10th, 2022, and subsequently revised through its letter no. TEL/NEPRA/010/22 dated April 27th, 2022, for approval of tariff petition for two year extension in term of Power Purchase Agreement (PPA) with K-Electric Limited (KE) which is currently set to expire on June 19th, 2022.

Considering the growth in power demand on KE grid and the timing of additional supply from National Grid, there is a compelling need for KE to cover the demand shortfall in the interim period of FY-23 and FY-24 through based load power plants. While KE remains committed to the addition of new and efficient generation in its system, the long gestation period of developing new projects does not allow KE to cover the shortfall in interim period.

In view of the above, KE has agreed with TEL on extension of existing PPA for the next two years on take and pay basis in order to overcome any uncertainties and untoward delays in project timelines and/or the commissioning of the interconnection facilities. Furthermore, as also observed during this summer, there is a risk that NTDC may reduce its power supply to KE during FY-23 and FY-24 due power shortage in the National Grid, and until such time as our aforementioned power supply options are commissioned, this extension will provide the required contingency in supply to KE against any potential adverse circumstances.

Accordingly, we hereby request the Authority to please consider the tariff petition filed by TEL for extension of another 2 years before the PPA expiry on June 19th, 2022 to ensure uninterrupted supply from TEL in peak summer days.

Sincerely,

Mudassir Zuberi
Head of Business Development

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

TAPAL ENERGY (PRIVATE) LIMITED

FOR NEPRA'S APPROVAL OF REFERENCE GENERATION TARIFF
FOR
TAPAL ENERGY (PRIVATE) LIMITED

RELATING TO A THERMAL POWER GENERATION FACILITY OF 126 MW (GROSS)

LOCATED AT

DEH GONDPASS, TAPO GABOPAT, HUB RIVER, TALUKA & DISTRICT KARACHI (WEST), KARACHI,
SINDH, PAKISTAN

DATED: JUNE 7, 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
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COMPANY

TAPAL ENERGY (PRIVATE) LIMITED

CORPORATE OFFICE
F 25, BLOCK 5, CLIFTON
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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.
AVS	Ameejee Valleejee & Sons (Pvt.) Limited.
Board	The board of directors of the Company.
BOO	Build Own Operate.
Capacity Charge	The capacity charge component of the Reference Generation Tariff.
Company	Tapal Energy (Private) Limited, a company duly established and existing under the laws of Pakistan with its corporate office located at F 25, Block 5, Clifton, Karachi, Pakistan and its registered office located at 155-A, Street No. 37, Sector F-10/1, Islamabad, 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	June 20, 2022.
Facility	The Company's 126 MW (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.
Generation License	Generation license No. IPGL/010/2003 issued by the Authority to the Company on August 26, 2003, attached as ANNEXURE F (COPY OF GENERATION LICENSE).
Generation License First Modification Application	Application dated May 22, 2018 submitted by the Company to the Authority for modification of the Generation License.
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	KE-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 February 18, 2022 and email dated April 22, 2022 for confirmation of first and second extension year dispatch factor attached as ANNEXURE E & E-1 (KE CAPACITY FACTOR CONFIRMATION)
KE Power Purchase Consent	KE's letter dated December 6, 2021 bearing reference No. CEOSEC_199_061221 for consent of one year extension and KE's letter dated April 13, 2022 bearing reference No. CEOSEC_247_03042022 for consent of two year extension, attached as ANNEXURE D (KE POWER PURCHASE CONSENT).

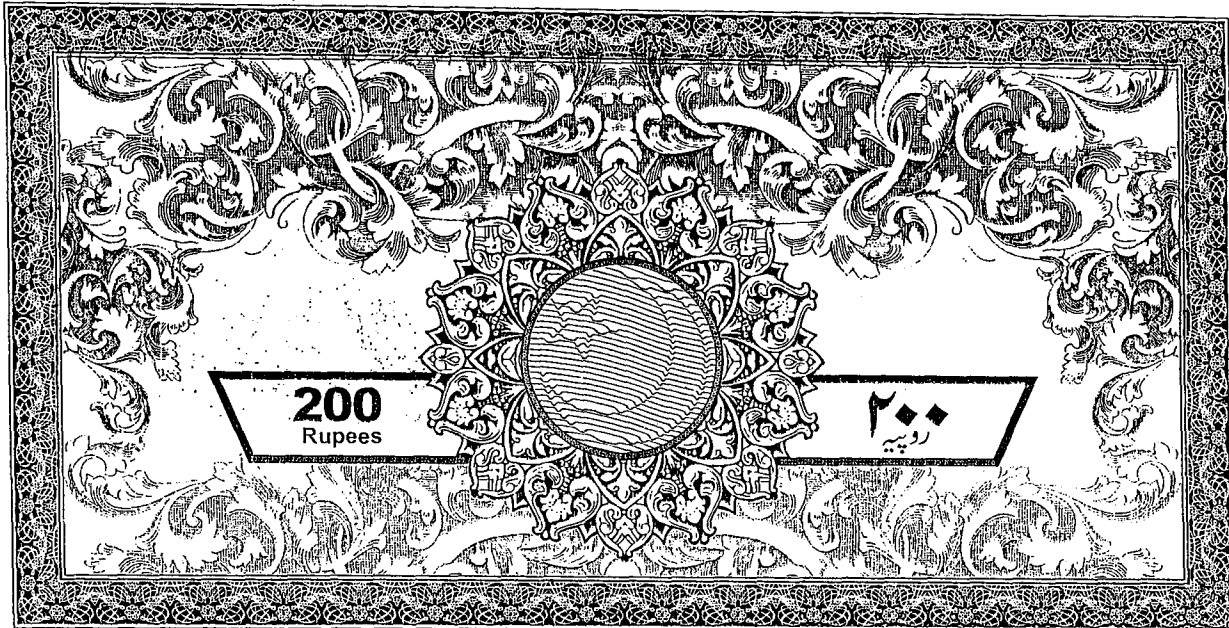


KIBOR	Karachi Inter Bank Offered Rate.
LHV	Lower Heating Value.
Marubeni	Marubeni Corporation, a general trading company existing under the laws of and headquartered in Nihonbashi, Chuo, Tokyo, Japan.
NEPRA Act	Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.
NEPRA First Modification Approval	Authority's approval dated November 20, 2018 bearing reference No. NEPRA/R/LAG-11/18273-79 in relation to the Company's Generation License First Modification Application, attached as ANNEXURE G (<i>NEPRA FIRST MODIFICATION APPROVAL</i>).
NEPRA Second Modification Approval	Authority's approval dated March 9, 2020 bearing reference No. NEPRA/R/LAG-11/7639-44 in relation to the Company's Generation License First Modification Application, attached as ANNEXURE G-1 (<i>NEPRA SECOND MODIFICATION APPROVAL</i>).
O&M	Operations and maintenance.
Original Power Purchase Agreement	Power Purchase Agreement dated September 26, 1995 executed between KE and the Company.
Reference Date	January 31, 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 (<i>REFERENCE GENERATION TARIFF TABLE</i>).
RFO	Residual Fuel Oil.
ROE	Return on Equity.
RULA	Remaining useful life assessment.
RULA Study Report	'Remaining Useful Life Assessment (RULA) Study Report' dated October 1, 2018 commissioned by M/s Continental Marine Energy Sdn Bhd (CME), Malaysia.
Site	Deh Gondpass, Tapo Gabopat, Hub River Road, Taluka & District Karachi (West), Karachi, Sindh, Pakistan.
SML	Sithe Mauritius Limited, a private limited company set up and 100% owned (as an investment holding company) by Marubeni Corporation.
Specific FMEs	Has the meaning given to it in paragraph 10.2.1.
Tariff Determination	Authority's tariff determination dated June 9, 2020 bearing reference No. NEPRA/R/SA(Tariff)/TRF-460/TEPL-2018/14643.
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 PPA	The 731 day period commencing from June 20, 2022.
Variable O&M Cost Component	The variable O&M component of the Energy Charge.
USD	United States Dollar.



**COPY OF
AFFIDAVITS OF AUTHORIZED REPRESENTATIVES OF
TAPAL ENERGY (PRIVATE) LIMITED**





KASHIF RAZA STAMP VENDOR

17 MAY 2022

License No. 02 G-14, Spanish Homes

Phase-I, D.H.A., Karachi.

S.no. 2257 Date 17/05/2022 Advocate Muhammad Waris Khan Almar

Issued To With Address..... Ladder No. 1513 Sheikh

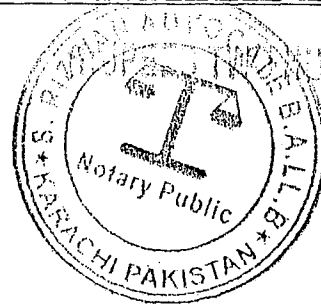
Through With Address.....

Purpose.....

Value Rs..... Attached

Stamp Vendor's Signature.....

(NOT USE FOR FREE WILL & DIVORCE PURPOSE)



BEFORE

THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

AFFIDAVIT of MUSTAFA LAKDAWALA, son of Abid Hussain Lakdawala, resident of 14/A, Block 7/8 Overseas Housing Society, Ameer Khusro Road, Karachi and holding CNIC No. 42201-3140375-9 (the "Deponent"), being the 'CHIEF FINANCIAL OFFICER' of TAPAL ENERGY (PRIVATE) LIMITED (a company duly established and existing under the laws of Pakistan with its corporate office located at F-25, Block 5, Rojhan Street, Kehkashan, Clifton, Karachi, Pakistan).

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- 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 June 07 2022 (the "Tariff Petition") before the NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (the "Authority") and for the purposes of further representing the Petitioner 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 April 15, 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.

Mustafa Lakdawala
DEPONENT

VERIFICATION

It is hereby verified on solemn affirmation at Karachi, Pakistan on this June 07 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.

ATTESTED

R. BILAL

Mustafa Lakdawala
DEPONENT



17 MAY 2022

Advocate
No. 6228 Date Ledger No. 7513mcrh

Issued To: With Address:

through With Address.....

purpose.....

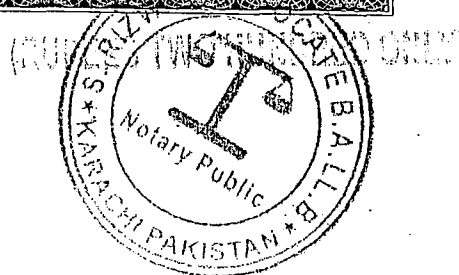
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Stamp Vendor's Signature.....

NOT USE FOR FREE WILL & DIVORCE PURPOSE

10-11-83

THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY



BEFORE

AFFIDAVIT of TABISH TAPAL, son of Moiz S. Tapal, resident of 33-B, 3rd Gizri Street, Phase IV, DHA, Karachi and holding CNIC No. 42301-2385059-9 (the “Deponent”), being the ‘CHIEF EXECUTIVE OFFICER’ of **TAPAL ENERGY (PRIVATE) LIMITED** (a company duly established and existing under the laws of Pakistan with its corporate office located at F-25, Block 5, Rojhan Street, Kehkashan, Clifton, Karachi, Pakistan).

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

- (a) I am the 'CHIEF EXECUTIVE OFFICER' of **TAPAL ENERGY (PRIVATE) LIMITED** (a company duly established and existing under the laws of Pakistan with its corporate office located at F-25, Block 5, Rojhan Street, Kehkashan, Clifton, Karachi, Pakistan) (the "Petitioner").
- (b) 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 June 07 2022 (the "Tariff Petition") before the **NATIONAL ELECTRIC POWER REGULATORY AUTHORITY** (the "Authority") and for the purposes of further representing the Petitioner 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 April 15, 2022.
- (c) 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.
- (d) 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

- (e) It is hereby verified on solemn affirmation at Karachi, Pakistan on this Time 07.2022, 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.

DEPONENT

ATTESTED

RIHUVAN ADVOCATE
KARACHI

DEPONENT

**COPY OF EXTRACT OF
RESOLUTION PASSED BY
BOARD OF DIRECTOR OF
TAPAL ENERGY (PRIVATE) LIMITED**





TAPAL ENERGY (PRIVATE) LIMITED

Corporate Office: F-25 • Block 5 • Rojhan Street
Kehkashan • Clifton • Karachi - 75600 • Pakistan
Tel. : +92-21-35876994 - 7
Fax : +92-21-35876991 & 35876993
Email : telcoff@tapalenergy.com.pk

CERTIFIED TRUE COPY OF RESOLUTION
OF THE BOARD OF DIRECTORS OF
TAPAL ENERGY (PRIVATE) LIMITED
PASSED ON APRIL 15, 2022

“It is hereby unanimously resolved that:

(A) **Tapal Energy (Private) Limited** (a private company duly established and existing under the laws of Pakistan with its registered office located at 155-A, Street no. 37, Sector F-10/1, Islamabad, Pakistan) (the “**Company**”), being currently in the process of extending the current term of the power purchase arrangement by two (2) years (the “**Two Year PPA Term Extension**”) (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 126 MW (Gross) thermal power generation facility located at Deh Gondpass, Tapo Gabopat, Hub River Road, Taluka & District Karachi (West), 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.

(B) Further Resolved That, in respect of the matters relating to the Tariff Petition, **Mr. Tabish Tapal** (being the chief executive officer of the Company and having CNIC No 42301-2385059-9) and **Mr. Mustafa Lakdawala** (being the chief financial officer of the Company and having CNIC No 42201-3140375-9) **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:

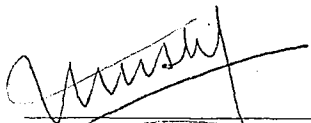
- (i) review, execute, submit, and deliver the Tariff Petition and any related documentation required by the Authority for its approval of the Tariff Petition including any



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.

(C) Further Resolved That this resolution supersedes the resolution dated 1st March 2022 previously passed on this subject.


Mustafa Lakdawala
Company Secretary

SECTION 1
DETAILS OF COMPANY



1. DETAILS OF COMPANY

1.1 NAME & ADDRESS

TAPAL ENERGY (PRIVATE) LIMITED
F-25, Block 5, Clifton Karachi
Pakistan
Tel: +92-21-35876994
Fax: +92-21-35876991

1.2 AUTHORIZED REPRESENTATIVES

1.2.1 MR. TABISH TAPAL

Chief Executive Officer,
Tapal Energy (Private) Limited.
Email: tabish@tapalenergy.com.pk
Mobile: +92 300 8220960

1.2.2 MR. MUSTAFA LAKDAWALA

Chief Financial Officer,
Tapal Energy (Private) Limited.
Email: mustafa@tapalenergy.com.pk
Mobile: +92 300 8292078



SECTION 2
INTRODUCTION TO THE COMPANY
&
THE PROJECT



2. INTRODUCTION TO COMPANY & THE PROJECT

2.1 THE COMPANY & PROJECT DEVELOPMENT BACKGROUND

TAPAL ENERGY (PRIVATE) LIMITED (a company duly established and existing under the laws of Pakistan with its corporate office located at F 25, Block 5, Clifton, Karachi, Pakistan and its registered office located at 155-A, Street No. 37, Sector F-10/1, 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 March 1, 1995 for the purposes of undertaking the project (the "Project") relating to the development, setting up, implementation, construction and operation of a 126 MW (Gross) thermal power generation facility (the "Facility") located at Deh Gondpass, Tapo Gabopat, Hub River Road, Taluka & District Karachi (West), 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 "GoP") '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	June 16, 1994
Issuance of Letter of Interest	June 28, 1994
Issuance of Letter of Support	September 18, 1994
Date of Financial Closing	April 18, 1996
Commissioning Date	June 20, 1997

2.1.3 The Company initially procured a license in January 1997 under the Electricity Act, 1910. Later, the Company obtained a generation license No. IPGL/010/2003 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. Further details of the Generation License and modifications therein are mentioned in Section 5 (The Generation License) below.

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	August 8, 1995
ORIGINAL POWER PURCHASE AGREEMENT	September 26, 1995
FUEL SUPPLY AGREEMENT	March 7, 1996
GOP GUARANTEE	April 18, 1996

2.2.2 In addition, the Company also entered into:

- (i) engineering, procurement and construction ("EPC") arrangements for the Facility with world-class EPC contractors / suppliers, such as Holland's Power Construction Company BV and Finland's Wartsila Diesel and ABB Industry; and



(ii) operations and maintenance ("O&M") arrangements with Wartsila Diesel Pakistan (Private) Limited and subsequently with Sithe Mauritius Power Services.

- 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 September 26, 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 June 19, 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' ("RULA") 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 October 1, 2018 ("RULA Study Report");
 - (ii) the Company filed the 'Licensee Proposed Modification of Generation License' before the Authority *vide* its application dated November 29, 2018, 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. TEL/NEPRA/011/19 dated December 7, 2018 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 June 19, 2029 *vide* approval No. NEPRA/R/LAG-11/7639-44 dated March 9, 2020.
- 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-460/TEPL-2018/14643 dated June 9, 2020 for a 3-year power purchase agreement extension term ("Tariff Determination") as against the Company's request for 5 years.
- 2.2.9 Subsequently, KE and the Company negotiated and finalized a power purchase agreement which was provisionally approved by the Authority on August 4, 2021. However, signing of the said power purchase Agreement was pending for want of a clarification requested by the Company from the Authority *vide* its letter No. TEL/NEPRA/003/21 dated September 17, 2021. The required clarification was provided by the Authority *vide* its letter No. NEPRA/Consultant (RE/Tech)/LAD-01/2914-15 dated February 21, 2022, following which KE and the Company are now in the process of finalizing and executing the said power purchase agreement (the "Three Year Extension Term PPA").

2.3 THE PROJECT SPONSORS

2.3.1 TAPAL GROUP

THE TAPAL GROUP, principals of AMEEJEE VALLEEJEE & SONS (PVT.) LIMITED ("AVS") was established in 1867. AVS has wide experience in the engineering and construction related activities ranging from ship building to barge construction/repairs to power plants. It has represented some



of the most renowned international companies such as ABB, Chint, Streinmuller, Lurgi, Standard Kessel, Henkels, Dorr Oliva, Atlas Copco etc. in Pakistan and has been instrumental in development of the economy of the Pakistan. The Tapal Group currently holds 50% of the shareholding in the Company and is responsible for the management of the Company.

2.3.2. SITHE MAURITIUS LIMITED

SITHE MAURITIUS LIMITED ("SML") is a private limited company, an entity set up and 100% owned (as an investment holding company) by MARUBENI CORPORATION ("Marubeni"). SML currently holds 50% of the share capital in the Company.

Marubeni is one of the leading trading and investment houses of Japan that was founded in May 1858. It has total of 133 branches and offices, consisting of Head Office in Tokyo, 12 branches and offices in Japan, 58 overseas branches and offices, and 29 overseas corporate subsidiaries containing 33 branches and offices, and is involved in a broad range of sectors on global level including, *inter alia*, power, food materials, food products, textiles, materials, pulp and paper, chemicals, energy, metals and mineral resources and transportation machinery. Marubeni has 45,470 employees within its group and total assets of around USD 61 billion.

Marubeni is very active in the power sector industry, it owns and operates 73 I(W)PP projects with a total gross capacity of 38,031MW globally as of January 31, 2022.

Marubeni's role in the IPP business includes development, financing, equity participation as well as engineering, procurement, and construction and operation and maintenance. Marubeni operates IPP projects in around 19 countries around the world, including Pakistan, Taiwan, Indonesia, Philippines, South Korea, Singapore, Oman, UAE, Saudi Arabia, Tunisia, Qatar, Portugal, Chile, Trinidad and Tobago, Jamaica, and USA. In addition, Marubeni, through its EPC arm, Marubeni Power & Infrastructure Systems Corporation, has delivered power plants in 56 countries, of which aggregate generation capacity is 112,444MW as of March 31, 2021.



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 36 consecutive months commencing from June 20, 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 CONTEMPLATED EXTENSION OF THE TERM OF THE APPROVED EXTENSION TERM PPA

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 735.962 per annum upto June 2021, and has met its generation obligations for over 24 years, the Company and KE (pursuant to Section 2.2(b) of the Three Year Extension Term PPA) have been engaged in discussions for extending the term of the power purchase agreement for an additional period which shall commence on June 20, 2022 (the "Extension Commencement Date").

3.3 THE KE CONSENT

3.3.1 In response to the Company's request, KE has issued its consent *vide* KE's letter bearing reference No. CEOSEC_199_061221 dated December 6, 2021 to purchase power for an additional 1 year. In continuation to the KE letter bearing reference No. CEOSEC_199_061221 dated December 6, 2021, KE subsequently issued a letter to the Company dated April 13, 2022 bearing reference No. CEOSEC_247_13042022 requesting a further extension of the term, such that the additional term of the power purchase arrangement between the Company and KE extends for two years i.e. till June 19, 2024 ("Two Year Extension Term PPA") with the option of successive extensions on a year-to-year basis. Copy of the KE power purchase consent letter No. CEOSEC_199_061221 dated December 6, 2021 and No. CEOSEC_247_13042022 dated April 13, 2022 are attached hereto at ANNEXURE D (the "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 PPA.

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 PPA, instead of extending the Tariff Determination for the Three Year Extension Term PPA.

3.4.3 In this regard, please find enclosed emails from KE dated February 18, 2022 and April 22, 2022 ("KE Capacity Factor Confirmation"), through which KE has informed the Company of its anticipated off take for the Two Year Extension Term PPA, which translates to an annual capacity factor of 30.38% for the first year and a capacity factor of 29.58% for the second year as ANNEXURE E (KE CAPACITY FACTOR CONFIRMATION).

3.4.4 This is a sharp contrast with the capacity factor assumed in the Tariff Determination of 71% for the Three Year Extension Term PPA on a take and pay basis. Moreover, whilst the 'assumed' annual capacity factor under the Tariff Determination (for the Three Year Extension Term PPA) is 71%,



the ground realities of off-take by KE are demonstrated through the actual data for the past 31 months as follows:

DESCRIPTION	FROM JUNE 20, 2019 TO JUNE 30, 2019	2019-20	2020-21	2021-22		TOTAL
				FROM 20 TH JUNE 2022 TO 31 ST JANUARY 2022	PROJECTED FEBRUARY TO 19 TH JUNE 2022	
Capacity - MW	123.50	123.50	123.50	123.50	123.50	123.50
No. of Days	11	365	365	215	139	1,095
Actual Dispatch - MWh	29,597	626,766	736,790	368,386	275,705	2,037,244
Actual Dispatch Factor %						62.77%
Authority's Determination %						71.00%

3.4.5 The above data demonstrates that the actual off-take for the Three Year Extension Term PPA is on average 62.77%, which is in sharp contrast to the capacity factor of 71% determined by the Authority for the Three Year Extension Term PPA.

3.4.6 It may be noted that if the Authority anticipates the Company to provisionally generate and provide energy after expiry of the Three Year Extension Term PPA, for any part of the Two Year Extension Term PPA, on the Tariff Determination (on take and pay basis) without revising the tariff on the KE anticipated capacity factor, it will result in substantial losses to the Company. Not only is this commercially non-viable, but it is contrary to Rule 17(3) of the National Electric Power Regulatory Authority (Tariff Standards and Procedure) Rules, 1998, which states and provides that licensees should receive adequate compensation for their costs as set forth below:

"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."



Therefore, it may be appreciated that if the existing tariff is not revised at the KE anticipated capacity factor and in terms of the Reference Generation Tariff, the Company shall not be able to recover its costs prudently incurred and will not be able to operate the Facility on a commercially viable basis.

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 PPA.
- 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 in the amount of PKR 1,869,444/- (Pakistani Rupees One Million Eight Hundred Sixty Nine Thousand Four Hundred and Forty Four only) dated June 7, 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 24 years, 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 our application for Three Year Extension Term PPA Tariff and while applying for the extension in the term of the Generation License of the Company up to June 2029, are provided below for the Authority's reference:

FACILITY GROSS CAPACITY	126 MW
NET DEPENDABLE CAPACITY	123.5 MW
FUEL & TECHNOLOGY	HFO/LFO – Diesel Engine, Stork - Wartsila, Model 18V38
FACILITY CONFIGURATION	12 Internal Combustion Diesel Engines

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

- (i) was designed, engineered and constructed by Power Construction Company BV of Holland with Wartsila Diesel and ABB Industry of Finland being the equipment suppliers;
- (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, Section 13 (*Conclusion & Recommendation*) of the RULA Study Report is reproduced below:

"13.0 Conclusion & Recommendations

The study carried out to assess the condition of engines and critical electrical components covering generator and power transformer concluded with ratings Very Good, Good and Acceptable condition and expected remaining useful life. It is pertinent to mention that the qualitative condition assessment and expected life is based on good O&M management practices, well maintained inspection, maintenance and other monitoring records, timely execution of inspection and maintenance work order, replacement of component as per preventive spares and follow instructions of troubleshooting as per OEM practices.

