

Dated: 16th March 2018

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, WAQAS ANWER QURESHI, of Trans Atlantic Energy (Pvt) Limited (the **Company**), being the duly authorized representative of the Company by virtue of the resolution of the Board of Directors dated 12th March 2018, 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 04252253, issued by Meezan Bank, in the sum of PKR 609,792/- 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:

TRANS ATLANTIC ENERGY (PVT) LIMITED

MR. WAQAS ANWER QURESHI
(AUTHORIZED REPRESENTATIVE)



TRANS ATLANTIC ENERGY
Private Limited

First Floor, Bahria Complex-III, Karachi, Pakistan
Direct: +92 21 3520 2916, Fax: +92 21 3563 5388

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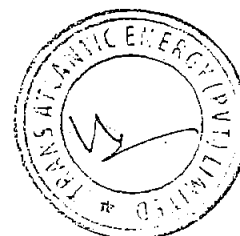
Noted All documents to be submitted 100%
Received along with Fee Copy & Clk. R 609,792/-



TRANSATLANTIC ENERGY
Private Limited

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1. Petitioner's Information

1.1 PETITIONER

Name: Trans Atlantic Energy (Private) Limited ("TAEL", the "Project Company" or the "Petitioner").

Address: First Floor, Bahria Complex III, M. T Khan Road, Karachi.

Company Registration #: 0050478

1.2 PROJECT SPONSORS

Sponsor: Pervez Anwer Qureshi, Waqas Anwer Qureshi, M. Ali Maskatiya, Shahreyar Nawabi

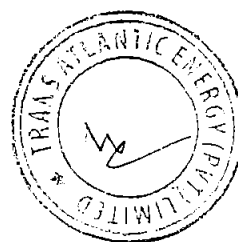
1.3 REPRESENTATIVE OF THE PETITIONER

Chief Executive Officer: Waqas Anwer Qureshi

1.4 PROJECT ADVISORS

Technical Advisors: Pakistan Alternative Energy Services (PAES)

Legal Council: AXIS Law Chamber



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 17th May 2005 to develop, own and operate an approximately 50MW wind power project in Jhimpir, Thatta ("Project") pursuant to a letter of Intent issued by the Alternative Energy Development Board ("AEDB") vide its letter No. B/3/1/TAEL/15 dated August 19, 2015 ("LOI") (Annexure 1) which was issued to the Project Company ("TAEL"). Recently the LOI has been extended to February 3rd, 2019 by AEDB letter no. B/3/1/TAEPL/16 dated: November 21st 2017. (Annexure 2)

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 leased by Government of Sindh (GOS) for period of (30) years through the "Agreement of Lease" dated: November 13, 2013 and "Rectification of Agreement of Lease" dated: July 17, 2015 (Annexure 3).
- The Project Company completed the detailed technical feasibility study for the Project and submitted the same to Panel of Experts, AEDB on August 15, 2017. (Feasibility attached)
- The Project's technical consultants completed the initial environmental examination for the Project which was submitted to the Sindh Environmental Protection Agency on September 9, 2015 and approved by the Sindh Environmental Protection Agency on March 28, 2016 (Annexure 4).
- Grid Interconnection Study was conducted by NTDC and submitted by the project on April 27, 2016 for approval.
- GIS approval and Power Evacuation Certificate (PEC) was issued to TAEL on December 08, 2016 (Annexure 5).



- 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 June 6, 2016 (Annexure 6).
- Generation License (GL) application was submitted to NEPRA on June 10, 2016. NEPRA granted generation license to the Project on April 18, 2017 (Annexure 7).
- EPC and O&M contracts for the Project have been executed (Annexure 8).
- The Feasibility study approval by AEDB is in process for submission to NEPRA as per letter attached. (Annexure 9)
- Project debt funding (which is to account for 75% of the total project cost) has been arranged from a consortium of banks (Annexure 10). 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. TAEL will be pleased to submit any further information as and when required by NEPRA in connection with the determination. Where required NEPRA may contract other stakeholders, including AEDB, directly for further information and approvals.

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 requirement 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, TAEL submits herewith before NEPRA, this petition for approval of

- The reference Tariff (Negotiated Tariff under Cost-Plus regime);
- The indexation, adjustments and escalations;
- Adjustments at Commercial Operations Date ("COD") and
- Other matters set out in this Tariff Petition

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.





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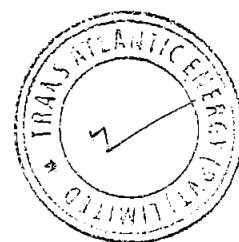
3. Executive Summary

3.1 BACKGORUND

Pervez Anwer Qureshi, Waqas Anwer Qureshi, M. Ali Maskatiya, and Shahreyar Nawabi are the sponsors of Trans Atlantic Energy (Pvt) Ltd a 50MW Wind Power Plant in Jhimpir, 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:	48.3MW
• Capacity Factor:	38%
• Annual Energy Generation:	160.78 GWh
• Construction Period:	18 months
• Tariff:	USD
• Power Purchaser:	CPPA (G)
• Wind Turbine Generators:	Vestas V126-3.45MW
• Land Area:	1000 Acre
• Exchange Rate Assumption:	PKR 110/USD

*the requested levelized tariff is lower than the Benchmark Tariff on Local and Foreign financing mix 40.60 each.





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3.2 PROJECT COST SUMMARY

After thorough market research and analysis total project cost is estimated to be USD 90.85 million. The breakup of the same is presented below in USD millions.

- EPC Cost: 78.6
- Project Development Cost 3.62
- Insurance During Construction 1.97
- Financial Fees and Charges 3.36
- Interest During Construction 3.7

3.3 PROJECT FINANCING

The project is financed through 80% Debt and 20% Equity. The total Debt amounts to USD 72.68 million, whereas the total Equity is USD 18.17 million.

The Debt is financed through a mix of Local and Foreign Lenders with 40:60 ratio. UBL is acting as the Lead financier in arranging both Local and Foreign financing. The financing terms are tabulated below for reference.

PROJECT FINANCING		
DESCRIPTION	PERCENTAGE	USD MILLION
Local Financing lead by UBL – (Commercial Facility)	40%	29.072
Foreign Financing arranged by UBL – (Commercial Facility)	60%	43.608
		72.68

FINANCING TERMS		
DESCRIPTION	LOCAL FINANCING	FOREIGN FINANCING
Loan Term	13 years	13 years
Debt Repayment	Quarterly	Quarterly
Mark-up Rate	3-M KIBOR + 3%	3-M LIBOR + 4.25%

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 0.4 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 and RFP was issued to following EPC Contractors/WTG Manufacturers:

- Vestas Denmark
- SEPCO 2
- PowerChina NorthWest Engineering Corporation
- Descon Pakistan
- Xinyiang Electric Power Company



Bid clarification meetings were held with the bidders. Based in technical and financial evaluation, PowerChina North West Engineering Corporation with Vestas WTG (V126-3.45) 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
- Transportation Study
- Geo-Technical Study
- Wind Resource Assessment Study
- Feasibility Study
- Grid Interconnection Study
- Initial Environmental Assessment
- EPC and O&M Agreements Signed
- Term sheet from Project Lenders



4. The Project

4.1.1 ABOUT THE PROJECT

The 48.3 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 TAEI which is owned 100% by Trans Atlantic Energy (Private) Limited.

A professional team has been appointed to assist in the implementation of the Project, whereas Pakistan Alternative Energy Services (PAES) is selected as Technical Advisor and Axis Law Chambers is acting as Legal Advisor for smooth and efficient execution of the Project.

