GUL AHMED ELECTRIC LIMITED

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Phone +92 21 34540270-73 Ext. 112 Fax +92 21 34540274 Email: info@gulahmedelectric.com

Dated: 13th December 2017

THE REGISTRAR,
NATIONAL ELECTRICAL POWER REGULATORY AUTHORITY
NEPRA Tower, Attaturk Avenue (East)
G-5/1,
Islamabad

SUBJECT: **APPLICATION FOR COST PLUS TARIFF BEFORE NEPRA**

Dear Sir,

I, YOUSUF AZIZ, of Gul Ahmed Electric Limited (the **Company**), being the duly authorized representative of the Company by virtue of the resolution of the Board of Directors dated 11th December 2017, hereby submit the application for Cost Plus Tariff Determination, in terms of the Policy for Development of Renewable Energy for Power Generation 2006 read with the enabling provisions of the Regulation for Generation, Transmission and Distribution of Electric Power Act (XL of) 1997 (**NEPRA Act**) and the NEPRA (Tariff Standards and Procedure) Rules, 1998 (the **NEPRA Rules**), before the National Electric Power Regulatory Authority (the **Authority**) being responsible, *inter alia*, for determining tariffs and other terms and conditions for the supply of electricity by the Company.

I certify that the documents-in-support attached with this application have been prepared and submitted in conformity with the prevailing provisions of the NEPRA Act and the NEPRA Rules, and I undertake to abide by the terms and provisions of the above-said laws. 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.

A Pay Order number 03973184, issued by Meezan Bank, in the sum of PKR 612,128/- being the non-refundable application processing fee calculated in accordance with National Electric Power Regulatory Authority (Fees Pertaining to Tariff Standards and Procedure) Regulations, 2002, is also enclosed herewith.

I hereby further request the Authority to accede to the Company's request for approval of the application for Cost Plus Tariff Determination.

Respectfully submitted for and on behalf of:
GULAHMED ELECTRIC LIMITED

Gul Ahmed Electric Ltd. Karachi

....
MR. M. YOUSUF AZIZ
(AUTHORIZED REPRESENTATIVE)

For information &
— DRo/Reg-I
Copy to:
— SA(Coh)
— SA-I
— DG(M&E)
— Dir (Lic)
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— m/F

Registrar
Dy No. 11946
Dated 14-12-17

Dy. No. 9793
Date 15-12-17

TARIFF PETITION

GUL AHMED ELECTRIC LIMITED.

50 MW WIND POWER PROJECT

Before
The National Electric Power Regulatory Authority (NEPRA)

December 13, 2017

Gul Ahmed Electric Ltd. Karachi

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1. Petitioner's Information

1.1 PETITIONER

Name: Gul Ahmed Electric Limited ("GEL", the "Project Company" or the "Petitioner").

Address: 7th Floor, Al-Tijarah Centre, 32-1-A, Block 6, P.E.C.H.S, Main Sharae Faisal, Karachi.

Company Registration #: 0096868

1.2 PROJECT SPONSORS

Sponsor: Gul Ahmed Energy Limited ("GAEL").

1.3 REPRESENTATIVE OF THE PETITIONER

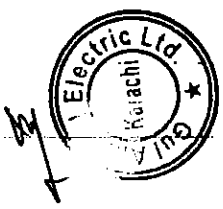
Executive Director: Ubaid Amanullah

1.4 PROJECT ADVISORS

Financial Advisors: Bridge Factor (Pvt) Ltd.

Technical Advisors: Renewable Resources (Pvt) Ltd.

Legal Council: Haidermota BNR & Company



2. Grounds for Petition

2.1 BASIS FOR PETITION

This Petition is made to the National Electric Power Regulatory Authority ("NEPRA") under the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of) 1997 (the "NEPRA Act") and the Tariff Standards and Procedure Rules, 1998 (the "NEPRA Rules") made under the NEPRA Act; and other applicable laws.

Under the NEPRA Act, NEPRA is responsible for determining tariffs, rates and other terms and conditions for the supply of electric power services by the generation, transmission and distribution companies and recommending them to the Federal Government for notification and therefore, in light of such authority, the Petitioner is hereby submitting this Petition for NEPRA's consideration.

2.2 ABOUT THE PETITIONER - BRIEF

The Project Company was incorporated on 23rd December 2015, to develop, own and operate an approximately 50 MW wind power project in Jhimpir, Thatta ("Project") pursuant to a Letter of Intent issued by the Energy Department, Government of Sindh ("EDGOS") vide its letter No. DAE/Wind/78/2015/23 dated 10th July 2015 ("LOI") (Annexure 1) which was issued to the parent company of the Project Company i.e. Gul Ahmed Energy Limited ("Sponsor").

Subsequent to the incorporation of the Project Company, the EDGOS by its letter dated 9th February 2015 recognized that the Project Company, and not the Sponsor, would undertake the Project.

The Project is to be developed under the guidelines of Policy for Development of Renewable Energy Projects, 2006 (the "RE Policy") issued by the Government of Pakistan.

2.3 PROCESS LEADING TO TARIFF PETITION

The following milestones have been achieved leading up to the submission of tariff petition.

- The land required for the Project has already been allotted by Government of Sindh (GOS) for a period of thirty (30) years through Land Allotment letter bearing Reference No: 01-65-2015/SO-VI/06 dated 14th January 2016 (Annexure 2).
- The Project Company completed the detailed technical feasibility study for the Project and submitted the same to Panel of Experts, EDGOS on 16th February 2016.
- The Project's technical consultants completed the initial environmental examination for the Project which was submitted to the Sindh Environmental Protection Agency on 10th February 2016 and approved by the Sindh Environmental Protection Agency on 8th April 2016 (Annexure 3).
- Grid Interconnection Study was conducted by NTDC and submitted by the project on 3rd June 2016 for approval.

- GIS approval and Power Evacuation Certificate (PEC) was issued to GEL on 1st December 2016 (Annexure 4).
- Request for issuance of Consent of the Power Acquisition Request (PAR) has been made to the Central Power Purchasing Agency (Guarantee) Limited ("Power Purchaser") on 2nd December 2016 (Annexure 5).
- Generation License (GL) application was submitted to NEPRA on 11th April 2017. NEPRA granted generation license to the Project on 1st August 2017 (Annexure 6).
- EPC and O&M Contracts for the Project has been executed (Annexure 7).
- The Feasibility Study was accorded approval by EDGOS Panel of Experts on 7th November 2017 (Annexure 8).
- Project debt funding (which is to account for 75% of the total project cost) has been arranged from a consortium of local and foreign banks (Annexure 9). The Sponsors of the Project will provide the remaining 25% of the project cost as in the form of equity investments.

All requisite information required by NEPRA for processing the Petition has been annexed herewith. GEL will be pleased to submit any further information as and when required by NEPRA in connection with the determination.

Accordingly, it is submitted that the requirements of the regulatory process for application of the tariff determination have been completed.

2.4 REQUEST FOR TARIFF DETERMINATION - SUBMISSION

In accordance with the requirements of the NEPRA Act, NEPRA Rules and the Policy for Development of Renewable Energy Project 2006 (RE Policy), Petitioner hereby submits this Petition for determination/approval of the Reference Tariff (Negotiated Tariff under Cost-Plus regime) along with adjustments, pass-through items, indexation mechanisms and other terms and conditions for supply of electric power service to CPPA (G) (the "Power Purchaser") from the Project.

Pursuant to the relevant provisions of the NEPRA Act, NEPRA Rules, the RE Policy 2006, GEL submits herewith before NEPRA, this Petition for approval of

- the Reference Tariff (Negotiated Tariff under Cost-Plus regime);
- the indexations, adjustments and escalations;
- adjustments at Commercial Operations Date ("COD") and
- other matters set out in this Tariff Petition, in each case, for the Project Company's power generation Project to be located at Jhimpir District Thatta, Sindh.

NEPRA (the Authority) is requested to process the Petition at the earliest, thereby enabling the Project Company to proceed further with the development and construction process.

