

Founding CEO
28/11/22 ✓
Chairman
- AD (CT)
- M.F

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engro powergen qadirpur

18 Nov 2022

Ref No: EPQL/HO/C/NEPRA/206

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

Subject: Petition for the Modification in Fuel Cost Component Allowed by NEPRA in the Reference Tariff at Commercial Operations Date in Respect of Engro Powergen Qadirpur Limited (the "Company") for its 226.52 MW project located at Qadirpur, District Ghotki, Sindh (the "Project")

I, Shahab Qader, Chief Executive Officer of the Company hereby apply to the National Electric Power Regulatory Authority for the approval of modification of the fuel cost component (the "Modification Petition") in the decisions of the Authority in the matter of adjustment at Commercial Operations Date regarding the Company wide determinations dated 03.11.2010, 01.04.2011, 26.08.2011 and Corrigendum dated 14.05.2012 (hereinafter referred to as the "Tariff Determination"), pursuant to Section 17(3) of the NEPRA Tariff Standards and Procedure Rules, 1998.

I certify that the documents-in-support attached with this Modification Petition are prepared and submitted in conformity with the provisions of the applicable law. I further undertake and confirm that the information provided in the attached documents-in-support is true and correct to the best of my knowledge and belief.

This Modification Petition is submitted together with the following:

- (a) A Bank Draft No/Pay Order No. 14313948 dated 14 Nov 2022 amounting to PKR 1,869,444/- drawn on 16 Nov 2022 on account of subject tariff modification petition fee, as determined by the Authority.
- (b) Certified extracts of the board resolutions of the Company, authorizing Mr. Shahab Qader, Chief Executive Officer of the Company, to file the application.
- (c) The affidavit of Mr. Shahab Qader, the Chief Executive Officer of the Company.

We will be pleased to provide any further information, clarification or explanation that may be required by the Authority in this regard during its evaluation of the attached Modification Petition. In light of the submissions set out in the application, the Authority is hereby kindly requested to process this Modification Petition at the earliest.

Yours sincerely,
For and on behalf of
Engro Powergen Qadirpur Limited

Shahab Qader
Shahab Qader
Chief Executive Officer

Engro Powergen Qadirpur Limited

engroenergy.com
engro.corporation
EngroCorp

engro-corp
engrocorporation
EngroCorp

with copy of Rs. 1,869,444/-

REGISTRAR OFFICE
Entry No. 12492
Date: 28.11.2022



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BEFORE
THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

**PETITION FOR MODIFICATION OF FUEL COST COMPONENT AS CONTAINED IN THE DECISIONS OF THE
AUTHORITY IN THE MATTER OF ADJUSTMENT AT COMMERCIAL OPERATIONS DATE REGARDING
ENGRO POWERGEN QADIRPUR LIMITED DATED 03.11.2010, 01.04.2011, 26.08.2011 AND
CORRIGENDUM DATED 14.05.2012**

PURSUANT TO SECTION 31 OF REGULATION OF GENERATION, TRANSMISSION AND DISTRIBUTION OF
ELECTRIC POWER ACT, 1997 READ WITH RULE 3 OF NEPRA (TARIFF STANDARDS AND PROCEDURE)
RULES 1998

BY

PETITIONER: ENGRO POWERGEN QADIRPUR LIMITED

IN RESPECT OF ITS 226.52 MW PROJECT, LOCATED AT QADIRPUR, DISTRICT GHOTKI, SINDH

DATED: 18th November 2022



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Tariff Modification Petition

In respect of Engro Powergen Qadirpur Limited (the "Company")

Modification Petition

The Company is hereby filing this tariff modification petition ("**Modification Petition**") before the National Electric Power Regulatory Authority ("**NEPRA/Authority**") requesting the modification of its fuel cost component, as allowed by NEPRA in its decisions in the matter of adjustment at Commercial Operations Stage Date regarding the Company dated: (i) 03.11.2010 bearing reference number NEPRA/R/TRF-72/EEL-2007/3542-3544; (ii) 01.04.2011 bearing reference number NEPRA/R/TRF-72/EEL-2007/2226-2228; (iii) 26.08.2011 bearing reference number NEPRA/R/TRF-72/EPQL-2007/7708-7710; and (iv) 14.05.2012 bearing reference number NEPRA/R/TRF-72/EEPL-2007/4377-4381, as amended and adjusted from time to time (hereinafter collectively referred to as the "**Tariff Determination**"). The Company is requesting this modification pursuant *inter alia* to the additional gas supply that it shall be arranging from the Badar Gas Field, operated by Petroleum Exploration (Private) Limited, and as further detailed in this Modification Petition.

Generation License

The Authority granted the Company a Generation License bearing reference No. IGSP/L13/2017 dated 26.07.2007 and expiring on 30.10.2034.

Project Documents of the Company

A Power Purchase Agreement dated 26.10.2007 (the "**PPA**") was executed between the Company and the National Transmission and Despatch Company Limited through the Central Power Purchasing Agency ("**CPPAG**"). An Implementation Agreement dated 29.10.2007 (the "**IA**") was executed between the Company and the Private Power Infrastructure Board ("**PPIB**") on behalf of the Government of Pakistan ("**GOP**").

Grounds

This Modification Petition is based on the facts, circumstances and grounds as elaborated in Section 2 herein.

Determination Sought

It is humbly prayed that the Authority:

- (a) Accepts this Modification Petition;
- (b) Reviews and accepts the proposed modifications as specified herein;
- (c) Allows for the immediate application of the proposed modifications while these proceedings are pending before the Authority;



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- (d) Declare and notify the changes necessitated in the Tariff Determination upon acceptance of the proposals specified herein; and
- (e) Grants any other relief to the Company as may be deemed fit and appropriate under the circumstances by the Authority, including options allowing the Company to optimize the use of indigenous gas sources.

We would like to avail the opportunity of personal hearing in the matter before the Authority to fully elaborate our point of view supported by valid and cogent evidence to clarify the grounds, facts and circumstances as laid down in this Modification Petition as well as any further and additional grounds at the time of personal hearing in the matter, for which the Company requests the Authority for the opportunity to present its case with supporting documents, justification and related evidence.