4.1.2 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.

This 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.





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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 177m.

The coordinates of Wind farm are given in Table below:

SITE COORDINATES		
	LATITUDE	LONGITUDE
1	24.935261	67.800444
2	24.977914	67.744131
3	24.964225	67.790686
4	24.952592	67.811139
5	24.944931	67.805894
6	24.979447	67.745178
7	24.943400	67.804847
8	24.935739	67.790606
9	24.945953	67.822808
10	24.942922	67.805686
11	24.947486	67.823856
12	24.944453	67.806736
13	24.952114	67.811978
14	24.938294	67.817564
15	24.961608	67.754106
16	24.965756	67.791733
17	24.960075	67.753058
18	24.927569	67.810225
19	24.936761	67.816717
20	24.929100	67.811272





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4.1.3 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.

4.1.4 ANNUAL ENERGY PRODUCTION

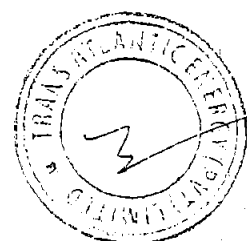
Annual Energy Production of 160.78 GWh has been estimated for the project. The table below shows key details relating to power generation from the project.

ENERGY PRODUCTION	
Total Installed Gross ISO Capacity of the Generation Facility – MW	48.3 MW
Annual Energy Generation (25 year equivalent Net AEP) – KWh	160.78 GWh
Net Capacity Factor	38%

4.2 ABOUT THE SPONSORS – TRANS ATLANTIC ENERGY (PRIVATE) LIMITED

4.2.1 Trans Atlantic Energy (Private) Limited (TAEL)

TAEL was setup to develop, own and operate wind farms as an Independent Power Producer in Sindh, Pakistan. AEDB has issued LOI of 50MW to TAEL. The company has already acquired 1,000 acres of land on 30 year lease from Government of Sindh (GOS) in Jhimpir, Sindh, Pakistan. The Company has carried out technical and financial feasibility studies. The Company has selected Vestas as the WTG supplier. Further the Company has entered into turnkey, fixed price EPC, and O&M contract with Northwest Engineering Corporation.



4.2.2 Waqas Anwer Qureshi – Chief Executive Officer/Sponsor

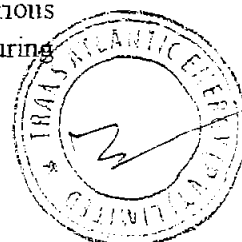
Mr. Waqas A. Qureshi is an Entrepreneurial Investment Banker with expertise in the field of finance, energy and airlines.

Mr. Qureshi completed his MBA from Pakistan Institute of Management & Sciences. He has worked with leading international banks including HSBC, Deutsche Bank, SCB and ABN-AMRO Bank before he launched Trans Atlantic Energy. Professionally Mr. Qureshi's experience covers many important areas in the field of Entrepreneurship, M&A, Finance, Advisory and Restructuring for different industries as an expert. With years of international experience of engaging with different parts of the world for work and otherwise brings together exposure required necessary for the development and turnaround of many critical areas in business. This international exposure also includes leading and engaging with many delegations in the field of Finance and Renewable Energy to various countries including, United Kingdom, Holland, Denmark, United States and UAE.

Mr. Waqas A. Qureshi is now the CEO and Executive Director at TAEL. His current role as the CEO & Executive Director involves major work with Federal and Provincial Governments, along with International Private and Public Sector players who are sitting at the helm of Renewable Energy Industry globally. At TAEL, Mr. Qureshi is involved in the strategic development and execution of this 100 MW project in Jhimpir, Sindh. Mr. Qureshi is leading the project development efforts for ensuring completion of large scale wind power project through bringing in the understanding of power markets and power pricing strategy along with management relationships with regulatory agencies, utilities, Financial Institutions and other stake holders. He is also responsible to oversee project from inception to commercial operation which includes leading the contract and budget negotiations, developing consultant scopes of work and their management.

He is also the board member for B.R.R Modharba and Crescent Modharba listed on Karachi Stock Exchange. Previously he has served as Managing Director for Burj Capital Pakistan and as part of the company's Board of Directors. At Burj Capital, Mr. Qureshi supervised the Investment Banking efforts of the firm including Origination and Execution of investment banking transactions. This included financial restructuring, project finance, debt syndications, bond offerings, equity and quasi equity structuring and sale. Additionally, he led the management of the firm's international business execution, including African and Middle Eastern Region. Mr. Qureshi managed the key relationships of the firm, which includes largest local and foreign corporate in Pakistan and outside. He developed new business opportunities, identified expansion opportunities to diversify the firm's business. He was also part of the Executive Committee of the firm on strategic and day to day business affairs.

Mr. Qureshi has previously helped to bring 50MW Jhimpir Wind Power Project to financial close of USD 100 Million along with Burj Gujjo of 13.5 MW, which is expected to achieve financial close shortly. In addition to this, Mr. Qureshi had recently helped raise PKR 8 billion for Mobilink (telecom sector) and PKR 34 billion for Hashwani Group (hotel sector) in Pakistan through various local and international financial institutions. He has also worked as an advisor to the restructuring of Dewan Group for USD 500 million. The largest restructuring in Pakistan to date.



4.2.3 Pervez Anwer Qureshi- Director/Sponsor

Mr. Pervez Anwer Qureshi is the investor and shareholder in the TAEI along with Trans Capital. He is an experienced professional and investor with background in Aeronautical Engineering. Mr. Qureshi has served in Pakistan International Airlines for over 35 years. During his time, he experienced managing one of the most sophisticated turbine engines of aircrafts like Boeing 707, 747 and DC 10s. During his career Mr. Qureshi has also held responsibilities for being Flight Engineer Training Instructor, which is a position of great responsibility and technical ability.

Mr. Qureshi has also been involved in business for over three decades. He has put up Textile Ginning Factory in 1990 and later diversified by expansion into Marble Industry in Jhelum. He further developed business in Compressed Natural Gas in Punjab. He is an avid investor and continues to expand in Real Estate and other industrial investments. He is one of the initial sponsor investor in Trans Atlantic Energy Wind Power Project as well.

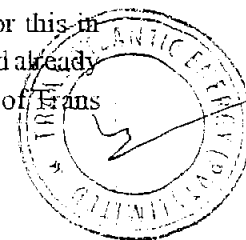
4.2.4 Trans Capital (Private) Limited:

TCL shall act as an investment vehicle for Mr. Waqas Anwer Qureshi and Mr. Pervez Anwer Qureshi in energy sector for the development of energy projects posts their involvement in the renewable energy sector in 2007. Mr. Waqas Qureshi has also been involved in the investment banking sector for close to two decade and has advised a number to large conglomerate and power companies including the likes of PIA, Hashoo Group, Dewan Group, Burj Power and Beacon Energy. This experience has led the family to further develop and invest into energy sector.

The Qureshi family has been in business for more than five decades starting with the launch of a construction company back in 1960s when the previous generation launched "Shahnaz Engineering". The company made some of the major land mark Road and Bridges in Punjab until 1980's. Currently the family holds interests in Real Estate, Agriculture, Marble Industries and Compressed Natural Gas sector. Family has also ventured into cotton ginning business under the name of "Gold Flower Ginning" in the 1990's, as this sector has been the back bone for Pakistan for many decades. Later the family had also launched a housing scheme in Southern Punjab under the name of "Gulshan-e-Ghani" for the middle Income families. This housing scheme was among the most popular destination of that time in the region and have had developed over 300 houses; the largest in that area at that time.