Gul Ahmed Electric Ltd. Karachi

3. Executive Summary

3.1 BACKGROUND

Gul Ahmed Energy Limited (GAEL) is the sponsor of Gul Ahmed Electric Limited (GEL) a 50 MW Wind Power Plant in Jhimpir, Nooriabad, District Thatta, Sindh. The Project is being developed for a concession period of 25 years.

- Type of Project: Build, Own and Operate (BOO)
- Gross Capacity : 50 MW
- Capacity Factor: 37.5%
- Annual Energy Generation: 164.250 GWh
- Construction Period: 18 months
- Tariff: USD cents 7.2267/kWh*
- Power Purchaser: CPPA-G
- Wind Turbine Generators: GoldWind GW 121 – 2.5
- Land Area: 370 acres
- Exchange rate assumption: PKR 105/USD

**the requested levelized tariff is lower than the Benchmark Tariff on Local and Foreign financing mix of 50% each.*

3.2 PROJECT COST SUMMARY

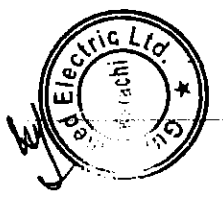
After thorough market research and analysis total project cost is estimated to be USD 86.96 million. The breakup of the same is presented below in USD millions.

- EPC Cost: 75.60
- Project Development Cost: 3.86
- Insurance During Construction: 0.50
- Financial Fees and Charges: 2.50
- Interest During Construction: 4.50

3.3 PROJECT FINANCING

The project is financed through 75% Debt and 25% Equity. The total Debt amounts to USD 65.22 million, whereas the total Equity is USD 21.74 million.

The Debt is financed through a mix of Local and Foreign Lenders with 50:50 ratio. UBL is acting as the lead financier in local financing and IFC has arranged the foreign financing. The financing terms are tabulated below for reference.



PROJECT FINANCING		
DESCRIPTION	PERCENTAGE	USD MILLION
Local Financing lead by [UBL – Commercial Facility]	50%	32.61
Foreign Financing from [IFC – Commercial Facility]	50%	32.61
Total Debt		65.22

FINANCING TERMS		
DESCRIPTION	LOCAL FINANCING	FOREIGN FINANCING
Loan Term	14.5 years	14.5 years
Debt Repayment	13 years	13 years
Mark-Up Rate	3-M KIBOR + 2.5%	3-M LIBOR + 4.5%

3.4 OPERATIONAL PHASE COSTS

The Project will have annual Operations and Maintenance cost of USD 1.9 million and annual Insurance costs of USD 0.3B million.

3.5 SUMMARY OF EPC SELECTION

Project Company carried out a competitive bidding process for selection of EPC contractor for the Project. For this purpose an RFP was issued to following EPC Contractors/WTG manufacturers:

- Vestas Denmark
- CSIC China
- HydroChina Corporation China
- Nordex Germany
- Descon Pakistan
- Orient Pakistan with Gamesa Spain

Bid clarification meetings were held with the bidders. Based on technical and financial evaluation, **Hydrochina Corporation** with **Goldwind WTG (GW 121-2.5)** was declared as the first preferred bidder. Accordingly an EPC contract has been executed with the preferred bidder.

3.6 PROJECT TASKS COMPLETED

The Project is ready for construction and has completed the following tasks:

- Letter of Intent
- Land Lease Signed
- Land Allotted
- Wind Mast Installed
- Topographical Study

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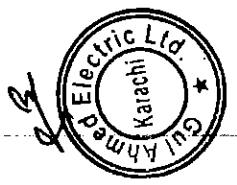
- Transportation Study
- Geo-technical Study
- Wind Resource Assessment Study
- Feasibility Study
- Grid Interconnection Study
- Initial Environment Assessment
- EPC and O&M Agreements Signed
- Term sheet from Project Lenders

The Project has been in development since the issuance of LOI in 10th July 2015 by EDGOS and all tasks and milestones had been completed to opt for Wind Upfront Tariff in 2016. This Project was one of the ten Projects with approved Interconnection Studies which were selected by Ministry of Water and Power, AEDB and EDGOS to be allowed the last Wind Upfront Tariff, however, at the last moment for unknown reasons, Central Power Purchase Agency ("CPPA-G") did not provide consent for power procurement due to which NEPRA returned our Tariff Petition filed prior to expiry of Wind Upfront Tariff.

The Company was advised by the concerned Authorities to await for a fresh Wind Upfront Tariff to be announced by NEPRA shortly. However, on 27th January 2017, NEPRA issued a Wind Benchmark Tariff Decision for bidding. Since that date, despite assurances that RFP shall be issued soon, no such RFP had been issued yet. However, a Review Petition was filed by EDGDS challenging the applicability of bidding for unsolicited Wind LOI holders and requested an Upfront Tariff. The Authority rejected the position of EDGOS in its decision on 30th May 2017 but stated in its decisions that there is no restriction on unsolicited projects to apply tariff under Tariff Standard and Procedure Rules, 1998. Hence, since no RFP has been issued to date, the Company has decided to submit this petition before the Authority to determine Reference Tariff for the Project under Cost-plus Tariff Regime.



4. The Project

4.1 PAKISTAN'S CURRENT ELECTRIC POWER SHORTAGE

Pakistan currently has around 25.5 GW of installed capacity fnr electricity generation. Conventional thermal plants (oil, natural gas, coal) account for 65.5% of Pakistan's capacity, with hydroelectricity making up 28%, Renewable Energy (Wind, Solar & Bagasse) 3.4% and Nuclear 3.1%.

Pakistan is moving ahead towards solving its energy crises. A major contributor to this solution is the injection of electricity through base load power plants i.e. LNG and Coal based generation. However, Pakistan still needs to generate electricity to meet future ever increasing demand due to expected increase in GDP growth rate and suppressed demand factor. Base load plants are generating electricity through imported fuels which increases the burden on the foreign exchange reserves. Therefore, it is imperative for Pakistan to look for indigenous/cheap energy resources for sustainable growth through self-reliance.

There should be a substantial portion of renewable energy in the overall energy mix of the country to optimize the basket price. Pakistan has abundant renewable resources, which should be utilized to provide affordable electric energy to its people.

4.2 WIND POWER PROJECTS – A NATURAL CHOICE

To ensure a sustainable energy future for Pakistan, it is necessary that the energy sector be accorded a high priority. It is considered that wind power generation could become a significant contributor to Pakistan's electricity supply in the near future. The development of wind generation projects supports the environmental objectives of the Government of Pakistan by:

- reducing dependence on fossil fuels for thermal power generation;
- increasing diversity in Pakistan's electricity generation mix;
- reducing greenhouse gas emissions through avoidance of thermal power generation; and
- helping in reduction of the exorbitant trade deficit.

Pakistan has a huge wind potential which can be effectively and efficiently utilized for the economical generation of power. The coastal belt of Pakistan is blessed with a wind corridor that is 60 km wide (Gharo - Kati Bandar) and 180 km long (up to Hyderabad). This corridor has potential of 50,000 MW of electricity generation through wind energy that is ready to be exploited. Currently fifteen (15) wind energy projects having a combined capacity of 788.5 MW are operational and 9 wind energy projects having a combined capacity of 445.8 MW are at different stages of construction.

The Petitioner is hopeful that the country will overcome the power shortfalls faced in recent years and achieve security of base load soon. It is pertinent to note that wind power generation becomes even more useful in cases where secure base load is available. The cheaper electricity offered by wind projects can be utilized as much as possible when available and demand in low wind period can be supplemented through base load plants.

Tariffs for all base load plants are split between the Capacity Purchase Price (CPP-fixed costs) and Energy Purchase Price (EPP-fuel costs). Most of the base load plants have an EPP component (excluding capacity charge) higher than the total wind tariff. The Power Purchaser (and as a result the consumers) can realize significant savings by replacing expensive base load plants with wind power generation in high wind periods. It is also important to highlight the fact that high wind periods in Pakistan coincide with the highest demand periods (summer months). The Petitioner firmly believes that advantages of having wind power in the mix (including cost saving in generation of electricity) cannot be undermined.

4.3 ABOUT THE SPONSORS – GUL AHMED ENERGY LIMITED

Gul Ahmed Energy Limited (The Project Sponsor) is the Sponsor of the Project Company with 100% shareholding in the Project Company. This is the second wind power project being set up by the Project Sponsor. The first being a 50 MW wind power project namely Gul Ahmed Wind Power Limited (GAWPL).