The Company will also be pleased to provide any further information, clarification or explanation that may be required by the Authority during its evaluation process.

Yours sincerely,
For and on behalf of
Engro Powergen Qadirpur Limited

Shahab Qader,
Chief Executive Officer



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Section 1 – Summary

A. Particulars of the Company

Name: Engro Powergen Qadirpur Limited (the “Company”)
Address: 16th Floor, Harbor Front Building, HC #3, Marine Drive, Block 4, Clifton, Karachi
Phone: +92 21 5297501
Facsimile: +92 21 5810669
E-mail: sqader@engro.com

B. Authorisations

This Modification Petition is being filed and submitted before the Authority by Mr. Shahab Qader, Chief Executive Officer of the Company, being the duly authorized representative of the Company by virtue of board resolution dated 17th November, 2022 appended herewith as Annex 1.

C. Petitioner’s Representatives

1. Mr. Shahab Qader, Chief Executive Officer of the Company;
2. Mr. Amir Qasim, Chief Financial Officer of the Company; and
3. All partners and associates of RIAA Barker Gillette (formerly RIAALAW), including Mr. Hasnain Naqvee and Mr. Nadir Altaf.

(the “Authorized Representatives”)

D. Processing Fee

The applicable fee for this Application, as determined by the Authority, is enclosed herewith as Annex 2.

E. Verification Through Affidavit

As required pursuant to Rule 3(8) of the National Electric Power Regulatory Authority (Tariff Standards and Procedure) Rules, 1998 (the “Rules”), an affidavit verifying the statement of fact or opinion made in this Application is enclosed herewith as Annex 3.



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Section 2 – Grounds for Tariff Modification

2. Grounds

- 2.1 As the Authority may be aware, the Company operates a dual fuel 226.52 MW Project, with its primary fuel constituting permeate gas obtained from the Qadirpur gas fields located in the province of Sindh (“Qadirpur Gas”) and high-speed diesel (“HSD”) utilized as the Project’s secondary fuel. Based on this, the Company sought approval for two tariffs, one based on Qadirpur Gas and, in the case of non-availability of such gas, on HSD.
- 2.2 Accordingly, the Authority issued its Tariff Determination (as defined in this Modification Petition) in the matter of adjustment at Commercial Operations Date regarding the Company’s Project, pursuant to which the Reference Fuel cost component of the Energy Charge as provided in the Company’s Tariff Determination was as follows:

Reference Tariff Components	Year 1 to 25	Indexation
<u>Energy Charge Rs./kWh</u>		
Fuel Cost Component (Gas)	2.7628 ¹	Fuel Price ³
Fuel Cost Component (HSD)	14.2314 ²	Fuel Price

- 2.3 In September 2018, the Company entered “Gas Insufficiency” phase due to the rapid depletion of production levels from the Qadirpur gas field. Per the Company’s IA, “Gas Insufficiency” has been defined *inter alia* as a permanent condition existing in the Qadirpur gas field, such that the quantity of permeate gas that is recoverable therein is insufficient for the Company’s requirements as detailed in its Gas Supply Agreement with the Gas Supplier, i.e. Sui Northern Gas Pipeline Limited (“SNGPL”) and, further, that this condition cannot be overcome or remedied by SNGPL. The Company has initiated the necessary Gas Depletion Mitigation Option / Gas Depletion

¹ Per Annex I contained in NEPRA’s decision bearing reference number NEPRA/TRF-72/EEL-2007/2226-2228 dated 01.04.2011, the “Fuel Price (inclusive of freight)” for Qadirpur Gas has been set at Rs. 368.67/MMBTU (LHV) by the relevant authority, i.e. the Oil and Gas Regulatory Authority (“OGRA”)
<https://nepra.org.pk/tariff/Tariff/PPs/Engro%20Power/2011/TRF-72%20Engro%20Powergen%20Motion%20Review%20Nov%202010%2001-04-2011%202226-2228.PDF>

² Per Annex I contained in NEPRA’s decision bearing reference number NEPRA/TRF-72/EPQL-2007/7708-7710 dated 26.08.2011, the “Fuel Price (inclusive of freight)” for HSD has been set at Rs. 68.84/Liter (excluding Sales tax).
<https://nepra.org.pk/tariff/Tariff/PPs/Engro%20Power/2011/TRF-72%20EPQL%2026-08-2011%207708-7710.PDF>

³ The variable charge part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations



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Mitigation Plan (“GDMO/GDMP”) in accordance with its IA. The Company notes that RLNG has been proposed by the Projects’ Committee of the Private Power Infrastructure Board (“PPIB”) as the GDMO and the same is currently being processed for the requisite approvals by PPIB.

- 2.4 The Company notes that as a result of being a dual fuel Project, it has been dispatched frequently on HSD, its alternate and secondary fuel, due to the shortfall in Qadirpur Gas. The Complex has, to date, produced 39 GWH on HSD. At current fuel prices, the generation on HSD costs is approximately ~52 PKR/Unit. It should be noted that continuously dispatching the Project on HSD is a costly exercise for the GOP as well as unnecessarily burdening the end consumer with higher electricity bills.
- 2.5 Accordingly, and in order to reduce the dispatching of the Project on its secondary fuel, the Company has explored local gas options. The Company is of the view that additional supplies of local gas can not only supplement the depleting reserves of Qadirpur Gas as utilized in the Complex but will also be able to supplement the use of RLNG (once approved by the GOP as the Company’s GDMO/GDMP). The Company, after detailed exploration and assessment, has therefore decided that one of the viable options for supplementing Qadirpur Gas in the Project is the natural gas extracted from Badar gas fields located at District Ghotki, Sindh operated by Petroleum Exploration (Private) Limited (“PEL Gas”). Please see **Schedule 2**, attached herewith, for technical specifications pertaining to PEL Gas.
- 2.6 The Company has executed a Heads of Terms with PEL such that PEL has agreed to supply 8-13 MMSCFD of permeate gas to the Project on an “As and When Available” and “Take and Pay” basis with the price of PEL Gas fixed at 70% of the prevailing RLNG price being paid to National Power Parks Management Company (Private) Limited. These executed Heads of Terms are attached herewith as **Schedule 2**. The Company has also submitted to the Authority its Licensee Proposed Modification to its Generation License dated 31.10.2022, through which it has requested the Authority to grant approval for the addition of PEL Gas as an additional fuel for use in the Project.