The family continues to operate three marble factories for the local area of Jhelum. The Marble is supplied from the northern Pakistan to feed the plant for cutting and polishing and then further sold in the local market across Punjab region. The family had started this business over two decades back and being one of the pioneer in this sector for the region have also helped expansion of this business for many others.

Post the involvement of the next generation, the new technical and working experiences have been brought to expand into other businesses including Power sector as there is much potential for this in Pakistan and currently due to supply deficit, this is a strategic area of investment. The family had already taken this major step for the development of wind power projects back in 2007 by the launch of Trans Atlantic Energy which is among the pioneer in this sector.



As of now, the family is looking at expansion of the marble business for exporting in the other parts of the world and expansion of the real estate to other cities like Lahore to build commercial complexes. In the long term, the family will increase its footprint in new wind projects and furthering its investment and development objectives by going into other technologies.

4.2.5 M. Ali Maskatiya – Director/Sponsor

Mr. Ali Maskatiya is an entrepreneur and is part of the Maskatiya group, which is a family business with interests in FMCG, Textile, Real Estate, IT and Power sector. The group has been in business for more than 3 decades. Mr. Ali Maskatiya joined the business in 2005, after graduating with an Accounting and Finance degree from the London School of Economics. He was the founder and CEO of Maxcom, which launched the group into the telecom business in 2005. Within a short span of time Maxcom became the largest consumer broadband provider in Karachi, before being acquired by PTCL in 2010.

Post the sale of Maxcom, Mr. Ali Maskatiya was actively involved in the rejuvenation of the group's textile business which now provides employment to over 2500 people, and has multimillion dollar exports in European and American markets to customers such as Inditex, Aldi, El Corte & Ross Stores.

Mr. Ali Maskatiya is also an active member of the Board of Directors of Maskatiya Industries (Pvt) Ltd, which is the manufacturer and distributor of cosmetics under the brand name of Olivia. Founded in 1983, Olivia is one the most well recognized brands in Pakistan.

Since 2015 he has been actively involved in expanding the group's presence in the Power sector. Currently the group is looking at projects in the Wind, Solar & Small Hydro sector in Pakistan. After leading the group's investment into Trans Atlantic Energy (Pvt) Limited Mr. Ali Maskatiya is serving on the board as a Director.

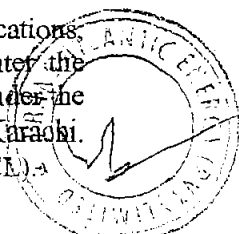
He is currently serving as the CEO &/Or Board of Director in the following companies:

- Maskatiya Industries (Pvt) Ltd – Director
- Grace Apparel (Pvt) Ltd – Director
- Grace Knitwear (Pvt) Ltd – Director
- Maskatiya Power (Pvt) Ltd – CEO
- Maskatiya Solutions (Pvt) Ltd – CEO
- Trans Atlantic Energy (Pvt) Ltd – Director

4.2.6 Maskatiya Family

The Maskatiya Family has been doing business in Pakistan & United States for over 30 Years. The group's first venture, Maskatiya Industries (Pvt) Ltd was formed to manufacture, market and distribute cosmetics, under the brand name of Olivia. Having started operations in late 1982, it has grown into one of the most well recognized and respected brand name in Pakistan.

Since then the group has diversified its interests into other areas such as Textiles, Telecommunications, IT, Snack Foods & Real Estate. Maskatiya Communications (Pvt) Ltd was formed to enter the IT/Telecommunications sector, with a specific focus on providing data connectivity solutions under the brand name of Maxcom. It very rapidly grew into the broadband service provider of choice in Karachi. This venture has since been acquired by Pakistan Telecommunications Company Limited (PTCL).





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Additionally, the group has also been an active real estate developer in the United States with many commercial projects in Silicon Valley. From humble beginnings in 1982, the group has grown many fold and now employees over two thousand people, with many having been with the group since its inception.

4.2.7 Shahreyar Nawabi – Sponsor

Mr. Nawabi is a leading lawyer in the UAE. He completed his Bachelor's in law from the University of Oxford in England (BA Jurisprudence) in 1998 and his Masters from the University of London, England in 2000. He was admitted to practice as a solicitor in England in August 2002.

During his time in England Mr. Nawabi advised large multinationals, financial institutions and governments of a variety of corporate transactions, including mergers and acquisitions, joint ventures, and capital market issuances.

In 2006 Mr. Nawabi returned to his country of citizenship, the United Arab Emirates, as part of the team to expand the Middle Eastern footprint of the UK's leading corporate law firm, Linklaters LLP. Whilst at Linklaters in Dubai he advised on a number of landmark corporate transactions, including the merger of Emirates Bank International and National Bank of Dubai to create Emirates NBD PJSC, the largest bank in the UAE by assets and the listing of Dubai Ports.

In 2008 Mr. Nawabi was appointed as Chief Legal Officer of Investment Corporation of Dubai ('ICD'), the sovereign wealth fund of the Government of Dubai. Whilst at ICD Mr. Nawabi was part of the team that led the Government of Dubai's debt restructuring negotiations during the global financial crisis.

In 2012 Mr. Nawabi left ICD to join Emirates, the world's fastest growing and largest international airline where he is currently serving as Vice President Legal. He leads a group of ten legal professionals managing the corporate and commercial legal affairs of Emirates globally.

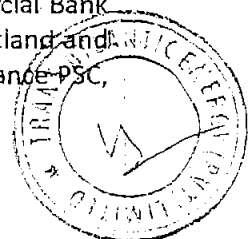
4.2.8 Markhor Energy/Nawabi/Lakhani Family

Markhor Energy is among the sponsors and investors of Trans Atlantic Energy and is jointly owned by Mr. Iqbal Lakhani and Family and Mr. Ashraf Nawabi and Family. Markhor Energy has been incorporated as an investment vehicle for investment in the Power sector by the family.

- Ashraf Nawabi

Mr. Ashraf Nawabi is a banker by profession, currently serving as an advisor to the Chairman of Emirates NBD PJSC, HH Sheikh Ahmed bin Saeed Al Maktoum, a post he has held since the mid-1990s. He has held a number of senior advisory positions for the royal family of Dubai in his career and continues to maintain these relationships at the most senior levels. Whilst being of Pakistan origin, he is a national of the United Arab Emirates, having been granted citizenship by Royal Decree of the previous Ruler of Dubai, HH Sheikh Maktoum bin Rashid Al Maktoum.

Aside from his banking career, Mr. Nawabi is also the CEO and director of First Jamia Services Limited, a company offering world class primary and secondary education in Pakistan in partnership with SABIS, a global education services provider with corporate headquarters in the USA, UAE and Lebanon (www.sabis.net). Mr. Nawabi was also one of the founding shareholders of Prime Commercial Bank in Pakistan which was acquired by ABN Amro Bank in 2007 (followed by Royal Bank of Scotland and now Faysal Bank). Mr. Nawabi is a major shareholder and serving director of Alliance Insurance PSC, one of the UAE's premier insurance companies listed on the Dubai Financial Market.