Based on study, following recommendations are made:

- (a) *The overall condition of Engines is 'Good', and the expected remaining life is 10 years. The condition of Generator units is generally found to be in range from 'Good' to 'Acceptable' with expected safe remaining useful life of up to 10 years. The condition of all Power Transformers have been found to be 'Very Good' with expected life more than 15 years.*
- (b) *The condition of storage tanks at the plant facility is 'Very Good'. Despite the quantitative remaining life reported in the recent inspection reports are suggesting*



beyond 15 years. However, due to aging corrosion is expected to increase specially at attachments (Nozzles, Saddles, Staircase and other Structure, base plates, top sides of tanks etc.). At present, the rates of corrosion currently are under acceptable limits. More robust risk based inspection and fabric maintenance, coating and external inspection monitoring over the years is needed together with audits of the safety and fire systems.

- (c) *Tapal Energy (Pvt.) Ltd. (the Asset Owner) to continue existing O&M Practices for the upkeep of the assets, follow OEM recommended guidelines for the time driven maintenance and inspection of engines and other critical assets.*
- (d) *Asset Owners may evaluate the requirements for further Condition Based Maintenance practices, such as continued focus on Vibration Monitoring, Thermographic Imaging and other use of NDT advanced methods (Acoustics). This can be done by independent plant machinery vibration analysis methods at a periodic level. The objective is to collect data, identify vibration zones and therefore, based on these studies improve Maintenance strategy and control on aging, failures and leakages.*
- (e) *Some of the critical Engine components such as Camshaft, Pistons, and its associated mechanical components require continued focus in the inspection and maintenance reporting e.g. photographic recordings, sample micro examination of cam shaft wear etc. The objective is to capture signs of wear, aging etc. It is also recommended that OEM guidelines for the camshaft inspection pertaining to wear may be consulted for further improvement in inspection reporting.*
- (f) *It is recommended that condition assessment methodology followed in this study be practiced at regular levels to validate the findings. Next Condition Assessment can be done in 5 years (2023) and further ascertain the expected life of engines and critical machinery components and other assets. The condition assessment may support asset owner in cost benefit and end of economic life assessments to benefit the business.*
- (g) *It is recommended to follow the testing and inspection activities as suggested through LEAP test results for all Generators in order to ensure the updated assessment of their conditions and subsequent corrective actions (if any) to be taken."*

Considering the afore-stated, the matters set out herein and the conclusions drawn in the RULA Study Report, the Company expects and intends to operate the Facility for at least the Two Year Extension Term PPA. 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 PPA.



SECTION 5
THE GENERATION LICENSE



5. THE GENERATION LICENSE

5.1 THE GENERATION LICENSE

5.1.1 In January 1997, the Company initially obtained a license under the Electricity Act, 1910 following satisfaction of the required legal requirements.

5.1.2 Following enactment of NEPRA Act and the rules and regulations made thereunder, the Company applied to the Authority for procurement of a generation license for its Facility and on August 26, 2003, the Authority granted the Company the Generation License. A copy of the Generation License is attached herewith at ANNEXURE F (*Copy of Generation License*) for the Authority's reference.

5.2 THE GENERATION LICENSE FIRST MODIFICATION

5.2.1 It is highlighted for the Authority's benefit that the Company previously submitted an application dated May 22, 2018 (the "**Generation License First Modification Application**") for modification of its Generation License. The reason for submission of the Generation License First Modification Application was to request for an extension of the term of the Generation License in order to bring the same in line with the Original Power Purchase Agreement (that is, till June 19, 2019).

5.2.2 The Authority's approval in relation to the Generation License First Modification Application was received by the Company *vide* the Authority's approval dated November 20, 2018 (the "**NEPRA First Modification Approval**") through which the term of the Generation License of the Company was extended up to June 19, 2019. The NEPRA First Modification Approval is attached herewith as ANNEXURE G (*NEPRA First Modification Approval*) for the Authority's ready reference.

5.3 THE GENERATION LICENSE SECOND MODIFICATION

It is submitted that the extension in the term of the Generation License for remaining useful power generation life of the Facility, a term much beyond the Two Year Extension Term PPA, has already been granted by the Authority to the Company by way of the Generation License Second Modification *vide* the Authority's approval No. NEPRA/R/LAG-11/7639-44 dated March 9, 2020 (the "**NEPRA Second Modification Approval**"), therefore, the Generation License of the Company stands extended up to June 19, 2029. The NEPRA Second Modification Approval is attached herewith as ANNEXURE G-1 (*NEPRA SECOND MODIFICATION APPROVAL*) for the Authority's ready reference.



SECTION 6
KEY CONSIDERATIONS



6. KEY CONSIDERATIONS

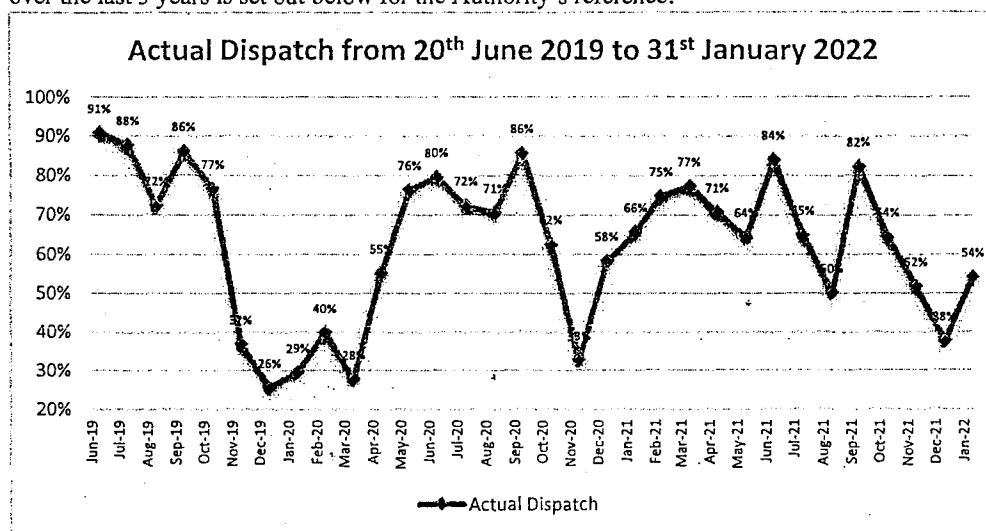
6.1 DEMAND FOR ELECTRICITY

6.1.1 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 proposed Two Year Extension Term PPA) beyond the Three Year Extension Term PPA.

6.1.2 The Authority's approval of the Reference Generation Tariff and the subsequent implementation by KE and the Company of the Two Year Extension Term PPA will ensure continued supply of reliable electricity to the consumers of KE until June 19, 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 an average of 735.962 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 west side of KE's transmission network as the power generated by the Company is transmitted to KE's grid stations of Baldia and Hub – which onwards supply power 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 below for the Authority's reference:



6.2.2 Additionally, the Facility has been used as a 'black start facility' by KE, enabling the grid power systems to recover from a blackout in various instances of widespread power outage. Time and again, KE has acknowledged the Facility's contribution in restoring its system.

6.2.3 The Facility's continued operations during the Two Year Extension Term will be available to KE in case any such outage or blackout occurs.

6.3 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.



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 exceeding the period relating to the Two Year Extension Term PPA. 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 THE TWO YEAR EXTENSION TERM PPA

- 6.5.1 It is submitted that with the current state of the well-maintained and 'debt free' Facility, the consumers will ultimately benefit during the high demand months of KE, from the electricity supplied by the Company during the period of the Two Year Extension Term PPA.

6.6 ALL REQUISITE INFRASTRUCTURE & ARRANGEMENTS ALREADY IN PLACE

- 6.6.1 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 PPA 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 PPA, the true benefits of the proposed Two Year Extension Term PPA 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.

6.7 DEVELOPMENT & CONTINUED DEPLOYMENT OF EXCEPTIONAL HUMAN RESOURCES

- 6.7.1 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 and subsequently with Sithe Mauritius Power Services for the operations and maintenance of the Facility in the initial years, it is highlighted that since the past 14 years, the Company has been carrying out the operations and maintenance of the Facility solely through its technically trained in-house resources. The Company's in-house resources include experienced and highly skilled personnel capable of performing the operations and maintenance of the Facility, including services in relation to overhauls, major and routine maintenances with minimum input from the original equipment manufacturers. 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 PPA will ensure continuation of such un-parallel efforts.

6.8 INITIAL PROJECT COST & FINANCING

- 6.8.1 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 2004, the initial equity of USD 33,774,000, 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 PPA, 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 PPA.
- 6.8.2 In addition, the Company requests the Authority's appreciation of the fact that besides the initial equity, the Project sponsors have endlessly, to date, endeavored to continuously improve and maintain the Facility through substantial investments in major overhauls and replacement of parts and components in accordance with the parameters and world class standards prescribed by the original equipment manufacturers hence assuring the reliability envisaged during the Two Year Extension Term PPA.



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 (the "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 January 31, 2022 ("Reference Date") (Subject to indexation at the start of Two Year Extension Term PPA period and at a plant dependable capacity of 123.5 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 PPA TARIFF FOR FIRST YEAR AT 30.38% CAPACITY FACTOR	22.5020	4.0328	26.5348
PROPOSED TWO YEAR EXTENSION TERM PPA FOR SECOND YEAR TARIFF AT 29.58% CAPACITY FACTOR	22.5012	4.1300	26.6312
THREE YEAR EXTENSION TERM PPA INDEXED TARIFF AS ON 31 ST JANUARY 2022 AT 71% CAPACITY FACTOR	22.5460	1.8315	24.3775

7.3 THE REFERENCE GENERATION TARIFF TABLE

7.3.1 The Reference Generation Tariff Table is prepared at following reference parameters prevailing on January 31, 2022.

ANNUAL DISPATCH FACTOR AS INDICATED BY KE	
• FOR THE FIRST YEAR OF THE PROPOSED TWO YEAR EXTENSION TERM PPA	30.38%
• FOR THE SECOND YEAR OF THE PROPOSED TWO YEAR EXTENSION TERM PPA	29.58%
PPA TERM	2 Year
REFERENCE DATE	January 31, 2022
START OF THE TWO YEAR EXTENSION TERM PPA	June 20, 2022
FUEL PRICE	PKR 98,356.48 per ton
KIBOR RATE	10.36% per annum
CONSUMER PRICE INDEX	158.78
EXCHANGE RATE	PKR 177.25 per USD
For the INDEXATION ASSUMPTIONS	Reference Parameters to be indexed with actual parameters prevailing on June 20, 2022

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 THE TWO YEAR EXTENSION TERM PPA – YEAR ONE	21.3745	1.1275	22.5020
PROPOSED REFERENCE TARIFF FOR THE TWO YEAR EXTENSION TERM PPA – YEAR TWO	21.3745	1.1267	22.5012
INDEXED TARIFF OF THE TARIFF DETERMINATION* (FOR INFORMATION)	21.7321	0.8140	22.5461

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

Notably the data that was being used in the Tariff Determination was not for the period of a term immediately preceding 5 years but was based on the 'estimated' calorific value in absence of the 'actual' calorific values for the said period. Thereby the Company has at an average suffered loss of Rs 0.1822/kWh on account of the Fuel Cost Component for each kWh sold to KE. This is also evident and is better explained in the following chart detailing the historical performance of the Company over the Three Year Extension Term PPA.

ITEM	METRIC	2019-20 ACTUAL	2020-21 ACTUAL	2021-22			LAST 3 YEARS AVERAGE
				ACTUAL UPTO JAN 2022	PROJECTE D FROM FEB TO JUNE 2022	TOTAL 2021-22	
Lower Calorific Value of Fuel - Average	Btu/Kg	38,447.87	38,270.44	38,395.22	38,367.30	38,383.59	38,367.30
Furnace Oil Consumed	Tons	135,846.45	160,175.65	80,335.76	59,936.85	140,272.61	145,431.57
Export	MWh	626,766	736,790	368,386	275,705	644,091	669,215.72
Heat Rate	Btu/kWh	8,333.26	8,319.86	8,373.04	8,340.85	8,359.63	8,337.84



Fuel Consumption Rate	g/kWh	216.74	217.40	218.07	217.39	217.78	217.32
Plant Efficiency	%	40.94%	41.01%	40.75%	40.91%	40.82%	40.92%
Authority Determined Plant Efficiency	%	41.34%	41.34%	-	-	41.34%	41.34%

In order to make the tariff truly 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.

The cost of fuel consumption for the Facility, at actual thermal efficiency of 40.92% (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:	40.92%
RFO PRICE:	PKR 98,356.48 per ton (including transportation cost of PKR 506.48, subject to adjustments as 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):	8,337.84 BTU/kWh
OUTPUT CAPACITY:	123.5 MW (net at Site reference conditions)
CALORIFIC VALUE (LHV):	38,367.30 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:

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

8.2.3 INDEXATION FORMULA

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

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

Where:

$FC_{(Rev)}$ = Revised Fuel Cost Component

$FC_{(Ref)}$ = Reference Fuel Cost Component

$FP_{(Ref)}$ = Reference Ex-GST delivered RFO price of PKR 98,356.48 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 38,367.30 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 PPA, 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 30.38% for year one and 29.58% for year two of the Two Year Extension Term PPA.

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

DESCRIPTION		PROPOSED – YEAR 1	PROPOSED – YEAR 2
Oil and Lubricants including diesel	Rs '000	122,266	119,377
Stores, spares and loose tools	Rs '000	189,108	182,788
Provision for obsolescence of spares	Rs '000	5,000	5,000
Capital Spares	Rs '000	54,148	54,412
Total	Rs '000	370,522	361,577
Dispatch factor	%	30.38%	29.58%
Rs/kWh cost	Rupees	1.1275	1.1267

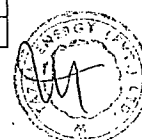
In the Tariff Determination, the Authority used the average of the previous 5 year's performance data amounting to PKR 464,847,000 (that is, from 2015 up to 2019), being the actual data of the immediately 5 preceding years.

Though the maintenance cost is based on the maintenance cycle to be followed based on the anticipated running hours of plant operations, the Company managed to survive on the previously given Tariff Determination, which was based on average historical cost, as the average was based on a longer term and 62.77% dispatch factor and the maintenance cycle of plant equipment based on running hours fell within the Three Year Extension Term PPA. However, in the instant case the term of the power purchase agreement is only 2 years. With a low dispatch factor anticipated by KE and high inflationary trends 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 PPA.

It may also be noted that the Company's calculations show a lower absolute amount at KE recommended dispatch factor of 30.38% and of 29.58% for the first and second extension term respectively, of the Two Year Extension Term PPA as against the average absolute amount of the preceding 3 year's actual cost incurred on a dispatch factor of 62.77%.

The Company's cost claimed for the Variable O&M Cost Component compared to the recently indexed Variable O&M cost allowed by the Authority to the power projects under 2002 policy, which use similar technology (at the parameters) as the Company, as on January 2022 is as follows:

S.No.	Power Project under 2002 Power Policy using similar technology	Period of Indexation	PKR/kWh
1	Atlas Power	Tariff for Jan – Mar 2022	1.6600
2	Liberty Power	Tariff for Jan – Mar 2022	1.8131



3	Nishat Power	Tariff for Jan – Mar 2022	1.6600
4	Tapal Energy	Proposed Tariff at Reference date of Jan 2022 for Year 1	1.1275
	Tapal Energy	Proposed Tariff at Reference date of Jan 2022 for Year 2	1.1267

The foregoing Variable O&M rates substantiate that the Company's claimed amount is less than the cost allowed to other similar projects. It is highlighted 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 PPA at a capacity factor of 30.38% for the first year and 29.58% for the second year.

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 158.78 for January 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 30.38% for the first year and 29.58% for the second year. 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 the Two Year Extension Term PPA Reference Tariff @ 30.38% Dispatch Factor	1.4024	0.4314	0.8363	1.3627
Second Year of the Two Year Extension Term PPA Reference Tariff @ 29.58% Dispatch Factor	1.4361	0.4419	0.8565	1.3955
INDEXED TARIFF OF LAST NEPRA TARIFF DETERMINATION @ 71% DISPATCH FACTOR*	0.7132	0.1687	0.3665	0.5830

*Reference tariff has been indexed at parameters prevailing in January 2022 (assumed as reference date 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 has 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	2021-22			LAST 3 YEARS AVERAGE
			ACTUAL FROM JULY 2021 TO JAN 2022	PROJECTED FROM FEB TO JUNE 2022	TOTAL 2021-22	
Salaries, Wages and Other Benefits	361,078	368,839	227,854	154,850	382,704	370,874
Travelling and Entertainment	14,631	14,038	7,633	6,133	13,766	14,145
Rent, rates and Taxes	11,923	11,729	7,972	6,448	14,420	12,691
Printing and Stationery	599	722	490	271	761	694
Postage, telephone and fax	1,140	1,139	847	457	1,304	1,194
Vehicle running and maintenance	5,545	4,695	3,759	2,395	6,154	5,465
Repair and Maintenance	10,876	14,926	9,605	7,128	16,733	14,178
Legal and Professional	4,594	8,372	910	2,999	3,909	5,625
Utilities	12,408	10,822	12,152	4,337	16,489	13,240
Training	41	-	-	-	-	14
Security	19,397	18,709	11,625	13,069	24,694	20,933
Auditor's remuneration	733	776	178	780	958	822
Fuel testing and technical fees	611	1,025	894	432	1,326	987
Total	443,576	455,792	283,919	199,300	483,219	460,862

The proposed cost for the year 2022-2023 and 2023-24 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 PPA.

The Company's cost claimed for the Fixed O&M Cost Component compared to the recently indexed Fixed O&M Cost allowed by the Authority to power projects under the 2002 policy, which use similar technology (at the parameters) as the Company, as on January 2022 is as follows:

S.No.	Power Project under the 2002 Power Policy using similar technology	Period of Indexation	PKR '000
1	Atlas Power	Tariff for Jan – Mar 2022	861,471
2	Liberty Power	Tariff for Jan – Mar 2022	828,135
3	Nishat Power	Tariff for Jan – Mar 2022	819,333
4	Tapal Energy	Proposed Tariff at Reference date of Jan 2022	460,862

The cost claimed by the Company is significantly lower than the cost allowed to the other above mentioned 2002 Policy Power Projects, therefore, in all fairness, the Company's claim is justified and it is humbly requested to be allowed by the Authority.



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 PPA:

"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 PPA) 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:

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

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) 158.78 of January 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 800,000 per annum considered for the 2 year extended 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.

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:

$$AIC = \text{Ins (Ref)} / P (\text{Ref}) * P (\text{Act})$$

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 2,223,724,000 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 the February 1, 2022;
- (ii) energy payments receivables along with GST for credit period of 25 days allowed to KE from the date of invoicing; and

The cost of Working Capital is calculated at 12.36% comprising of 3 months Karachi Inter Bank Offered Rate ("KIBOR") 10.36% + 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 PPA), to:

- (i) the average of fuel price of closing fuel inventory at 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 3,732,042,000 calculated based on the investment in the Project of USD 33,774,000 and converting equity at the rate of PKR 110.50 to USD 1. Though the Company had contended that it is unequitable for the Authority to use an exchange rate prevailing in January 2018 as the basis of conversion, however, the Company's submission was not accepted before the Authority and accordingly, the Authority calculated the ROE at the rate of 12% on the shareholders' equity which resulted in the annual ROE of PKR 447,840,000.

The ROE component of the Capacity Charge calculate on the basis adopted by the Authority in the Tariff Determination, at the following parameters:

INTERNAL RATE OF RETURN	12%
REPAYMENT OF CAPITAL	None
BASE EQUITY AS PER NEPRA TARIFF DETERMINATION OF JUNE 9, 2022	PKR 3,732,042,000
ABSOLUTE ANNUAL RETURN IN RUPEES AT 12%	PKR 447,840,000

The dispatch factor of 71% used by the Authority in the Three Year Extension Term PPA Tariff Determination was limited to 62.77% (in actual), therefore, the IRR earned by the Company over the Three Year Extension Term PPA, is 10.61%, which is less than the Authority allowed IRR of 12%.

Therefore, in all fairness and to adequately compensate the Company for the ROE duly allowed to it by the Authority, it is prayed that the Authority may calculate the ROE at KE's anticipated dispatch factor of: (i) 30.38% and allow the tariff of PKR 1.3627/kWh for the first year of the Two Year Extension Term PPA; and (ii) 29.5958% and allow the tariff of PKR 1.3955/kWh for the second year of the Two Year Extension Term PPA.



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 PPA, 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 PPA) (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 PPA 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 PPA

10.3.1 As noted in Section 3.2 (*The Contemplated Extension of the Term of the Approved Two Year Extension Term PPA*) above, the detailed terms and conditions for the Two Year Extension Term PPA if found to be different from the terms agreed under the signed Three Year Extension Term PPA that may possibly, as a result of the risk allocation contained therein or from additional cost contemplated from Two Year Extension Term PPA, 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 PPA 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 158.78 as published by Federal Bureau of Statistics, Pakistan in their publication for the month of January 2022.

11.2.4 2 Two-year extension in the term of the power purchase agreement, commencing on June 20, 2022 and expiring on June 19, 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 98,356.48 per ton, which includes the transportation cost of fuel to the site at PKR 506.48, subject to adjustment at actuals.

11.2.9 The exchange rate has been assumed to be PKR 177.25 to USD 1.

11.2.10 All risks emanating from the Two Year Extension Term PPA (considering that the Company has not to date received any draft of the same from KE) if found to be different from the terms agreed under the signed Three Year Extension Term PPA, 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 or seek repayment.

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 per annum 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 PPA.

11.2.16 All of the above assumptions and terms and conditions shall be incorporated in the Two Year Extension Term PPA 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,
TAPAL ENERGY (PVT.) LIMITED



MUSTAFA LAKDAWALA
CHIEF FINANCIAL OFFICER

ANNEXURES

ANNEXURE A
SHAREHOLDING PATTERN



TAPAL ENERGY (PVT) LIMITED

PATTERN OF HOLDING OF SHARES HELD BY THE SHAREHOLDERS AS AT JUNE 30, 2021

Number of Shareholders	Shareholding	Total Shares held
1	From 1 to 6,000,000 Shares	2,493,766
6	From 6,000,001 to 8,000,000 Shares	39,539,040
1	From 8,000,001 to 10,000,000 Shares	9,698,886
1	From 10,000,001 to 15,000,000 Shares	12,932,922
1	From 15,000,001 to 65,000,000 Shares	64,664,614
<u>10</u>		<u>129,329,228</u>

Categories of Shareholders	Number	Shares Held	Percentage
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Directors/Chief Executive Officer and their spouse and minor children

Moiz Ali Tapal		12,932,922	10.00%
Daanish A. Tapal		9,698,886	7.50%
Tabish Tapal		6,466,461	5.00%
Shakil A. Tapal		6,466,461	5.00%
	4	<u>35,564,730</u>	<u>27.50%</u>

Associated Companies, undertaking and related parties

1	64,664,614	50.00%
---	------------	--------

Individuals

5	29,099,884	22.50%
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<u>10</u>	<u>129,329,228</u>	<u>100.00%</u>
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ANNEXURE B
MEMORANDUM & ARTICLES OF ASSOCIATION



**TAPAL
ENERGY**

**THE COMPANIES ORDINANCE, 1984
(Company Limited by Shares)**

**MEMORANDUM
AND
ARTICLES OF ASSOCIATION**

OF

TAPAL ENERGY (PRIVATE) LIMITED



THE COMPANIES ORDINANCE, 1984

(A Company Limited by Shares)

MEMORANDUM OF ASSOCIATION

OF

TAPAL ENERGY (PRIVATE) LIMITED¹

- I) The name of the company is **TAPAL ENERGY (PRIVATE) LIMITED**.
- II) The Registered office of the company will be situated in Islamabad, Capital Territory.
- III) The main and exclusive object for which the company is established is to set up an industrial undertaking in power sector to carry on the business of electric power generation, accumulation, transmission and distribution thereof in all its branches and aspects by the use of such forms of energy and in such manner as may be deemed feasible for that purpose.

To achieve the main and exclusive object the Company shall be authorised:-

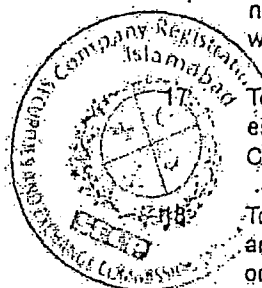
- 1. To import, purchase and acquire by some other means all kinds of raw and other material, and market, sell, transmit and deliver the electricity thus generated any where in Pakistan.
- 2. To purchase, or acquire by some other means, any land or lands and build, erect, construct, furnish, equip, maintain or improve any building, structure, edifice on for sale and hire, and to carry on construction thereof.
- 3. To acquire by purchase, exchange, hire, assignment or otherwise, tenements, buildings, easements, rights, advantages, moveable and immovable property of any kind whatsoever, machinery, trade marks, patents or inventions, licenses to use patents, or other properties, plants and stock-in-trade and to employ, resell, sell, exchange, mortgage, get on lease, license to use or otherwise and to pay for the properties, rights or privileges acquired by the Company.

¹Converted from a public limited company to a private limited company by a Special Resolution passed at an Extraordinary General Meeting held on 19.4.1999.