4.3.1 Gul Ahmed Energy Limited (GAEL):

Gul Ahmed Energy Limited (GAEL) is a 136 MW RFO based private power plant at Korangi Industrial Area of Karachi on a BOO basis. GAEL achieved COD in November 1997 and has successfully completed over 20 years of operation and has also timely paid off its entire debt on time. The major shareholder of GAEL is Gul Ahmed Energy Group.

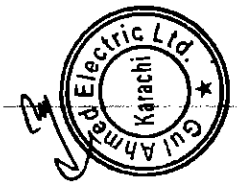
GUL AHMED ENERGY LIMITED - SHAREHOLDING	
SHAREHOLDERS	SHAREHOLDING PERCENTAGE
Gul Ahmed Energy Group	56.84%
Toyota Tsusho Corporation	18.63%
Tomen Power Singapore	12.77%
Habib Bank A.G. Zurich	10.84%
Wartsila	0.92%

4.3.2 Gul Ahmed Energy Group:

Gul Ahmed Energy Group has been engaged in a diversified portfolio of businesses including trade, manufacturing, banking, industries and investments since 1948 with Iqbal Alimohamed being largely involved in power and energy businesses of the group.

The Gul Ahmed Energy Group consists of about 50 individuals having a collective shareholding of 56.84% in GAEL.

The Gul Ahmed Energy Group intends to continue its growth initiatives in the power sector; it has created a special purpose company: Gul Ahmed Wind Power Limited (GAWPL) for developing a 50 MW wind generation farm in Jhimpir, which has achieved COD in 18th October 2016. In case of GAWPL, the Lead Foreign Lenders are IFC and PROPARCO while United Bank Limited is the Lead Local Lender. IFC also holds 9.9% Equity in GAWPL.



Apart from GAWPL and the Project Company, the Gul Ahmed Energy Group is also involved in the development of Gul Ahmed Solar Power Limited (50 MW Solar Project).

4.3.3 Toyota Tsusho Corporation (TTC) and Tomen Power Singapore (a wholly owned subsidiary of TTC):

Toyota Tsusho Corporation (TTC) and Tomen Power Singapore (a wholly owned subsidiary of TTC) established in 1948 is the sole general trading company in the Toyota Group. As part of the expansion plan in non-automotive businesses, Toyota Tsusho acquired Tomen trading company in 2006. Toyota Tsusho's business spans a wide range of fields including metals, machinery & electronics, automotive, food, consumer products and energy.

TTC - FINANCING HIGHLIHGTS (2017)	
DESCRIPTION	USD MILLIONS
Total Assets	37,444.68
Total Equity	10,876.92
Gross Profit	5,074.41

4.3.4 Habib Bank A.G. Zurich

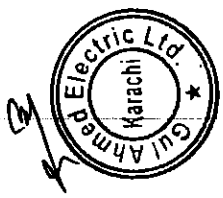
Habib Bank AG Zurich (HBZ) was established on 25th August 1967 in Switzerland. Based on a solid foundation of banking tradition that spans several generations, the Bank began its operation from 1 Todistrasse, Zurich.

Traditional banking values set in the context of international banking has determined HBZ's corporate philosophy - "Service with Security" - for over 50 years in operation.

Providing corporate, personal, private, and correspondent banking products, HBZ offer highly personalized service through our international network of branches, subsidiaries and affiliates. HBZ, a technology pioneer and leader in the banking sector offers a wide range of financial products and services complemented by innovative delivery channels.

"THE BANKER" Magazine (July 2016 issue) ranked HBZ as the "4th Most Sound Bank" in Switzerland and as the "204th Soundest Bank" in the world.

HBZ - FINANCING HIGHLIHGTS (2016)	
DESCRIPTION	USD MILLIONS
Total Assets	11,555
Total Equity	1,057
Gross Profit	93



4.3.5 WARTSILA:

Wärtsilä is a global leader in advanced technologies and complete lifecycle solutions for the marine and energy markets. By emphasizing sustainable innovation and total efficiency, Wärtsilä maximizes the environmental and economic performance of the vessels and power plants of its customers. In 2016, Wärtsilä's net sales totaled EUR 4.8 billion with approximately 18,000 employees. The company has operations in over 200 locations in more than 70 countries around the world. Wärtsilä is listed on Nasdaq Helsinki.

WARTSILA - FINANCING HIGHLIHGTS (2016)	
DESCRIPTION	USD MILLIONS
Net Sales	5,661
Total Assets	6,357
Total Equity	2,698
Gross Profit	565

4.4 ABOUT THE PROJECT

The 50 MW (gross) Wind Project is located at Jhimpir, District Thatta, Sindh. The development of the Project is being undertaken on a Build-Own and Operate (BOO) basis by GEL which is owned 100% by Gul Ahmed Energy Limited.

A professional team has been appointed to assist in the implementation of the Project. Bridge Factor has been appointed as Transaction Advisor, whereas a Renewable Resources (RE2) is selected as Technical Advisor and Haidermota BNR is acting as Legal Advisor for smooth and efficient execution of the Project.

4.5 PROJECT LOCATION

The site for the implementation of the project has been selected considering

- location in the wind corridor,
- wind conditions at the site,
- topographic conditions,
- site accessibility, and
- location of the grid with reference to the site for interconnection.

The Site is located in Jhimpir, District Thatta, Sindh, which is one of the most promising areas where wind power projects can be viably installed. The Project's wind farm site is located 145 km from Port Qasim Karachi in the East direction with easy road access. Nooriabad Industrial Estate (situated on the M9 motorway connecting Karachi and Hyderabad) is 09 Km from the Wind Farm.

The major track from Karachi to Nooriabad is via the Karachi-Hyderabad Motorway, and another access to the Project site is through Jhimpir. When travelling via the Karachi-Hyderabad Motorway the access from Nooriabad to the site is a single track which turns toward the site.

Gul Ahmed Electric Ltd. Karachi

However, the terrain is flat and long and heavy vehicles can easily navigate through this road. There are number of neighboring wind farms in the surrounding area of Jhimpir. The proposed site is located about 145 km from Port Qasim Karachi.

The Project site is exposed to strong winds; wind data analysis of the area suggests that 80% wind blows from the south west direction. The site is easily accessible through metaled roads. The terrain at the site and surrounding area has elevations varying between 127m to l 77m.

The coordinates of Wind farm are given in Table below:

SITE COORDINATES		
	LATITUDE	LONGITUDE
1	25º2.603N	67º 40.730E
2	25º 2.662N	67º 40.794E
3	25º 58.912N	67º 44.876E
4	25º 58.852N	67º 44.818E

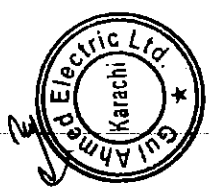
4.6 GRID CONNECTIVITY

The Project would be connected by a double circuit of 132kV looping in-out with a sub cluster also connecting nearby WPPs to Jhimpir New 132 kV collector substation.

4.7 ANNUAL ENERGY PRODUCTION

Annual Energy Production of 164.250 GWh has been estimated for the project. The table below shows key details relating to power generation from the project.

ENERGY PRODUCTION	
Total Installed Gross ISO Capacity of the Generation Facility - MW	50 MW
Annual Energy Generation (25 year equivalent Net AEP) - kWh	164.25 GWh
Net Capacity Factor	37.5%



5. EPC – Process & Selection

5.1 WTG TECHNOLOGY & EPC SELECTION

After award of LOI, the Project Company carried out a competitive bidding process in order to select EPC and WTG manufacturers for the Project by circulating RFPs to the EPC contractors and WTG manufacturers working in Pakistan for awarding the turnkey EPC contracts for the development of the Project. For this purpose an RFP was issued to following.

- Vestas Denmark
- CSIC China
- HydroChina Corporation
- Nordex Germany
- Descon Pakistan
- Orient Pakistan

Bid clarification meetings were held with the bidders.