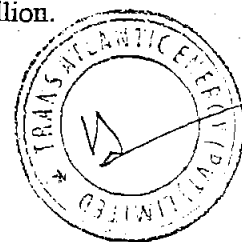
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- Iqbal Ali Lakhani

Mr. Iqbal Ali Lakhani is a one of Pakistan's leading industrialists and is the Chairman of the Lakson Group of Companies. The Lakson Group of Companies is one of Pakistan's largest and most diversified business conglomerates. The Group's interests range from Media (The Express Media Group), FMCG (Colgate Palmolive Pakistan), Technology (Cybernet), Manufacturing (Century Paper & Board Mills) and financial services (Lakson Investments). The Group currently comprises of over 15 companies in Pakistan, with an annual turnover in excess of US\$ 500 million and an asset base in excess of US\$ 1 billion. Mr. Lakhani has over 38 years' experience of senior management in consumer marketing, finance, manufacturing, industry and government relations. Areas of special interest cover marketing, total quality management and leadership. In addition, he is also on the Board of Trustees of the Layton Rahmatullah Benevolent Trust. Previously he has served as the Chairman Cigarette Manufacturers Association of Pakistan, Chairman Aga Khan Economic Planning Board for Pakistan and Vice President American Business Council of Pakistan. Mr. Lakhani is consistently recognized as one of Pakistan's highest tax-payers, both in his personal capacity and through his business interests.

4.2.9 IFU – Investment Fund for Developing Countries

IFU was established by the Danish State in 1967 and is governed by the Danish Act on International Development Cooperation. IFU advises and invests in developing countries and emerging market in Asia, Africa, Latin America and Europe. Over the years IFU has contributed to the establishment of close to 800 companies in 85 developing countries for which IFU has contributed approx. DKK 10 billion. IFU also acts as fund manager for a number of investment funds based on public and private capital: the Danish Climate Investment Fund (DCIF), the Arab Investment Fund (AIF), the investment Fund for Central and Eastern Europe (10) and IFU Investment Partner (LiP). DCIF with a total commitment of DKK 1,290 million corresponding to EUR 175 million is an equity or quasi equity minority investor. The commitment to the individual project will be up to EUR 15 million.



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
- SEPCO 2
- PowerChina Xibei Engineering Corporation Ltd/ Northwest Engineering Corporation
- Descon Pakistan
- Xinyiang Electric Power Company

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.

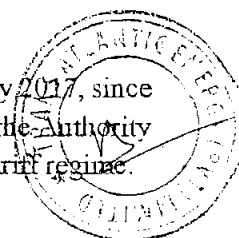
Following criteria was provided in the Invitation to bid for tender evaluation:

- 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, North West Engineering Corporation with Vestas V126 3.45MW WTG 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.





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Accordingly, based on due diligence and following a negotiations process with the preferred bidder, the Company signed EPC contract with "NORTHWEST ENGINEERING CORPORATION OF CHINA" and "Vestas WTG V126-3.45" as the technology for its Project with a fixed price and fixed Commercial Operations Date.

Since the Company has already declared preferred bidder for signing 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 VESTAS – THE WTG MANUFACTURER

Vestas is an international, multi-faceted wind power company based out of Denmark. It is the only global energy company dedicated exclusively to wind energy. Founded in 1898 as a blacksmith shop in western Denmark, Vestas started producing Wind Turbines (WTGs) in 1979 and have since gained a market-leading position.

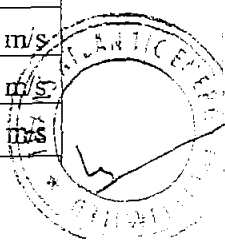
Vestas has an installed capacity of over 64 GW globally with around 52,000 wind turbines on six continents (capable of generating more than 90,000 GWh of energy per year) and has been involved in the O&M of more than 42 GW around the world. Data synchronization with more than 25,000 wind turbines enables Vestas to meticulously plan and carry out service inspections, thereby reducing wind turbine down-time to an absolute minimum.

With WTGs installed in 73 countries, Vestas has considerable experience of engineering, transportation, construction and operations & maintenance. Their expertise range from financing and siting, to grid requirements and the regulatory framework.

Vestas monitors 20% of the global installed wind capacity (26,000+ MW) in more than 22,000 wind turbines through Vestas Performance and Diagnostics Centre (VPDC). VPDC has global reach with 7 locations and staffed with world class engineers / scientists who analyze the fleet and initiate predictive maintenance among other improvements.

The specifications of 3.45 MW V126-3.45 turbine are as follows:

VESTAS V110-2.2 SPECS		
	DESCRIPTION	SPECS.
1	Wind Turbine Type, Make & Model	V126 -3.45MW
2	Installed Capacity of Wind Farm (MW)	48.3 MW
3	Number of Wind Turbine Units/Size of each Unit (KW)	14 X 3.45 MW
4	Number of blades	3
5	Rotor diameter	126m
6	Hub Height	137m
7	Generator Voltage	750 V
8	Cut-in wind speed	3.0 m/s
9	Cut-out wind speed	20.0 m/s
10	Extreme wind speed	38.0 m/s





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5.3 THE EPC CONTRACTOR – NORTHWEST ENGINEERING CORPORATION

NorthWest Engineering 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. PowerChina performs 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 NorthWest Engineering Corporation is registered as Harvey Energy (Pvt) Limited, 100% subsidiary of POWERCHINA Xibei Engineering Corporation Ltd., was incorporated on May 22, 2013. Harvey Energy (Pvt) Limited specializes in consultancy, design, EPC contracting and investment of hydropower project, solar and wind energy development in Pakistan. Since its establishment, the Company has been awarded the onshore contract execution of HYDROCHINA Dawood Wind Farm Project, applied LOI for 100MW wind farm development in Thatta District.

Harvey Energy (Pvt) Limited is 100% subsidiary of POWERCHINA Xibei Engineering Corporation Ltd. (hereinafter called POWERCHINA XIBEI). POWERCHINA XIBEI, a large multidisciplinary state-owned company from China, specializes in planning, consultancy, investigation, design, scientific research, project management, construction supervision, EPC contracting, and investment of large and medium sized hydroelectric, water resources, wind farms, solar energy and other civil engineering projects. It was founded in 1950 and based in Xi'an, Shaanxi Province with an office area of more than 60,000m². POWERCHINA XIBEI has been ranked one of the China Top 100 companies in hydropower, wind power and solar energy sectors since 1992, and has established its branches in Gansu, Qinghai, Nanjing, Shanghai, Kunming, Laos and Ecuador, etc.

In 1993, POWERCHINA XIBEI was one of the earliest companies granted the right for foreign business and subsequently was awarded overall project contracting business both at home and abroad. In 1995, POWERCHINA XIBEI passed authentication of the ISO 9001 quality system and has recertification of the ISO 9001:2000 quality system in 2001.

POWERCHINA XIBEI has obtained a wide variety of the state-issued Class A qualification or certificates in different professional fields, such as "Class A Certificate of Project Investigation", "Class A Certificate of Project Design", "Class A Certificate of Environmental Impact Assessment", "Class A Certificate of Engineering Consultation", "Class A Qualification/Certificate of Construction Supervision", "Class A Certificate of Overall Project Contracting", "Qualification/Certificate of Import and Export Enterprise", "Class A Certificate of Intelligentized System Design" and "Class A Certificate of Pre-evaluation Certificate of Labor Safety and Industrial Hygiene", etc.





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POWERCHINA XIBEI has completed specialized departments, strong technical force. The main disciplines includes hydrology, energy potential, sedimentation, EIA and settlement, engineering geology and geotechnical, geophysical and survey, dam, outlet structures, power system, construction, hydraulic machinery, hydraulic steel structure, electrical engineering, computer supervisory control and protection, communication, industrial and civil architecture, heating, water supply and sewage works, cost estimate, pressure vessel, river, wind base, solar energy plants planning, city planning, labor safety and industrial hygiene, etc.