The Company notes that there are numerous advantages to opting for PEL Gas, as an additional fuel to Qadirpur Gas in the Project, as detailed at **Schedule 1** and as briefed below:

- (a) The Company, by procuring local gas, would be contributing towards lessening the pressure upon Pakistan’s scarce foreign reserves and ensuring energy security and independence for the country as well as being beneficial for end consumers.
- (b) If the Authority expedites the approval for the Company’s use of PEL Gas as an additional, supplementary fuel the Company can ensure its utilization prior to peak winter season, i.e. from December 2022 to March 2023. This is because the Company’s Project is already equipped to utilize permeate gas and no additional treatment/processing of the PEL Gas



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would be required, unlike if such gas were to be utilized by other industries (such as the fertilizer or cement industry).

- (c) The Company in order to expedite the process of utilizing PEL Gas has written to CPPAG, detailing the Heads of Terms between the Company and PEL Gas. CPPAG has also issued its in-principle approval of the use of PEL Gas by the Company in its Project and the approval of CPPAG is attached herewith as **Schedule 2**.
- (d) As a result of obtaining CPPAG's in-principle approval and in the interest of time, the Company has also initiated the process of laying down a dedicated pipeline infrastructure for the supply of PEL Gas from the Badar gas fields to the Company's Project. The Company is confident that the dedicated pipeline can be completed and ready for transmission within thirty days from the date of submission of this Modification Petition and that the Project shall be able to produce ~ 18 million units of power per month on PEL Gas for end consumers prior to peak winter.



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Section 3 – Statement of Compliance

3. Statutory Compliance

3.1 Pursuant to Section 7 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (as amended from time to time, the “NEPRA Act”), the Authority is mandated to determine tariffs and other terms and conditions for the supply of electric power services by generation, transmission and distribution companies. The Authority is also responsible for determining the process and procedures for reviewing tariffs, recommending tariff adjustments, and revision thereof.

3.2 Under Rule 6 of the NEPRA Licensing (Generation) Rules 2000, the licensee can charge only such tariff for provision of electric power as approved by the Authority. Accordingly, upon filing petitions by the Company for determination of its tariff for sale of its generated electricity, the Authority has determined the Tariff Determinations, as discussed above.

3.3 This Petition is being filed before the Authority pursuant to Rules 3 and 17(3) of the Rules (including all amendments thereto), read with all enabling provisions of the NEPRA Act for the Authority’s determination of this Modification Petition in relation to the Company’ Project.

3.4 Pursuant to Rule 3(1) of the Rules:

“Any licensee, consumer or person interested in the tariff may file a petition with the Authority by filing it with the Registrar along with such fees as may be determined by the Authority from time to time. The Authority may also initiate proceeding suo moto.”

(Emphasis added).

The Company, as a licensee, is therefore entitled to file this petition for tariff modification before the Authority.

3.5 Pursuant to Rule 4 (7) of the Rules:

“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.”

Pursuant to the above Rule, the Authority has the power to expedite the matter for immediate application of PEL Gas (as defined herein) by the Company as an additional fuel to the Company’s existing supply of gas. The application of Rule 4(7) to the Company’s case would be particularly beneficial, especially in view of the depleting reserves of Qadirpur Gas which are insufficient for the efficient operations of the Project on its primary fuel (i.e. gas) and considering the challenging ongoing winter season which would result in increase in demand of pipeline Gas by end consumers.



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Section 4 – Comparison of the Proposed and Existing Tariff

4. Comparison of the Proposed and Existing Tariff

- 4.1 The Company would like to take this opportunity to clarify that it is not seeking an amendment to the principal terms, conditions or technical assumptions as contained in its Tariff Determination. The Company is filing this Modification Petition before the Authority to seek the approval of NEPRA in allowing PEL Gas (as defined herein) as an additional fuel that may be used by the Company in the operation of its Complex, for the reasons detailed in Section 2 herein.
- 4.2 Accordingly, the Company, through this Modification Petition, requests that the fuel cost component, including the adjustment mechanism for fuel price variation of PEL Gas, is reflected in the Company’s Tariff Determination, as follows:

Existing Reference Tariff of the Company pertaining to Fuel Cost Component and Fuel Price Variation:

Tariff Components	Reference FCC Year 1 to 25	Indexation	FCC based on Current Fuel Prices
<i>Energy Charge</i> <i>Rs./kWh</i>			
Fuel Cost Component (Gas)	2.7628	Fuel Price	7.124
Fuel Cost Component (HSD)	14.2314	Fuel Price	52.687

Fuel Price Variation of Qadirpur Gas

The variable charge part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations. In this regard, the variation in EEL’s allowed rate relating to fuel cost shall be revised according to the following formula:

$$FC_{REV} = (Rs. 2.7628 \text{ per Kwh} * FP_{(REV)}) / Rs. 368.67 \text{ per MMBTU}$$

Where:

FC_{REV} = Revised fuel cost component of variable charge on permeate gas
 $FP_{(REV)}$ = Revised Fuel Price



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Fuel Price Variation of HSD

The variable charge part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations. In this regard, the variation in EPQL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FC(d)_{REV} = (Rs.14 .2314 \text{ per Kwh} * FP(d)_{(REV)}) / Rs. 63.84 \text{ per Liter}$$

Where:

$FC(d)_{REV}$ = Revised fuel cost component of variable charge on HSD operations

$FP(d)_{(REV)}$ = Revised Fuel Price (HSD)

Proposed Reference Tariff of the Company pertaining to Fuel Cost Component of PEL Gas:

Tariff Components	Ref. FCC	Current FCC	Indexation
<u>Energy Charge Rs./kWh</u>			
Fuel Cost Component (Gas)	2.7628	7.1240	Fuel Price
Fuel Cost Component (HSD)	14.2314	52.687	Fuel Price
Fuel Cost Component (PEL Gas)	20.9027	20.9027	Fuel Price (70% of RLNG price as determined by OGRA for NPPMCPL on prevailing exchange rate)