Two (02) envelope bidding procedure was adopted, whereby technical and financial bids were submitted in two separate envelopes. Technical bids were evaluated as per pre-defined criteria, and bidders qualifying technical evaluation were then evaluated on the basis of financial bids.

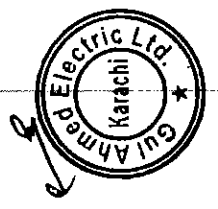
Following criteria was provided in the Invitation to bid for tender evaluation:

- capability (including experience) of the Bidder;
- completeness of the Bid;
- compliance with the Tender Documents;
- prices and economic performance;
- risk coverage: liquidated damages, availability guarantee, bank guarantee, total liability, etc;
- construction period: completion of the works in the shortest possible time;
- technical performance: availability, efficiency, track record, quality assurance, etc;
- quality of offered equipment and reputation of proposed vendors operational range;
- environmental impact; and
- adequacy and robustness of proposed operation and maintenance regime.

Based on combined technical and financial evaluation, HydroChina Corporation with Goldwind WTGs was declared as the first preferred bidder.

As explained earlier the Company completed all other requirements to opt for the then available upfront tariff, however, despite the best efforts put in by the Company, grant of upfront tariff could not be achieved.

After lapse of the Upfront Tariff, NEPRA issued a Benchmark Tariff for bidding in January 2017, since then no Wind RFP has yet been issued by the relevant agencies. Based on the decision of the Authority on Motion



for Leave for Review of EDGOS, the Company decided to opt for Cost Plus Tariff regime and re-negotiated the EPC terms with the earlier selected EPC contractor.

Accordingly, based on due diligence and following a negotiations process with the preferred bidder, the Company signed EPC contract with "**HydroChina Corporation**" and "**Goldwind WTG GW 121-2.5**" as the technology for its Project with a fixed price and fixed Commercial Operations Date.

Since the Company has already declared preferred bidder for singing of EPC contract, therefore, NEPRA (Selection of Engineering, Procurement and Construction Contractor by Independent Power Producers) Guidelines, 2017, are not applicable to the instant case.

5.2 GOLDWIND – THE WTG MANUFACTURER

Goldwind is an international, multi-faceted wind power company based in Beijing, China and has now expanded across six continents, preserving blue skies and white clouds for producing clean energy for future generations around the globe

With strong international research and development capabilities and an extensive experience of more than 27 years in wind farm development, Goldwind has become a global leader in manufacturing wind turbine generators (WTGs) and providing comprehensive wind power solutions. Goldwind's current product portfolio includes turbines with rated capacities of 1.5 MW to 2.5 MW. Additionally, Goldwind offers support services that cover everything from development assistance to operations and maintenance

Goldwind is the largest WTG manufacturer with more than 31 Gigawatts (GW) of installed capacity and more than 22,000 installed WTG units worldwide. The 2.5 MW platform selected for the project has more than 1,698 installed units in the world.

Goldwind continues to lead the global wind industry with mature manufacturing capabilities and innovative product lines.

The specifications of 2.5 MW GW 121 ·2.5 turbine are as follows:

GOLDWIND GW 121-2.5 SPECS

	DESCRIPTION	SPECS.
1	Wind Turbine Type, Make & Model	GW 121-2.5
2	Installed Capacity of Wind Farm (MW)	50 MW
3	Number of Wind Turbine Units/Size of each Unit (KW)	20 x 2.5 MW
4	Number of blades	3
5	Rotor diameter	121m
6	Hub Height	90m
7	Generator Voltage	690 V
8	Cut-in wind speed	3 m/s
9	Cut-out wind speed	22 m/s

	DESCRIPTION	SPECS.
10	Extreme wind speed	52.5 m/s

5.3 THE EPC CONTRACTOR - HYDROCHINA CORPORATION

HydroChina Corporation, is part of Power China group one of the largest groups in China with total revenue of approx. US$ 50 billion and total assets of over US$ 77 billion. Power China perform more than 1,900 Projects in 116 countries.

The company provides technical services in the field of hydropower, water resources development and wind power development in China, including planning of river basins, reconnaissance, design, consultancy, construction supervision, appraisal, evaluation, safety appraisal, check and acceptance, construction, project management and EPC contracting for hydropower and new energy development, and development, investment, operation and management of hydropower and new energy projects as well. The company was founded in 2002 and is headquartered in Beijing, China.

In Pakistan HydroChina Corporation has already conducted EPC works since 2011 and has completed EPC contracts for 280 MWs and is executing EPC contracts for another 300 MWs.

6. Project Cost

The Project Cost is based on the firm EPC Contract comprising of the Offshore Contract and the Onshore Contract. The reference exchange rate used to convert the PKR denominated costs into United States Dollars is US $ 1 = PKR 105.

A summary of the Project Cost is given below:

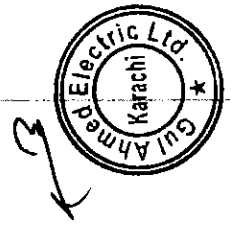
PROJECT COST		
	DESCRIPTION	USD MILLION
1	EPC Cost	75.60
2	Project Development Cost	3.86
4	Insurance during Construction	0.50
5	Financial Fee and Charges	2.50
6	Interest during Construction	4.50
	Total Project Cost	**86.96**

6.1 EPC COST

The scope of work to be carried out by the EPC contractor has been split into two parts, namely, onshore works and offshore works; where offshore works primarily relate to procurement and supply of electrical and mechanical equipment outside Pakistan and onshore works comprise of civil works, erection, commissioning, testing, etc.

Total EPC cost for the project is US $ 75.60 Million. As identified above, GEL adopted an effective and efficient bidding process for procuring the services of EPC Contractor at the most competitive prices. Bidding process allows each bidder to submit its own project layout and design, based on the project topography, geology, and other basic information combined with site visits, so as to provide the most optimized and effective technical scheme for construction and implementation of the project. The bidders submitted different technical schemes and the most robust and cost effective solution was selected through the bidding process. GEL believes that the price as contracted with the EPC Contractor is reasonable under the prevailing market conditions.

EPC COST		
	DESCRIPTION	USD MILLION
1	Onshore EPC Cost	64.50
2	Offshore EPC Cost	11.10
	Total EPC	75.60



6.2 PROJECT DEVELOPMENT COSTS

This head includes the cost for development of Project and Land, it includes all costs, fees and expenses incurred or to be incurred for such purpose. A total of US$ 3.86 million has been estimated under this head. These costs include costs of:

- Feasibility study costs including cost for Topographical survey of land, Geological and geotechnical study, Project layout study, and electrical study; and Transportation study etc.
- Costs related to the performance guarantee to be furnished to EDGOS / AEDB;
- Costs related to the Power Purchaser letter of credit to be furnished to the Power Purchaser pursuant to the provisions of the EPA;
- Various regulatory fees to be paid to NEPRA;
- Costs incurred during Project Company formation;
- Project Company staff salaries, allowances and other benefits;
- Project Company head office - development and running expenses during construction period;
- Travelling costs of Project Company staff for arrangement of financing agreements;
- Cost of security arrangement for the Project;
- Costs relating to various permits for the Project; and
- Project advisors, including cost of Local and Foreign Financial Advisors, Insurance Advisor, Audit and Tax Advisors, Security Advisors, Carbon Credit Advisors etc. and their travelling cost related to financial close.

6.3 DUTIES AND TAXES

Duties and Taxes of non-refundable nature shall be adjusted at Commercial Operations Date, based on the actual cost incurred for which the Project Company shall submit documentary evidence to the satisfaction of the Authority.

6.4 INSURANCE DURING CONSTRUCTION

Insurance during Construction cost covers the insurance cost of the Project's assets during the construction period. Authority is hereby requested to allow Insurance during Construction at USD 0.50 million, as is allowed in case of other wind power projects.

The Project, in view of the practices set by other IPPs in Pakistan and in accordance with the requirements typically set out by the Lenders funding the Project, intends to procure the following insurances during the construction phase of the Project:

- Construction All Risk Insurances (CAR);
- CAR Delay in Start-up Insurance;
- Terrorism Insurance;
- Marine and Inland Transit Insurance;
- Marine - Delay-In Startup Insurances; and

- Comprehensive General Liability.