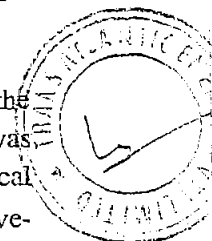
POWERCHINA XIBEI is equipped with advanced equipment for scientific research, automatic monitoring, precision survey and geological exploration, geotechnical construction and has established CAD, MIS systems and enterprise local network, with 12 categories, 1260 sets.

POWERCHINA XIBEI is an all-round entity and are mainly engaged in the planning of large and medium-sized river basins, wind energy base, solar power plants, site investigation, design, scientific research, engineering consultation and supervision, geotechnical works and EPC-turkey project for water resources, hydropower projects, wind farm, and solar power projects of all sizes and various types as well as for industrial and civil intelligentized buildings, bridges & culverts and special projects in the above fields. In the past six decades, POWERCHINA XIBEI has accomplished reconnaissance, planning and design of over 30 rivers including the Upper Yellow River, Yangtze River, Lancang River, Bailongjiang River, Hanjiang River and the rivers in southern regions of Shaanxi Province, Hexi Corridor of Gansu Province, Xinjiang and Tibet Autonomous Regions, and has completed investigation and design of more than 100 multipurpose hydropower projects and wind power projects. There are about 50 large and medium-sized hydropower stations completed such as Longyangxia, Lijiaxia, Liujiaxia, Yanguoxia, Bapanxia, Daxia, Qingtongxia on the Upper Yellow River, Shiquan and Shimen on the Hanjiang River, Bikou and Baozhushi on the Bailongjiang River, Tishrin in Syria, with a total installed capacity of 9300MW; more than 100 small hydropower stations (such as Keketuohai) in operation with a total installed capacity of 2000MW.

Among those completed projects, Liujiaxia (1160MW), Bikou (300MW), Longyangxia (1280MW), Lijiaxia (2000MW) and Baozhushi (700MW) hydropower stations designed by POWERCHINA XIBEI have won the national prizes of excellent design, representing China's hydropower engineering design capability in 1960s, 1970s, 1980s, and 1990s respectively, which have made a significant contribution to power industry in the western region of China.

Up to 2013, more than 200 engineering design and scientific achievements by POWERCHINA XIBEI have won the national and ministerial (provincial) prizes of excellent design or science and technology advance award. In the periods of the Seventh Five-year and the Eighth Five-year Plans, POWERCHINA XIBEI had undertaken 77 sub-items of the national key scientific research, of which 28 sub-items were appraised as the leading level in the country through assessment of the national Ministries, and sub-items "Safety Monitoring Technique and Back Analysis for High Dams" and "Reinforced Mechanism for Group Anchorage of Prestressed Cables" etc. attained the domestic and international top levels.

In 1993, POWERCHINA XIBEI was awarded the certificate to conduct foreign business by the Ministry of Foreign Trade and Economic Cooperation under which POWERCHINA XIBEI was authorized to directly undertake reconnaissance, design, engineering supervision and relevant technical service in the international market and allowed to export equipment and material relating to the above-mentioned projects. Meanwhile POWERCHINA XIBEI has actively involved in international bidding,





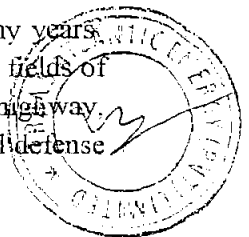
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engineering design and consultancy service. It has subsequently undertaken the design of multipurpose hydropower projects in over 10 countries including Syria, Ethiopia, Zambia, Laos, Malaysia, Cambodia, Ecuador, etc. The typical projects NWH has served as design consultant are Rehabilitation of Grid Substations in Nigeria, Bakun Hydroelectric Project in Malaysia (205m CFRD, 2400MW), Taleghan Hydroelectric Project (101m dam with clay core), Allai Khwar Hydroelectric Project (121MW) in Pakistan, Jinnah Hydropower Project (96MW) in Pakistan, Xeset 2 Hydroelectric Project (76MW) in Laos, Tuyen Quang Hydroelectric Project (342MW) in Vietnam. In addition, POWERCHINA XIBEI has served as Project Management and Project Supervision in Kamchay Hydroelectric Power Project in Cambodia and rendered hydro consultancy services for the projects in varied countries such as Zambia, Sudan, Ghana, Palau, Iran, Guatemala, etc. In 1997, POWERCHINA XIBEI was officially accepted by the World Bank, Asian Development Bank and African Development Bank as registered consulting engineers.

As a national leader in the design of wind power projects in China, POWERCHINA XIBEI began to perform planning, consultancy, investigation, design, EPC contracting and investment of wind power projects in 1994. Since then POWERCHINA XIBEI has successively undertaken the planning for three very large-sized (10 million kilowatts) wind power bases in Hebei Province, Jiuquan of Gansu Province and Hami in Xinjiang, as well as the investigation and design of over 50 large and medium-sized wind power projects in Yumen in Gansu Province, Anxi in Gansu Province, Helan Mountain in Ningxia, Taober in Jilin province (China Huaneng Group), Xiaocaohu in Xinjiang (China Huadian Corporation), Laofengkou and Aoerjin in Inner Mongolia, Gancheng in Dongfang of Hainan Province and so on. Up to now, the total installed capacity of the completed wind power projects is over one million kilowatts. Especially in 2008, POWERCHINA XIBEI undertook the whole investigation and design works for the first 3800MW wind power project of Jiuquan wind power base, the first one in 10 million kilowatts class in China. In December 2008, the National Development and Reform Commission and the Hydropower and Water Resources Planning and Design General Institute reviewed and approved the feasibility study, and the construction of the project commenced in August 2009. Both the completed initial design and the scale of production are among the forefront in China.

Through more than 15 years of practice and professional activities in the field of wind power projects, POWERCHINA XIBEI has possessed a team of highly skilled professionals who are well-versed in technology and management in various areas of investigation, design and R & D of wind power projects, created a group of leading talents in wind power generation, especially in aspects of micro-site selection of wind turbine, electrical design, foundation design, investment estimation and competitive tendering of turbine, etc, and accumulated a wealth of engineering experience. A number of our staff, as the China's first group of experts in the field of wind power generation, have been listed on the China Mechanical and Electrical Products International Bidding Evaluation Expert Pool, and participated in the preparation of standards and codes of wind power generation, laying the technological and man power resource foundation for undertaking the investigation, design and scientific research of large and medium-sized wind power projects.

In addition to involvement of hydro-related projects, POWERCHINA XIBEI, through many years efforts, has obtained 18 qualification/certificates which helped to develop the business in the fields of environment protection/mitigation works, industrial and civil architecture, city planning, highway, public works, geotechnical works, maritime works, transmission and distribution works, civil defense works, Labor safety and hygiene. Through engineering design and construction practice,





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POWERCHINA XIBEI has accumulated rich engineering service experiences in special projects concerning landslide control, high slope treatment, foundation preparation, prestressed concrete technique, rehabilitation of dams and reservoirs, rehabilitation of damaged structures, displacement monitoring, environmental protection, pressure vessel etc., which have become part of our core competitiveness and know-how achievement.

So far, POWERCHINA XIBEI has undertaken over 650 water resources and hydropower projects with installed capacity of over 150,000MW in the role of planning, consultancy, design, construction supervision, project management, EPC contracting, investment, etc. Since 1994, the total installed capacity of wind farms undertaken by POWERCHINA XIBEI has exceeded 90,000MW. Since 2001, POWERCHINA XIBEI has undertaken planning of 22 solar power projects with installed capacity of 52,300MW, feasibility study and design for 117 projects with installed capacity of 3720 MW, and EPC contracting of 5 solar power projects with total installed capacity of 640MW. In 2013, POWERCHINA XIBEI has witnessed a contract value of USD 828 million and realized a turnover of USD 467 million.