Fuel Price Variation of PEL Gas

The variable charge part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations. In this regard, the variation in EPQL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FC_{REV} = (Rs. 20.9027 \text{ Kwh} * FP_{(REV)}) / Rs.2,514.526^4 \text{ per MMBTU}$$

Where:

FC_{REV} = Revised fuel cost component of variable charge on PEL gas

$FP_{(REV)}$ = Revised Fuel Price (PEL) (70% of RLNG price determined by OGRA for NPPMCPL on prevailing exchange rate)

⁴ NPPMCPL Fuel Price w.e.f September 24, 2022 based on USD 15.7376 /mmbtu Exchange rate: 228.2546.
 Price of RLNG = 3,592.1796 Rs./mmbtu; Price of PEL Gas= 2,514.526 Rs./mmbtu (70% of NPPMCPL Fuel Price)



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5. Determination Sought

- 5.1 In light of the foregoing submissions, the learned Authority is kindly requested to *inter alia* accept this Modification Petition and approve the modifications in the Company's Fuel cost component (Gas) (together with the pertinent indexations/adjustment for fuel price variation in accordance with the assumptions related thereto) for the Project, as mentioned above, with immediate effect and for the remainder term of the Project provided under its PPA.
- 5.2 In particular, the Petitioner humbly requests the learned Authority to:
- (a) Accept this Modification Petition;
 - (b) Modify the fuel cost component (Gas) of the Energy Charge as contained in the Tariff Determination of the Company, such that it reflects the addition of PEL Gas as an additional fuel for the Company's Project and together with the pertinent indexation for fuel price variation for PEL Gas;
 - (c) Allow for the immediate application of the proposed modification while the proceedings are pending before the Authority, such that PEL Gas can be utilized by the Project in the upcoming peak winter season;
 - (d) Declare and notify the changes necessitated in the Tariff Determination upon acceptance of the proposals specified herein; and
 - (e) Grants any other relief to the Company as may be deemed fit and appropriate under the circumstances by the Authority, including options allowing the Company to optimize the use of indigenous gas sources.
- 5.3 The Company reserves the right to adduce further and additional grounds at the time of personal hearing in the matter, for which the Company requests for the opportunity to present its case before the Authority with supporting documents, justification and related evidence.



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SCHEDULE 1

Benefits of Fuel (Gas) Supply from PEL

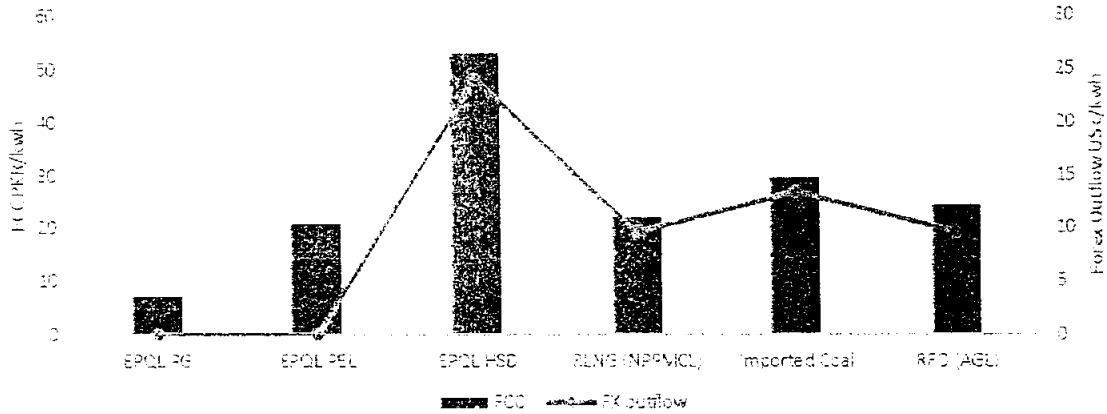
1. EPQL has been exploring additional local fuel sources to supplement its existing Permeate Gas supply, to reduce the burden on the economy due to forex outflow associated with power generation from imported fuels. A feasible indigenous source of fuel as identified by EPQL is gas supply from Badar gas fields operated by PEL.
2. Per the Head of Terms executed between EPQL and PEL, the latter has agreed to supply to EPQL 8 – 13 mmcf/d of gas, which has a heating value of approximately 572 btu/scf. PEL Gas will be available for three years, although the term may be extended subject to the mutual consent of both PEL and EPQL.
3. Since PEL Gas is available in the vicinity of EPQL plant, the Company will be able to guarantee a very quick turn-around time of utilization, effective immediately. The required modifications, in the form *inter alia* of laying down a pipeline and associated cost of implementation, will be incurred by both PEL and EPQL, thereby generating significant returns for the economy without any additional cost burden on end consumers. In the interest of time, both parties have initiated work on the required modification as endorsement from CPPA-G has also been received vide its letter dated 17th October 2022.
4. PEL Gas is priced at a discount of 30% to the prevailing RLNG price being paid to National Power Parks Management Company (Private) Limited (NPPMCL). The prevailing RLNG price is a blended price of spot cargoes and long-term contract-based procurement. EPQL will buy the PEL Gas on “Take and Pay” basis and will not be under any obligation to buy any quantum of fuel at any time from PEL.
5. The indigenous gas supply from PEL will also enable the Company to produce additional power of over 20 MW, translating into generation of ~ 600 million units over the period, which will substitute power generated from imported fuels. At prevailing RLNG prices applicable in Pakistan (USD 15.7/mmbtu), the fuel cost component of EPQL on PEL Gas will be ~PKR 20/ kwh, which will place EPQL higher in the Economic Merit Order as compared to imported fuel-based projects. Please find below a tabular format of the estimated fuel cost component (FCC) of EPQL on various fuels and a chart showing comparative FCC of other alternatives.