6.5 FINANCIAL FEES AND CHARGES

Financial Fee & Charges include costs related to Debt Financing of the project. Such costs include fees and charges related to lenders up-front fee, lenders advisors & agents charges, commitment fee, management fee, charges related to various letters of credit to be established in favor of various contracting parties, fees payable and stamp duty applicable on the financing documents, agency fee, security trustee fee, L/C commitment fee/charges for EPC, commitment fee and other financing fees cost and charges.

The financial charges requested as part of the Project Cost i.e. USD 2.50 million, based on discussions held with the financial institutions and their experience regarding costs incurred on projects of such stature. Keeping in view the deteriorating country risk profile of the country and prevailing circular debt issue, higher financing cost is required to be incurred for obtaining financing for the project.

Since foreign financing with IFC is involved, there will not be requirement of opening LC in favor of EPC contractor. However, in case the Company is required to provide LC confirmation cost for base equity LC and other LC's related to securing the sponsors obligations under the financing agreements, than such costs shall be claimed at true-up on the basis of actual cost incurred.

6.6 INTEREST DURING CONSTRUCTION

The Interest during Construction ("IDC") has been calculated on the basis of 18 months construction period at USD 4.50 Million on the terms offered by financial institutions and banks to the Project at 3-month KIBOR plus a spread of 2.50% for local financing and at 3-month LIBOR plus a spread of 4.50% for foreign loan. Actual IDC, however, shall be subject to change depending on the fluctuations in base rate, funding requirement (draw-downs) of the Project during the construction period, changes in Project Cost including changes due to Taxes and Duties, and variations in PKR / USD exchange rate. Construction period assumed for IDC calculation is 18 months.

The spreads are considered to be reasonable given:

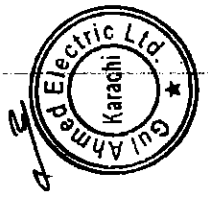
- Tenure of the Loan has increased from 12 years to 14.5 years. In the past for 12 year funding the spread was 4.50% - 5%.
- Pakistan's balance of payment situation has deteriorated significantly during the past year which may cause a lowering of our Credit Rating.

6.7 RETURN ON EQUITY (ROE), ROE DURING CONSTRUCTION

The Return on Equity ("ROE") and Return on Equity during Construction ("ROEDC") have been estimated separately and the same are provided under Section 9.

Project Company hereby requests:

- ROE of 15% (IRR based) return on invested equity net of withholding tax.



- ROEDC at a rate of 15% over the remaining life of the Project.

It is pertinent to highlight that the withholding tax component has not been identified as a separate line item in the tariff as the same is assumed to be paid on all equity components i.e. ROE and ROE-DC, at actual as a pass-through item under the tariff.

Gul Ahmed Electric Ltd. Karachi

7. Financing Arrangement

7.1 PROJECT FINANCING

The Project Cost is envisaged to be funded on the basis of a Debt: Equity ratio of 75:25, however, this shall be firmed up once the financing documents for debt financing have been executed prior to financial close. For the purpose of this Petition, a debt: equity ratio of 75:25 has been assumed, thereby resulting in the following debt and equity injections for the Project:

FINANCING SUMMARY

	DESCRIPTION	USD MILLION
1	Debt	65.22
2	Equity	21.74
	Total Project Cost	86.96

Key terms and condition of financing are provided in the table below:

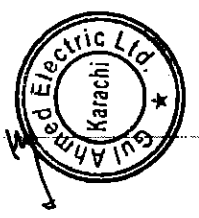
FINANCING TERMS

	DESCRIPTION	LOCAL FINANCING	FOREIGN FINANCING
1	Base Rate	3-M KIBOR (6.0%)	3-M LIBOR (0.6%)
2	Spread	2.50%	4.50%
3	Total Rate	8.50%	5.10%
4	Repayment period	13 years	13 years
5	Repayment basis	Quarterly	Quarterly

Sponsors are planning to inject 20% equity into the Project. The financing structure of 75:25 debt: equity might change later on based on mutual arrangement between Banks and Sponsors.

7.2 CARBON CREDITS

Wind Power is a clean form of energy and will reduce CO^2 emission. GEL intends to register for CDM emission reduction program. In case any income is generated from CDM, the same shall be shared in accordance GoPs prevailing policy.



8. Operations Cost

The operational cost of the Project comprises of the operations and maintenance cost, and the cost of the operational period insurances to be taken out by the Project Company.

8.1 O&M COSTS

This component caters for the cost of services rendered by the O&M operator that are dependent on the operation of the Project thereby determinable on a kWh basis. This component also includes costs expected to be incurred by the project locally; these include costs associated with local staff, administrative expenses, corporate fees, audit fees, advisory fees etc. This component also includes cost associated with replacement of parts necessitated due to regular operation / normal wear and tear. The O&M cost of USD 1.90 million per annum is assumed to by the Project Company to be incurred.

The O&M cost will be incurred in local as well as foreign currency – percentage of local: foreign components is specified below along with indexations applicable on the same:

O&M COSTS			
	DESCRIPTION	PERCENTAGE	INDEXATION
1	Local	50%	Pakistan CPI (General)
2	Foreign	50%	US CPI (All Urban Consumers) PKR / USD Indexation

8.2 INSURANCE COST

The insurance cost consists of operations all risk insurance for the project, as well as business-interruption insurance; these are standard insurances required by all lenders' and also set out under the EPA.

Aforementioned insurances are required to be maintained throughout the life of the Project. Since the Pakistan Insurance/Reinsurance industry does not have sufficient capacity and expertise to manage such huge risks entirely, therefore this risk is required to be insured/reinsured internationally. The risks' to be covered through insurance will include machinery breakdown, natural calamities (like earthquake, floods, etc.), sabotage and consequential business interruption, etc. The annual Insurance Cost is USD 0.38 million per annum.

Gul Ahmed Electric Ltd. Karachi

9. Reference Tariff

As the Project is 75% debt funded with loan tenure of 13 years for repayment, this means that there will be higher debt service cost requirements in the first 13 years of the Project. In the last 12 years of the Project, the tariff will be decreased due to no debt service related costs.

The proposed tariff is for the life of the Project i.e. term of the EPA, to be signed with the Purchaser, which is 25 years from COD. The tariff is divided into two (02) bands i.e. year 1 – 13 and year 14 – 25 to cover the variations due to the debt repayment period.

A summarized Reference Generation Tariff table setting out the two bands is provided below:

REFERNCE TARIFF				
	DESCRIPTION		YEAR 1-13	YEAR 14-25
			PKR/kWh	
1	O&M		1.2146	1.2146
2	Insurance		0.2416	0.2416
3	ROE		2.0847	2.0847
4	ROEDC		0.2373	0.2373
5	Debt Servicing	Local	2.6649	-
		Foreign	2.2033	-
		Total	**8.6465**	**3.7783**

Gul Ahmed Electric Ltd. Karachi

9.1 REFERENCE GENERATION TARIFF

Year	O&M	Insurance	ROE	ROEDC	Local Financing		Foreign Loan		Tariff	
					Principal	Mark-up	Principal	Mark-up		
	Rs./kWh								Rs./kWh	US ¢/kWh
1	1.2146	0.2416	2.0847	0.2373	0.9218	1.7431	1.1622	1.0412	8.6465	8.2348
2	1.2146	0.2416	2.0847	0.2373	1.0027	1.6622	1.2226	0.9808	8.6465	8.2348
3	1.2146	0.2416	2.0847	0.2373	1.0907	1.5742	1.2861	0.9172	8.6465	8.2348
4	1.2146	0.2416	2.0847	0.2373	1.1864	1.4785	1.3530	0.8504	8.6465	8.2348
5	1.2146	0.2416	2.0847	0.2373	1.2905	1.3744	1.4233	0.7800	8.6465	8.2348
6	1.2146	0.2416	2.0847	0.2373	1.4037	1.2612	1.4973	0.7061	8.6465	8.2348
7	1.2146	0.2416	2.0847	0.2373	1.5269	1.1380	1.5751	0.6282	8.6465	8.2348
8	1.2146	0.2416	2.0847	0.2373	1.6608	1.0041	1.6570	0.5463	8.6465	8.2348
9	1.2146	0.2416	2.0847	0.2373	1.8066	0.8583	1.7432	0.4602	8.6465	8.2348
10	1.2146	0.2416	2.0847	0.2373	1.9651	0.6998	1.8338	0.3696	8.6465	8.2348
11	1.2146	0.2416	2.0847	0.2373	2.1375	0.5274	1.9291	0.2743	8.6465	8.2348
12	1.2146	0.2416	2.0847	0.2373	2.3251	0.3398	2.0294	0.1740	8.6465	8.2348
13	1.2146	0.2416	2.0847	0.2373	2.5291	0.1358	2.1349	0.0685	8.6465	8.2348
14	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
15	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
16	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
17	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
18	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
19	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
20	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
21	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
22	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
23	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
24	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
25	1.2146	0.2416	2.0847	0.2373	0.0000	0.0000	0.0000	0.0000	3.7783	3.5984
Levelized Tariff									**7.5880**	**7.2267**