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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 110.

A summary of the Project Cost is given below:-

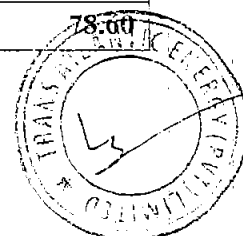
PROJECT COST		
	DESCRIPTION	USD MILLION
1	EPC Cost	78.60
2	Project Development Cost	3.62
3	Insurance during Construction	1.07
4	Financial Fee and Charges	3.86
5	Interest during Construction	3.7
	Total Project Cost	90.85

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 \$ 78.60 Million. As identified above, TAEL 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. TAEL 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	11
2	Offshore EPC Cost	67.6
	Total EPC	78.60





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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\$ 3.62 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 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 1.07 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 Insurance; and
- Comprehensive General Liability





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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 3.86 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 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 3.7 Million on the terms offered by financial institutions and banks to the Project at 3-month KIBOR plus a spread of 3% for local financing, and at 3-month LIBOR plus a spread of 4.25% for foreign loan. Construction period assumed for IDC calculation is 18 months.

The spreads are considered to be reasonable given:

- Tenure of the Loan repayment is 13 years.
- Pakistan's balance of payment situation has deteriorated significantly during the past year which may cause a lowering of our Credit Rating.

"IDC, at this stage, is an estimated figure, which is adjustable at COD, based in actual LIBOR, actual KIBOR, timing and amount of loans drawdown, changes in Taxes and Duties and variations in PKR/USD exchange rate during the Project construction period after financial close, therefore, it is prayed that NEPRA kindly allow adjustment for the same at the time of tariff true-up at COD."

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 ROEDC at actual as a pass-through item under the tariff.





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7. Financing Arrangement

7.1 PROJECT FINANCING

The Project Cost is envisaged to be funded on the basis of a Debt: Equity ratio of 80:20, however, this shall be firmed up once the financing documents for dept financing have been executed prior to financial close. For the purpose of this Petition, a dept: equity ratio of 80:20 has been assumed, thereby resulting in the following dept and equity injections for the Project:

FINANCING SUMMARY		
	DESCRIPTION	USD MILLION
1	Debt	72.68
2	Equity	18.17
	Total Project Cost	90.85

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

FINANCING TERMS			
	DESCRIPTION	LOCAL FINANCING	FOREIGN FINANCING
1	Base Rate	3-M KIBOR (6.36%)	3-M LIBOR (0.6%)
2	Spread	3%	4.25%
3	Total Rate	9.36%	4.85%
4	Repayment period	13 years	13 years
5	Repayment basis	Quarterly	Quarterly
	Total Project Cost		90.85

Sponsors are planning to inject 20% equity into the Project.

7.2 CARBON CREDITS

Wind Power is a clean form of energy and will reduce CO² emission. TAEL 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 be incurred by the Project Company.

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

O&M COSTS			
	DESCRIPTION	PERCENTAGE	INDEXATION
1	Local	20%	Pakistan CPI (General)
2	Foreign	80%	US CPI (All Urban Consumers) PKR / USD Indexation

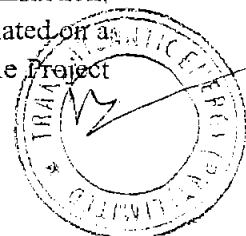
8.2 INSURANCE COST

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 0.4 million per annum.

8.3.1 DEBIT SERVICE RESERVE ACCOUNT (DSRA)

The debt to be arranged by the Project Company is to be structured as a project financing transaction, under which the cash flows of the Project during the debt repayment period shall be appropriated on a waterfall method, which is usually applied by lender i.e. the monthly revenues earned by the Project shall be applied in the order of precedence specified below:



- Payment of interest and principal due for the month shall be secured by the Lenders in a Debt Payment Account;
- Payment of maintenance reserve shall be secured by the Lenders in a Maintenance Reserve Account;
- Payments to be made for operating expenditure shall flow through the Project – the same shall be immediately paid to the relevant creditors i.e. O&M contractor, staff salaries, etc.; and
- The payment against ROE and ROE-DC shall be utilized by the Lenders to fund the Debit Service Reserve Account (DSRA)

DSRA is maintained by the Lenders in Project Financing transactions as a mean to secure the debt service due immediately after the next debt repayment date. The DSRA provides the Lenders with adequate time to take over the Project in case of default by the Project Company.

The two options available for funding the DSRA are provided below:

- Through cash – there are two further sub-options in case this method of funding is chosen by the Lenders (i) Upfront funding – funding through equity injection by the Sponsors at the time of COD, or (ii) funding through diversion of ROE and ROE-DC cash flows into a DSRA account. In either scenario, the Sponsors of the Project are unable to avail any return on the amount retained by the Lenders to fulfill the DSRA requirement; or
- Through L/C – the Sponsors provide and L/C equivalent to the amount required for funding the DSRA requirement; L/C charges are borne by the Project Company.

The Sponsors are of the view that the Lenders may be willing to accept securing the DSRA through and L/C. The cost associated with the L/C to be provided by the Lenders for securing the DSRA has been created for under this account.

If the cost of such L/C is not allowed to the Project Company, the same would result in a reduction of the Sponsors IRR. Which defies the basic theme behind RE Policy, that was developed in order to attract private investment into the power sector.

In this regard, the NEPRA Rules clearly state that the:

“tariff should allow licenses a rate of return which promotes continued reasonable investment...” and

“tariffs should generally be calculated by including a depreciation charge and a rate of return on the capital investment of each license commensurate to that earned by other investments of comparable risk”

Furthermore, NEPRA Rules clearly stipulate that the:

“tariffs should, to the extent feasible, reflect the full cost of service to consumer groups with similar service requirements”

It is therefore, respectfully submitted that the Project Company be allowed to claim the said L/C charges for fulfilling the DSRA funding requirement of the Lenders along with the costs for maintaining a working capital facility at the time of COD in True-up

Alternatively, the Project shall be forced to fund the DSRA through cash (on an 75:25 debt: equity basis) which will result in an increase in total project cost of the Project. This increase in equity will ultimately result in a higher tariff which will be to the detriment of consumers.



We request NEPRA to either allow project company for L/C charges at True-up or allow the Project additional debt: equity for DSRA.

9. Reference Tariff

As the Project is 80% 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:

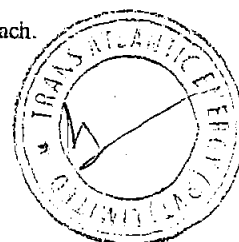
REFERENCE TARIFF				
	DESCRIPTION		YEAR 1-13	YEAR 14-25
			PKR/kWh	
1	C&M		1.29990	1.29990
2	Insurance		0.28345	0.28345
3	ROE		1.86477	1.86447
4	ROEDC		0.22302	0.22302
5	Debt Servicing	Local	2.56106	-
		Foreign	3.10761	-
	Total		9.5116	3.6711