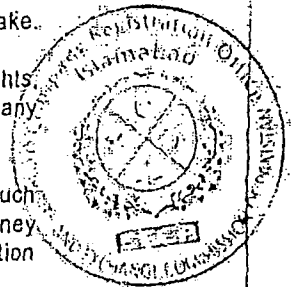
4. To arrange for buying all kinds of raw material, plant and machinery, equipments and tools whether local or imported, on cash, loan, deferred credit, pay-as-earn or non-repatriable investment basis.
5. To arrange electricity, water, gas, sewerage and other utilities required for efficient running of the project.
6. To appoint agents, sub-agents, attorneys, consultants, brokers and contractors in connection with the business of the Company but not to act as managing agents.
7. To adopt such means of making known the products of the Company as may seem expedient, and in particular by advertising in the press and electronic media, by circulars, by purchase and exhibition of works of art or interest, by publication of books and periodicals, and by prizes, rewards, stipends and donations.
8. To carry on any other business or trade which can, in the opinion of the Company, be advantageously or conveniently carried on by the Company in connection with the main and exclusive object, if calculated directly or indirectly, to develop any branch(es) of the Company's business or to increase the value any of the Company's property, assets or rights.
9. To enter into any arrangement with any governments or authorities (Federal, Provincial, Municipal, local or otherwise), or any corporations, companies, firms, or persons that may seem conducive to the Company's exclusive object, and to obtain from any such government, authority, corporation, company or person any charters, contracts, decrees, rights, privileges and concessions which the Company may think desirable, and to carry out, exercise and comply with any such charters, contracts, decrees, rights, privileges and concessions.
10. To sell or otherwise dispose off all goods, materials, articles and things belonging to the Company either on cash or on credit and either for immediate or future delivery and to send the same for sale or export to any place that may be deemed necessary or expedient in the event of winding up of the Company.
11. To get insured against losses, damages, risks, accidents and liabilities of all kinds which may affect the company whether in respect of its contracts, agreements, advances or securities or in respect of servants or employees of the company, or in respect of property belonging to or leased to or hired by the company, either by setting apart funds of the company or by effecting such insurance and in later case to pay the premium thereon.
12. To open, close and operate bank accounts with scheduled banks or financial institutions and to draw, make, accept, endorse, discount, execute and issue promissory notes, bills of exchange, cheques, bills of lading, warrants, debentures; and other negotiable or transferable instruments, concerning the business of this Company.
13. To invest the surplus moneys of the Company not immediately required in and subscribe for, take, acquire and hold shares, debentures, securities of any other company of corporation whatsoever, and to invest moneys of the Company in any other manner, including the purchase of any book or any other debts without doing the business of an investment company within the meaning of the law.
14. To borrow or procure on mark-up, profit or return in any form, money or finances, in local or any foreign currency from any bank or financial institution and to receive money on mark-up and/or interest by issuing debentures, and on security of any such money so borrowed or received to

mortgage, pledge, charge or hypothecate whole or any part of property, assets or revenue of the Company (both present and future) including its capital by special assignment or otherwise, to transfer or convey the same conditionally, absolutely or in trust and to give, tender power to sell and other powers as may seem expedient, and to purchase or redeem such securities and pay for such borrowing and loans,

15. To procure or arrange finances from scheduled banks and financial institutions under any mode of Islamic financing scheme like, redeemable capital including modaraba and musharaka and to procure, raise or to secure the money in such manner as the company may deem fit and particularly by mortgage of its property in full or in part on both the present and future assets in accordance with Islamic Laws and/or by the issue of shares, bonds, debentures, participation term certificates, Term Finance Certificates, or redeemable capital or any other securities charged or based upon the undertaking of the company, on any part of its property, both present and in future and generally to borrow money for the purposes of the business of the company in such manner as the company shall deem fit. To issue debentures or participation term certificates, term finance certificates, redeemable capital, either permanent or redeemable or repayable or convertible into shares and to secure any securities of the company by a trust or other assurances.
16. To pay commission or otherwise remunerate any company or firm or firms or person or persons (whether an officer of this Company or not) for services rendered in placing or assisting to place any of the shares of the Company's capital or any debentures or other securities of the Company, or for negotiating any of the purchases or sales by the Company, or for rendering any service of any kind whatsoever to the Company.
- To procure the registration or other recognition of the Company in any country, state or place and to establish and regulate agencies and open branches in any part of the world for the purposes of the Company's business.
- To pay the costs, charges and expenses preliminary and incidental to the formation, establishment and registration of the Company, and to remunerate any person or company for services rendered or to be rendered in placing or assisting to place or guaranteeing the placing of any of the shares in the Company's capital, or any debentures or other securities of the Company, or in or about the conduct of its business.
19. To grant pensions, allowances and bonuses to officers, ex-officers, employees or ex-employees of the company or its predecessors in business or the dependents or connections of such persons and establish and support or aid in the establishment and support of associations, institutions, funds, trusts and conveniences calculated to benefit employees and ex-employees and officers and ex-officers (including Directors and ex-directors) of the Company, or the dependents or connections of such persons, and to pay gratuities or grant pensions and allowances, and to make payments towards insurance, and to subscribe or guarantee money for charitable or benevolent objects, or for any exhibition, or for any public, general or useful object.
20. To distribute any of the property of the Company amongst the members in specie or kind and in particular any shares, debentures or securities of other companies belonging to this Company, or of which this Company may have the power of disposing in the event winding up of the Company.
21. To create any depreciation fund, provident fund, reserve fund, sinking fund, insurance fund, or any other special fund conducive to the interest of the company.



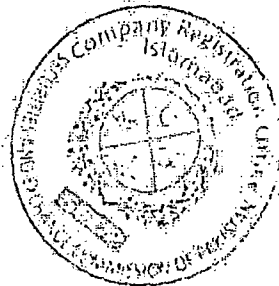
22. To capitalise such portion of the profits of the Company as are not distributed amongst shareholders of the Company in the form of dividend and as the Directors of the Company may think fit and to issue bonus shares as fully paid-up in favour of the shareholders of the Company.
23. To issue any shares of the Company as fully paid-up at par or at a premium or at a discount as provided by law.
24. To remunerate Directors, officials, servants of the Company or any other person or firm or company rendering services to this company, out of, or in proportion to the returns or profits of the company or otherwise as the Company may think proper, either by cash payment or by the allotment to him or them shares or securities of the Company credited as paid-up in full as may be thought expedient.
25. To appoint such persons or firms as may be seem expedient to be general managers, secretaries, managers, branch managers, or district representatives of the Company upon such terms as the Company may determine.
26. To establish and maintain branches, receiving offices and distributing centers and to enter into contracts or agency agreements (other than managing agency) with any other persons or firms or companies or for the distributing centers for the efficient carrying on of the business of the Company.
27. To undertake and execute any trusts which the company may think fit and expedient to undertake.
28. To apply for, purchase or other wise acquire, and protect and renew any patents, patent rights, brevets d'invention (trade marks, designs, etc.), licenses, concessions and the like, conferring any exclusive or non-exclusive or limited right to their use.
29. To establish, improve, manage laboratories, research and development centers to perform such research and development as the Company may deem advisable or feasible, and to expend money on experimenting upon testing and improving or securing any process or protecting any invention (s) which the Company may acquire or propose to acquire or deal with.
30. To develop and/or transfer technology and to acquire or pass on technical know-how.
31. To train personnel and workers, in Pakistan and/or abroad, to obtain technical proficiency in various specialities connected with the business of the Company.
32. It is hereby declared that:-
 - (a) the word "company" in the above clauses except where used in reference to this Company shall be deemed to include any body of persons incorporated in Pakistan or elsewhere;
 - (b) the main and exclusive object for which the company is set up are indicated in Clause III. The Company shall have full authority, power and competence to do any and all other things and acts to further the purposes specified in Sub-clauses 1 to 31 in support of and in relation, whether directly or indirectly, to the said exclusive object of the Company.
 - (c) notwithstanding anything contained in the foregoing object clause of this Memorandum of Association, nothing herein shall be construed as empowering the Company to undertake or indulge in the business of banking, finance, leasing, investment or insurance, directly or



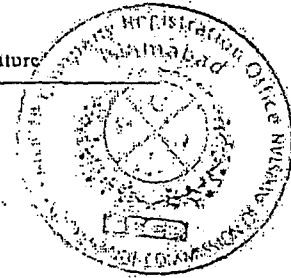
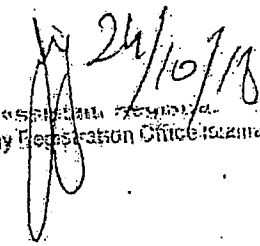
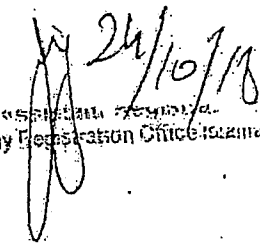


indirectly, as restricted under law or in any unlawful operation, and that nothing in the objects clause shall be construed to entitle it to engage in such business.

- IV. The liability of the members is limited.
- V. The authorised capital of the Company is Rs. 1,500,000,000 (Rupees Fifteen Hundred Million) divided into 150,000,000 ordinary shares of Rs. 10 each with powers to increase and reduce the capital of the Company in such manner as may be consistent with the provisions of the Companies Ordinance, 1984.



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

Names and Surname (Present and former in full in block letters)	Father's/Husband's Name in full	Nationality with any former nationality	Occupation	Residential Address	Number of shares taken by each subscriber	Signature
MR. MOIZ S. TAPAL	LATE MR. SADIQ ALI	PAKISTANI	BUSINESS (TRADING)	6-A, 1ST GIZRI LANE, D.H.A., KARACHI.	6,250	 CERTIFIED TO BE TRUE COPY  <small>Assistant Secretary Companies Registration Office, Islamabad</small>
MR. DAANISH A. TAPAL	MR. ANWAR ALI S. TAPAL	PAKISTANI	BUSINESS (TRADING)	F/98, CLIFTON, KARACHI.	6,250	
MR. TABISH M. TAPAL	MR. MOIZ S. TAPAL	PAKISTANI	BUSINESS (TRADING)	6-A, 1ST GIZRI LANE, D.H.A., KARACHI.	6,250	
MR. SHAKIL A. TAPAL	MR. AMIR ALI S. TAPAL	PAKISTANI	BUSINESS (TRADING)	K.P.T. 39/B, M. T. KHAN ROAD, LALAZAR, KARACHI.	6,250	
MR. IAN CHRISTOPHER COPELAND	MR. LAWRENCE G. COPELAND	AMERICAN	ENGINEER/ BUSINESS	27-D, SEABIRD LAND DISCOVERY BAY, LANTAU ISLAND HONG KONG.	1	
ALEXANDER ARMAND KARSNER	MR. DAVID WILFRED KARSNER	AMERICAN	BUSINESS	6-C, GREENBELT COURT DISCOVERY BAY, LANTAU ISLAND, HONG KONG	1	
KAJ TORE BJORKMAN	MR. EVALD BJORKMAN	FINLAND	MARKETING MANAGER	65920 N. VALLGRUND VASA, FINLAND	1	
M/S. KINGPIN INVESTMENT LIMITED THROUGH MR. IAN C. COPELAND	NONE	HONG KONG	FOREIGN COMPANY	14TH FLOOR, LUK KWOK CENTRE, 72 GLOUCESTER ROAD, WANCHAI, HONG KONG	24,997	 <small>Assistant Secretary Companies Registration Office, Islamabad</small>
TOTAL					50,000	

Dated the Day of 1995

Witness to the above signatures

Full Name, Father's/Husband's Name Signature Occupation Full Address.



THE COMPANIES ORDINANCE, 1984
(Company Limited by Shares)
ARTICLES OF ASSOCIATION¹
OF
TAPAL ENERGY (PRIVATE) LIMITED²
PRELIMINARY



1. Table A not to apply

The regulations contained in the Table 'A' in the First Schedule to the Ordinance 1984, shall not apply to the Company except so far as the same are repeated, contained or expressly made applicable in these Articles or by the Ordinance.

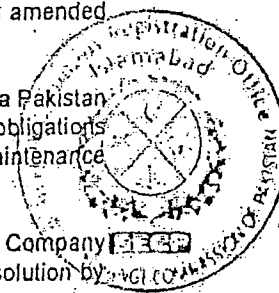
2. The marginal notes hereto shall not affect the construction hereof and in these presents, unless there is something in the subject of context for the time being in force:

- i) "Affiliate" shall mean, with respect to a Member, any Person directly or indirectly Controlling, Controlled by or under common Control with such Member;
- ii) "Agreement" means the Amended and Restated Shareholders Agreement between the Company, Sithe, Marubeni, Kingpin and the Tapal Shareholders dated 21 October 1997 as amended and/or restated from time to time;
- iii) "Agreed Equity" means the maximum total ordinary equity share capital of the Company being US\$ 33,774,131 (as the same may be increased in accordance with the terms of the Agreement);
- iv) "Articles" means these Articles of Association as altered by Special Resolution from time to time;
- v) "Board" means the Board of Directors for the time being at a meeting duly constituted, called and convened;

¹ Substituted by Special Resolution passed at an Extraordinary General Meeting held on 19.4.1999

² Converted from a public limited company to a private limited company by a Special Resolution passed at an Extraordinary General Meeting held on 19.4.1999.

- xxxvi) "New Capital" means any funding in addition to the Agreed Equity;
- xxxvii) "Office" means the Registered Office for the time being of the Company;
- xxxviii) "Operating and Maintenance Agreement" means the Operating and Maintenance Agreement made on 1 December 1995 between the Company and the Operator as amended and/or restated from time to time;
- xxxix) "Operator" means Wartsila Pakistan or, following the relinquishment by Wartsila Pakistan of its rights and the assumptions by the Site Operator of Wartsila Pakistan's obligations arising from and after the date of such assumption under the Operating and Maintenance Agreement, the Site Operator;
- xl) "Ordinary Resolution" means a resolution passed at a general meeting of the Company when the votes cast (whether on a show of hands or in poll) in favour of a resolution by Members who being entitled to vote in person or by proxy, do so vote, exceed the number of votes of any cast against the resolution by Members so entitled and voting;
- xli) "Ordinance" means the Companies Ordinance, 1984 or any statutory modification or re-enactment thereof for the time being in force;
- xlii) "Overruns and Shortfalls" means all amounts that increases the Agreed Equity and each Member's proportionate share thereof on account of the following factors:
 - (i) if due to constraints on availability of debt financing in the form of Working Capital and refinancing of the Existing Loan, the Members agree pursuant to Article 57 that the amount of equity financing required is higher than the amount of the Agreed Equity; or
 - (ii) any call or drawing in any guarantees, letters of credit or other financial support provided by the Members pursuant to the Agreement;
- xliii) "Person" means an individual, partnership, corporation, company, joint venture, association, trust, incorporated organisation, or a government;
- xliiii) "Project" means the development, design, engineering, manufacture, financing, procurement of the Site, construction, permitting, installation, completion, testing, commissioning, insurance, ownership, operation and maintenance of the Complex and all activities incidental thereto;
- xlv) "Project Costs" means the total cost of the Project approximately US\$ 141,727,131;
- xlv) "Project Documents" means the Implementation Agreement, the Guarantee, the Fuel Supply Agreement, the Power Purchase Agreement, the Construction Contract, the Equipment Supply Contract, the EPC Guaranty, the Operating and Maintenance Agreement, the Long Term Maintenance Agreement, the Memorandum and Articles of Association of the Company and any land purchase or title documents pertaining to the Site for the location of the Project and each other material agreement and document relating to the Project, excluding the Financing Documents, entered into by the Company after 21 October 1997 (including land purchase documents for the Islamabad property);



- xlii) "Power Purchase Agreement" means the Power Purchase Agreement made between the Karachi Electric Supply Corporation Limited and the Company dated 26 September 1995 as amended by Amendment No.1 made between the Karachi Electric Supply Corporation Limited and the Company dated 9 May 1996;
- xliii) "Proxy" includes an attorney duly constituted under a power of attorney;
- xliv) "Register" means the Register of Members to be kept pursuant to Section 147 of the Ordinance;
- xlv) "Seal" in relation to a Company means the Common Seal of the Company;
- xlvii) "Secretary" means the Secretary for the time being of the Company;
- xlviii) "Shareholder Loan" means a loan from a Member (or an Affiliate of a Member) to the Company to fund Agreed Equity, New Capital, Working Capital or Overruns and Shortfalls;
- xlix) "Site" means the land, spaces, waterways, road, wells and any rights acquired or to be acquired by the Company for the purposes of the Complex on, through, above or below the ground on which the complex or any part thereof is to be built (including, without limitation, any working areas required by the Company and the Contractors, villages, township, and camps for the accommodation of the employees of the Company and the Contractors and any subcontractors; and, all rights of way and access from public highways, railways, and seaward access, if applicable);
- i) "Sithe" means Sithe Mauritius Limited, a limited liability company organised under the laws of Mauritius and such successors and assigns of it as may be permitted from time to time;
- ii) "Sithe Operator" means one or more Affiliates of Sithe that are reasonably acceptable to the Company;
- iii) "Special Resolution" has the meaning assigned thereto by Section 2(1)(36) of the Ordinance;
- iiii) "Tapal Shareholders" means Moiz S. Tapal, Dannish A. Tapal, Tabish M. Tapal, Shakil A. Tapal, Tajwar M. Tapal, Mustafa A. Tapal, Amir S. Tapal, Zafar A. Tapal and the permitted transferees of such shareholders as provided under the Agreement;
- liv) "Term Sheet" means collectively (i) Summary of Key Terms and Conditions dated 23 December 1996 initialled by the Company, ING Bank N.V. and Merita Bank Limited, (ii) Summary of Terms and Conditions for the FMO Term Loan Facility dated 13 January 1997 between the Company and Nederlandse Financierings-Maatschappij Voor Ontwikkelingslanden N.V. and, (iii) Draft Term Sheet, Finnfund Loan Facility for Tapal Energy Limited dated 13 March 1997 from Finnish Fund for Industrial Cooperation Ltd. and accepted on behalf of the Company on 18 March 1997;
- iv) "Wartsila Pakistan" means Wartsila NSD Pakistan (Pvt) Limited formerly known as Wartsila Diesel Pakistan (Pvt) Limited, a private limited company organised and existing under the laws of Pakistan;

- lv) "Working Capital" means short term loans in the amount of US \$10,500,000 and a short term loan in the amount of US\$ 453,000 supported or provided by Kingpin to finance part of the Project Costs.
 - lvii) Words importing the singular number shall include the plural number and vice versa.
 - lviii) Words importing the masculine gender shall include the feminine gender.
 - lix) Expression referring to writing shall unless the contrary intention appears, be construed as including references to printing, lithography, photography and other modes of representing or reproducing words in a visible form.
3. Unless the context otherwise requires words or expressions contained in these Articles shall bear the same meaning as in the Ordinance.

PRIVATE COMPANY

4. The Company is a private limited company and accordingly:
- (a) the right to transfer shares of the Company is restricted in the manner hereinafter provided;
 - (b) the number of Members for the time being of the Company (not including persons who are for the time being in the employment of the Company) shall be limited to fifty (50): Provided that, for the purpose of this provision where two or more persons hold one or more shares in the Company jointly, they shall be treated as a single number; and
 - (c) an invitation to the public to subscribe for any shares or debentures of the Company is hereby prohibited.

CAPITAL

5. The authorised share capital of the Company is Rs. 1,500,000,000 (Rupees fifteen hundred million) divided into 150,000,000 ordinary shares of Rs. 10 (Rupees Ten) each with powers to increase and reduce the capital of the Company in such manner as may be consistent with the provision of the Ordinance.

SHARES

6. The Company shall not issue partly paid shares.
7. Except to the extent and in the manner allowed by Section 95 of the Ordinance no part of the funds of the Company shall be employed in the purchase of, or in loans upon the security of, the Company's shares.
8. The Directors may with the sanction of an Ordinary Resolution of the Company in general meeting, increase the authorised share capital by such sum as they think fit, to be divided into shares of such amount as the resolution may prescribe, subject, nevertheless, to the provisions of Section 92 of the Ordinance.
9. Subject to compliance with the requirements of Articles 57 and 98 and Section 86 of the Ordinance where the Directors decide to increase the capital of the Company by the issue of further shares,



either at a premium or at par, such shares shall be offered on such terms and conditions and for such consideration, and at such times as the Directors deem fit, to the Members strictly in proportion to the existing shares held by each Member; Such offer shall be made by notice specifying the number of shares to which the Member is entitled and limiting a time within which the offer, if not accepted, will be deemed to be declined; and after the expiration of such time or on receipt of an intimation from the Member to whom such notice is given that such Member declines to accept the shares offered, the Directors may dispose of the same in such manner as they think most beneficial to the Company.

10. The Company may at any time pay commission to any person for subscribing or agreeing to subscribe (whether absolutely or conditionally) for any shares, debentures or debenture stock of the Company, or procuring or agreeing to procure subscriptions (whether absolutely or conditionally), for any shares, debentures, debenture stock of the Company, but if the commission in respect of shares shall be paid or payable out of capital, the conditions and requirements laid down in Section 82 of the Ordinance shall be observed. The amount or rate of commission shall not exceed any statutory limit thereon. The commission may be paid or satisfied in cash or in shares, debentures or debenture stock of the Company.



Except so far as otherwise provided by the conditions of issue or by these presents, any capital raised by the creation of new shares, shall be considered part of the original capital and shall be subject to the provisions herein contained with reference to the payment, transfer and transmission, surrender, voting and otherwise.

12. The Company may from time to time by Special Resolution reduce its share capital in any way and in particular (without prejudice to the generality of the power) by paying off capital or cancelling capital which has been lost or is unrepresented by available assets or reducing the liability on the share or otherwise as may seem expedient and capital may be paid off which is in excess of the needs of the Company or otherwise, and paid up capital may be cancelled as aforesaid without reducing the nominal amount of the shares by the like amount to the extent that the unpaid and callable capital shall be increased by the like amount.
13. Save as herein otherwise provided, the Company shall be entitled to treat the registered holder of any share as the absolute owner thereof and accordingly shall not, except as ordered by a court of competent jurisdiction, be bound to recognise any equitable, contingent or partial interest in or any other right in respect of such share on the part of any other person.
14. Shares may be registered in the name of any limited company or other body corporate but not in the name of a minor or a firm. Not more than four persons shall be registered as joint holders of any shares.
15. If any share stands in the name of two or more persons, the person first named in the Register shall, as regards receipt of dividend or service of notice and all or any other matters connected with the Company except voting at the meeting and the transfer of shares, be deemed the sole holder.
16. In the case of the death of any one or more of the persons named in the Register as the joint-holder of any share, the survivor or survivors shall be the only person or persons recognised by the Company as having any title to or interest in such share, but nothing herein contained shall be taken to release the estate of a joint holder from any liability.



17. Every Member shall name to the Company a place in or out of Pakistan to be registered as his address and such address shall for all purposes be deemed to be his place of residence.
18. Subject to the provisions of Section 92 of the Ordinance the Company may by Ordinary Resolution:
- a) consolidate and divide the whole or any part of its share capital into shares of larger amount than its existing shares;
 - b) sub-divide its shares or any of them into shares of smaller amount than is fixed by the Memorandum of Association;
 - c) cancel any shares which at the date of passing of the resolution have not been taken or agreed to be taken by any person.

The resolution by which any share is sub-divided or consolidated may determine that as between holders of shares resulting from sub-division or consolidation, rights of profits, votes and other benefit attaching to them will be proportionate to their paid up value and where shares issued as sub-divided or consolidated shares are of same class as those previously issued that rights attaching to them, subject as aforesaid, shall be the same as those attaching to the shares previously held.

19. Subject to the provisions of the Ordinance and these Articles, the Directors may allot and issue shares in the capital of the Company as payment or part payment of any property, sold or transferred, or in discharge of any indebtedness or obligations of the Company, or for goods or machinery supplied or for services rendered to the Company in or about the formation or promotion of the Company or the conduct of its business, and any shares which may be sold or allotted may be issued as fully paid-up shares, and, if so issued, shall be deemed to be fully paid-up shares.

CERTIFICATE

20. Every person whose name is entered as a Member in the Register shall without payment be entitled to receive, after allotment or registration of transfer, one certificate for all his shares or several certificates each for one or more of his shares and upon payment of such charges, if any, as the Directors may determine for every certificate after the first.
21. The certificates of title of shares and duplicates thereof when necessary shall be issued under the Seal and shall specify the share or shares held by a Member 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 entered into by the Company in this respect.
22. The Company shall not be bound to issue more than one share certificate in respect of a share or shares held jointly by two or more persons, and delivery of a certificate for a share to any one of joint holders shall be sufficient delivery to all.
23. The Company shall, within ninety days, after the allotment of any of its shares, and within 45 days after the date on which the instrument of transfer has been lodged, complete and have ready for delivery the certificates of all shares, allotted or transferred, unless the conditions of issue of the shares otherwise provide.



24. If any certificate be worn out, defaced, destroyed or lost or if there is no further space on the back thereof for endorsement of transfer, it may be renewed or replaced on payment of such sum, not exceeding five rupees, as the Directors may from time to time prescribe; provided, however, that such new certificate shall not be granted except upon delivery of the worn out or defaced or used up certificate for the purpose of cancellation or upon proof of destruction or loss to the satisfaction of the Directors and on such indemnity as the Directors may deem adequate in case of certificate having been lost or destroyed. Any renewed certificates shall be marked as such.