Fuel Cost Component EPQL	PKR Per Unit	Merit Order Position (wrt merit order for Oct 2022)
Permeate Gas	7.1	8
PEL (70% of RLNG Price)	20.9	18 (Above NPPMCPL)
RLNG	29.9	29
HSD	53	83

*Exchange rate: 220



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⁵Based on FCC from Sep 2022

6. If EPQL generates electricity from PEL, the country will be able to substitute forex ranging from USD 19 – 30 million per annum (**Annex 4a**), depending on gas supply and at prevailing RLNG price in Pakistan. It should be noted that due to market dynamics, the current international spot price for RLNG is over twice that of the prevailing contract price applicable for Pakistan and, based on expected RLNG spot rates, forex substitution can be as high as USD 36 – 59 million⁶ per annum.
7. The sale and purchase agreement between PEL and EPQL with the price of PEL gas fixed at 70% of the prevailing RLNG gas price gives the government an opportunity to generate ~ 2 - 4 Mn USD per annum in revenue (via royalty) (**Annex 4b**) which can then be used for the benefit of countrymen. Had the agreement of the same nature been signed earlier, this benefit could have been reaped by the country already.
8. Currently, EPQL is available on HSD to the extent of shortfall in Permeate Gas, while RLNG has been narrowed down as the most feasible option for GDMO. Gas supply from PEL will also displace RLNG and HSD in EPQL plant, amounting to USD 26 Mn and USD 47 Mn, respectively (**Annex 4c**).
9. Energy prices have diverged widely and have remained extremely volatile over the ongoing year. Energy prices are expected to remain more than 50 percent above their five-year average through 2024⁷. It is therefore vital that Pakistan reduces the dependence of its growing power sector on imported fuel and to seriously consider EPQL's readiness and ability to quickly and effectively utilize gas from local sources.

⁶ Spot RLNG of USD 30/mmbtu based on 8-13 mmcf/d @100% load

⁷ Commodity Markets Outlook, World Bank Group



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Schedule 2

Executed Heads of Terms between the Company and PEL

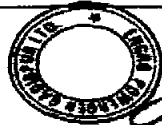
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GSA HEAD OF TERMS

STRICTLY CONFIDENTIAL

This GSA Head of Terms (HOT) is executed at Islamabad on 27th day of July 2022

Seller	Petroleum Exploration (Private) Limited or its duly authorized and legally empowered nominee.
Buyer	Engro Powergen Qadirpur Limited (EPQL).
Transaction	Sale and purchase of 8 to 13 MMSCFD of Specified Gas for the purpose of power generation at EPQL's 226 MW Gas-based Power Project at Qadirpur, District Ghotki, Sindh.
Specified Gas	See Annex-A hereto.
Gas Price	70% of the prevailing RLNG price (fuel cost component) being paid to National Power Parks Management Company (Private) Limited under its PPA with CPPA.
Term	Three years from the Effective Date, which will occur when the following conditions have been satisfied: 1. Each party has obtained its board of directors' approval. 2. NEPRA has issued the necessary consents to the Buyer to enter into this HOT. 3. PPA has been amended to incorporate the new gas pricing and terms.
Basis of Supply	As and when the Specified Gas is available; on best efforts basis.
Take & Pay Basis	The Buyer shall not be obligated to buy any fixed quantum of Specified Gas at any time. The Buyer shall buy the Specified Gas as and when it requires it.
Payment	The Seller shall submit an invoice at any time after expiry of the calendar month in which any amount of Specified Gas has been supplied. The Buyer shall pay such invoice within 30 days of receipt thereof.
Payment Security	The Buyer shall cause to be issued an SBLC by a reputable bank in Pakistan to secure the Gas Price for 60-days equivalent supply (i.e. 8MMSCFD x 60 x Gas Price applicable on the Effective Date).
Failure to Supply & LDs	The Seller shall indemnify the Buyer in case the Seller is unable to supply the Specified Gas following receipt of the Dispatch Instructions under the PPA. Such indemnification shall be in the form of PKR two million per each event of failure to supply Specified Gas.
Right of First Refusal	The Buyer shall have the right of first refusal in case the Seller finds a potential buyer which offers the Seller a better price. The Seller shall not commit to sell the Specified Gas to a third party if the Buyer is willing to match the price.



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PETROLEUM EXPLORATION (PVT) LTD.

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PAGE 2

	offered by such third party. The Seller shall give 30 days to consider such better offer from the third party and shall disclose the name of such party.
Discount Offer	The Seller shall have the discretion to offer a price discount at any time to ensure maximum sale of the Specified Gas.
Delivery Point	The Seller shall deliver the Specified Gas at the Buyer's powerhouse.
Pipeline	The Seller shall, at its own cost, lay the pipeline from its gas field to the Buyer's powerhouse, within 30 days from the Effective Date. The Seller shall be responsible for all consents and approvals including the right of way to construct, own and operate such pipeline.
Representations & Warranties	Each party represents and warrants that it has all the necessary approvals, consents and licenses (the "Consents") that it may require to enter into this HOT. The Seller has in particular represented that it has already obtained the Consents required by it under law to perform its obligations herein. if a party suffers any loss on account of breach of the aforesaid, the other party shall indemnify the first party for the loss suffered by such party on account of breach of representation.
Governing Law	This HOT shall be governed by the laws of Pakistan.
Dispute Resolution	In case of a dispute of any nature whatsoever, which cannot be amicably settled within 30 days, the courts at Islamabad shall have the exclusive jurisdiction to decide such dispute.
GSA	At the request of the Buyer, this document shall be converted into a gas-supply-agreement (GSA) with such details as are required for a transaction of this nature per the market norm and keeping in view the Buyer's PPA.



POWERGEN QADIRPUR LTD

2 | P A G E



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Annex-A

Gas Specifications:

- Heating Value = ± 572 BTU /SCF
- Moisture Content = < 7 Lbs / MMSCF
- Sp. Gravity = ± 0.7

Gas Composition: Component	Mol%
Carbon dioxide CO2	0.54
Nitrogen N2	43.86
Hydrogen Sulphide H2S	0
Methane C1	54.51
Ethane C2	0.70
Propane C3	0.18
n-Butane nC4	0.05
i-Butane iC4	0.05
n-Pentane nC5	0.03



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VERIFIED BY: [Signature]



16th Floor, The Harbor Front Building, J. 00 92 011 111 211 211
 HC#3, Marine Drive, Block-4, Clifton, T. 00 92 011 38297875-8-
 Karachi-75000, Pakistan. F. 00 92 011 38296666

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Schedule 3

CPPAG In-Principle Approval/No Objection to use of PEL Gas in Project



Central Power Purchasing Agency (Guarantee) Limited

A Company of Government of Pakistan



Office of Chief Executive Officer

No. CTO/DGMT-C/MT-R&G/EPQL/18060-63

Date: 17-10-2022

The Chief Executive Officer
 Engro Powergen Qadirpur Limited
 The Harbor Front Building, 16th Floor
 HC#3, Marine Drive, Block-4, Clifton, Karachi

226 MW CCPP – EPQL Qadirpur

Additional Gas Supply to

Subject: Engro Powergen Qadirpur Limited from Petroleum Exploration Private Limited (PEL)

Reference: EPQL No. Nil dated 29-09-2022

While appreciating EPQL's efforts to explore possibilities of arranging local gas options for its project, we take this opportunity to intimate that CPPA-G shall endorse any option of using local gas at the project for power generation purposes, as it is bound to reduce the pressure on national foreign exchange reserves.