9.1 REFERENCE GENERATION TARIFF

Year	O&M	Insurance	ROE	ROEDC	Local Financing		Foreign Loan		Tariff	
					Principal	Mark-up	Principal	Mark-up	Rs./kWh	US\$/kWh
1	1.2990	0.28345	1.86447	0.22302	0.8859	1.83329	1.7047	1.41662	9.5116	8.6469
2	1.2990	0.28345	1.86447	0.22302	0.9662	1.75305	1.7882	1.33310	9.5116	8.6469
3	1.2990	0.28345	1.86447	0.22302	1.0542	1.66503	1.8758	1.24546	9.5116	8.6469
4	1.2990	0.28345	1.86447	0.22302	1.1507	1.56848	1.9678	1.15349	9.5116	8.6469
5	1.2990	0.28345	1.86447	0.22302	1.2566	1.46257	2.0643	1.05698	9.5116	8.6469
6	1.2990	0.28345	1.86447	0.22302	1.3728	1.34639	2.1656	0.95570	9.5116	8.6469
7	1.2990	0.28345	1.86447	0.22302	1.5003	1.21896	2.2719	0.84942	9.5116	8.6469
8	1.2990	0.28345	1.86447	0.22302	1.6400	1.07916	2.3834	0.73789	9.5116	8.6469
9	1.2990	0.28345	1.86447	0.22302	1.7934	0.92582	2.5004	0.62085	9.5116	8.6469
10	1.2990	0.28345	1.86447	0.22302	1.9616	0.75761	2.6233	0.49803	9.5116	8.6469
11	1.2990	0.28345	1.86447	0.22302	2.1461	0.57310	2.7521	0.36914	9.5116	8.6469
12	1.2990	0.28345	1.86447	0.22302	2.3485	0.37069	2.8874	0.23389	9.5116	8.6469
13	1.2990	0.28345	1.86447	0.22302	2.5705	0.14867	3.0293	0.09196	9.5116	8.6469
14	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
15	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
16	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
17	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
18	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
19	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
20	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
21	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
22	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
23	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
24	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
25	1.2990	0.28345	1.86447	0.22302	0.0000	0.0000	0.0000	0.0000	3.6711	3.3374
Levelized Tariff									8.2417	7.4925

* the requested levelized tariff is lower than the Benchmark Tariff on Local and Foreign financing mix of 40:60 each.

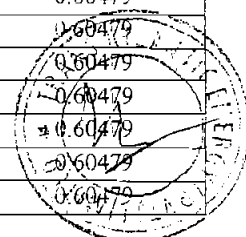




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9.2 REFERENCE DEBT SERVICING SCHEDULE – LOCAL FINANCING

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	292.062	0.18165	680.919	0.423137	972.381	0.60479
2	298.896	0.18590	673.485	0.418886	972.381	0.60479
3	305.890	0.19025	666.491	0.414536	972.381	0.60479
4	313.1048	0.19471	659.333	0.410084	972.381	0.60479
5	320.374	0.19926	652.007	0.405528	972.381	0.60479
6	327.870	0.20392	644.511	0.400865	972.381	0.60479
7	335.542	0.20870	636.838	0.396093	972.381	0.60479
8	343.394	0.21358	628.987	0.391210	972.381	0.60479
9	351.410	0.21858	620.951	0.386212	972.381	0.60479
10	359.653	0.22369	612.728	0.381097	972.381	0.60479
11	368.069	0.22893	604.317	0.375863	972.381	0.60479
12	376.682	0.23428	595.699	0.370506	972.381	0.60479
13	385.496	0.23977	586.885	0.365024	972.381	0.60479
14	394.517	0.24538	577.864	0.359413	972.381	0.60479
15	403.748	0.25112	568.633	0.353671	972.381	0.60479
16	413.195	0.25699	559.185	0.347795	972.381	0.60479
17	422.865	0.26301	549.516	0.341781	972.381	0.60479
18	432.769	0.26916	539.621	0.335627	972.381	0.60479
19	442.886	0.27546	529.492	0.329329	972.381	0.60479
20	453.250	0.28191	519.137	0.322883	972.381	0.60479
21	463.856	0.28850	508.555	0.316286	972.381	0.60479
22	474.710	0.29525	497.671	0.309535	972.381	0.60479
23	485.819	0.30216	486.562	0.302626	972.381	0.60479
24	497.187	0.30923	475.197	0.295556	972.381	0.60479
25	508.820	0.31647	463.560	0.288320	972.381	0.60479
26	520.727	0.32388	451.654	0.280914	972.381	0.60479
27	532.912	0.33145	439.469	0.273335	972.381	0.60479
28	545.382	0.33921	426.999	0.265579	972.381	0.60479
29	558.141	0.34715	414.237	0.257642	972.381	0.60479
30	571.205	0.35527	401.176	0.249519	972.381	0.60479
31	584.571	0.36358	387.810	0.241205	972.381	0.60479
32	598.250	0.37209	374.131	0.232697	972.381	0.60479
33	612.249	0.38080	360.152	0.223990	972.381	0.60479
34	626.576	0.38971	345.805	0.215080	972.381	0.60479
35	641.238	0.39883	331.111	0.205961	972.381	0.60479
36	656.243	0.40816	316.133	0.196628	972.381	0.60479
37	671.599	0.41771	300.782	0.187077	972.381	0.60479
38	687.314	0.42749	285.067	0.177302	972.381	0.60479
39	703.397	0.43749	268.982	0.167299	972.381	0.60479
40	719.857	0.44773	252.524	0.157062	972.381	0.60479
41	736.701	0.45820	235.680	0.146585	972.381	0.60479
42	753.946	0.46893	218.441	0.135863	972.381	0.60479
43	771.582	0.47990	200.799	0.124890	972.381	0.60479
44	789.637	0.49113	182.744	0.113661	972.381	0.60479
45	808.115	0.50262	164.266	0.102168	972.381	0.60479
46	827.025	0.51438	145.356	0.090407	972.381	0.60479
47	846.377	0.52642	126.004	0.078370	972.381	0.60479
48	866.182	0.53874	106.199	0.066052	972.381	0.60479
49	886.451	0.55134	85.930	0.053446	972.381	0.60479
50	907.194	0.56425	65.187	0.040544	972.381	0.60479
51	928.422	0.57745	43.959	0.027341	972.381	0.60479
52	950.147	0.59096	22.235	0.013828	972.381	0.60479