COMPLIANCE WITH THE AGREEMENT

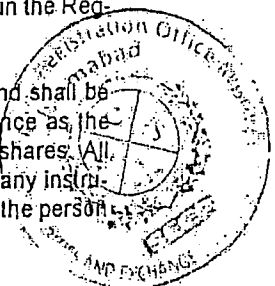
25. The Members, the Company, the Chief Executive of the Company and the Directors of the Company shall at all times comply and ensure compliance with the terms and conditions of the Agreement.

TRANSFER AND TRANSMISSION OF SHARES

26. No share or any interest in or to a share (including the granting of any warrants or options with respect thereto) in the Company shall be sold or transferred by a Member or other person entitled to sell or transfer unless and until the rights of first refusal conferred by the Agreement on Members by Article IV of the Agreement shall have been exhausted.
27. In the event of sale or transfer of shares as provided in Article 26 the transferee of shares shall, if not already a party become a party to the Agreement and shall be bound by the terms of the Agreement in the same manner and to the same extent as the transferor of shares. Until the transferee becomes a party to the Agreement the transferor shall be deemed to continue to own such shares and shall be and remain fully liable for any liabilities in respect of such shares and for the acts, omissions or defaults of the transferee with respect to such shares and the provisions of the Agreement as if the transferor were still a party thereto. No transfer shall relieve the transferor of responsibility for its own acts, omissions or defaults under or pursuant to the Agreement.
28. Notwithstanding anything contained in these Articles a Member may assign or transfer its shares or any portion thereof to an Affiliate without compliance with the terms of Article 26 provided that such Member complies with the terms of the Agreement in this regard. For the purposes of this Article the term "Affiliate" shall be deemed to include the spouses and lineal ascendant, descendant and cognate relatives (and their respective spouses) of the Tapal Shareholders.
29. If in any case the proposing transferor after having become bound as aforesaid makes default in transferring the shares, the Company may receive the purchase money and shall thereupon cause the name of the purchaser to be entered in the Register as the holder of the shares, and shall hold the purchase money in trust for the proposing transferor. The receipt of the purchase consideration by the Company shall be a good discharge to the purchasing member, and after his name has been entered in the Register in purporting exercise of the aforesaid power, the validity of the proceedings shall not be questioned by any person.
30. The Directors shall not refuse to transfer any fully paid shares unless:-
- (a) the transfer deed is for any reason defective or invalid provided that the Company shall within thirty (30) days from the date on which the instrument of transfer was lodged with it notify the defect or invalidity to the transferee who shall after removal of such defect or invalidity be entitled to re-lodge the transfer deed with the Company; or



- (b) the transfer is in breach of the Agreement or any other contractual arrangements entered into by the Company; or
- (c) the transfer is in violation of these Articles.
31. If the Company refuses to register the transfer of any shares, owing to any attachment or prohibitory order of a competent authority or otherwise, the Company shall within forty five (45) days after the date on which the instrument of transfer was lodged with it, send notice to the transferee notice of the refusal indicating reasons for such refusal. No transfer of shares in any case shall be made to a minor or an insolvent or person of unsound mind,
32. 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 and shall be executed both by the transferor and the transferee and duly stamped according to law, and execution be attested by at least two male witnesses, who shall add their address and occupation, and the transferor shall be deemed to remain the holder of such shares until the name of transferee shall have been entered in the Register of Members in respect hereof.
33. Every instrument of transfer shall be left at the office for registration, duly stamped and shall be accompanied by the certificate of the shares to be transferred and such other evidence as the Company may require to prove the title of the transferor or his right to transfer the shares. All instruments of transfer which will be registered shall be retained by the Company, but any instrument of transfer which the Directors decline to register shall, on demand, be returned to the person depositing the same.
34. Where it is proved to the satisfaction of the Directors that an instrument of transfer signed by the transferor and the transferee has been lost, the Company may, if the Directors shall think fit, by an application in writing made by the transferee and bearing the stamp required by an instrument of transfer, register the transfer on such terms as to indemnity or otherwise as the Directors may think fit.
35. Nothing contained in these Articles shall prejudice any power of the Company to register as Member any person to whom the right to any shares of the Company has been transmitted by operation of law.
36. No fee will be charged for registering transfer of shares.
37. The transfer books and Register of Members may be closed for any time or times not exceeding in the whole forty five days in each year, but not exceeding thirty days at a time, in accordance with the manner specified in Section 151 of the Ordinance.
38. The nominees of a deceased Member as specified in Section 80 of the Ordinance, or executors or administrators of a deceased Member shall be the only persons recognised by the Company as having title to his share except in case of joint holders in which case the surviving holders or the executors or administrators of the last surviving holder shall be the only person entitled to be so recognised; but nothing herein contained shall release the estate of a deceased joint holder from any liability in respect of any share jointly held by him. The Company shall not be bound to recognise a nominee of a deceased Member or executor or administrator unless he shall have obtained probate or letters of administration, succession certificates or other legal representation, as the case may be, from a court of competent jurisdiction Provided nevertheless that where the Directors





in their absolute discretion think fit it shall be lawful for the Directors to dispense with the production of probate or letters of administration, succession certificates or such other legal representation upon such terms as to indemnity or otherwise as the Directors in their absolute discretion may consider necessary.

39. A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a Member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to meetings of the Company.
40. Neither the Company nor its Directors shall incur any liability or responsibility whatsoever in consequence of their registering or giving effect to any transfer of shares made or purporting to be made by an apparent legal owner thereof to the prejudice of persons having or claiming any equitable right, title or interest to or in the same, notwithstanding that the Company may have had notice of such equitable right, title or interest, or notice prohibiting registration of such transfer, and may have entered such notice or referred thereto in any book of the Company and shall not be bound or required to attend or give effect to any notice which may be given to them of any equitable right, title or interest or be under any liability whatsoever for refusing or neglecting so to do, though it may have been entered or referred to in some book of the Company; but the Company shall nevertheless be at liberty to regard and attend to any such notice and give effect thereto if the Directors shall so think fit.

GENERAL MEETINGS

41. A general meeting, to be called Annual General Meeting, shall be held within eighteen Months from the date of incorporation and thereafter once at least in each calendar year within a period of six Months following the close of its financial year at such time and place as the Directors may determine, provided, however, that no greater interval than fifteen Months shall be allowed to elapse between two Annual General Meetings. All general meetings of the Company other than the Statutory Meeting and the Annual General Meeting, shall be called Extraordinary General Meetings.
42. The Directors may, whenever they think fit, call an Extraordinary General Meeting and Extraordinary General Meeting shall also be called on the requisition of the holders of not less than 10% of the issued and paid up share capital of the Company. On the date of deposit of requisition, the Directors shall forthwith proceed to convene an Extraordinary General Meeting of the Company and in case of such requisition, the provisions of Section 159 of the Ordinance shall apply.
43. If at any time there are not within Pakistan sufficient Directors capable of acting to form a quorum, the Directors may convene an Extraordinary General Meeting in the same manner as nearly as possible as that in which meetings may be convened by the Directors.

NOTICE OF MEETING

44. Subject to the provisions of Sections 158 and 159 of the Ordinance twenty-one days' notice at least (exclusive of the day on which the notice is served or deemed to be served, but inclusive of the day for which notice is given) specifying the place, the day and the hour of meeting and, in case of special business the general nature of that business, shall be given in the manner provided by the Ordinance for the general meeting, to such persons as are under the Ordinance or the regulations of the Company, entitled to receive such notice from the Company. With the consent in writing of all

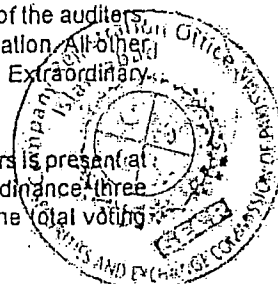


the Members entitled to receive notice of some particular meeting (other than the Annual General Meeting) at which a special resolution is to be passed that meeting may be convened by such shorter notice and in such manner as the Members may deem fit.

45. The accidental omission to give notice of a meeting to or the non-receipt of notice of a meeting by, any Member or person entitled to receive notice shall not invalidate the proceedings at any general meeting.

PROCEEDINGS AT GENERAL MEETINGS

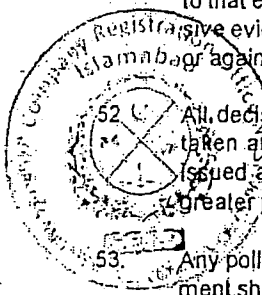
46. The ordinary business of the Company at an Annual General Meeting shall be to receive and consider the balance sheet and profit and loss account, the reports of the Directors and of the auditors, to elect Directors, to declare dividends and to appoint auditors, and fix their remuneration. All other business transacted at an Annual General Meeting and all business transacted at Extraordinary General Meetings, shall be deemed special.
47. No business shall be transacted at any general meeting unless a quorum of Members is present at the time when the meeting proceeds to business. Subject to the provisions of the Ordinance, 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, shall be a quorum.
48. If within half an hour from the time appointed for a general 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, at such adjourned meeting if a quorum is not present within half an hour from the time appointed for such meeting the Members present being not less than three shall constitute a quorum and may transact the business for which the meeting was called.
49. The Chairman, if any, of the Board shall preside as Chairman at every general meeting of the Company, but if there is no such Chairman, or if he shall not be present within fifteen minutes after the time appointed for the holding of the meeting or is unwilling to act, the Members present shall elect one of the Directors present to be Chairman of the meeting, or if no Directors be present or if Directors present decline to take the chair, the Members present shall choose one of their member to be Chairman of the meeting. Every Director of the Company shall have the right to attend any general meeting of the Company and also to take part in the discussion thereat.
50. The Chairman may with the consent of any meeting at which a quorum is present (and shall, if so directed by the meeting), adjourn the meeting from time to time and from place to place, 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. When a meeting is adjourned for thirty days or more, notice of adjourned meeting shall be given as in the case of original meeting. Save as aforesaid, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.
51. At a general meeting a resolution put to the vote of the meeting shall be decided on a show of hands, unless a poll is (before or on the declaration of the show of hands) demanded in accordance with provisions of Section 167 of the Ordinance:-
- a) by the Chairman of the meeting of his own motion; or





- b) by one Member having the right to vote on the resolution and present in person or by proxy if not more than seven such Members are personally present, and by two such Members present in person or by proxy if more than seven such Members are personally present; or
- c) by any Member or Members present in person or by proxy and having not less than one-tenth of the total voting power in respect of the resolution; or
- d) by any Member or Members present in person or by proxy and holding shares in the Company conferring a right to vote on the resolution, being shares on which an aggregate sum has been paid-up which is not less than one-tenth of the total paid-up on all shares conferring that right.

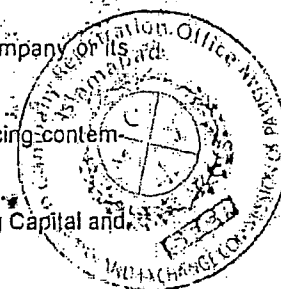
Unless a poll is so demanded, a declaration by the Chairman of the meeting that a resolution has on a show of hands been carried or carried unanimously or by a particular majority, or lost, and an entry to that effect in the book containing the minutes of the proceedings of the Company shall be conclusive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



All decisions required to be taken by the Members under the Articles or applicable law shall be taken at a meeting and shall require the affirmative vote of Members holding a majority of the issued and paid-up share capital of the Company, except in the case of a decision requiring a greater percentage affirmative vote as set out in Article 57.

- 53. Any poll duly demanded on the election of a Chairman of a meeting or on any question of adjournment shall be taken at the meeting and without adjournment.
- 54. If a poll is duly demanded, it shall be taken in accordance with the manner laid down in Section 168 of the Ordinance and the results of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded.
- 55. The demand of a poll shall not prevent the continuance of the meeting for the transaction of any business other than the question on which the poll has been demanded. The demand for a poll may be withdrawn at any time by the person or persons who made the demand.
- 56. The Chairman of any meeting shall be the sole judge of the validity of every vote tendered at such meetings. The Chairman present at the time of taking of a poll shall be the sole judge of the validity of every vote tendered at such poll.
- 57. Notwithstanding anything contained in these Articles the affirmative vote of the Members holding at least eighty-five percent (85%) of all issued and paid up shares shall be required with respect to a decision regarding any of the following matters:
 - (i) the issuance of, and the interest rate, terms, subordination provisions and other financial provisions relating to the issuance of, any New Capital, or the sale or issuance of New Capital to any Person not a Member prior to such sale;
 - (ii) any merger or consolidation of the Company with or into any other Person or any entry by the Company into a joint venture with any Person;
 - (iii) the filing by the Company of any voluntary petition for the winding-up or dissolution of the Company;

- (iv) any amendment to the Memorandum and Articles of Association;
- (v) the incurring of indebtedness on the part of the Company or the provision of guarantees by the Company in an aggregate outstanding amount at any time of US\$500,000 or more (excluding the Existing Loan and any refinancing thereof as contemplated by the Term Sheet and Working Capital);
- (vi) the approval of all material agreements (including any amendments thereto) entered or to be entered into by the Company after the date of the Agreement, including any Financing Document, any other agreement with respect to the financing arrangements for the Project and any additional Project Document other than any document entered or to be entered into by the Company for the refinancing of the Existing Loan as contemplated by the Term Sheet;
- (vii) any change in the number of Directors comprising the Board;
- (viii) any change in the status of the Company or other reorganisation of the Company or its assets;
- (ix) approval of any plan of refinancing the Existing Loan other than the refinancing contemplated by the Term Sheet;
- (x) the requirement for any support from the Shareholders, other than for Working Capital and the refinancing of the Existing Loan as contemplated by the Term Sheet; and
- (xi) the transaction of any business by the Company with a Member or any Affiliate of a Member, or the causing of the Company to enter into any contract or other agreement with a Member, an Affiliate of a Member or any employee, officer or director of a Member.



VOTES OF MEMBERS

- 58. On a show of hands every Member who, being an individual, is present in person or by proxy or being a body corporate is present by a representative duly appointed pursuant to Article 69 shall have one vote except in the case of an election of Directors in which case the provisions of Section 178 of the Ordinance shall apply. On a poll every Member shall have voting rights as laid down in Section 160 of the Ordinance. Nothing contained in these Articles shall prevent a Member from binding in the case of an individual, himself and in the case of a body corporate itself by contract with any other Member or Members to vote his or its shares or other voting securities in any particular manner, subject to the terms and conditions of the Agreement, at an election of Directors or for the removal of Directors or for the removal of the Chief Executive or otherwise at any general meeting of the Company.
- 59. In the case of joint holders the vote of the senior Member present 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 their names stand in the Register.
- 60. 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 or other legal guardian and any such committee or guardian may, on a poll, vote by proxy.



61. No Member shall be entitled to vote at any general meeting unless all sums presently payable by him in respect of shares in the Company have been paid.
62. 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 such objection made in due time shall be referred to the Chairman of the meeting, whose decision shall be final and conclusive.
63. On a poll, votes may be given either personally or by proxy, or, in the case of a body corporate by a representative duly authorised in accordance with Article 69.
64. The instrument appointing a proxy shall be in writing under the hand of the appointer or of his attorney duly authorized in writing, or if the appointer is a body corporate, under its common seal or the hand of an officer or attorney duly authorized by it and in default the instrument of proxy shall not be valid. A proxy need not be a Member. A proxy who is appointed for a specified meeting only shall be called a Special Proxy. Any other proxy shall be called a General Proxy. A Special Proxy shall be valid only for the meeting to which it relates and it may not be used for more than one meeting.
65. 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 that power or authority, shall be deposited at the Office not less than forty-eight hours before the time for holding the meeting at which the person named in the instrument proposes to vote, and in default the instrument of proxy or the power of attorney or other authority (if any) under which it is signed or a notarially certified copy of that power or authority shall not be treated as valid.
66. An instrument appointing a proxy may be in the following form, or in any other form which the Directors shall approve:-

I, the undersigned of being a member of TAPAL ENERGY (PRIVATE) LIMITED hereby appoint Mr./Mrs./Miss of or failing him/her of as my proxy to vote for me and on my behalf at the Annual or Extraordinary (as the case may be) General Meeting of the Company to be held on the day of and at every adjournment thereof (or at every general meeting of the Company to be held before the day of and at every adjournment of any such meeting).

Signed this day of

67. The instrument appointing a proxy shall be deemed to confer authority to demand or join in demanding a poll.
68. A vote given in accordance with the terms of an instrument of proxy shall be valid notwithstanding the previous death or insanity of the principal or revocation of the proxy or of the authority under

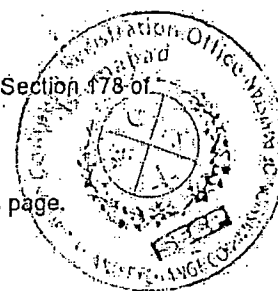


which the proxy was executed, or the transfer of the shares in respect of which the proxy is given, provided that no intimation in writing of such death, insanity, revocation or transfer as aforesaid shall have been received by the Company at the Office before the commencement of the meeting or adjourned meeting at which the proxy is used.

69. Subject to the provisions of Section 162 of the Ordinance, a body corporate which is a Member may, by resolution of its directors or in such manner as may be permitted or required by its constitution, authorise in writing any person to act as its representative at any meeting of the Company and the person so authorised shall be entitled to exercise the same powers on behalf of the body corporate which he represents as that body corporate could exercise if it were an individual Member of the Company present in person. A body corporate attending a meeting through such representative shall be deemed for all purposes of these Articles to be a Member present in person at the meeting.

DIRECTORS

70. The number of Directors to be elected shall be fixed, pursuant to the provisions of Section 178 of the Ordinance.
71. Article 71 deleted and replaced with the Article 71 reproduced at the bottom of this page.
72. The first Directors of the Company shall be appointed by the Subscribers.
73. Save as provided in Section 187 of the Ordinance no person shall be appointed as a Director unless he is a Member.
74. The first Directors shall stand retired at the first annual general meeting, and directors shall be elected in their place in accordance with Article 77 hereof.
75. Any person who seeks to contest an election to the office of Director shall, whether he is a retiring Director or otherwise, file with the Company, not later than fourteen days before the date of the meeting at which elections are to be held, a notice of his intention to offer himself for election as a Director. Provided that any such person may, at any time, before the holding of elections withdraw such notice.
76. Retiring Directors shall be eligible for re-election.
77. The Directors shall be elected in accordance with the provisions of the Ordinance by the Members in General Meeting from amongst the candidates eligible for election in the following manner;
- a) every Member present in person or by proxy or by representative shall have such number of votes as is equal to the product of the number of voting shares held by him and the number of Directors to be elected;
 - b) the number of votes calculated in accordance with the preceding clause (a) may be given to a single candidate or may be divided between any two or more candidates in such manner as the person voting may choose; and



71. Unless otherwise determined by the Company in General Meeting in accordance with the provisions of Article 98(b), the Board shall consist:
- (i) ten (10) elected directors including a Chief Executive, if the Chief Executive is nominated from one of the elected directors; or
 - (ii) ten (10) elected directors plus a Chief Executive; if the Chief Executive is not nominated from one of the elected directors.

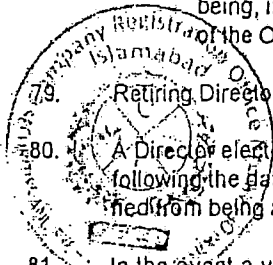


- c) the candidate who gets the highest number of votes shall be declared elected as Director and then the candidate who gets the next highest number of votes shall be so declared and so on until the total number of Directors to be elected has been so elected.

78. The Company may at any time, by a resolution in general meeting remove a director, appointed under Section 176 or Section 180 or elected in the manner provided for in Section 178 of the Ordinance:

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

- i) the minimum number of votes that were cast for the election of a director in the manner provided in subsection (5) of Section 178 of the Ordinance; or
- ii) the total number of votes for the time being computed in the manner laid down in sub-Section (5) of Section 178 of the Ordinance divided by the number of directors for the time being, if the resolution relates to removal of director appointed under Sections 176 or 180 of the Ordinance.



79. Retiring Directors shall continue to perform their functions until their successors are elected.

80. A Director elected by the Members in general meeting shall hold office for a period of three years following the date from which his election is effective unless he earlier resigns, becomes disqualified from being a Director or otherwise ceases to hold office.

81. In the event a vacancy occurs on the Board by reason of the death, resignation or removal of a director, such vacancy shall be filled by the vote of the remaining Directors if still constituting a quorum, or if no quorum exists, by the Members at a general meeting called for that purpose. A director elected or appointed to fill a vacancy caused by the death, resignation or removal of a director shall be elected or appointed only for the unexpired term of such director's predecessor in office.

82. When any Director intends to be, or is absent for a period of not less than three (3) Months from Pakistan, he may with the approval of the Directors appoint any person to be his alternate director, and such alternate director during the absence of the appointer from Pakistan, shall be entitled to receive notice of and to attend and vote at meeting of Directors and shall be subject to and entitled to the benefit of the provisions contained in these Articles with reference to directors and may exercise and perform all such powers, directions and duties as his appointer could have exercised or performed including the power of appointing another alternate director. An alternate director so appointed shall not be entitled to receive any remuneration from the Company nor be required to hold any qualification. Such appointment shall be recorded in the Directors minute book. A Director may at any time by notice in writing to the Company remove an alternate director appointed by him upon the return of the appointer to Pakistan, or the death of, or the retirement or resignation as Director of the appointer; the alternate director shall cease to be such provided that if any Director retires but is re-elected at the meeting at which such retirement took effect any appointment made by him pursuant to this Article which was in force immediately prior to this retirement and re-election and which has not otherwise ceased to be effective shall continue to operate after his re-election as if he had not so retired. An alternate director shall not be deemed to be the agent of the Director appointing him but shall be reckoned as one with his appointer. All appointments and removals of alternate directors shall be effected by writing under the hand of the Director making or revoking



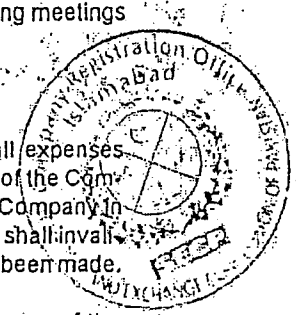
such appointment and left at the office. For the purpose of assessing a quorum in accordance with the provisions of Article 97 hereof an alternate director shall be deemed to be Director. Any Director may act as an

Alternate director for any one or more Directors, as well as being able to act as a Director in his own right. An alternate director may resign as such upon giving thirty (30) days prior notice to the Board to this effect. An alternate director need not be a Member.

83. The Directors shall be paid such travelling and hotel expenses as may be fixed by the Directors from time to time or if a Director has to come to attend the Board meeting from outstation.
84. The Directors shall elect one of their member as the Chairman of the Board and the Chairman shall not have a second or casting vote.
85. The Directors may from time to time delegate any of their powers to a committee or committees consisting of two (2) or more members of their body as they think fit. A committee's duties and powers shall be restricted to the purpose for which it is formed. Any committee so formed shall conform to any regulations that may be imposed upon it by the Directors and shall be governed, in the exercise of the powers so delegated, by the provisions herein contained for regulating meetings and proceedings applicable to the Directors.

POWERS AND DUTIES OF DIRECTORS

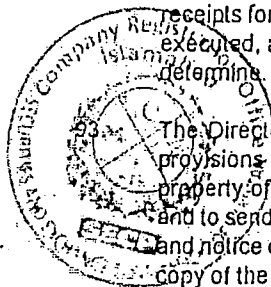
86. The business of the Company shall be managed by the Directors, who may pay all expenses incurred in setting up and registering the Company, and may exercise all such powers of the Company as are not by the Ordinance or by these Articles, required to be exercised by the Company in general meeting provided that 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.
87. Subject to the provisions of Articles 57 and 58 the Directors may exercise all the powers of the Company to borrow money and to mortgage its undertaking, property and capital or any part thereof, and to issue securities and debentures, participation or term finance certificates or any other instrument, whether as security for any debt, liability or obligation of the Company or of any third party or otherwise.
88. The Directors may from time to time and at any time by power of attorney appoint any company, firm or person or body of persons, whether nominated directly or indirectly by the Directors, to be the attorney or attorneys of the company for such purposes and with such powers, authorities and discretions (not exceeding those vested in or exercisable by the Directors under these Articles) for such period subject to such conditions, if any, as they may think fit, and any such powers of attorney may contain such provisions for the protection and convenience of persons dealing with any such attorney to delegate all or any of the powers, authorities, and discretion vested in him.
89. A Director of the Company or a firm of which such Director is a partner or private company of which such Director is a director may with the consent of the Company in general meeting hold any office of profit in the Company.
90. Subject to the provisions of Section 195 of the Ordinance, the Directors shall not be disqualified from contracting with the Company either as vendor, purchaser, or otherwise, nor shall any such contract or agreement entered into by or on behalf of the company or partnership of or in which any Director of the Company shall be a member or otherwise interested be avoided nor shall any such Director so contracting or being such member or so interested be liable to account to the Company



for any profit realized by any such contract or arrangement by reason of such Director holding that office or of the fiduciary relation thereby established, but the nature of his interest must be disclosed by him at the meeting of the Directors at which the contract or arrangement is determined on, if the interest then exists, or in any other case at the first meeting of the Directors after the acquisition of the interest. A general notice that any Director of the Company is a director or a member of any other company or is a member of any named firm and is to be regarded as interested in any subsequent transaction with such company or firm shall, as regards any such transaction, be sufficient disclosure under this Article and after any such general notice it shall not be necessary to give any special notice relating to any particular transaction with such firm or company. In the case of a Director being directly or indirectly interested or concerned in a contract for the appointment of a chief executive, managing agent, whole time director, or secretary of the Company, the provisions of Section 218 of the Ordinance shall be observed and performed.