However, if any change is required in the existing tariff of EPQL as a result of proposed use of gas from PEL, NEPRA shall have to be approached by EPQL with complete details and relevant comparative analysis for the purposes of Tariff Determination afresh on comingling principles. Moreover, the determination of gas price for aforesaid purpose, we understand, is the sole prerogative of OGRA, as such, requisite regulatory synchronization may also please be coordinated accordingly.


 Chief Technical Officer
 CPPA-G Islamabad

Copy to:

1. Chief Executive Officer, CPPA-G Islamabad.
2. Chief Financial Officer, CPPA-G Islamabad.
3. Chief Legal Officer, CPPA-G Islamabad.
- Master File.

Shaheen Plaza, Fazlul-Haq Road, Blue Area Islamabad
 ☎ +92 51 921 6954 ☎ +92 51 921 6949

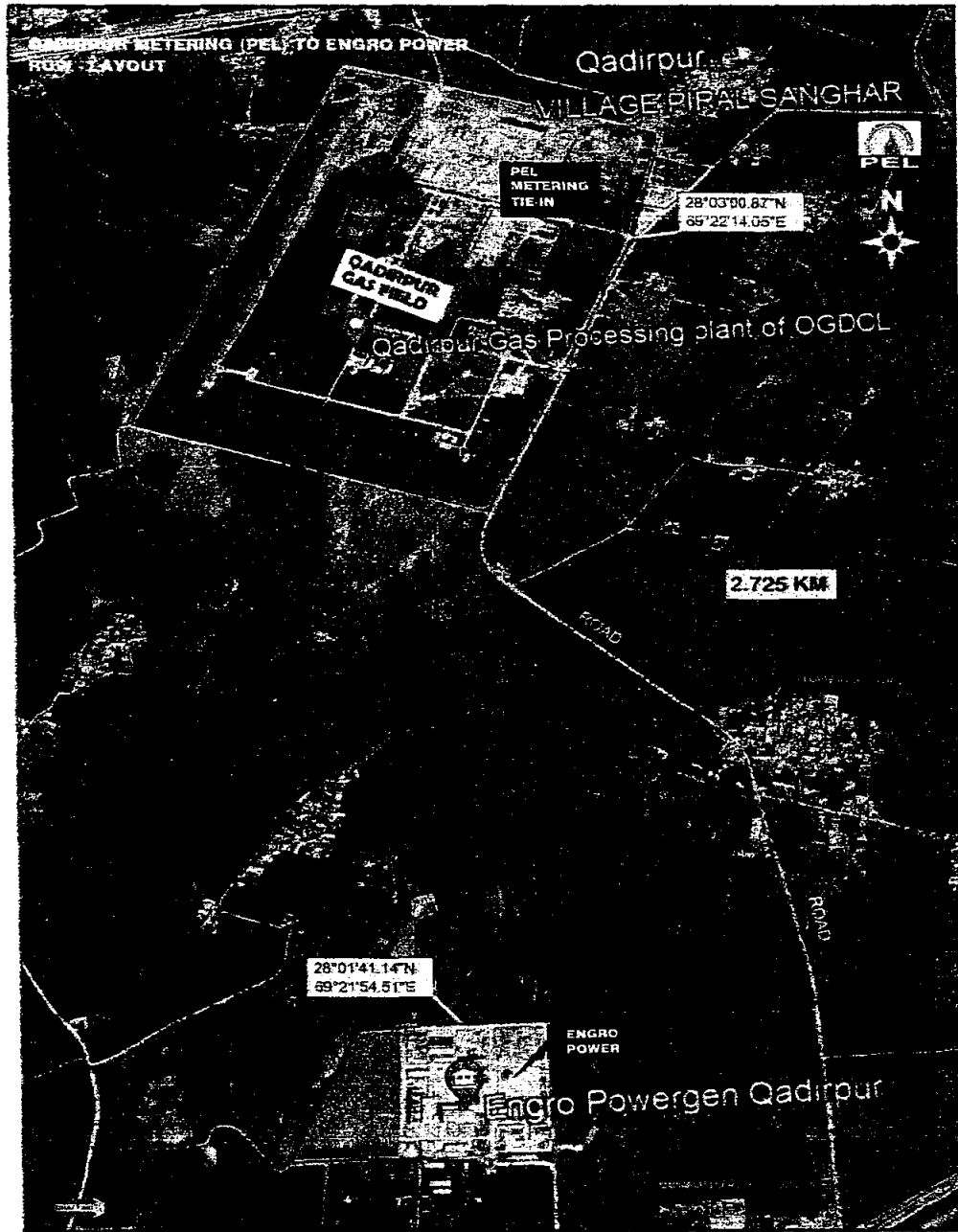


14th Floor, The Hubert Poon Building, J-10 55 St, 1114211, GHA
 -ONG, Wazirpur Drive, Block A, Doha, J-10 55 St, 16297875-84
 -Wazirpur, 15500, Pakistan F-10 55 St, 16293665

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SCHEDULE 4

PIPELINE LAYOUT FROM BADAR GAS FIELD TO EPQL POWER PLANT





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16th Floor, Harbor Front Building, HC #3, Marine Drive, Block 4, Clifton, Karachi-75200, Pakistan
T: 021 271 86297375-4
F: 021 271 86297375-4