**the requested levelized tariff is lower than the Benchmark Tariff on Local and Foreign financing mix of 50% each.*

Gul Ahmed Electric Ltd. Karachi

9.2 REFERENCE DEBT SERVICING SCHEDULE – LOCAL FINANCING

Repayment Period	Principal Repayment - US$	Principal Tariff Component (Rs/kWh)	Interest - US$	Interest - Tariff Component (Rs/kWh)	Installments US$	Installment - Tariff Component (Rs/kWh)
1	[illegible]	0.2232	[illegible]	0.4430	[illegible]	0.6662
2	[illegible]	0.2280	[illegible]	0.4383	[illegible]	0.6662
3	[illegible]	0.2328	[illegible]	0.4334	[illegible]	0.6662
4	[illegible]	0.2378	[illegible]	0.4285	[illegible]	0.6662
5	[illegible]	0.2428	[illegible]	0.4234	[illegible]	0.6662
6	[illegible]	0.2480	[illegible]	0.4182	[illegible]	0.6662
7	[illegible]	0.2532	[illegible]	0.4130	[illegible]	0.6662
8	[illegible]	0.2586	[illegible]	0.4076	[illegible]	0.6662
9	[illegible]	0.2641	[illegible]	0.4021	[illegible]	0.6662
10	[illegible]	0.2697	[illegible]	0.3965	[illegible]	0.6662
11	[illegible]	0.2755	[illegible]	0.3908	[illegible]	0.6662
12	[illegible]	0.2813	[illegible]	0.3849	[illegible]	0.6662
13	[illegible]	0.2873	[illegible]	0.3789	[illegible]	0.6662
14	[illegible]	0.2934	[illegible]	0.3728	[illegible]	0.6662
15	[illegible]	0.2996	[illegible]	0.3666	[illegible]	0.6662
16	[illegible]	0.3060	[illegible]	0.3602	[illegible]	0.6662
17	[illegible]	0.3125	[illegible]	0.3537	[illegible]	0.6662
18	[illegible]	0.3192	[illegible]	0.3471	[illegible]	0.6662
19	[illegible]	0.3259	[illegible]	0.3403	[illegible]	0.6662
20	[illegible]	0.3329	[illegible]	0.3334	[illegible]	0.6662
21	[illegible]	0.3399	[illegible]	0.3263	[illegible]	0.6662
22	[illegible]	0.3472	[illegible]	0.3191	[illegible]	8.6662
23	[illegible]	0.3545	[illegible]	0.3117	[illegible]	8.6662
24	[illegible]	0.3621	[illegible]	0.3042	[illegible]	0.6662
25	[illegible]	0.3698	[illegible]	0.2965	[illegible]	0.6662
26	[illegible]	0.3776	[illegible]	0.2886	[illegible]	0.6662
27	[illegible]	0.3856	[illegible]	0.2806	[illegible]	0.6662
28	[illegible]	0.3938	[illegible]	8.2724	[illegible]	0.6662
29	[illegible]	0.4022	[illegible]	0.2640	[illegible]	0.6662
30	[illegible]	0.4108	[illegible]	0.2555	[illegible]	0.6662
31	[illegible]	0.4195	[illegible]	0.2467	[illegible]	0.6662
32	[illegible]	0.4284	[illegible]	0.2378	[illegible]	0.6662
33	[illegible]	0.4375	[illegible]	0.2287	[illegible]	0.6662
34	[illegible]	0.4468	[illegible]	0.2194	[illegible]	0.6662
35	[illegible]	0.4563	[illegible]	0.2099	[illegible]	8.6662
36	[illegible]	0.4660	[illegible]	0.2002	[illegible]	0.6662
37	[illegible]	0.4759	[illegible]	0.1903	[illegible]	0.6662
38	[illegible]	0.4860	[illegible]	0.1802	[illegible]	8.6662
39	[illegible]	0.4963	[illegible]	0.1699	[illegible]	0.6662
40	[illegible]	0.5069	[illegible]	0.1593	[illegible]	0.6662
41	[illegible]	0.5177	[illegible]	0.1486	[illegible]	0.6662
42	[illegible]	0.5287	[illegible]	0.1376	[illegible]	0.6662
43	[illegible]	0.5399	[illegible]	0.1263	[illegible]	0.6662
44	[illegible]	0.5514	[illegible]	0.1149	[illegible]	0.6662
45	[illegible]	0.5631	[illegible]	0.1032	[illegible]	0.6662
46	[illegible]	0.5750	[illegible]	0.0912	[illegible]	0.6662
47	[illegible]	0.5873	[illegible]	0.0790	[illegible]	0.6662
48	[illegible]	0.5997	[illegible]	0.0665	[illegible]	0.6662
49	[illegible]	0.6125	[illegible]	0.0537	[illegible]	0.6662
50	[illegible]	0.6255	[illegible]	0.0407	[illegible]	0.6662
51	[illegible]	0.6388	[illegible]	0.0274	[illegible]	0.6662
52	[illegible]	0.6524	[illegible]	0.0139	[illegible]	0.6662