91. In accordance with the provisions of Section 219 of the Ordinance a Register shall be kept by the Directors in which shall be entered particulars of all contracts or arrangements and which shall be open to inspection by any Member at the Office during business hours.

92. All cheques, promissory notes, drafts, bills of exchange and other negotiable instruments, and all receipts for moneys paid to the Company, shall be signed, drawn, accepted, endorsed, or otherwise executed, as the case may be, in such manner as the Directors shall from time to time by resolution determine.



93. The Directors shall duly comply with the provisions of the Ordinance and in particular with the provisions in regard to the registration of the particulars of mortgages and charges affecting the property of the Company or created by it, and to keep a Register of the Directors and managers, and to send to the Registrar an annual list of Members and a summary of particulars relating thereto and notice of any consolidation or increase of share capital and copies of special resolutions and a copy of the Register of the Directors and notification of any changes therein.

94. The Directors shall cause minutes to be made in books provided for the purpose :-

- a) of all appointments of officers made by the Directors;
- b) of the names of the Directors present at each meeting of the Directors and of any committee of the Directors;
- c) of all resolutions and proceedings of all meetings of the Company, and of the Directors and of committee of Directors; and every Director present at any meeting of Directors or committee of Directors shall sign his name in a book to be kept for the purpose and any such minute of such a meeting if purporting to be signed by the Chairman thereof, or by the Chairman of the next succeeding meeting of the same body, shall be sufficient evidence without any further proof of the facts therein stated.

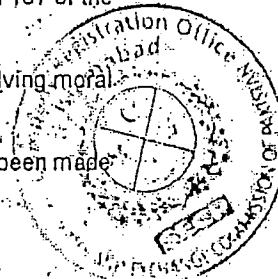
VACATION OF OFFICE OF DIRECTORS

95. A Director shall ipso facto cease to hold office if:

- a) he is found to be of unsound mind by a court of competent jurisdiction, or
- b) he is adjudged an insolvent, or



- c) he ceases to be a Member of the Company save as provided in Section 187(h) of the Ordinance, or
- d) he or any firm of which he is a partner or any private company of which he is a director without the sanction of the company in general meeting accepts or holds any office of profit under the Company other than that of Chief Executive or a legal or technical advisor or banker, or
- e) he absents himself from three consecutive meetings of the Directors or from all meetings of the Directors for a continuous period of three Months whichever is the longer without leave of absence from the Board, or
- f) he acts in contravention of Section 195 of the Ordinance, or
- g) he resigns his office by notice in writing to the Company, or
- h) he suffers from any of the disabilities or disqualifications mentioned in Section 187 of the Ordinance, or
- i) he has been convicted by a court of competent jurisdiction for an offence involving moral turpitude, or
- j) he has betrayed lack of fiduciary behaviour and a declaration to this effect has been made by the Court under Section 217 of the Ordinance.

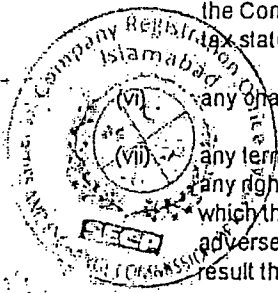


PROCEEDINGS OF DIRECTORS

96. The Directors may meet together for the despatch of business, adjourn and otherwise regulate their meetings, as they think fit. The Board of Directors shall meet at least four times in every year to conduct the business of the Company. A Director may, and the Secretary on the requisition of Director shall, at any time, summon a meeting of Directors. No meeting of the Board of Directors may be held unless not less than seven (7) days' notice has been given to each Director on the Board of Directors; provided however that such meeting may be held upon shorter notice if such notice is waived in writing by all of the Directors. If and to the extent permitted by law, meetings of the Board of Directors may be held by video conference call, provided a quorum of Directors is present on such call and such directors can hear and see each other and are able to satisfy themselves that the directors present at such meetings remain present for the duration thereof.
97. The quorum necessary for the transaction of the business of the Directors shall be four Directors actually present in person or by an alternate director, and at least one of whom shall have been nominated by each Group entitled to nominate a director pursuant to the Agreement. For the purposes of this Article, an alternate director appointed by a Director shall be counted in a quorum at a meeting at which the Director appointing him is not present.
98. (a) Except as set forth in Article 98(b) decisions and resolutions of the Board shall be taken by not less than two-thirds of the Directors present at a meeting at which there is a quorum.
- (b) No resolution, concerning any matter listed below when put to vote, shall be deemed to be carried except when voted in favour of such resolution by at least seven Directors on the Board:



- (i) the issuance of, and the interest rate, terms, subordination provisions and other financial provisions relating to the issuance of, any New Capital, or the sale or issuance of New Capital to any Person not a Member prior to such sale, including any decision that New Capital shall be contributed as equity rather than Shareholder Loans;
- (ii) any decision regarding the declaration or payment of distributions to the Shareholders (and the amount thereof) whether in the form of dividends (including interim dividends) or return of capital, including determination of Net Cash Flow;
- (iii) any decision to sell, pledge, lease, assign, mortgage or create a Lien on or a security interest in any material asset of the Company other than for purposes of the refinancing of the Existing Loan as contemplated by the Term Sheet;
- (iv) any decision to lend Company funds to or invest Company funds in any other company, partnership, joint venture or other Person (other than funds maintained and invested by the Company under and in accordance with the Financing Documents);
- (v) to the extent not otherwise determined by the Agreement or applicable law, any decision which could reasonably be expected to have the effect of a material change in (A) any of the Company's depreciation or accounting methods, tax policies or tax elections, or (B) the status of the Company or any Member;
- (vi) any change in the Company's Fiscal Year;
- (vii) any termination of, any material amendment or modification to or any waiver or election of any right under any Project Document, any Financing Document or any other agreement to which the Company is a party if the same could reasonably be expected to have a material adverse effect on the Company or would require the Company to make payments as a result thereof in an aggregate amount in excess of US\$500,000;
- (viii) any decision to cause the Company to enter into or conduct any business other than the Project and activities reasonably related thereto;
- (ix) any increase in or voluntary prepayment, modification or extension of any indebtedness of the Company (other than for Working Capital and the refinancing of the Existing Loan as contemplated by the Term Sheet) in an aggregate amount outstanding at any time in excess of US\$500,000;
- (x) the initiation, release, settlement or compromise by the Company of any arbitration, litigation or other legal or administrative proceeding, or the settlement or compromise by the Company of any threatened claim, that in either case could have a material adverse effect on the Company or that could require as part of such settlement or litigation, payments by the Company (other than payments covered by insurance) in an amount in excess of US\$500,000;
- (xi) the transaction of any business by the Company with a Member or any Affiliate of a Member, or the causing of the Company to enter into any contract or other agreement with a Member, an Affiliate of a Member or any employee, officer or director of a Member;
- (xii) the approval of each annual budget for the Company and any changes thereto in excess of 115% of the budgeted amount contained in the relevant approved annual budget;





TAPAL
ENERGY

- (xiii) the approval of all material agreements (including any amendments thereto) entered or to be entered into by the Company after the date of the Agreement including any Financing Document, any other agreement with respect to the financing or refinancing arrangements for the Project, any additional Project Document and any amendment or modification to a Project Document or a Financing Document other than any document entered or to be entered into by the Company for the purposes of the refinancing of the Existing Loan as contemplated by the Term Sheet;
 - (xiv) the approval of any expenditure not contained in an approved budget in excess of US\$500,000;
 - (xv) any change in the number of Directors comprising the Board;
 - (xvi) the appointment of the Chief Executive;
 - (xvii) the approval of a protocol with respect to the place, time and procedures for meetings of the Board of Directors (and any replacement or amendment of such protocol); and
 - (xviii) the requirement for any support from the Shareholders, other than for Working Capital and the refinancing of the Existing Loan as contemplated by the Term Sheet;
99. The continuing Directors may act notwithstanding any vacancy in their body, but if and so long as their number is reduced below the number fixed by or pursuant to the regulations of the Company as the necessary quorum of Directors, the continuing Directors may act for the purpose of filling vacancies in their body or summoning a General Meeting of the Company, but for no other purpose.
100. All acts done at any meeting of the Directors or by any person acting as a Director shall notwithstanding that it shall afterwards be discovered that there was some defect in the appointment or continuance in office of any such Director or person acting as aforesaid, or that they or any of them were disqualified or had vacated office, or were not entitled to vote, be as valid as if every such person had been duly appointed or had duly continued in office and qualified and had continued to be a Director and had been entitled to be a Director.
101. Except as otherwise provided in the Ordinance, any action which may be taken at a meeting of the Board shall be validly taken without such meeting if a resolution in writing approving such action is executed by the Directors that would otherwise comprise a quorum under Article 97 or, if Article 98(b) is applicable, the number of Directors required to take such action pursuant to Article 98(b). For this purpose, it shall be permissible to circulate the text of the proposed resolution duly signed by the Chairman, if any, of the Board or 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 by 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.
102. If at any meeting the Chairman is absent, the Directors present may elect any one of their number to act as the Chairman for the meeting.

CHIEF EXECUTIVE

103. The Board shall within fourteen days after the constitution of the Board or from the date of election of Directors or the office of the Chief Executive falling vacant as the case may be, appoint, subject

to the provisions of Section 198 of the Ordinance, a person to be the Chief Executive of the Company. The period for which a Chief Executive shall be appointed shall not exceed three years from the date of appointment unless he earlier resigns or his services as Chief Executive have been terminated by the Board in accordance with and in the manner, as the case may be, the provisions of the Ordinance and the Agreement. On the expiry of his term of office, a Chief Executive shall be eligible for reappointment if nominated in the manner provided in this Article. The terms and conditions of appointment of a Chief Executive including his powers and remuneration shall be determined by the Directors, subject to the provisions of the Ordinance.

104. The Chief Executive shall, if not already a Director, be deemed to be a member of the Board and shall be entitled to all the rights and privileges (including the right to vote at meetings of the Board and other proceedings and for resolution by circular) and subject to all of the liabilities of a Director of the Company; Provided, however, that if an elected director is appointed as the Chief Executive he shall not have an additional vote while he holds office as Chief Executive. The Chief Executive shall be entitled to such remuneration, benefits and allowances as the Board may specify. Subject to supervision of the Board, the Chief Executive shall be responsible, and hold the powers and authorities, for the implementation of policies, decisions, guidelines, and directives of the Board for achievement of the objectives of the Company and shall have, subject to Article 98, full powers to execute the same, including powers for conducting day to day management and business of the Company, appointment and termination of personnel (except in the case of General Manager and/or Executive Directors who would be appointed and their terms and conditions determined subject to prior approval of the Board). The Chief Executive shall inform the Board subsequently and at the earliest possible opportunity and the Board may review it if it considers necessary, powers to carry out sale, production and distribution, import, export and operation of bank accounts and to make payment and powers to appoint distributors, authorized sub-contractors, dealers or agents. The Chief Executive may further delegate any of his powers to any other person(s) or committee(s) as he may think fit subject to the approval of the Board.
105. The Chief Executive shall devote his time exclusively to the management of the Company except that he may, with the prior consent of the Board, devote lesser time to the Company or become a Director of such company or companies as are not engaged in any business in direct competition with that of the Company.

SECRETARY

106. The Secretary shall be appointed by the Directors for such term, at such remuneration and upon such conditions as they may think fit, and any Secretary so appointed may be removed by them.

THE SEAL

107. The Directors shall provide for the safe custody of the Seal which shall only be used by the authority of a resolution of the Board or by a committee of Directors authorised in that behalf by the Directors and every instrument to which the Seal shall be affixed shall be signed by either two Directors or one Director and the Secretary.

DIVIDENDS AND RESERVES

108. The Company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Directors in accordance with Article 98(b). No dividend shall be paid by the company otherwise than out of the profits of the company or in contravention of Section 248(2) of the Ordinance.

109. The Directors may from time to time pay to the Members such interim dividend as appear to the Directors to be justified by the profits of the Company.
110. The Directors may, before recommending any dividends, set aside out of the profits of the Company, such sums as they think proper as a reserve or reserves, which shall, at the discretion of the Directors, be applicable for meeting contingencies, or for equalizing dividends, or for any other purpose to which the profits of the Company may be properly applied, and pending such application may, at the like discretion, either be employed in the business of the Company or be invested in such investments (other than shares of the Company) as the Directors may from time to time think fit.
111. When any shareholder is indebted to the Company, all dividends payable to him, or a sufficient part thereof, may be retained and applied by the Directors in or towards satisfaction of the debt.
112. Any dividend, interest or other moneys payable in cash in respect of shares may be paid by cheque or warrant sent through the post direct to the registered address of the holder or, in the case of joint holders, to the registered address of that one of the joint holders who is first named on the Register or to such persons and to such address as the holder or joint holders may in writing direct. Every such cheque or warrant shall be made payable to the order of the person to whom it is sent. Any of two or more joint holders may give effectual receipts for any dividends, bonuses, or other moneys payable in respect of the shares held by them as joint holders. The dividend shall be paid within the period laid down in the Ordinance.
113. Unpaid dividends shall not bear interest as against the Company.

CAPITALIZATION OF PROFITS

114. The Company in general meeting may upon the recommendation of the Directors resolve that it is desirable to capitalize any part of the amount for the time being standing at the credit of any of the Company's reserve accounts or to the credit of the profit and loss accounts or otherwise available for distribution and accordingly that such sum be set free for distribution amongst the Members who would be entitled thereto if distributed by way of dividend and in the same proportion on condition that the same be not paid in cash but be applied either in or towards paying up any amounts for the time being unpaid on any shares held by such Members respectively or paying up in full un-issued shares of the Company to be allotted and distributed/credited as fully paid up to and amongst such Members in the proportion aforesaid, or partly in the other, and the Directors shall give effect to such resolution.

ACCOUNTS

115. The Directors shall cause the Company to keep proper books of account as required under Section 230 of the Ordinance and in accordance with sound and generally accepted accounting principles and corporate practices.
116. The books of account shall be kept at the Office of the Company or at such other place as the Directors shall think fit and shall be open to inspection by the Directors during business hours.
117. The Directors shall from time to time determine whether and to what extent and at what time and places and under what conditions or on regulations that accounts and books or papers of the Company or any of them shall be open to the inspection of Members not being Directors, and no Member (not being a Director) shall have any right of inspecting any account and book or papers of

the Company except as conferred by law or authorised by the Directors or by the Company in general meeting or under this Article 117. Notwithstanding the aforesaid any Member (or, in the case of the Tapal Shareholders, any group of them acting collectively) who holds shares sufficient to elect at least one director shall have the right to inspect, in person or through its authorised representatives, the books and records of the Company at all reasonable times. The Company shall upon request provide each such Member with copies of all tax returns promptly after the filing of such tax returns with the appropriate governmental authorities and copies of proof of payment submitted in connection with such tax returns. The Members shall cause the Board to adopt appropriate resolutions permitting the Members access to the books, records and other documents as they may reasonably request.

118. The Directors shall as required by Sections 233 and 236 of the Ordinance cause to be prepared and to be laid before the Company in general meeting such profit and loss account and balance sheets duly audited and reports as are referred to in those sections.

119. The balance sheet, profit and loss account, and other reports referred to in Article 118 shall be made out in every year and laid before the Company in annual general meeting made up to a date not more than six Months before such meeting. The balance sheet and profit and loss account shall be accompanied by a report of the auditors' of the Company and the report of Directors.

120. A copy of balance sheet and profit and loss account and reports of Directors and auditors shall, at least twenty one days preceding the meeting, be sent to the persons entitled to receive notices of general meetings in the manner in which notices are to be given hereunder.

The Directors shall in all respect comply with the provisions of Section 230 to 236 of the Ordinance.

AUDIT

Auditors shall be appointed and their duties regulated in accordance with Sections 252 to 255 of the Ordinance. The Company's annual financial statements shall be prepared in accordance with generally accepted accounting principles of Pakistan.

NOTICES

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

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

124. A notice may be given by the Company to the joint holders of a share by giving the notice to the joint holder named first in the Register in respect of the share and a notice so given shall be sufficient notice to all the holders of such shares.

125. A notice may be given by the Company to the persons entitled to a share in consequence of the death or insolvency of a Member through the post in a prepaid letter addressed to them by name or

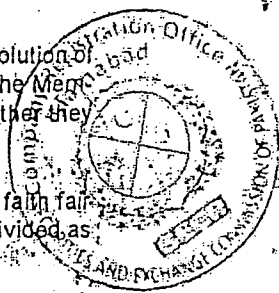


by the title or representatives of the deceased, or assignee of the insolvent or by any like description, at the address (if any) in or out of Pakistan supplied for the purpose by the persons claiming to be entitled, or (until such an address has been so supplied) by giving the notice in any manner in which the same might have been given if the death or insolvency had not occurred.

126. Notice of every general meeting shall be given in the manner hereinbefore authorised to (a) every Member of the Company, except those Members who having no registered address within Pakistan have not supplied to the Company an address within or outside Pakistan for the giving of notice to them; (b) every person entitled to a share in consequence of the death or insolvency of a Member, who but for his death or insolvency would be entitled to receive notice of the meeting; (c) the auditors of the Company for the time being; and (d) the Directors.

WINDING UP

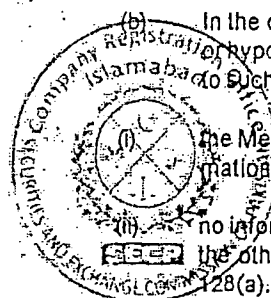
127. (a) If the Company is wound up, the liquidator may, with the sanction of Special Resolution of the Company and other sanctions required by the Ordinance, divide amongst the Members, in specie or kind the whole or any part of the assets of the Company, whether they consist of property of the same kind or not.
- (b) For the purpose aforesaid, the liquidator must set a value as he deems in good faith fair upon any property having due regard for the property's fair marked value to be divided as aforesaid.
- (c) The liquidator shall distribute the cash and non-cash proceeds from the sale of the Company's assets, and any asset not sold, except as may be otherwise provided by applicable law, in the following order of priority:
- (i) All of the Company's debts and liabilities shall be paid and discharged in the order of priority provided by applicable law; and
- (ii) The balance shall be distributed to the Members pro rate in accordance with the ratio which the number of shares held by each Member bears to the total number of issued and paid up shares of the Company.
- (d) The liquidator may, with the like sanction, vest the whole or any part of such assets for the benefit of the contributories as the liquidator, with the like sanction, thinks fit, but so that no member shall be compelled to accept any shares or other securities whereon there is any liability.
- (e) Upon completion of distribution pursuant to this Article the liquidator shall take such actions, including executing any documents or agreements as may be necessary to dissolve the Company under applicable law.



SECURITY

128. (a) Subject to Article 128(b) and (c) no Member nor its Affiliates or nominees shall reveal to any third party, without the prior consent of the other Members any information concerning the organisation, business, manufacturing processes, finances, transactions or affairs of the Company, the other Members or any of the other Members' Affiliates or nominees, or any information related to the Agreement (the "Confidential Information") and shall not use

any such Confidential Information in any manner which may directly or indirectly injure the Company, any other Member or any of the other Members' Affiliates or nominees, except that such Confidential Information may be disclosed if, and only to the extent, required by law, or to any lender or prospective lender or other parties providing financing to the Company, provided that such lender, prospective lender or party providing financing has supplied an undertaking, which shall be acceptable (i) in the case of information pertaining to a Member, to that Member and (ii) in the case of information pertaining to the Company, to the Board in its sole discretion, to keep such Confidential Information confidential on substantially the same terms as are contained in this Article. The provisions of this Article shall not apply (i) in respect of information which is or has become publicly available through no act or omission of a Member, its Affiliates, agents or nominees, (ii) to the extent such information was in the possession of the Member, its Affiliates, agents or nominees prior to its earliest receipt from any other Member or the Company, or (iii) as may be required in any report, statement or testimony required to be submitted to any municipal, state or national regulatory body, any court or any arbitration tribunal having or claiming to have jurisdiction over it, or as may be otherwise required by law, regulation, court order or other governmental authority, or as may be required in response to any summons or subpoena or in connection with any litigation or arbitration under the Agreement.



(b) In the course of an offer to a third party to sell, transfer, assign, dispose of, pledge, charge or hypothecate any shares, a Member shall be entitled to disclose Confidential Information to such third party, provided that:

(i) the Member promptly informs the other Members of the substance of all Confidential Information disclosed; and

(ii) no information shall be disclosed to the third party unless the third party has first supplied to the other Members an undertaking in writing on substantially the same terms as Article 128(a).

(c) The Board shall exclusively control all public disclosures and communications with the press regarding the Company.

INDEMNITY

129. Every Director or officer of the Company and every person employed by the Company as auditor shall be indemnified out of the funds of the Company against all liability incurred by him as such Director, officer or auditor in defending any proceeding, whether civil or criminal, in which judgment is given in his favour, or in which he is acquitted, or in connection with any application under Section 488 of the Ordinance in which relief is granted to him by the court.

RECONSTRUCTION

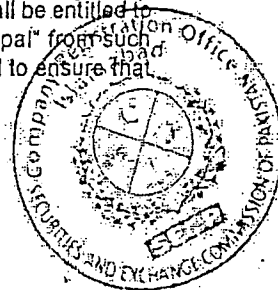
130. On any sale of the undertaking of the Company, the Directors or the liquidator on a winding-up may, if authorised by Special Resolution, accept fully paid or partly paid-up shares, debentures or securities of any other company, whether incorporated in Pakistan or not either then existing or to be formed for the purchase in whole or in part of the property of the Company, and the Directors (if the profits of the Company permit) or the liquidator (in a winding-up) may distribute such shares, or any other property of the Company amongst the Members without realization, or vest the same in trustees for them, and any Special Resolution may provide for the distribution or appropriation of the



cash, shares, or other securities, benefits or property, otherwise than in accordance with the strict legal rights of the Members or contributories of the Company, and for the valuation of any such securities or property at such price and in such manner as the meeting may approve, and all holders of shares shall be bound by any valuation or distribution so authorized, and waive all rights in relation thereto, save only in case the Company is proposed to be or is in the course of being wound up, such statutory rights if any, under Section 367 of the Ordinance as are incapable of being varied or excluded by these Articles.

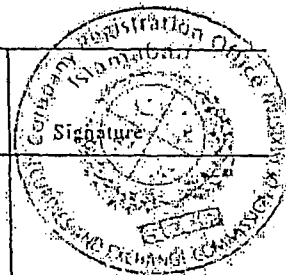
CHANGE OF NAME

131. If at any time the aggregate shareholding of the Tapal Shareholders falls below twenty-six per cent (26%) of the issued and paid-up shares of the Company, the Tapal Shareholders shall be entitled to require that the name of the Company be changed so as to remove the word "Tapal" from such name and each Member shall take all such steps as lies within its power or control to ensure that the Company effects such change.



We, the several persons whose names and addresses are subscribed below are desirous of being formed into a Company in pursuance of the Articles of Association, and we respectively agree to take the number of shares in the Capital of the Company set opposite our respective names:-

Names and Surname (Present and former in full in block letters)	Father's/Husband's Name in full	Nationality with any former nationality	Occupation	Residential Address	Number of shares taken by each subscriber
MR. MOIZ S. TAPAL	LATE MR. SADIQ ALI	PAKISTANI	BUSINESS (TRADING)	6-A, 1ST GIZRI LANE, D.H.A., KARACHI.	6,250
MR. DAANISH A. TAPAL	MR. ANWAR ALI S. TAPAL	PAKISTANI	BUSINESS (TRADING)	F/98, CLIFTON, KARACHI.	6,250
MR. TABISH M. TAPAL	MR. MOIZ S. TAPAL	PAKISTANI	BUSINESS (TRADING)	6-A, 1ST GIZRI LANE, D.H.A., KARACHI.	6,250
MR. SHAKIL A. TAPAL	MR. AMIR ALI S. TAPAL	PAKISTANI	BUSINESS (TRADING)	K.P.T. 39/B. M. T. KHAN ROAD, LALAZAR, KARACHI.	6,250
MR. IAN CHRISTOPHER COPELAND	MR. LAWRENCE G. COPELAND	AMERICAN	ENGINEER/ BUSINESS	27-D, SEABIRD LAND DISCOVERY BAY, LANTAU ISLAND HONG KONG.	1
ALEXANDER ARMAND KARSNER	MR. DAVID WILFRED KARSNER	AMERICAN	BUSINESS	6-C, GREENBELT COURT DISCOVERY BAY, LANTAU ISLAND, HONG KONG	1
KAJ TORE BJORKMAN	MR. EVALD BJORKMAN	FINLAND	MARKETING MANAGER	65920 N. VALLGRUND VASA, FINLAND	1
M/S. KINGPIN INVESTMENT LIMITED THROUGH MR. IAN C. COPELAND	NONE	HONG KONG	FOREIGN COMPANY	14TH FLOOR, LUK KWOK CENTRE, 72 GLOUCESTER ROAD, WANCHAI, HONG KONG	24,997
TOTAL					50,000



CERTIFIED TO BE TRUE COPY

26/10/18
Asst. Secy. General
Company Registration Office Islamabad

Dated the _____ Day of _____ 1995

Witness to the above signatures

Full Name, Father's/Husband's Name

Signature

Occupation

Full Address

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. I-01646

I hereby certify that "TAPAL ENERGY LIMITED"

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

the company is limited by shares

Given under my hand at Islamabad

this 1st day of March

one thousand nine hundred and ninety-five

Fee Rs. 78,500/- (Rupees Seventy eight thousand & five hundred only)



(NAZIR AHMED SHAHEEN)
DEPUTY REGISTRAR
OF COMPANIES
ISLAMABAD

CRO-1

PCPPK-Like/2108/92-94/DCS&F-2.1.94-12005 Loose.