Annex 1

EXTRACTS OF THE RESOLUTIONS PASSED BY THE BOARD OF DIRECTORS OF ENGRO POWERGEN QADIRPUR LIMITED ("COMPANY") THROUGH CIRCULATION AS ON 17th November, 2022

"UNANIMOUSLY RESOLVED that the Company be and is hereby authorized to file a petition for the modification of the fuel cost component for primary fuel, i.e. permeate gas, allowed by the National Electric Power Regulatory Authority in its decision in the matter of adjustment at Commercial Operations Stage Date regarding the Company dated 03.11.2010 bearing reference number NEPRA/R/TRF-72/EEL-2007/3542-3544, 01.04.2011 bearing reference number NEPRA/R/TRF-72/EEL-2007/2226-2228, 26.08.2011 bearing reference number NEPRA/R/TRF-72/EPQL-2007/7708-7710 and Corrigendum dated 14.05.2012 bearing reference number NEPRA/R/TRF-72/EEPL-2007/4377-4381, as amended and adjusted from time to time, and that such authorization includes any motions, petitions, modifications, review motions, or re-filings of fresh petitions by the Company (the **"Tariff Modification Petition"**).

FURTHER RESOLVED that the Chief Executive Officer and/or the Chief Financial Officer and/or their delegates, acting jointly or severally, be and are hereby authorized to represent the Company and appear before the National Electric Power Regulatory Authority and/or make any oral/written representations on behalf of the Company before the National Electric Power Regulatory Authority as needed; to sign various forms/documents; file the Tariff Modification Petition and all necessary documents in support thereof; amend or withdraw the petition, affidavits, power of attorney, petitions, deeds, certificates, or any other instruments or documents as may be deemed appropriate; pay the necessary fees; appoint/remove consultants or attorneys, represent the Company in person or through attorneys, advocates, or representatives in all negotiations, representations, hearings or meetings of any nature whatsoever with any entity (including but not limited to the National Electric Power Regulatory Authority); and to do all needful acts in order to complete all procedural and legal formalities incidental and ancillary thereto; and any and all actions of the authorized representative/nominated officers pursuant to, or in furtherance of the intent and purposes of, the foregoing resolution are hereby in all respects adopted, approved, confirmed and ratified as the valid and subsisting acts of the Company."

CERTIFICATION

Certified that the above resolutions were duly passed at a meeting of the Board of Directors of the Company at which the quorum of directors was present and was held on 17 November, 2022 at the registered office of the Company situated at 16th Floor, Harbor Front Building, HC #3, Marine Drive, Block 4, Clifton, Karachi, Pakistan.



12th Floor, The Habitat Front 8, Jhang Road, F-04/3, Phase 3, Block 4, D-11, F-11, Islamabad
Karachi Office: Pakistan
Tel: +92 (21) 35297855-84
Fax: +92 (21) 35293665

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FURTHER CERTIFIED that the said resolutions have not been rescinded and are in operation and that this is a true and correct extract and copy thereof.

On Behalf of the Board

Name
Company Secretary

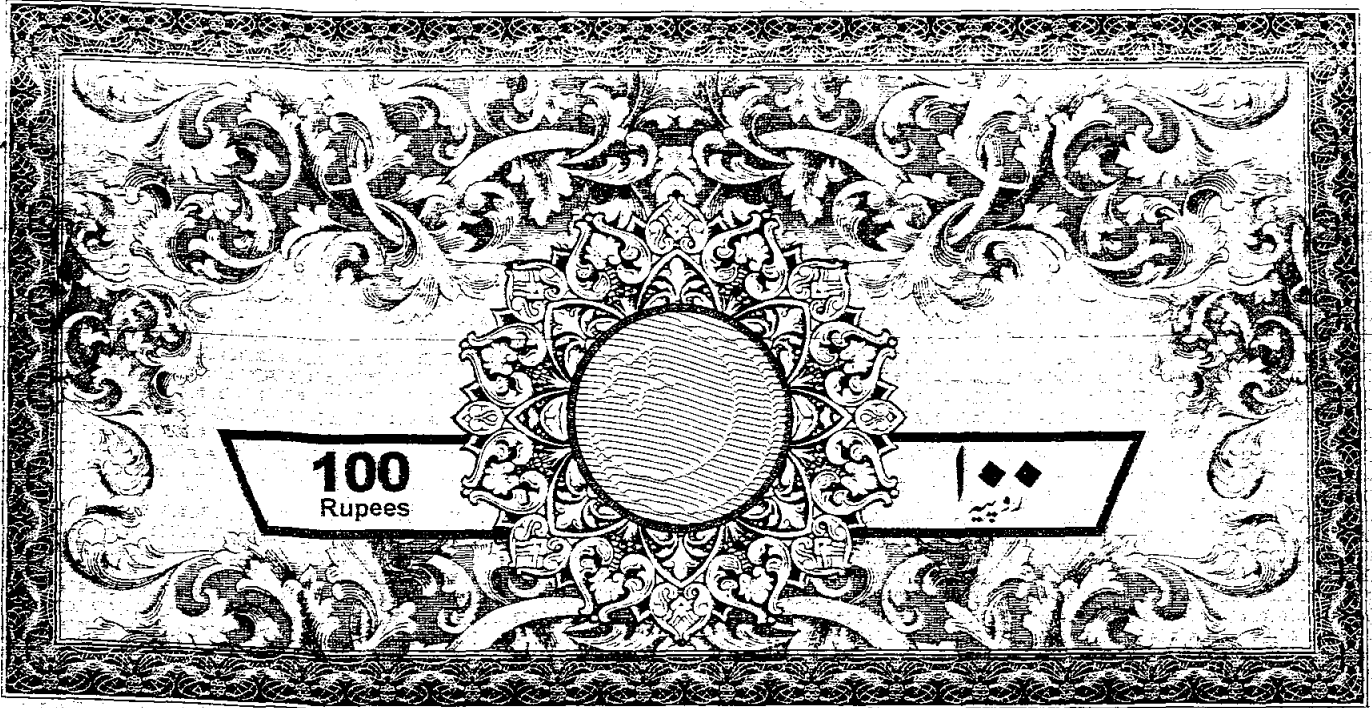
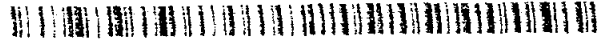