Gul Ahmed Electric Ltd. Karachi

9.4 REFERENCE DEBT SERVICING SCHEDULE – FOREIGN FINANCING

Repayment Period	Principal Repayment - US$	Principal - Tariff Component (Rs/kWh)	Interest - US$	Interest - Tariff Component (Rs/kWh)	Installments US$	Installment - Tariff Component (Rs/kWh)
1	[illegible]	0.2850	[illegible]	0.2658	[illegible]	0.5508
2	[illegible]	0.2887	[illegible]	0.2622	[illegible]	0.5508
3	[illegible]	0.2924	[illegible]	0.2585	[illegible]	0.5508
4	[illegible]	0.2961	[illegible]	0.2548	[illegible]	0.5508
5	[illegible]	0.2999	[illegible]	0.2510	[illegible]	0.5508
6	[illegible]	0.3037	[illegible]	0.2472	[illegible]	0.5508
7	[illegible]	0.3076	[illegible]	0.2433	[illegible]	0.5508
8	[illegible]	0.3115	[illegible]	0.2394	[illegible]	0.5508
9	[illegible]	0.3154	[illegible]	0.2354	[illegible]	0.5508
10	[illegible]	0.3195	[illegible]	0.2314	[illegible]	0.5508
11	[illegible]	0.3235	[illegible]	0.2273	[illegible]	0.5508
12	[illegible]	0.3277	[illegible]	0.2232	[illegible]	0.5508
13	[illegible]	0.3318	[illegible]	0.2190	[illegible]	0.5508
14	[illegible]	0.3361	[illegible]	0.2148	[illegible]	0.5508
15	[illegible]	0.3404	[illegible]	0.2105	[illegible]	0.5508
16	[illegible]	0.3447	[illegible]	0.2061	[illegible]	0.5508
17	[illegible]	0.3491	[illegible]	0.2017	[illegible]	0.5508
18	[illegible]	0.3535	[illegible]	0.1973	[illegible]	0.5508
19	[illegible]	0.3581	[illegible]	0.1928	[illegible]	0.5508
20	[illegible]	0.3626	[illegible]	0.1882	[illegible]	0.5508
21	[illegible]	0.3672	[illegible]	0.1836	[illegible]	0.5508
22	[illegible]	0.3719	[illegible]	0.1789	[illegible]	0.5508
23	[illegible]	0.3767	[illegible]	0.1742	[illegible]	0.5508
24	[illegible]	0.3815	[illegible]	0.1694	[illegible]	0.5508
25	[illegible]	0.3863	[illegible]	0.1645	[illegible]	0.5508
26	[illegible]	0.3913	[illegible]	0.1596	[illegible]	0.5508
27	[illegible]	0.3962	[illegible]	0.1546	[illegible]	0.5508
28	[illegible]	0.4013	[illegible]	0.1495	[illegible]	0.5508
29	[illegible]	0.4064	[illegible]	0.1444	[illegible]	0.5508
30	[illegible]	0.4116	[illegible]	0.1392	[illegible]	0.5508
31	[illegible]	0.4168	[illegible]	0.1340	[illegible]	0.5508
32	[illegible]	0.4222	[illegible]	0.1287	[illegible]	0.5508
33	[illegible]	0.4275	[illegible]	0.1233	[illegible]	0.5508
34	[illegible]	0.4330	[illegible]	0.1178	[illegible]	0.5508
35	[illegible]	0.4385	[illegible]	0.1123	[illegible]	0.5508
36	[illegible]	0.4441	[illegible]	0.1067	[illegible]	0.5508
37	[illegible]	0.4498	[illegible]	0.1011	[illegible]	0.5508
38	[illegible]	0.4555	[illegible]	0.0953	[illegible]	0.5508
39	[illegible]	0.4613	[illegible]	0.0895	[illegible]	0.5508
40	[illegible]	0.4672	[illegible]	0.0836	[illegible]	0.5508
41	[illegible]	0.4731	[illegible]	0.0777	[illegible]	0.5508
42	[illegible]	0.4792	[illegible]	0.0717	[illegible]	0.5508
43	[illegible]	0.4853	[illegible]	0.0655	[illegible]	0.5508
44	[illegible]	0.4915	[illegible]	0.0594	[illegible]	0.5508
45	[illegible]	0.4977	[illegible]	0.0531	[illegible]	0.5508
46	[illegible]	0.5041	[illegible]	0.0467	[illegible]	0.5508
47	[illegible]	0.5105	[illegible]	0.0403	[illegible]	0.5508
48	[illegible]	0.5170	[illegible]	0.0338	[illegible]	0.5508
49	[illegible]	0.5236	[illegible]	0.0272	[illegible]	0.5508
50	[illegible]	0.5303	[illegible]	0.0205	[illegible]	0.5508
51	[illegible]	0.5371	[illegible]	0.0138	[illegible]	0.5508
52	[illegible]	0.5439	[illegible]	0.0069	[illegible]	0.5508

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10. Indexations &Adjustments

10.1 INDEXATIONS

It is submitted that indexations be made on 1st January, 1st April, 1st July and 1st October respectively, on the basis of latest information available with respect to Consumer Price Index (CPI) (General), as notified by Pakistan Bureau of Statistics, US CPI (for all Urban-consumer) as notified by US Bureau of Labor Statistics and exchange rate as notified by National Bank of Pakistan.

10.1.1 Foreign O&M Cost Component

The Reference Foreign O&M Cost Component of the O&M Cost shall be quarterly indexed to both:

- the USD/PKR exchange rate, based on the revised TT & OD selling rate of USD as notified by the National Bank of Pakistan; and
- US CPI (for all Urban-consumer), as issued by the US Bureau of Labor Statistics.

The applicable formula shall be as follows:

$O\&M_{(FREV)}$ =	RELEVANT REFERENCE GENERATION TARIFF COMPONENT * (US $CPI_{(REV)}$/ US $CPI_{(REF)}$) * (FX $USD_{(REV)}$ /FX $USD_{(REF)}$)

WHERE	
$O\&M_{(FRev)}$	the revised Foreign O&M Cost Component applicable for the relevant quarter
US $CPI_{(Rev)}$	the revised US CPI (for all Urban-consumers) for the month prior to the month in which indexation is applicable, as issued by the US Bureau of Labor Statistics
US $CPI_{(Ref)}$	the US CPI (for all Urban-consumers) for the relevant month, as issued by the US Bureau of Labor Statistics.
FX $USD_{(Rev)}$	the revised TT & OD selling rate of PKR/USD as on the date on which indexation is applicable, as notified by the National Bank of Pakistan.
FX $USD_{(Ref)}$	Reference TT & OD selling rate of PKR/USD, of PKR 105 for USD1

10.1.2 Local O&M Cost Component

The Reference Local O&M Cost Component of the O&M Cost shall be quarterly indexed to the CPI (General) in Pakistan, as notified by the Pakistan Bureau of Statistics based on the following formula:

$O\&M_{(LREV)}$	RELEVANT REFERENCE GENERATION TARIFF COMPONENT * ($CPI_{(REV)}$/ $CPI_{(REF)}$)

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WHERE	
$O\&M_{(LRev)}$	the revised local O&M cost component applicable for the relevant quarter
$CPI_{(Rev)}$	the revised CPI (General) in Pakistan for the month prior to the month in which indexation is applicable, as notified by the Federal Bureau of Statistics.
$CPI_{(Ref)}$	the CPI (General) in Pakistan for the relevant month as notified by the Federal Bureau of Statistics

10.1.3 Insurance Cost

The Reference Insurance Cost Component shall be annually indexed to USD/PKR exchange rate, based on the revised TT & OD selling rate of USD notified by the National Bank of Pakistan.

The indexation of the Insurance Cost Component shall be based on the following formula:

$INSURANCE_{(REV)}$	RELEVANT REFERENCE GENERATION TARIFF COMPONENT * ($FX\ USD_{(REV)}/FX\ USD_{(REF)}$)

WHERE	
$Insurance_{(Rev)}$	the revised Insurance Cost Component applicable for the relevant year
$FX\ USD_{(Rev)}$	the revised TT & OD selling rate of PKR/USD as on the date on which indexation is applicable, as notified by the National Bank of Pakistan.
$FX\ USD_{(Ref)}$	Reference TT & OD selling rate of PKR/USD, of PKR 105 for USD1

10.1.4 Return on Equity and Return on Equity during Construction

In line with NEPRA's previous determinations, the ROE and ROEDC the Reference Generation Tariff shall be quarterly indexed to the USD/PKR exchange rate, based on the revised TT & OD selling rate of USD notified by the National Bank of Pakistan.

The applicable formula shall be as follows:

$ROE_{(REV)}$	RELEVANT REFERENCE GENERATION TARIFF COMPONENT* ($FX\ USD_{(REV)}/FX\ USD_{(REF)}$)

$ROEDC_{(REV)}$	RELEVANT REFERENCE GENERATION TARIFF COMPONENT* ($FX\ USD_{(REV)}/FX\ USD_{(REF)}$)

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WHERE	
$ROE_{(Rev)}$	the revised ROE component applicable for the relevant quarter
$ROE\text{-}DC_{(Rev)}$	the revised ROE-DC component applicable for the relevant quarter
$FX\ USD_{(Rev)}$	the revised TT & OD selling rate of PKR/USD as on the date on which indexation is applicable, as notified by the National Bank of Pakistan.
$FX\ USD_{(Ref)}$	Reference TT & OD selling rate of PKR/USD, of PKR 105 for USD1

10.1.5 Debt Component

Local Financing: The principal and interest component of local financing will remain unchanged throughout the term except for the adjustment due to variation in 3 months KIBOR, while spread of 2.5% on KIBOR remaining the same, according to the following formula:

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 6.0\%)/4$$

WHERE	
ΔI	the variation in interest charges applicable corresponding to variation in 3 month KIBOR. ΔI can be positive or negative depending upon whether $KIBOR_{(REV)}$ > or < 6.0%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each period under adjustment applicable on bi-annual basis.
$P_{(Rev)}$	the outstanding principal on a quarterly basis at the relevant calculation dates.