NK-OR/1872
dt 1-3-95

CERTIFIED TO BE TRUE COPY.

Assistant Registrar
Company Registration Office Islamabad

ANNEXURE D
KE POWER PURCHASE CONSENT



Ref: CEOSEC_199_061221
Dated: December 6, 2021

Mr. Tabish Tapal
Chief Executive Officer
Tapal Energy (Pvt.) Limited ("TEL")
F-25, Block 5, Rojhan Street
Kehkashan, Clifton
Karachi

Subject: Extension to the PPA Term Expiring on 19th June 2022

Dear Mr. Tabish,

We have received your letters no. TEL/KE/016/22 dated September 21, 2021 and TEL/KE/031/22 dated November 26, 2021 regarding the subject. We would like to inform you that KE is principally willing to continue purchasing power from TEL via an extension of the PPA subject to the fulfillment of the regulatory requirements and provision of necessary approvals.

Please note that we would initially seek an extension of one (1) year only and consider any future extensions on a year-on-year basis. We understand that TEL and KE would be required to undertake the standard regulatory process which would include filing of tariff and negotiate a revised PPA/extension. It is therefore suggested that our teams get together and formalize the plan going forward.

Look forward to continuing our arrangement.

Yours Sincerely,

Syed Moonis Abdullah Alvi
Chief Executive Officer

Ref: CEOSEC_247_13042022

Date: April 13, 2022

Tabish Tapal
Chief Executive Officer
Tapal Energy (Pvt.) Limited ("TEL")
F-25, Block 5, Rojhan Street
Kehkashan, Clifton
Karachi

Subject: Extension to the PPA Term Expiring on 19th June 2022

Dear Mr. Tapal,

We write this in continuation to our previous letter vide ref no. ceosec_199_061221 dated 06 December 2021, regarding the subject.

We would like to inform you that KE is willing to seek an extension of two (02) years with TEL while any further extensions may be considered later on a year-on-year basis. Further, we understand that TEL and KE would be required to undertake the standard regulatory process which would include filing of tariff and negotiate a revised PPA/extension. It is therefore suggested that our teams get together and formalize the plan going forward.

Look forward to continuing our arrangement.

Yours Sincerely,



Syed Moonis Abdullah Alvi
Chief Executive Officer

ANNEXURE E
KE CAPACITY FACTOR CONFIRMATION

Imran Adhi

From: Mudassir Zuberi <mudassir.zuberi@ke.com.pk>
Sent: Friday, February 18, 2022 6:50 PM
To: Mustafa Lakdawala
Cc: Faizan Pasha, Muhammad; Fahad Najmi; Fahad Mazhar; Tabish; Mohammad Imran; Raza Abbas
Subject: RE: Extension to the PPA Term Expiring on 19th June 2022

Dear Mustafa sb,

Pls find below indicative monthly dispatch numbers for the 1 year extension. Pls understand these numbers have been projected based on tentative calculation and are dependent on various factors that we had mentioned in our last email including but not limited to gas supply, BQ 3 dispatch, system demand, supply from NTDC etc. Accordingly, these numbers may vary. Thanks

We are available to discuss further.

Month wise expected dispatch

Month	Utilization
Jan	0.00%
Feb	0.00%
Mar	0.04%
Apr	6.73%
May	32.78%
Jun	74.87%
Jul	96.39%
Aug	63.16%
Sep	88.50%
Oct	0.68%
Nov	0.00%
Dec	0.00%
Yearly Utilization	30.38%

Regards,

Mudassir

Imran Adhi

From: Fahad Mazhar <fahad.mazhar@ke.com.pk>
Sent: Friday, April 22, 2022 5:45 PM
To: Mustafa Lakdawala
Cc: Faizan Pasha, Muhammad; Fahad Najmi; Tabish'; Mohammad Imran; Raza Abbas; Naz Khan; Mudassir Zuberi
Subject: RE: Extension to the PPA Term Expiring on 19th June 2022

Dear Mustafa Sb

Pls see below indicative Annual and monthly dispatch numbers for the extension till FY-24. Kindly note that these are projections based on tentative calculations and are highly dependent on various factors including but not limited to system demand, gas supply, supply from NTDC etc. Accordingly, these numbers may vary in future.

Tentative Annual Utilization: ~30%

Tentative Monthly utilization	
Month	Utilization %
July 2023	91%
Aug 2023	40%
Sep 2023	79%
Oct 2023	26%
Nov 2023	0%
Dec 2023	0%
Jan 2024	0%
Feb 2024	0%
Mar 2024	10%
Apr 2024	3%
May 2024	31%
June 2024	74%

We are available if any further discussion is required in this regard.

Regards
Fahad Mazhar

From: Mustafa Lakdawala <mustafa@tapalenergy.com.pk>
Sent: Friday, April 22, 2022 12:22 PM
To: Mudassir Zuberi <mudassir.zuberi@ke.com.pk>
Cc: Faizan Pasha, Muhammad <faizanpasha@ke.com.pk>; Fahad Najmi <fahad.najmi@ke.com.pk>; Fahad Mazhar <fahad.mazhar@ke.com.pk>; Tabish' <tabish@tapalenergy.com.pk>; Mohammad Imran <imran@tapalenergy.com.pk>; Raza Abbas <raza@tapalenergy.com.pk>; Naz Khan <naz.khan@ke.com.pk>
Subject: Re: Extension to the PPA Term Expiring on 19th June 2022

[External Sender mustafa@tapalenergy.com.pk]

Dear Mudassir,

As discussed please expedite! With our hearing notice issued by NEPRA the modification will get more complicated with further delay by KE in providing the dispatch factor for the 2nd extension term.

ANNEXURE F
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/RLAG - 11/7745-46

30.8.2003

Chief Executive,
M/s. Tapal Energy (Pvt) Limited
F-25, Block 5,
Kehkashan, Clifton
Karachi

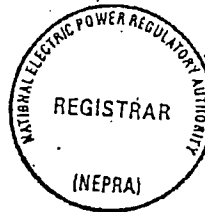
Subject: **Grant of Generation Licence IPGL/010/2003**
Licence Application No. LAG 11
M/s. Tapal Energy (Pvt) Limited

Please refer to your application No. TEL/ACCTT/79/01 dated 10.05.2001 for a Generation Licence.

2. Enclosed here is Generation Licence No. IPGL/010/2003 granted by the Authority to M/s. Tapal Energy (Pvt) 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.



(Signature)
(Mahjoob Ahmad Mirza)

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

National Electric Power Regulatory Authority
(NEPRA)
Islamabad – Pakistan

GENERATION LICENCE

NO. IPGL/010/2003

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:

Tapal Energy (Pvt) Limited

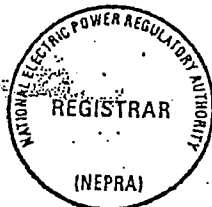
Incorporated under the Companies Ordinance, 1984
Under Certificate of Incorporation

No. I-01646 Dated 1st March, 1995

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 & Eighteen.


Registrar

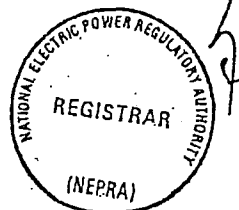


Article 1
Definitions

- (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 8th August 1995 between the Licensee and the President of Pakistan;
 - e. "Licensee" means Tapal Energy (Pvt) Limited;
 - f. "Power Purchase Agreement" means the Power Purchase Agreement dated 26th September 1995 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.



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- (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

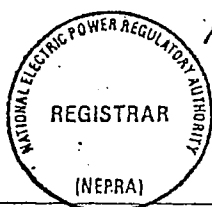
- (1) The location, size, technology, interconnection arrangements, technical limits technical functional specifications and other details specific to the generation facilities of the Licensee are set out in Schedule I to this Licence.
- (2) The net capacity of the generation facilities is set out in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

Article 4 Term

- (1) Pursuant to Rule 5 of the Rules, this Licence is granted for a term of Fifteen (15) 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.

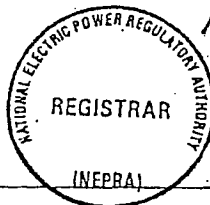


Article 6
Competitive Trading Arrangement

- (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.



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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

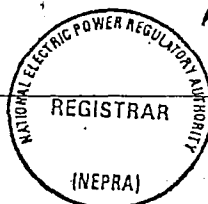
Provision of Information

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

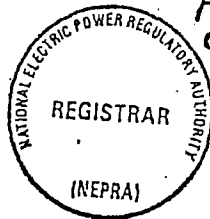
Revocation and Suspension

- (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.



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Schedule I

SCHEDULE 1

MINIMUM FUNCTIONAL SPECIFICATIONS

The Complex consists of one (1) land-based powerplant comprised of twelve (12) residual fuel oil ('RFO') fired diesel generating sets (each a 'Unit') with the following design ratings:

1. Gross Capacity under ISO 3046 (Latest Version as of the date of this Agreement)
 - a. Diesel generating unit at alternator terminals 10,500 kW_e per Unit
 - b. Multiplied by twelve (12) Units 126,000 kW_e for the Complex
2. Derating from ISO standard conditions to Reference Conditions 2,500 kW_e for the Complex
3. Gross Capacity after derating 123,500 kW_e for the Complex
4. Estimated auxiliary consumption for the Complex 4,000 kW_e for the Complex
5. Estimated Dependably Capacity of the Complex at the 132kV busbar under Reference Conditions 119,500 MW_e

The Site is located off Hub River Road, South of Hub Chowki, in the District of Karachi West, Sindh Province.

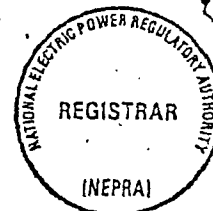
The Site area is characterized as tropical. Average rainfall is 700 mm per year, but this amount falls in short durations. Reference Conditions at the Site are:

AMBIENT AIR TEMPERATURE = T_{ra} = 30 deg. C = 303 K

LARGE AIR COOLANT TEMPERATURE = T_{cta} = 40 deg. C = 313 K

TOTAL BAROMETRIC PRESSURE = p_r = 1031.2 mbar

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 40m/sec.

The Site will be at elevation <65 m with respect to mean sea level (MSL). All structures will have a ground floor elevation of at least 20 m above MSL. Access to the Site will be provided by a road. The main power block consists of twelve (12) RFO fired diesel generating sets. Other plant buildings and structures outside of the main power block include, but are not limited to, the following:

SCHEDULE 1

Fuel Storage Area;
Combined Fuel Treatment / Boiler (for heating RFO only) / Water Treatment House;
Fire Fighting Basin;
Workshop / Stores;
Office Building;
Switchyard;
Guardhouse.

The Complex will use a simple cycle diesel generating sets with waste heat recovery to heat the RFO systems.

Cooling will be supplied via a radiator cooling system. The primary fuel will be RFO, with Light Fuel Oil ('LFO') being used for flushing the engines and for LFO fired boilers.

Each generator will be nominally rated at 13,125 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. Each generator will be air cooled.

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

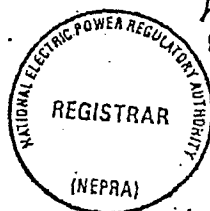
The Complex will have three main step-up transformers, each rated not less than 58.6 MVA, 132/11kV, ONAF.

Interconnection with the KESC system will be via a 132 kV, switchyard located on the Complex.

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 Unit will be capable of being started and stopped locally. The plant control systems include a data acquisition system.

Fuel supply to the Complex will be via road tanker 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.



SCHEDULE 2

TECHNICAL LIMITS

1. Design Limits

1.1 Unit Starts

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

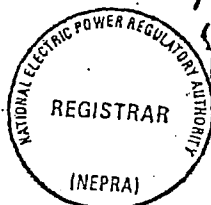
Table 1

	<u>Length of Shutdown</u>	<u>Notice required to synchronize</u>
(i)	Not more than 2 hours	20 minutes
(ii)	More than 2 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 or Unit(s) is classified as follows:

"Hot Start" - A start following a shutdown period as per (i), (ii), (iii) or (iv) above.

"Cold Start" - A start following a shutdown period as per (v) above.



SCHEDULE 2

and the reference to starts, starting or started means the process of starting the Complex or Unit(s) and synchronizing it with 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:

Table 2

<u>Type of Starts</u>	<u>Total aggregate maximum number of starts</u>	<u>Maximum number of starts per year</u>
Hot Starts	No technical limitations	
Cold Starts		

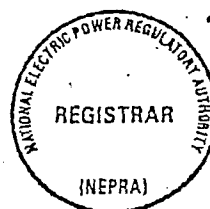
1.2 Complex loading

- (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 3A:

Table 3A

<u>Complex Load Range:</u>	<u>Cold Start % per minute</u>	<u>Hot Start % per minute</u>
(i) $0 \leq 25$	5	6
(ii) $> 25 \leq 50$	5	6
(iii) $> 50 \leq 100$	4	5

Complex load percentages in this Table 3A refer to the sum of the load(s) at the generator terminals of the Units already synchronized to the KESC Grid System as a percentage of gross capacity of the Complex specified in Section 3 of Schedule 1.



SCHEDULE 2

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

Table 3B

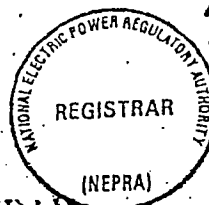
Unit load range, %	Cold Start (MW / min.)	Hot Start (MW / min.)
(i) $0 \leq 25$	0.8	1
(ii) $> 25 \leq 50$	0.8	1
(iii) $> 50 \leq 100$	0.8	1

Unit load percentage in the Table 3B refers to the load at the generator terminals of the Unit as a percentage of the gross capacity of the Unit specified in Section 1.a. of Schedule 1.

- (c) Step changes in Despatched load of up to 20% are allowable provided that Complex load is greater than 30% of gross capacity of the Complex specified in Section 3 of Schedule 1. After such step change the new Complex load must be held constant for 5 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. Provided the Complex auxiliaries are operated continuously, 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 6% of the gross capacity of the Complex specified in Section 3 of Schedule 1.

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 Complex has a Reactive Power capability of 144 MVAR lagging and 91.2 MVAR leading. At 100% load the Complex has a Reactive Power capability of 104.4 MVAR lagging and 72 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.



SCHEDULE 2

- (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) above occur.
- (e) The Unit governor droop is adjustable in the range 0% to 10%. The automatic voltage regulator droop setting is adjustable in the range $\pm 10\%$ of rated voltage with a droop characteristic of $\pm 0.5\%$.

1.4 General

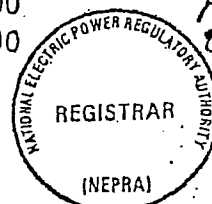
- (a) The Company shall advise KESC of any temporary operating constraints and limits which may from time to time apply to the Complex.

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 per 12 Month periods	Operating hours interval for each maintenance activity	Estimated duration of each activity per unit
Change of Oil in TurboCharger	1000	2 hours
Change of Fuel Filters	1000	4 hours
Change Lube Oil Filters	1000	4 hours
Check of Valve Clearance	1000	5 hours
Check of Alarm and Stop/Safety Devices	1000	15 hours
Inspection of Injectors	1000	10 hours
Change Oil in Governor	2000	1 hour
Cleaning of Air Coolers	2000	10 hours
Inspection of Crankcase	4000	2 hours
Check of Crankshaft Alignment	4000	4 hours
Inspection of TurboCharger	4000	5 hours
Inspection of Pistons	8000	2 hours(per piston)
Inspection of Engine Driven Pumps	4000	10 hours



SCHEDULE 2

Inspection of Thermostatic Valves 4000 8 hours

Required time per year (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 manufacturer's requirements. All inspections required in accordance with manufacturer's specifications will be carried out during Scheduled Outages. In addition to the above annual Scheduled Outages, 720 hours of Scheduled Outages shall be allowed for every fifth (5th) year for overhaul items of work as shown in Table 5.

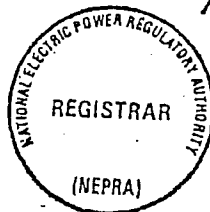
TABLE 5

		Estimated duration of each activity per unit
Piston overhaul	≈ 40,000	90
Cylinder liner overhaul	≈ 40,000	274
TurboCharger overhaul	≈ 40,000	120
Fuel Injection Pump overhaul	≈ 40,000	18
Inspection / overhaul of Main Bearings	≈ 40,000	108
Check of Damper	≈ 40,000	5

3. Prudent Utility Practice

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

4. While the Complex is under the control of AGC, KESC shall not remotely control the Start-up, synchronization to the Grid System or shutdown of any of the individual diesel generating units at the Complex.



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KARACHI

27 SEP 1995

TRANSMITTED

SCHEDULE 3

INTERCONNECTION FACILITIES AND TRANSMISSION FACILITIES

1. Interconnection and Transmission Facilities

- (a) The connection between the Complex and KESC's network shall be through 132 kV double circuit transmission lines, one originating from the Baldia grid station and the other from Hub Chowki grid station. The transmission line each will terminate in the substation of the Complex; the location of which is shown on the Site plan attached as Figure 1. The circuits of the transmission lines will connect at bushings provided by the Company as shown on the single line diagram of the Complex substation attached as Figure 2. The boundary of responsibility between the Company and KESC will be at the top of the bushings (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 (on the 132 kV side of the Complex's transformers) which together with the transmission lines 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 Baldia and Hub Chowki grid stations owned by KESC.

2. Design Data

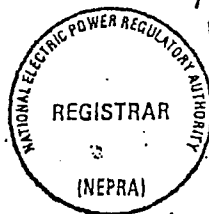
The following design data has been provided by the Company to KESC to enable completion of KESC of the design of the Interconnection Facilities and the Transmission Facilities.

2.1. Generator Design Data

(a) Rating

Rating
Power factor

Number of phases
Number of poles



13,125 kVA
0.8 lagging
0.9 leading
3
10

SCHEDULE 3

Frequency	50 Hz \pm 6 %
Rated speed	600 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)

Unsaturated direct axis synchronous reactance	190 %
Saturated direct axis sub-transient reactance	22.7 %
Saturated direct axis transient reactance	33.8 %
Negative phases sequence reactance	24.7 %
Zero phase sequence reactance	12.8 %
Leakage reactance	0.01 per unit

Generator time constants

Direct axis open circuit time constant	4.500 seconds
Direct axis open circuit sub-transient time constant	0.037 seconds
Direct axis short circuit trans-transient time constant	1.000 seconds
Direct axis short circuit sub-transient time constant	0.035 seconds

(d) Inertia constant

Diesel engine generator	J =	5,050 kgm ² *
	H =	0.69 sec
* Definition of J:	J =	0.25 GD ²

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

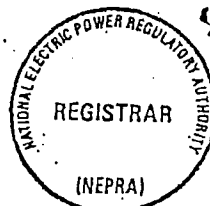
2.7 Excitation System

Excitation of the main generator is provided by a brushless system using booster transformers. The excitation control system comprises of one automatic voltage regulator (AVR) and one manual excitation control (MEC). During normal operation, the whole excitation system is subject to automatic control by means of AVR.

Technical Characteristics

- (i) Voltage setting range for AVR operation: \pm 10 %

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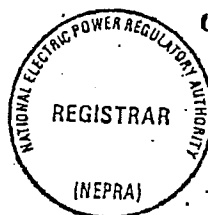
- (ii) Voltage adjusting range for MEC operation: 90-110 %
- (iii) Generator terminal voltage is held within $\pm 10\%$ from no load to full load at rated frequency
- (iv) Under the maximum direct current supplied from the excitation system for a specified time, the ceiling voltage to the generator field voltage is 2.0 per unit
- (v) The transfer function diagram of the AVR to manual excitation system as mentioned above is to be provided.

2.3. Generator Transformer

MVA rating ONAF	58.6 MVA
Rated voltage	132 kV/11 kV $\pm 10\%$
On-Load Tap changers	± 13 Taps
Frequency	50 Hz $\pm 6\%$
Connection Group	Ynd5
B.I.L. 11 kV side	75 kV
B.I.L. 132 kV side	650 kV
Insulation levels for impulse	145 kV
Insulation levels for AC withstand	275 kV
Type of cooling	ONAN / ONAF
Temperature rise wdg/oil	55 / 50 °C
Maximum system short circuit power	10 GVA
Impedance and Losses at reference power at nominal tap	58.6 MVA
Impedance	12 % HV to LV
No Load Losses	30 kW
Load Losses	230 kW
Auxiliary Losses	4 kW
Positive Reactance	$U_x = 13\%$
Zero Sequence Reactances	$Z_0 = 9.6\%$

- * i. HE-L (Leakage)
- * ii. HE-T (Leakage)
- * iii. L-T (Leakage)
- * Magnetizing reactance at rated voltage (from H.V. terminal)
- * X air core (from H.V. terminal)
- * X air core (from L.V. terminal)
- * Saturation curve at no load V (rms)
- * Versus I (rms)

* Data to be supplied by _____



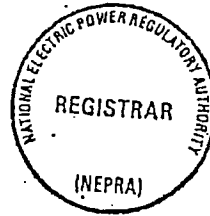
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 KARACHI

27 SEP 1995

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- 2.4 The governor droop will be adjustable from 0 % to 10 % and is designed to operate over the frequency range 47 to 53 Hz.
- 2.5 The AVR droop setting is ± 0 to 10 % of rated voltage, with a droop characteristic of ± 0.5 %.