18th Floor, The Harbor Point Building, 17 00 00 01 111211 011
 4000, Marine Drive, Boston, Canton 1 617 921 1600 01 1600 01 1600 01 1600
 Karachi 75000, Pakistan 9 97 91 0 98000000

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Annex 2

ABL PAYORDER - NEPRA

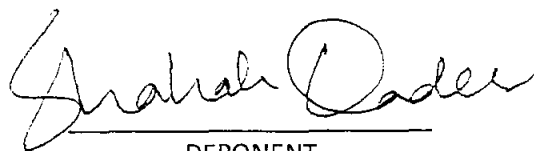


AFFIDAVIT

BEFORE THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

I, Shahab Qader, Chief Executive Officer of Engro Powergen Qadirpur Limited, being the duly authorized representative of Engro Powergen Qadirpur Limited, hereby solemnly affirm and declare that the contents of the accompanying petition/application dated 18th Nov,2022 including all supporting documents are true and correct to the best of my knowledge and belief and that nothing has been concealed.

I also affirm that all further documentation and information to be provided by me in connection with the accompanying petition shall be true to the best of my knowledge and belief.



DEPONENT



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Annex 3

Gen. Mgr. (Accounts) Power Building 1 01 02 01 111 011 011
Chf. Mgr. (Gen. Mgr. Secy) Tower 1 01 02 01 111 011 011
Asst. Mgr. (Gen. Mgr. Secy) Tower 1 01 02 01 111 011 011

Account Payee Only



0412 P.T.I.D.C HOUSE KARACHI

AEC No. **BBB-14313948**

Stationery/Ref No:

AEC-33314313948

On Demand Pay NATIONAL ELECTRIC POWER REGULATORY AUTHORITY A.C. ENGRO POWERGEN QADIRPUR LIMITED NTN# 2639742-7

ONE MILLION EIGHT HUNDRED AND SIXTY NINE THOUSAND FOUR

PKR 1,869,444.00

Rupees HUNDRED AND FORTY FOUR ONLY

ALLIED BANKER'S CHEQUE
(Payable at any branch in Pakistan)

Please do not accept handwritten / tampered instrument in any case.

28131

Authorized Signatory
IBS No.

Authorized Signatory
IBS No.

Please do not write below this line.

0412 P.T.I.D.C HOUSE KARACHI

Date:

11 NOV 2012

Instrument Type & No: AEC 33314313948
IBS No: 0010002209840013
Applicant Name: ENGRO POWERGEN QADIRPUR LTD
On Account Of: NEPRA PAYMENT
Instrument Amount: ***1,869,444.00
Commission/Charges: PKR0.00
Total Amount: ***1,869,444.00

0010002209840013

Applicant Name: ENGRO POWERGEN QADIRPUR LTD

On Account Of: NEPRA PAYMENT

Instrument Amount: ***1,869,444.00

Commission/Charges: PKR0.00

Total Amount: ***1,869,444.00

Debit Account No: 0010002209840013

Transaction Mode: ACCOUNT

FEE Amount: PKR0.00

Total Amount: ***1,869,444.00



engro powergen qadirpur

13th Floor, The Embassy Point Building
 H-04, Marine Drive, Block 4, Doha,
 Qatar P.O. Box 23303, Doha

G: 974 92 21 111211211
 F: 974 92 21 16297875-9
 E: 974 92 21 16290666

ANNEXURE 4

Calculations

a. Import Substitution

Gas Supply	Mmcfd	A	8	13
Heating value	btu/scf	B	572	572
Gas Supply	mmbtu/day	$C = A \times B$	4,576	7,436
Energy required per kwh	mmbtu	D	3412	3412
Plant Efficiency (Gas)		E	45.53%	45.53%
LHV-HHV Factor		1.10926234		
Power	MW	$F = C / (D/E \times 1.10926234) \times 1000 / 24$	23	37
Generation per annum	Gwh	$G = F \times 8760 / 1000$	201	327
RLNG Price OGRA determined Sep 2022	USD/mmbtu	H	15.7376	15.7376
Exchange rate (NPPMCL Sep 24, 2022)		I	228.2546	228.2546
Fuel Cost Component RLNG plants Sep 2022 (NPPMCL)	PKR/kwh	J	21.8315	21.8315
Forex Savings	USD Mn	$K = G \times J / I$	19	31

b. Revenue generation opportunity by the government

Gas Supply	Mmcfd		8	13
Price of PEL in USD		$O = 70\% \times H$	11.02	11.02
Royalty			12.5%	12.5%
Royalty	USD Mn	$P = C \times 365 \times O \times \text{Royalty}$	2	4

c. Displacement of RLNG and HSD in EPQL Plant

Gas Supply	Mmcfd		8	13
RLNG Substitution by PEL in EPQL	USD Mn	$L = C \times H \times 365 / 10^6$	26	43
EPQL HSD FCC	PKR / kwh	M	53	53
HSD Substitution by PEL in EPQL	USD Mn	$N = M \times G / I$	47	76



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Annexure - 5

VAKALATNAMA

We, **Engro Powergen Qadirpur Limited** (the "**Company**") hereby appoint and constitute jointly and severally all partners and associates working with RIAA Barker Gillette (formerly RIAALAW) including **MR. WASEE-UL-HASNAIN NAQVEE, MR. NADIR ALTAF, MR. AUN RAZA and MS. SANA K. TIRMIZEY** to appear and act for us as our advocates in connection with the filing, submission, processing and presentation of the Company's application dated 18th November, 2022 (along with all annexes and schedules) and any documents-in-support thereof, before the National Electric Power Regulatory Authority ("**NEPRA**" or "**Authority**") relating to the Company's tariff petition for modification of its fuel cost component for its primary fuel.

We also authorize the said advocates or any one of them to sign the necessary documentation, pay the necessary filing fees, appear and/or make any oral and/or written representations on behalf of the Company before NEPRA and undertake or do any other matters / acts necessary for the filing, submission, processing, completion and finalization of the application before NEPRA, or incidental thereto.

Signature:

For and on behalf of Engro Powergen Qadirpur Limited

Shahab Qader

Chief Executive Officer

Dated:

ACCEPTED

RIAA Barker Gillette

(Formerly RIAALAW)