Foreign Loan LIBOR: The principal and interest component of foreign loan will remain unchanged throughout the term except for the adjustment due to variation in 3 months LIBOR, while spread of 4.5% on LIBOR remaining the same, according to the following formula:

$$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 0.6\%)/4$$

WHERE	
ΔI	the variation in interest charges applicable corresponding to variation in 3 month LIBOR. ΔI can be positive or negative depending upon whether $LIBOR_{(REV)}$ > or < 0.6%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each period under adjustment applicable on bi-annual basis.
$P_{(Rev)}$	the outstanding principal on a quarterly basis at the relevant calculation dates.

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10.2 ADJUSTMENTS

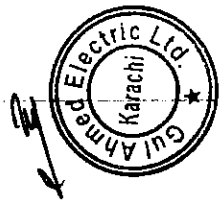
The Project Company requests NEPRA to allow adjustment to the total Project Cost for the following items forming part of Project Cost:

- The Principal Repayment and cost of debt be adjusted at COD as per the actual borrowing composition;
- Interest During Construction be adjusted as per actual based on actual disbursement of loans and prevailing KIBOR rates during the project construction period;
- The specific items of Project Cost to be incurred in foreign currency (US$) be adjusted at COD based on the PKR / US$ exchange rate prevailing on the date the transaction was carried out;
- Customs duty and other taxes (including SIDS) be adjusted/allowed as per actual;
- Any negative financial implications resulting from changes in tax rates, duties etc. and currently applicable sales tax structure may kindly be adjusted in the Project Cost.
- Pre-COD Insurance Cost be adjusted at actual subject to a cap of 1.0 % of the EPC cost in line with earlier tariff determinations by NEPRA for other IPPs.
- Return on Equity be adjusted at COD in order to ensure an IRR based return of 15% on equity (while treating the project as a Build-Own-Operate type project).
- ROEDC is to be allowed at the time of COD, as true-up adjustment, based on actual equity injections to the GEL by the Project Sponsors.

10.3 NON PROJECT MISSED VOLUME (NPMV)

The Petitioner expects that the Non-Project Missed Volume (NPMV) shall be paid by CPPA on the basis of actual generation missed by the Project Company due to the occurrence of a non-project event (NPE). Given the sophisticated SCADA systems and forecasting tools (as also specified under the Grid Code Addendum No. 1 (Revision 1) now available, missed generation can be accurately determined without human intervention; therefore, the same should be compensated at actual – we believe that the aforementioned mechanism is the only fair method which ensures neither party (Project Company or Power Purchaser) are unduly burdened / penalized due to occurrence of the NPE. If such a practical solution is not workable, then firstly, the requirement for having forecasting tools should be removed from the Grid Code Addendum No. 1 (Revision 1), secondly, the Petitioner requests to go with the precedent mechanism of NPMV compensations (as reflected in the previously available tariff determinations and previously executed EPAs).

It is worth highlighting that the Grid Code Addendum No. 1 (Revision 1) provides for levy of penalties on wind IPPs for not remaining within the forecast error thresholds, therefore, while the wind IPPs are now obligated to maintain compliance with such stringent standards for forecasting, the same method for determining projected energy yield should be used for compensating the wind IPPs during the occurrence of a NPE.

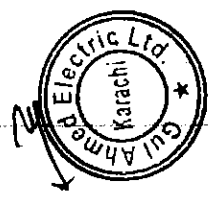


10.4 ENERGY SALE PRIOR TO COD

It is standard practice for wind power projects internationally to come online one WTG at a time, thereby, enabling the wind farm to commence dispatching energy to the grid as soon as a WTG is capable of power generation. Commissioning of a WTG cannot be completed without the substation being completed, tested and commissioned, therefore, all protection and safety equipment required to ensure smooth, safe operation of the wind farm (and the grid) would already be in place prior to commissioning of the WTGs. As soon as a WTG has been commissioned, it is ready to supply energy to the grid.

The standard EPA approved by the GOP permitted wind power developers to claim compensation from NTDC for supply of electricity prior to achievement of COD. The same has been allowed to wind power projects developed under the upfront tariff regimes.

As it has been allowed for past wind IPPs, NEPRA is humbly requested to allow the Project to claim compensation from the Power Purchaser for all electricity supplied into the grid system prior to achievement of COD at the tariff rate applicable for the first year of operation minus the debt servicing components of the tariff.



11. Pass Through Items & Tariff Assumptions

11.1 PASS THROUGH ITEMS

Authority is requested to allow following cost components as pass-through to GEL on the basis of actual costs incurred by Project Company or obligated to be paid in relation to the Project pursuant to Laws of Pakistan.

- No provision of income tax has been provided for in the tariff. If the Project Company is obligated to pay any type of tax, the same should be allowed to the Project Company as pass through.
- No withholding tax on dividend has been included in the tariff. Authority is requested to allow payment of withholding tax on dividend as pass through at the time of actual payment of dividend.
- The payments to Workers Welfare Fund and Workers Profit Participation Fund have not been accounted for in the Project budget and have been assumed to be reimbursed as pass through at actual by the power purchaser.
- Zakat deduction on dividends as required under Zakat Ordinance is considered as a pass through;
- No tax on income of GEL (including proceeds against sale of electricity to CPPA) has been assumed. Corporate tax, turn over tax, general sales tax / provincial sales tax and all other taxes, excise duty, levies, fees etc. by any federal / provincial entity including local bodies as and when imposed, shall be treated as a pass through item;
- No hedging cost is assumed for exchange rate fluctuations during construction and all cost overruns resulting from variations in the exchange rate during construction shall be allowed as pass through;
- Any costs incurred by Project Company, which are required to be incurred by Power Purchaser pursuant to provisions of EPA shall also be treated as pass through.
- Taxes and charges that constitute as part of the Project Cost for construction period and operation period shall be treated as pass through.

11.2 ASSUMPTIONS

The proposed Reference Tariff is based on the following assumptions. A change in any of these assumptions will necessitate a corresponding adjustment in the Reference Tariff:

- Debt for the Project will be sourced from local financial institutions. Exact composition of local debt will be finalized prior to financial close; adjustment against the same will be requested at the time of COD;
- An exchange rate of PKR 105 /USD has been assumed. Indexation against PKR / USD variations will be permitted for debt servicing payments and all other project costs denominated in foreign currency. Tariff components shall be respectively indexed for exchange rate variations as discussed in Section 10;

- The timing of drawdown nf debt and equity may vary from those specified in this Petition; as such, the Project Cost will be adjusted on the basis of actual IDC at COD. Similarly, ROEDC component will also be updated in the Reference Tariff;
- Similarly, adjustments in Project Cost due to variation in PKR / USD variations and KIBOR fluctuations will also be catered for at the time of COD;
- Taxes and Custom duties shall be claimed on actual at the time of COD tariff adjustment;
- Withholding tax at 8% on supplies and Onshore Contract. No withholding tax is anticipated on the Offshore Contract. In case there is any change in taxes etc., or additional taxes, fees, excise duty, levies, etc. are imposed, the EPC cost and ultimately the Project cost and the Reference Tariff will need to be adjusted accordingly;
- The power purchaser will compensate for energy delivered to the power purchaser prior to COD. For this purpose Energy Purchase Price shall be paid for all energy delivered prior to COD. Payments will be invoiced to the power purchaser as per mechanism specified in the EPA;
- The power purchaser shall be solely responsible for the financing, engineering, procurement, construction, testing and commissioning of the interconnection and transmission facilities up till the Project gantry point. Said facilities will be made available to the Project at least on or before the deadline set out in the EPA. Furthermore, the power purchaser will be solely responsible for operation and maintenance of the said interconnection and transmission facilities;
- Project contingency and maintenance reserves are not included in Reference Tariff calculations. If required by lenders, these will be adjusted accordingly in the Reference Tariff;
- In case of any unintentional error or omissions, typographic errors, and any genuine assumption being overlooked, the same will be corrected/incorporated and advised to NEPRA as soon as the Project Company becomes aware of it;
- Any additional indexation or concession allowed by the GOP, NEPRA or any other Govt. entity to any IPP will be allowed to GEL without any discrimination.

Gul Ahmed Electric Limited

Dated: 13-12-2017

Gul Ahmed Electric Ltd. Karachi

Gul Ahmed Electric Ltd. Karachi