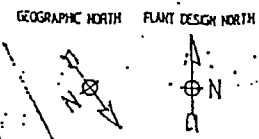
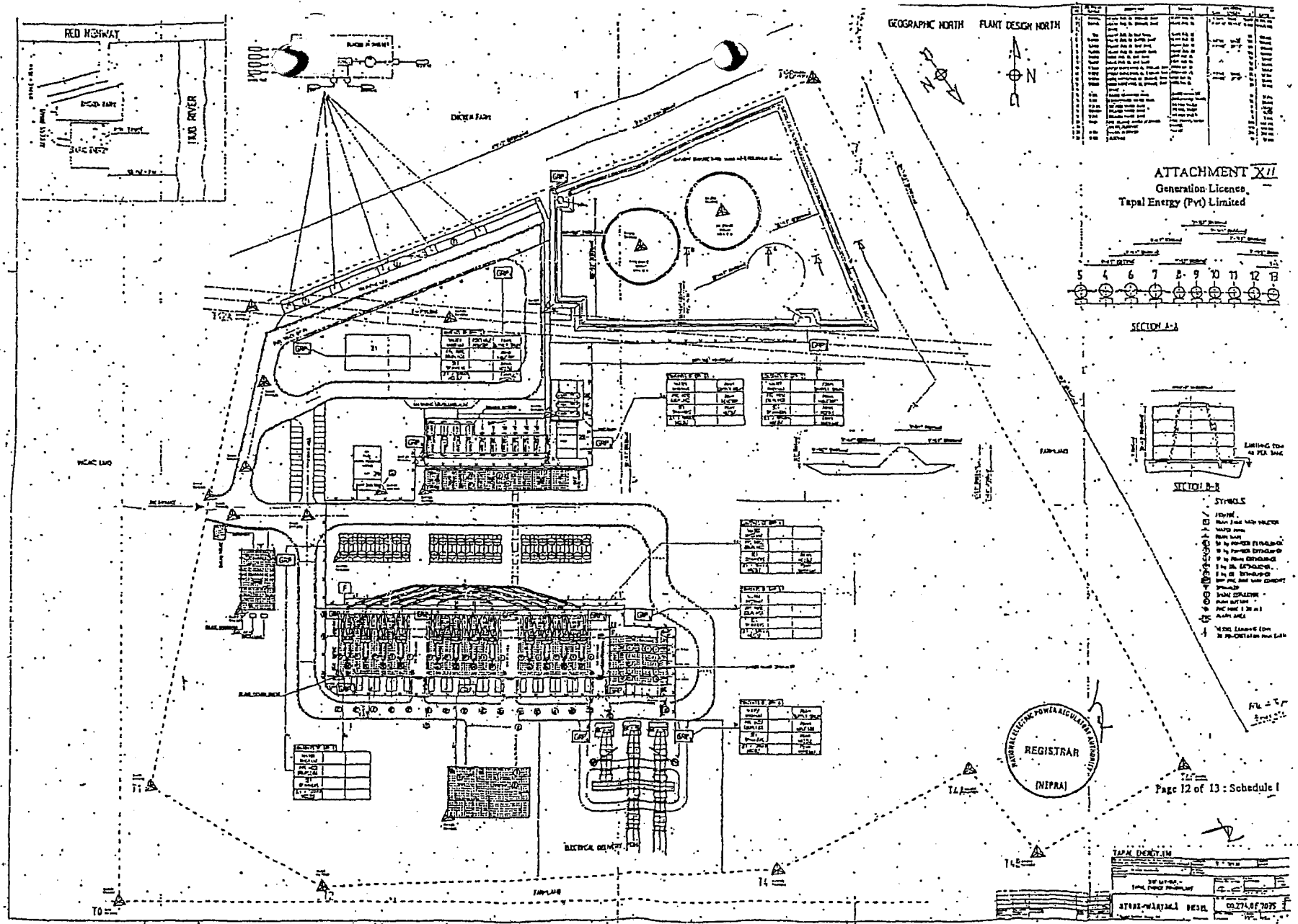


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KARACHI

27 SEP 1995

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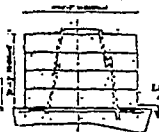


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ATTACHMENT XII
 Generation Licence
 Tapal Energy (Pvt) Limited

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SECTION A-A



SECTION B-B

- SYMBOLS**
- 1. EXISTING
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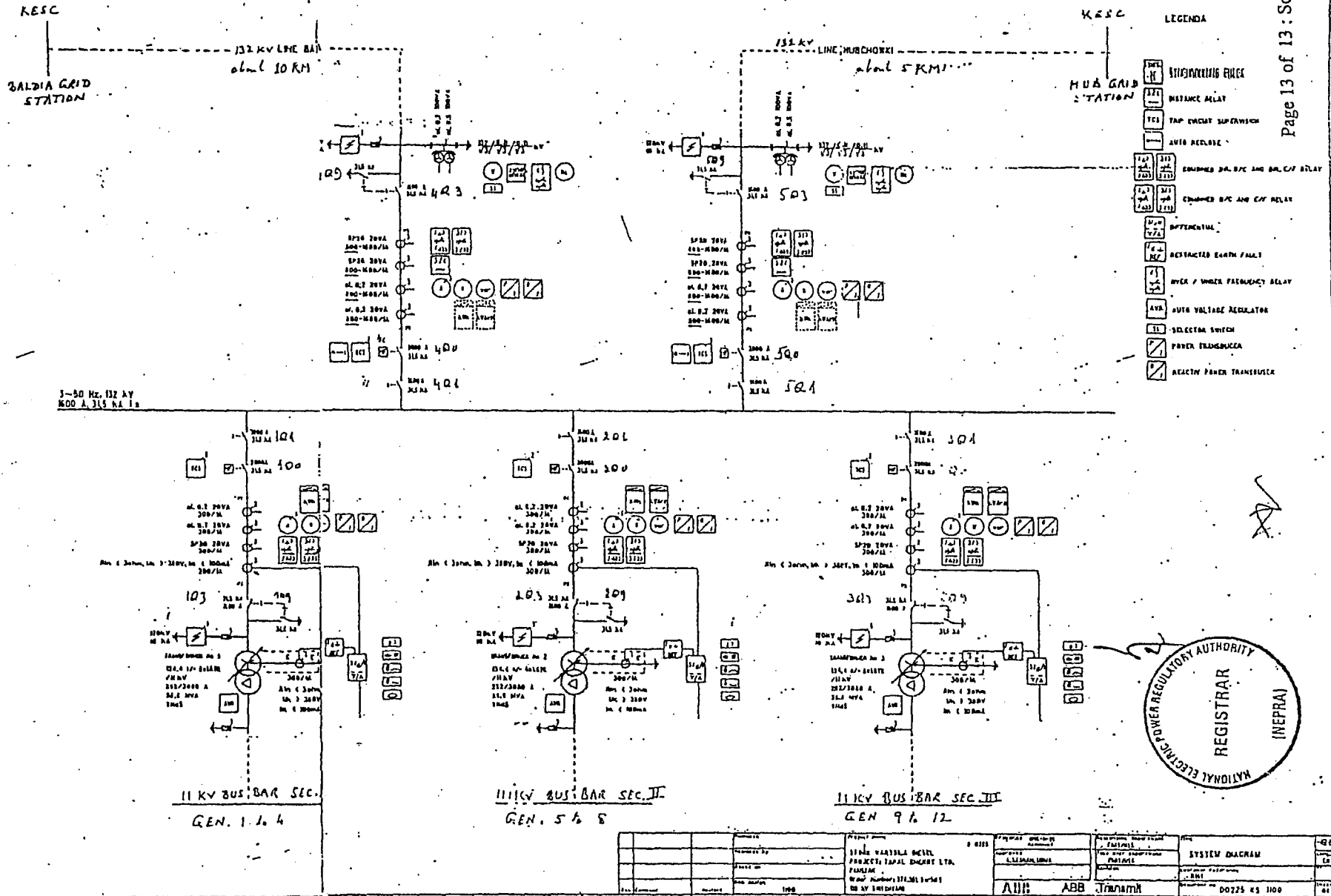


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TAPOL ENERGY (PRIVATE) LIMITED Single Line Diagram

ATTACHMENT XII

Page 13 of 13 : Schedule I



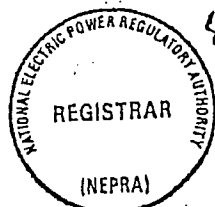
Schedule III

INSTALLED CAPACITY (GROSS) & NET CAPACITY

Installed ISO (Gross) Capacity 126MW

Net Capacity 119.5MW

Note: Net Capacity – These are indicative figures only as provided by the Licensee. The net capacity available to NTDC for dispatch and other purchasers will be determined through procedures contained in the Agreements or Grid Code.



ANNEXURE G
NEPRA FIRST MODIFICATION APPROVAL



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

Registrar

No. NEPRA/R/LAG-11/ 18 173-77

November 20, 2018

Mr. Mustafa Lakdawala
Chief Financial Officer
Tapal Energy (Private) Limited
F-25, Block 5, Rojhan Street
Kehkeshan, Clifton, Karachi

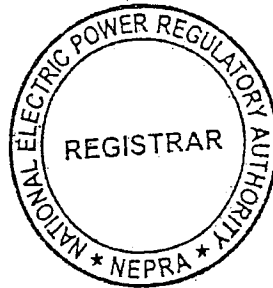
Subject: **Modification Generation Licence No. IPGL/010/2003**
Licence Application No. LAG-11
Tapal Energy (Private) Limited, (TEPL)

Reference: *TEPL's LPM submitted vide letter No. TEL/NEPRA/006/18 dated 22-05-2018 (received on 24-05-2018)*

It is intimated that the Authority has approved Modification in Generation Licence No. IPGL/010/2003 dated August 26, 2003 in respect of Tapal Energy (Private) Limited (TEPL) pursuant to Regulation 10(11)(a) of the NEPRA Licensing (Application and Modification Procedure) Regulation 1999.

2. Enclosed please find herewith determination of the Authority in the matter of Licensee Proposed Modification of TEPL alongwith Modification-I in the Generation Licence No. IPGL/010/2003, approved by the Authority.

Enclosure: As Above



(Signature)
20 11 18
(Syed Safeer Hussain)

Copy to:

1. Secretary, Power Division, Ministry of Energy, 'A' Block, Pak Secretariat, Islamabad
2. Managing Director, Private Power & Infrastructure Board (PPIB), Ground & 2nd Floors, Emigration Tower, Plot No. 10, Mauve Area, Sector G-8/1, Islamabad
3. Managing Director, NTDC, 414 WAPDA House, Lahore
4. Chief Executive Officer, CPPA(G), Ground Floor, Enercon Building, G-5/2, Islamabad
5. Chief Executive Officer, K-Electric Limited, KE House, 39-B, Sunset Boulevard, Phase-II, DHA Karachi
6. Director General, Environmental Protection Agency, Government of Sindh Plot No. ST/2/1, Sector 23 Korangi Industrial Area, Karachi

**National Electric Power Regulatory Authority
(NEPRA)**

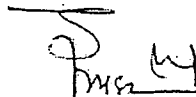
Islamabad – Pakistan

Generation Licence

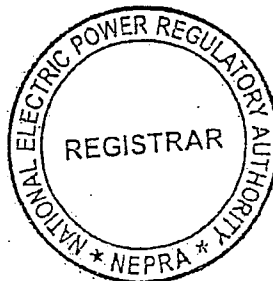
IPGL/010/2003

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/010/2003, dated August 26, 2003) granted to Tapal Energy (Private) Limited. The changes made in the Generation Licence are described in the attached Annexure-A.

This Modification-I is given under my hand on 20th of November
Two Thousand & Eighteen

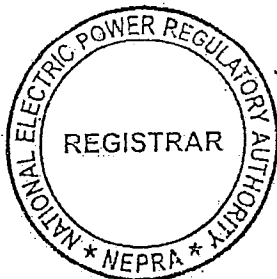

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Registrar



Generation Licence
Tapal Energy (Private) Limited
Deh Gondpass, Tapo Gabopat
Hub River Road, Taluka & District Karachi
in the Province of Sindh

Annexure-A



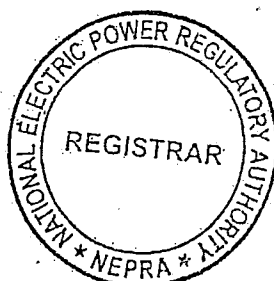
Modification-I
in Generation Licence (No. IPGL/010/2003, dated
August 26, 2003) of Tapal Energy (Private) Limited

(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 & Eighteen" is deleted and is replaced by the phrase "expires on 19th day of June, Two Thousand & Nineteen."

(B). **Article-4**

- (i). Article-4(1) of the generation licence is rephrased as "the term of this Licence is valid upto June 19, 2019."



National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter of Licensee Proposed Modification of
Tapal Energy (Private) Limited

November , 2018
Case No. LAG-11

(A). Background

(i). Tapal Energy (Private) Limited (TEPL) has set up a 126.00 MW Residual Furnace Oil (RFO) based generation facility/thermal power plant at Deh Gondpass, Tapo Gabopat, Hub River Road, Taluka & District Karachi, province of Sindh as an Independent Power plant under the Power Policy of 1994.

(ii). The Authority granted a generation licence (No. IPGL/010/2003, dated August 26, 2003) to TEPL in terms of Section-15 of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), as amended or replaced from time to time ("the NEPRA Act"), for a term of fifteen (15) years from the date of issuance of generation licence up to August 25, 2018.

(B). Communication of Modification

(i). TEPL 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 May 24, 2018.

(ii). In the "text of the proposed modification", TEPL stated that the communicated modification envisages extension in the term of its above mentioned existing licence to make it consistent with the term of Power Purchase Agreement (PPA) that had been signed with K-Electric Limited (KEL).



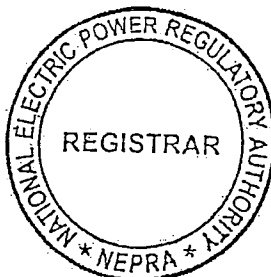
(iii). Regarding the "statement of the reasons in support of the modification", TEPL inter alia submitted that in order to discharge its contractual obligations under the PPA, it is required to obtain and maintain a generation license from the Authority for the term of the PPA. In this regard, TEPL emphasized that the maintenance of a valid generation license is a critical regulatory consent without which the Company cannot perform its contractual obligations under the PPA.

(iv). About the statement of "the impact on tariff", "quality of service (QoS)" and "the performance by the licensee of its obligation under the licence", TEPL stated that proposed changes will not result in any cost variation and would not have any additional financial implications. Further, TEPL 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 TEPL, the Registrar published the communicated LPM on June 11, 2016 in one (01) English and one (01) Urdu newspaper, informing the general public about the communicated LPM and inviting their comments within a period of fourteen (14) days from the date of the said publication.

(ii). 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 June 02, 2018, 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.

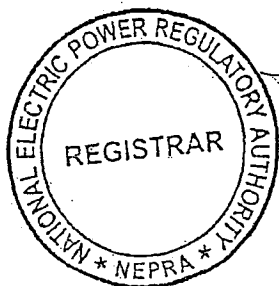


(iii). The Registrar invited comments of the said stakeholders in favor or against the communicated LPM. Apart from the said notice in the press, separate letters were also sent to individual experts, Government ministries/attached departments and other representative organizations etc. on June 04, 2018 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

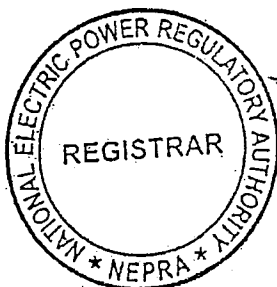
(i). In response to the above, comments were received from five (05) stakeholders which included Energy Department Government of Sindh (EDGoS), KEL, Board of Investment (BoI), Pakistan State Oil Company Limited (PSO) and National Accountability Bureau (NAB). The salient points of the comments offered by the above mentioned stakeholders are summarized in the following paragraphs:-

- (a). EDGoS in its comments submitted that the Authority in view of the rising demand of the city of Karachi, may consider the request of TEPL for modification in its generation licence;
- (b). KEL remarked that it executed the PPA with TEPL which had an initial term of twenty-two (22) years which will be expiring on June 19, 2019. However, the generation license awarded to TEPL expires on August 25, 2018 falling ten (10) months short of the term of the PPA. In order to fulfill its obligations under the PPA, the company/TEPL is required to have a valid generation license for the full PPA Term. Therefore, K-Electric supports the request of TEPL to extend the validity of its generation licence on the requested terms. In this regard, it is pertinent to mention that company has maintained the desired quality of service and generally performed in accordance with the provisions of the PPA which has helped serve the customers in licensed territory of KEL;



(c). Bol submitted the energy sector is priority sector of the Government to cater the short fall in the country, Bol being an investment promoting and facilitating agency has also been making its efforts to attract investment in the energy sector. BOI understands that affordable and smooth supply of energy is the back bone for industrial growth as well as attracting FDI in the country. Bol is of the view that we may encourage the investors in any sector of the economy including energy sector as well;

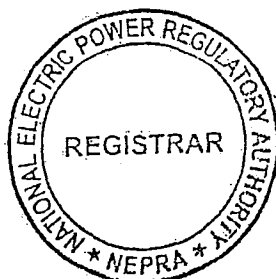
(d). PSO remarked that it has a continuing business relationship with TEPL and has been making fuel oil supplies to its plant under a valid Fuel Supply Agreement (FSA) under the Power Policy of 1994. In consideration of the said, TEPL is bound under clause 3.1 of the FSA to purchase all its requirements of Fuel, Diesel Oil, Greases, Lubricants and Additives for its power plant from PSO being the sole supplier during the term of the FSA. However, TEPL is in breach of the provisions of the FSA as it has failed to draw fuel oil from it on a continuous basis. PSO has already communicated its reservations regarding the purchase of fuel by TEPL from other sources which is a violation of the provisions of FSA diluting the overall Security Package, which essentially comprises of the FSA, along with the PPA and Implementation Agreement (IA). The company continues to meet its fuel oil requirements from other sources with partial supplies to a very low proportion of its actual consumption from PSO. Therefore, the Authority is requested to direct TEPL that it should discontinue purchase of fuel oil from sources other than PSO in line with FSA and the Generation licence should be contingent upon the extension of the FSA corresponding to the same time period;



(e). NAB remarked that the matter is a pure technical subject and apparently have no relevance to the Bureau. In view of the said, the Authority may proceed as per law and rules.

(ii). The abovementioned comments of the stakeholders were examined it was observed that all the stakeholders have supported the proposed LPM of TEPL except PSO which has raised some serious observations. In view of the said, TEPL was directed to submit its reply to the observations of PSO. In response to the same, TEPL submitted that it appreciates its longstanding business relationship with PSO. It is for the information of the Authority that TEPL has not disputed its obligation under Clause 3.1 of the FSA to purchase its requirements for Fuel, Diesel Oil, Greases, Lubricants and Additives for the subject generation facility from PSO. However, reservation of TEPL in respect of purchase of fuel under the FSA relates to the fact that the quality of imported fuel supplied by PSO under the FSA is not fit for the intended purpose. Nonetheless, the contentions raised by PSO in respect of alleged breach of the FSA are being discussed between TEPL and PSO bilaterally. The same does not impact the matter before the Authority. The reservations of PSO do not impact the matter at hand. The matter of non-conforming fuel has been discussed on numerous occasions with PSO and the company has remained committed to its relationship with PSO, provided, that the fuel supplied is fit for the intended purpose. The company remains eager to resolve this matter through mutual discussion and agreement with PSO.

(iii). The above submissions of TEPL were examined and found to be satisfactory. In view of the said, it was considered appropriate to proceed further with the communicated LPM as stipulated in the Licensing Regulations and the NEPRA Licensing (Generation) Rules, 2000 ("the Generation Rules").



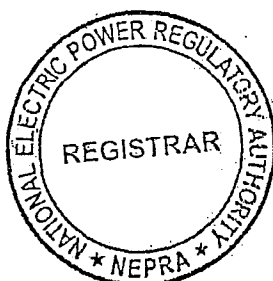
(E). Analysis of the Authority

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

(ii). In terms of Regulation-10(5) of the Licensing Regulations, the Authority is empowered 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 originally TEPL was granted the generation licence for a period of fifteen (15) years. Now, TEPL intends to modify its abovementioned generation licence by extending its term till the validity of its PPA and TEPL has submitted that the term of its PPA is twenty two (22) years from the COD.

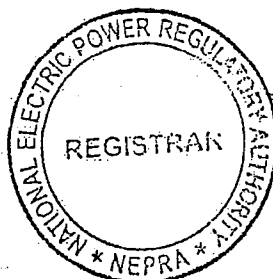
(iv). In this regard, the Authority examined the provisions of the PPA which transpired that TEPL entered into PPA with KEL on September 26, 1995 for a period of twenty two (22) years from the COD of the project which is June 20, 1997. Therefore, the said PPA is valid for twenty two (22) years only (i.e. till June 19, 2019).



(v). Regarding FSA the Authority has observed that as per provisions of GSA entered into by TEPL and PSO on March 07, 1996, the term of the same is also twenty years from COD of the project. Therefore, the said FSA is also valid till June 19, 2019.

(vi). The term of a generation licence under Rules-5(1) of the Generation Rules is to commensurate with the maximum expected useful life of the units comprised in a generating facility, except where an applicant consents to a shorter term. In this regard, the Authority has observed that as per international benchmark the useful life of a diesel generator is taken as thirty (30) years from the commissioning of the same. Therefore, though the useful life of the generation facility of TEPL is valid till June 19, 2049, the Licensee has requested for extension in the term of generation licence till the expiry of PPA which is valid till June 19, 2019. Further, it is also observed that FSA entered into between the Licensee and PSO is also valid till June 19, 2019. Therefore, term of the licence can be extended till June 19, 2019.

(vii). In view of the above analysis the Authority considers that the communicated LPM will not have any adverse effect on the performance of the Licensee of its obligations as it will enable the Licensee to supply the available energy for approximately another one (01) year. Further, the LPM will 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 the NEPRA Act. The LPM will be beneficial to the consumers in general as cheap electricity will be available to the power purchaser for approximately another one (01) year. The LPM is reasonably necessary for the Licensee to effectively and efficiently perform its obligations under the Licence. The LPM is 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.




(F). Approval of LPM

(i). Keeping in view the term of PPA and FSA, the Authority is of the considered view that the generation facility of TEPL can continue its operations and supply electric power to KEL till June 19, 2019, which will be beneficial for the consumers of the KEL. Therefore, the Authority hereby approves the communicated LPM of TEPL in terms of Regulation-10(11)(a) of the Licensing Regulations and extends the term of the generation licence (No. IPGL/010/2003, dated August 26, 2003) of TEPL till June 19, 2019.


(ii). Accordingly, the generation licence (No. IPGL/010/2003, dated August 26, 2003) in the name of TEPL is hereby modified. The changes in "Face Sheet", of the generation licence are attached as annexure to this determination. The approval of LPM will be subject to the provisions contained in the NEPRA Act, relevant Rules & Regulations framed thereunder, terms & conditions of the generation licence and other applicable documents.

Authority:

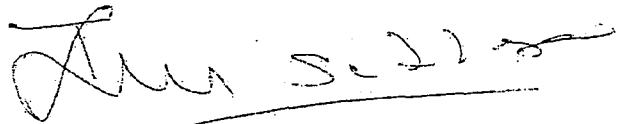
Saif Ullah Chattha
(Member)

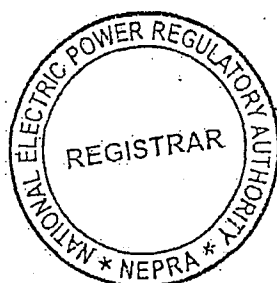

19.11.2018

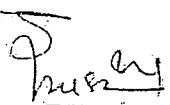
Rematullah
(Member/Vice Chairman)


19/11/2018

Tariq Saddozai
(Chairman)


20.11.18




20.11.18

ANNEXURE G-1
NEPRA SECOND MODIFICATION APPROVAL



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-11/7639-44

March 09, 2020

Mr. Mustafa Lakdawala,
Chief Financial Officer,
Tapal Energy (Private) Limited,
F-25, Block 5, Rojhan Street Kehkashan, Clifton,
Karachi-75600.
Contact No. 021-35876994-7

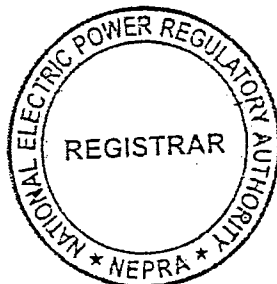
Subject: Modification-II in Generation Licence No. IPGL/010/2003
Licence Application No. LAG-11
Tapal Energy (Private) Limited (TEPL)

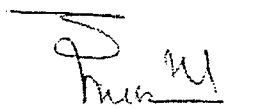
Reference: *TEPL's LPM submitted vide letter No. TEL/NEPRA/009/19 dated November 29, 2018 (received on November 30, 2018)*

The Authority has approved Modification in Generation Licence No. IPGL/010/2003 dated August 26, 2003 in respect of Tapal Energy (Private) Limited (TEPL), pursuant to Section-26 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

2. Enclosed please find herewith determination of the Authority in the matter of Licensee Proposed Modification in the Generation Licence of TEPL along with Modification-II in the Generation Licence No. IPGL/010/2003 dated August 26, 2003 as approved by the Authority.

Encl: As above




09 03 20
(Syed Safeer 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 Ltd, KE House, 39-B, Sunset Boulevard, Phase-II, DHA, Karachi.
5. Director General, Environmental Protection Department, Government of Balochistan, Zarghoon Road, Quetta.

National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter of Licensee Proposed Modification of
Tapal Energy (Private) Limited

March 09
February, 2020
Case No. LAG-11

(A). Background

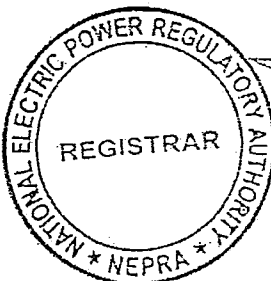
(i). Tapal Energy (Private) Limited (TEPL) holds a generation licence (No. IPGL/010/2003, dated August 26, 2003, and Modification-I dated November 20, 2018) in terms of Section-15 (now Section-14B) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 ("the NEPRA Act").

(ii). The Authority granted the above generation licence to TEPL for its 126.00 MW Residual Furnace Oil (RFO) based generation facility/thermal power plant located at Deh Gondpass, Tapo Gabopat, Hub River Road, Taluka & District Karachi, province of Sindh.

(B). Communication of Modification

(i). TEPL 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 November 30, 2018.

(ii). In the "Text of the Proposed Modification", TEPL has proposed to extend the term of its generation licence till June 19, 2029, in terms of Rule-5 of the NEPRA Licensing (Generation) Rules, 2000 (the "Generation Rules"). Regarding the "Statement of the Reasons in Support of the Modification", TEPL, *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. Further, the



proposed modification is also essential for effective utilization of the facility, including implementation of the Power Purchase Agreement (PPA) term extension, as the Licensee and K-Electric Limited (KEL) are in discussions for extension in the term of the PPA pursuant to Clause-4.1(c) of the same, which are at advanced stage and are expected to be finalized prior to the expiry of the current PPA.

(iii). About the statement of "the Impact on Tariff", "Quality of Service (QoS)" and "the Performance by the Licensee of its Obligations under the Licence", TEPL 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, TEPL also confirmed that QoS and the performance under the existing generation licence would not be affected by the proposed modification.

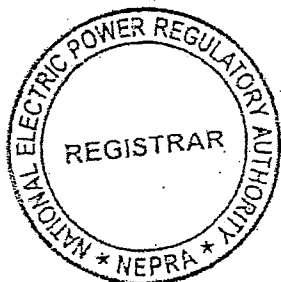
(C). Processing of LPM

(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 December 15, 2018, informing the general public, interested/affected parties, and relevant stakeholders about the said LPM as required under the Regulation-10(4) of the Licensing Regulations.

(ii). The Registrar invited comments of the above stakeholders in favor of or against the communicated LPM. Apart from the said notices in the press, separate letters were also sent to individual experts, Government ministries/attached departments and other representative organizations, etc. on December 17, 2018, inviting their views and comments for assistance of the Authority as stipulated in Regulation-10(9) of the Licensing Regulations.

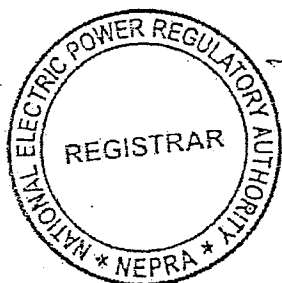
(D). Comments of Stakeholders

(i). In response to the above, comments were received from four (04) stakeholders including Mr. M. Arif Bilvani, Pakistan State Oil Company Limited (PSO), K-Electric Consumers Forum (KECF) and KEL. The salient points of the



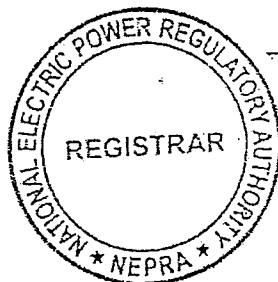
comments offered by the above-mentioned stakeholders are summarized in the following paragraphs: -

- (a). Mr. M. Arif Bilvani opposed the LPM on the premise that the licensee is operating its Residual Furnace Oil (RFO) based single cycle power plant comprising of twelve (12) generating sets of 10.50 MW capacity each totaling 126.00 MW gross and 119.5 MW net capacity. The plant was established under the 1994 power policy and is operating since 1995 and has already completed twenty-three (23) years of operation. Although the generation licence of the applicant was to expire on August 25, 2018, it was extended by the Authority till June 19, 2019, enabling the licensee to run the plant for a total period of twenty-four (24) years. Now the licensee has again requested the Authority to further extend its generation license for a period of ten (10) years i.e. up to June 19, 2029, on the pretext that "renowned independent engineering consultant" appointed by the licensee itself has opined that the remaining useful life of the plant is more than ten (10) years. Mr. Bilvani submitted that he does not agree at all with the request of TEPL for the reasons that the power plant is based on RFO fuel, one of the dirtiest fuels which have been already banned by the Government of Pakistan (GoP) in new power plants and is also discouraging its use in existing power plants by curtailing their operation to the bare minimum thereby incurring capacity charges. Since the power plant is single cycle comprising of small inefficient generators, the efficiency of the plant is very low even when compared to other bigger size RFO based power plants. Auxiliary consumption and maintenance cost of the plant is much higher compared to RLNG/Gas based power plants due to the aging factor. RFO based power plants are the worst polluters of the environment. The generation cost of this



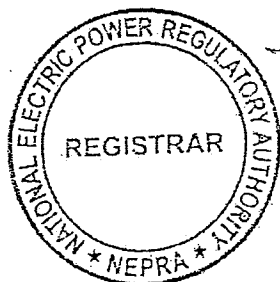
plant is much higher, although it's a fully depreciated and debt-free plant, because of the costly fuel compared to the RLNG/Gas based power plants resulting in higher tariff for the consumers and increased subsidy on part of the GoP. KEL may make an arrangement with CPPA-G/ NTDC from which it is already procuring 650 MW and this quantity can be enhanced from the newly commissioned coal-fired power plant in the vicinity of Karachi which will result not only in the utilization of surplus power available with CPPA-G but also result in better tariff for consumers of Karachi. If the Authority considers it inevitable to extend the arrangement of supply from TEPL, the new tariff must be based on the Take & Pay basis;

- (b). PSO submitted that it has been making fuel oil supplies to TEPL under a valid Fuel Supply Agreement (FSA) under the Energy Policy of 1994. However, TEPL is in breach of the provisions of the FSA as it has failed to uplift fuel oil from PSO on a continuous basis. TEPL is bound by the FSA under Clause-3.1 to purchase all of its requirements of "Fuel, Diesel Oil, Greases, Lubricants and Additives" for its power plant from PSO being the sole supplier during the term of the FSA. PSO has already communicated its reservations regarding the purchase of fuel by TEPL from other sources which defies the provisions of FSA between PSO and TEPL diluting the overall security package, which essentially comprises of the FSA, along with the Implementation Agreement (IA) and PPA. TEPL continues to meet its fuel oil requirements from other sources with partial supplies to a very low proportion of their actual consumption from PSO. You are therefore requested to direct TEPL that it should discontinue the purchase of fuel oil from sources other than PSO in line with FSA and the generation



licence should be contingent upon the extension of the FSA corresponding to the same time period;

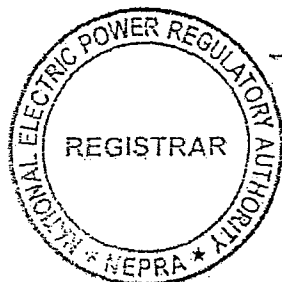
- (c). KECF requested the Authority to conduct/hold a public hearing in the matter in Karachi because all the three parties namely the power producer, the immediate buyer/KEL and the consumers/affected persons reside in Karachi. The license was issued for fifteen (15) years, i.e. from August 26, 2003, to August 25, 2018, although the plant became operational on September 26, 1995, therefore, to operate for 23 years. The aforesaid license was modified on November 20, 2018, and the expiry date was extended from August 25, 2018, to June 19, 2019, on the plea that the PPA with KEL will expire on the same date. KECF opposed the extension on the premise that it is an RFO based power plant and the production of power from RFO fuel is much costlier than from LNG/Gas. Further, it is also consistent with the policy of GoP, which has banned setting up of new RFO based power plants. Moreover, it is a single cycle power plant which further adds to the cost of electricity because of its inefficiency. RFO based power plants are inefficient because of their higher auxiliary consumption, are much costlier to operate because of their higher maintenance cost and are detrimental to the environment as compared to LNG/Gas based plants. Even in the merit order of operation, the TEPL plant does not find any favor as the bigger and more efficient RFO plants are much ahead of this small, highly inefficient and more expensive to operate on per MW basis plant. If the operators of this plant still intend to run it, then they may do so on their own by selling the power to industrial and other consumers located in the adjoining area by availing the transmission and distribution network of KEL which is now legally allowable after the recent amendments in the



NEPRA Act and also under the NEPRA Wheeling of Electric Power Regulations, 2016. KECF opposed the LPM of TEPL stating that the same is detrimental to the interest of consumers as well as the GoP because its costlier power is a burden on the consumers in their tariff and on the GoP in its subsidy to the power distributor; and

- (d). KEL in its comments submitted that the existing generation license of TEPL and the PPA shall expire on June 19, 2019. Keeping in view the current shortfall and to cater for future growth in power demand, in addition to the expected pipeline of planned projects which shall come online in next few years, the continuity of existing sources of power supply in the next five years is an essential part of the strategy of KEL to fulfill the increasing power demand. In this regard, KEL vide its letter dated December 04, 2018, has already submitted Power Acquisition Request based on the Power Sale Proposal received from TEPL, requesting for power acquisition for another five (05) years for which TEPL is required extension in the validity of its generation licence. In view of the above, KEL requested the Authority to consider the request of TEPL for proposed extension in its generation license which would also enable KEL to continue to procure power from TEPL and ensure an adequate supply of power.

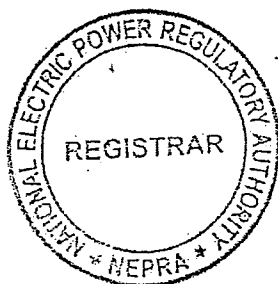
(ii). The above comments of stakeholders were examined and in view of the observations of Mr. Bilvani, PSO and KECF, the Authority considered it the appropriate seeking perspective of the licensee. Regarding the observations of Mr. Bilvani and KECF, it was submitted that the rationale for the continued operation of the generation facility has been extensively explained in the submitted petition for determination of reference tariff dated December 7, 2018, in respect of additional five (05) years term extension in the PPA with KEL; however, the same is reiterated again. 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. 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.

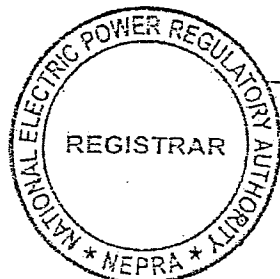
(iii). It is established that reliance on local gas is not a viable long-term solution for thermal power generation. In this regard, it is emphasized that during the winter months of 2018-19 there was an extreme shortage of gas and even in this lean period the generation facility was operating at around 65% 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) power plants. 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 being pursued for development of 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 are competitively priced when compared 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. Moreover, whilst Mr. Bilvani and KECF have 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 the GoP seek to export RFO in order to promote 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.

(v). About the breach of the policy of GoP, it was stated that the company understands that the prevalent GoP policy does not permit the establishment of new RFO based power plants, nor the import of RFO, however, it is widely acknowledged that in order to meet load variations in peak and off-peak hours thermal power plants are an integral part of the energy mix. 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 for the growing population of Karachi and the continued demand for electricity of KEL until new projects are successfully established and commissioned. 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 size of the plant, high ambient temperatures, load variations, number of start-ups 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 Licence granted to the facility, which was commissioned under the policy for the generation of power 1994 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

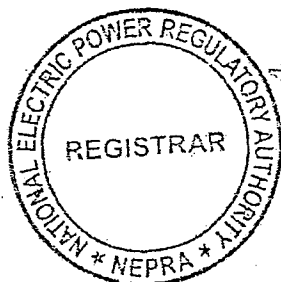


tariff and will unnecessarily burden the end consumers.

(vi). 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 two percent (2%) whereas the auxiliary consumption of our facility, despite being a small simple-cycle plant, is one point ninety-eight percent (1.98%). 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 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.

(vii). 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. About the multiple generating units, the facility consists of several generating units and therefore the fuel efficiency can be maintained across a wide range of load variations and also at part load operations. Therefore, the facility can be operated at all loads with the same efficiency.

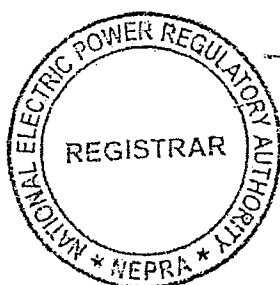
(viii). About the suggestion of wheeling to industrial consumers instead of supplying to KEL, it is highlighted that KEL in its "Power Acquisition Consent (dated October 22, 2018)" submitted that "...the continued availability of the facility is an integral part of our strategy to meet our future demand and its contribution to



the system stability of the 132- kV network due to its strategic location in North-West zone of Karachi. Additionally, KEL has also submitted a power acquisition request to the Authority vide its letter No. SBD/AR/NEPRA-0312/2018-0412, dated December 4, 2018 (the "Power Acquisition Request") for permission to KEL to acquire power from the Company for the PPA Term Extension. KEL stated in the Power Acquisition Request "...to ensure adequate supply of power to meet the growing power demand of the city, in addition to the expected pipeline of planned projects which shall come online in next few years, the continuity of the existing sources of power supply in the next five year is an essential part of K-Electric's strategy to fulfill the increasing power demand...".

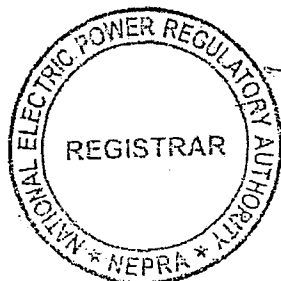
(ix). Further, TEPL submitted that the stakeholders may be aware that KEL has added new power generation facilities of more than 1000 MW since 2009 to its distribution system. KEL is also procuring power from Fauji Fertilizer Bin Qasim Limited, Sindh Nooriabad Power Company (Private) Limited-Phase-1 & Sindh Nooriabad Power Company (Private) Limited-Phase-2 but despite all these additions the shortfall in the year 2017-18 was around 500 MW. Many of the planned investments in generation projects of KEL have been delayed and KEL anticipates a power shortfall of 600 MW in the summer of 2019. Therefore, the suggestion that the Company should enter into wheeling arrangements in order to provide electricity to consumers in other service territories undermines the energy security of consumers in the service territory of KEL.

(x). It has been suggested that KEL should procure electricity from CPPA-G/NTDC. In this regard, it is highlighted that out of the two projects mentioned, Port Qasim Coal project is already connected to the national grid and selling power to the CPPA-G/NTDC while Hubco Coal project is yet to be commissioned, however, it would also be connected to the national grid. As the Authority may be aware, the Cabinet Committee on Energy (CCE) was recently briefed by the Power Division that there will be load shedding in 2019 peak seasons. The National Power Control Centre (NPCC) data showed that the generation deficit was at 7,000 MW, on some occasions in May 2017. According to the Energy Access Outlook 2017 of International Energy Agency (IEA), twenty-five percent (25%) of Pakistani



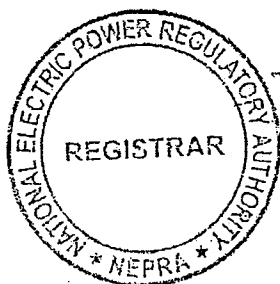
households are not connected to the national grid. In other words, over 50 million Pakistanis may be living without access to electricity. Considering all these facts, it is considered that CPPA-G does not have surplus power to cater to the additional demand for electricity. KEL has also highlighted that it is critical for the facility to continue to generate electricity, in order to provide uninterrupted supply to its critical industrial consumers.

(xi). It has been suggested that the power purchase agreement between KEL and the Company must be on take & pay basis and that the fuel cost of the same should pass through. It is submitted that the project is an IPP (as opposed to being a captive power plant) and will exclusively supply power to KEL. All IPPs are developed on "take or pay" basis as a large investment is required by the project company. This is essential as providing certainty of income to sellers is a crucial feature for projects with very large initial capital investment. Therefore, a "take & pay" arrangement as opposed to the "take or pay" will make the project unviable for the sponsors. This risk allocation provides the Company with the certainty of regular project revenues and a predictable cash-flow stream, a necessary criterion for the Company to continue operations of the facility. The stakeholders have failed to understand the prevailing contractual/tariff regime, commercial realities and the fact that the "take & pay" arrangement works for facilities that meet their fixed cost/expenses by in house consumption and sell surplus power on "as & when" available basis. This arrangement does not provide the requisite comfort to ensure recovery of mandatory payments associated with capacity charge and guaranteed off-take. Moreover, the Company will sell its output to KEL on commercial terms without allocating risk obligations on the GoP. The Company will assume the commercial risk, without having the necessary comfort which is typically available with grid-based power projects under the relevant government policies, including an Implementation Agreement and sovereign guarantee of GoP. Therefore, a "take & pay" arrangement as opposed to the "take or pay" will make the project questionable and in the absence of assured revenue, the project will not be viable.



(xii). 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 infrastructure requirements in place to continue power generation for servicing the consumers of the largest city of Pakistan. It is noted that implementation of the PPA Term Extension will neither require a financial close from lenders nor construction of any new transmission lines. Moreover, an offtake arrangement is already in place and KEL itself is a strong supporter of the PPA Term Extension. Given the combination of a well-maintained and 'debt-free' facility with no major capital expenditures required for the continued use of the facility, KEL's consumers will directly benefit from the low cost of electricity supplied by the Company during the requested extension period.

(xiii). On the comments of PSO, it was submitted that the matter of purchase of fuel from PSO has extensively been discussed between the parties. The Company has not disputed its obligation under the FSA to purchase its requirements for "Fuel, Diesel Oil, Greases, Lubricants and Additives" for the facility from PSO. However, the reservation of the company in respect of the purchase of fuel under the FSA relates to the fact that the quality of fuel supplied by PSO under the FSA is not in conformity with the required standards for such fuel under the terms of the FSA. Nonetheless, the contentions raised by PSO in respect of the alleged breach of the FSA are being discussed between TEPL and PSO bilaterally. The same does not impact the matter before the consideration of the Authority i.e., granting the Company a necessary regulatory consent in order to continue the activity of power generation and meets its obligations under the PPA with KEL. The comment of PSO that the Generation Licence of the Company should be contingent upon the extension of the FSA corresponding to the same time period is unfounded given that the FSA formed part of the 'security structure' that was available to the Company at the inception of the Project which is no longer continuing on an 'as-is basis'. At such time, the Company also had the benefit of the Implementation Agreement and GoP Guarantee, which shall also no longer be part of the security structure in the PPA Term Extension.



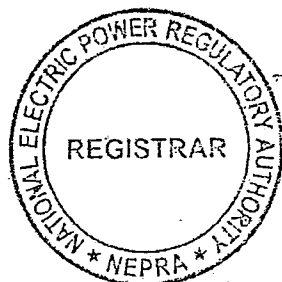
(xiv). The Authority considered the above submissions and considered it appropriate to proceed further with the communicated LPM as stipulated in the Licensing Regulations and the Generation Rules.

(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 stakeholder, provisions of PPA, and 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.

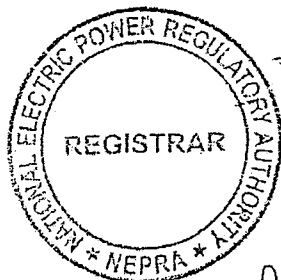
(iii). The Authority has observed that the LPM envisages extension in the term of the generation licence. In this regard, Rule-5 (2) of the Generation Rules stipulates that on the expiry of the term of a generation licence, the Authority may renew a generation licence for such further term as it may 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 it is found that the average running of each Diesel Engine of the generation facility is around 127560 hours with the operation of the lowest used engine at 118837 hours and that of the engine having maximum use at 141826 hours. In view of the said, 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 TEPL is at-least ten (10) years. The said assessment is also corroborated by the plant assessment report prepared by an Independent Malaysian Consultant namely Continental Marine Energy which has concluded that the expected useful of the generation facility is ten (10) years.

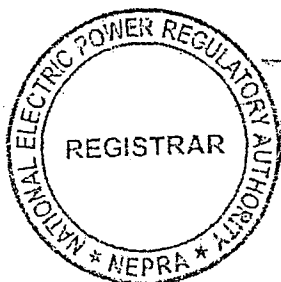
(v). The Authority observes that the performance of the licensee during the previous term has been very satisfactory as has also been confirmed by the Power Purchaser i.e. KEL and the same can be gauged from the fact that a new PAR has already been submitted for consideration of the Authority. In this regard, it is pertinent to mention that 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 to allow an extension in the term of the licence of TEPL. It is important to highlight that KEL had submitted its consent for Purchase of Power from the generation facility for another five (5) years subject to Regulatory approvals.

(vi). The Authority has also considered the comments of the stakeholders and observed that all the stakeholders except KEL opposed the requested extension in the term of the Licence of TEPL, *inter-alia*, on the ground that plant is low in efficiency and producing costly energy. The stakeholders 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 power can easily be provided to KEL by the national grid. In addition, PSO has also raised concerns regarding its FSA with the TEPL.



(vii). Regarding the comments of PSO, the Authority observes that since RFO is an unregulated commodity, therefore, it cannot direct TEPL to purchase the same from a specific supplier. In this regard, TEPL should have the option to purchase the fuel from any supplier given market-based price competitiveness and required quality standards. Further, the Authority is of the considered opinion that the matter related to FSA is a bilateral issue between PSO and TEPL and does not come under its regulatory domain and therefore the same may be resolved bilaterally or through other available avenues. However, the Authority considers it appropriate to direct TEPL to maintain adequate storage of fuel supplies during the term of its licence to meet its obligations towards the Power Purchaser as agreed in the PPA.

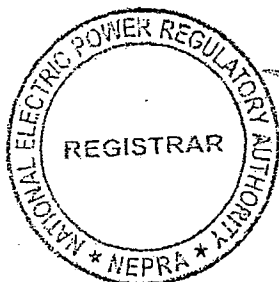
(viii). In view of the comments of the stakeholders regarding supply of additional power from the national grid to KEL, the Authority vide letter No. NEPRA/SAT-II/TRF-460/10495-10496 dated June 18, 2019, through the Ministry of Energy, directed CPPA-G to look into the matter of supply of equivalent power to KEL as this will reduce the burden of capacity charges and will be beneficial for all the electricity consumers in the country. CPPA-G in its response vide letter No. CPPA-G/2019/CEO/7307-11 dated June 19, 2019, committed that the analysis and recommendation in this regard will be submitted to the Authority after consultation with NTDC and KEL. Till that time, CPPA-G suggested that procurement of power from TEPL may be allowed on the take & pay basis and shall be dispatched on the basis of KEL's merit order without any sovereign guarantee's commitment by the GoP. The Authority vide its letter No. NEPRA/SAT-II/TRF-460/TEPL-2018/18005 dated September 30, 2019, again directed to submit its analysis and recommendations on the additional supply of power to KEL to replace power supply by TEPL. Further, the Authority vide its letter No. NEPRA/SAT-II/TRF-450/NTDC-2018/1 8593 dated October 4, 2019, also directed NTDC to provide information whether equivalent power can be made available to KEL from national grid to replace the power supplied by TEPL 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? In this regard, NTDC vide



its letter No. GMT/NTDC/T-90/1875-78 dated November 1, 2019, 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 Marchant IPPs on Take & Pay basis for 2-3 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 TEPL to ten (10) years, i.e., till June 19, 2029. However, TEPL will be required to strictly follow the directions given by the Authority in the tariff determination regarding supply of power to KEL. Further, the Authority considers that in order to promote competition in the market, TEPL 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 TEPL 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 continuous, safe and reliable supply of electric power to the utility/consumers keeping in view its financial and technical viability.

(F). Approval of LPM

(i). In consideration of the above, the Authority hereby approves the communicated LPM of TEPL in terms of Regulation-10(11)(a) of the Licensing Regulations and extends the term of the generation licence (No. IPGL/010/2003, dated August 26, 2003) of TEPL till June 19, 2029.

(ii). Accordingly, the generation licence (No. IPGL/010/2003, dated August 26, 2003) in the name of TEPL is hereby modified. The changes in "Face Sheet", of the generation licence are attached as an annexure to this determination. The approval of LPM will be subject to the provisions contained in the NEPRA Act, relevant Rules & Regulations framed thereunder, terms & conditions of the generation licence and other applicable documents.

Authority:

Engr. Rafique Ahmed Shaikh
(Member)

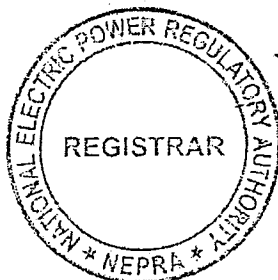
Engr. Rehmatullah Baloch
(Member)

Saif Ullah Chattha
(Member)

Engr. Bahadur Shah
(Member/Vice-Chairman)

Engr. Tauseef H. Farooqi
(Chairman)

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**National Electric Power Regulatory Authority
(NEPRA)**

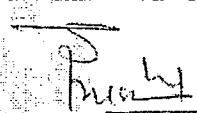
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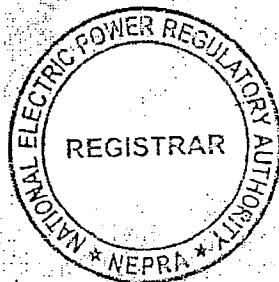
Generation Licence

IPGL/010/2003

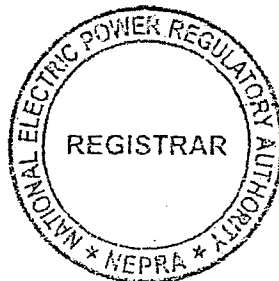
In exercise of the Powers conferred upon the National Electric Power Regulatory Authority (NEPRA) under Section-26¹ of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, (XL of 1997), as amended or replaced from time to time, the Authority hereby modifies the term of the Generation Licence (No. IPGL/010/2003, dated August 26, 2003 and Modification-I dated November 20, 2018) granted to Tapal Energy (Private) Limited. The changes made in the Generation Licence are described in the attached Annexure-A.

This Modification-II is given under my hand on 09th of March February Two
Thousand & Twenty


09.03.20
Registrar



Annexure-A



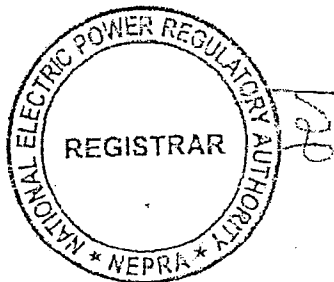
Modification-II in the
Generation Licence (No. IPGL/010/2003, dated
August 26, 2003) of Tapal Energy (Private) Limited

(A). Face Sheet

- (i). On the Face Sheet (i.e. the first page of the generation licence read with Modification-I dated November 20, 2018), in the last line the phrase "expires on 19th day of June, Two Thousand & Nineteen" is deleted and is replaced by the phrase "expires on 19th day of June, 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 upto June 19, 2029."



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ANNEXURE H
REFERENCE GENERATION TARIFF TABLE

Reference Generation Tariff

Year	Dispatch Factor	Energy Charge (EC)			Capacity Charge (CC)					Total Tariff
		(Rs./kWh)			(Rs./kWh)					
		Fuel Component	Variable O&M	Total	Fixed O&M	Cost of Working Capital	Insurance	ROE	Total CC	
									Rs./kWh	Rs./kWh
a	b	c = a+b	d	e	f	g	h - d+e+f+g	i = c + h		
1	30.38%	21.3745	1.1275	22.5020	1.4024	0.8363	0.4314	1.3627	4.0328	26.5348
2	29.58%	21.3745	1.1267	22.5012	1.4361	0.8565	0.4419	1.3955	4.1300	26.6312