9.4

REFERENCE DEBT SERVICING SCHEDULE - FOREIGN FINANCING

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Repayment Period	Principal Repayment (US\$)	Principal Tariff Component (Rs/kWh)	Interest (US\$)	Interest - Tariff Component (Rs/kWh)	Installment (US\$)	Installment Tariff Component (Rs/kWh)
1	606781	0.3774	528774	0.3289	1135555	0.7063
2	614139	0.3820	521416	0.3243	1135555	0.7063
3	621585	0.3866	514070	0.3197	1135555	0.7063
4	629122	0.3913	506438	0.3150	1135555	0.7063
5	636750	0.3960	498805	0.3102	1135555	0.7063
6	644470	0.4008	491085	0.3054	1135555	0.7063
7	652285	0.4057	483270	0.3006	1135555	0.7063
8	660194	0.4106	475361	0.2957	1135555	0.7063
9	668193	0.4156	467357	0.2907	1135555	0.7063
10	676290	0.4206	459255	0.2856	1135555	0.7063
11	684403	0.4257	451054	0.2805	1135555	0.7063
12	692600	0.4309	442755	0.2754	1135555	0.7063
13	700900	0.4361	434355	0.2702	1135555	0.7063
14	709302	0.4414	425855	0.2649	1135555	0.7063
15	717807	0.4468	417247	0.2595	1135555	0.7063
16	726417	0.4522	408538	0.2541	1135555	0.7063
17	735132	0.4577	399723	0.2486	1135555	0.7063
18	743954	0.4632	390801	0.2431	1135555	0.7063
19	752884	0.4688	381779	0.2374	1135555	0.7063
20	761924	0.4745	372651	0.2318	1135555	0.7063
21	771074	0.4803	363421	0.2260	1135555	0.7063
22	780335	0.4861	354090	0.2202	1135555	0.7063
23	789708	0.4920	344651	0.2143	1135555	0.7063
24	799194	0.4979	335107	0.2083	1135555	0.7063
25	808794	0.5040	325458	0.2023	1135555	0.7063
26	818508	0.5101	315707	0.1962	1135555	0.7063
27	828338	0.5163	305857	0.1900	1135555	0.7063
28	838285	0.5225	295910	0.1837	1135555	0.7063
29	848349	0.5289	285868	0.1774	1135555	0.7063
30	858532	0.5353	275733	0.1710	1135555	0.7063
31	868835	0.5418	265507	0.1645	1135555	0.7063
32	879259	0.5484	255191	0.1579	1135555	0.7063
33	889804	0.5550	244786	0.1513	1135555	0.7063
34	899480	0.5617	234296	0.1445	1135555	0.7063
35	909289	0.5685	223723	0.1377	1135555	0.7063
36	919233	0.5754	213072	0.1308	1135555	0.7063
37	929314	0.5824	202338	0.1239	1135555	0.7063
38	939533	0.5895	191523	0.1168	1135555	0.7063
39	949891	0.5966	180629	0.1097	1135555	0.7063
40	960387	0.6039	169657	0.1024	1135555	0.7063
41	970922	0.6112	158606	0.0951	1135555	0.7063
42	981597	0.6186	147478	0.0877	1135555	0.7063
43	992412	0.6261	136273	0.0802	1135555	0.7063
44	1003368	0.6337	125002	0.0726	1135555	0.7063
45	1014465	0.6414	113657	0.0649	1135555	0.7063
46	1025704	0.6491	102240	0.0571	1135555	0.7063
47	1037085	0.6570	90763	0.0493	1135555	0.7063
48	1048609	0.6650	79228	0.0413	1135555	0.7063
49	1060276	0.6730	66645	0.0332	1135555	0.7063
50	1072087	0.6812	54024	0.0251	1135555	0.7063
51	1084042	0.6895	41364	0.0168	1135555	0.7063
52	1096151	0.6978	28664	0.0085	1135555	0.7063

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:

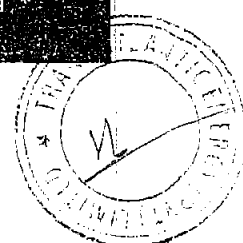
$$O\&M_{(REV)} = \frac{\text{RELEVANT REFERENCE GENERATION TARIFF COMPONENT} \times (US\ CPI_{(REV)} / US\ CPI_{(REF)}) \times (FX\ USD_{(REV)} / FX\ USD_{(REF)})}{CPI_{(REV)} \times US\ CPI_{(REF)}} \times (FX\ USD_{(REV)} / FX\ USD_{(REF)})$$

WHERE	
$O\&M_{(REV)}$	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 110 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:

$$O\&M_{(REV)} = \frac{\text{RELEVANT REFERENCE GENERATION TARIFF COMPONENT} \times (CPI_{(REV)} / CPI_{(REF)})}{CPI_{(REV)} \times CPI_{(REF)}} \times (CPI_{(REV)} / CPI_{(REF)})$$





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WHERE	
$O\&M_{(Rev)}$	The revised Foreign O&M Cost Component applicable for the relevant quarter
$CPI_{(Rev)}$	The revised US CPI (General) 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.

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

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 110 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 General 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:

$$REO_{(REV)} = \frac{\text{RELEVANT REFERENCE GENERATION TARIFF COMPONENT}}{(FX USD_{(REV)} / FX USD_{(REF)})}$$

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



WHERE	
$ROE_{(Rev)}$	The revised ROE component applicable for the relevant quarter.
$ROE-DC_{(Rev)}$	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 110 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 3% on KIBOR remaining the same, according to the following formula:

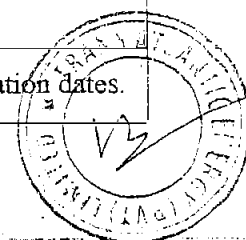
$$\Delta I = P_{(Rev)} * (KIBOR_{(Rev)} - 6.36\%) / 4$$

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 $< 6.36\%$. 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 q quarterly basis at the relevant calculation dates.

Foreign Load 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 4.25% 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 q quarterly basis at the relevant calculation dates.



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.



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11. Considerations With Respect To EPA

11.1 Energy Production

The expected energy output of the Project is determined as 160.78 GWh per annum, which translated as 38% annual capacity factor, and is based on NEPRA's benchmark tariff on January 27, 2017 considered very attractive for wind generation given the precedent cases in the cases and the expectations of NEPRA.

11.2 Wind Risk during operation

In the past cost-plus tariff petitions for wind power project, the wind risk (i.e. risk of lower than benchmark wind speeds) was borne by the Power Purchaser in line with the Policy for Renewable Energy, 2006. The energy output, for the purpose of tariff computation was determined based on a reference 'benchmark wind speed'. Payments to the Project were adjusted with reference to the benchmark, in accordance with the actual wind speeds observed at the sites. In order to minimize risks and disruptions to the project's cash flows, the tariffs were adjustable to wind speeds at both higher and lower than the benchmark. This procedure remains aligned with the spirit of cost plus tariff and is also captured in the Policy for Renewable Energy, 2006.

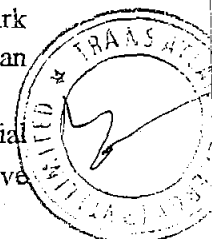
With the successful growth of the wind power industry in Pakistan, NEPRA began announcing upfront tariffs for wind power projects. Wind risk protection was not included in the upfront tariff regimes as the upfront tariff was considered a 'take it or leave it option', with all opportunities as well as all risks taken by the project developers.

The Petitioner understands that the Power Purchaser, AEDB and NEPRA are not in favour of providing coverage against wind speed risk to project developers. Therefore, the Petitioner has not requested any allowance or provision in the Reference Tariff for coverage against wind risk, provided that the Reference Tariff is approved on the estimated 38% annual capacity factor. The Petitioner has accepted all potential risks arising from unpredictable wind speeds, which may result in energy shortfalls during the operations period and Petitioner is also absorbing all such potential costs (including lender's requirements) related to this aspect.

11.3 Compensation against higher than assumed energy yields

Despite the sophisticated forecasting techniques available, it is impossible to accurately predict the wind speed and wind direction over the course of the life of the Project. Both these parameters affect the energy output of the plant; wind speed directly and wind direction indirectly through 'wake effects'. It is also pertinent to mention that the annual energy assumed for the purpose of this Petition is based on an average energy output; the Project may experience energy output higher than the benchmark assumptions in some years, whereas in other years the energy output may be significantly lower than the benchmark of 160.78 GWh per annum.

As mentioned in the preceding section, the Petitioner is bearing the risks associated with the potential of lower than predicted wind speeds, as well as their further repercussions. Therefore, in order to have an opportunity to recover its potential energy shortfall on account of wind speed, the Petitioner has





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assumed that any such energy generated over and above the 38% capacity factor shall be paid at the full tariff rate to the Project.

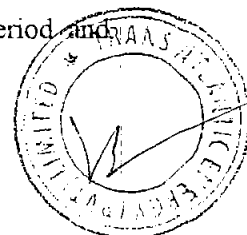
It is humbly emphasized that the Petitioner should be allowed compensation for energy output above 38% capacity factor at the Reference Generation Tariff to cater for the risks of variability in the wind speed, from which the Petitioner can potentially suffer during the life of the Project.

12. Pass Through Items & Tariff Assumptions

12.1 PASS THROUGH ITEMS

Authority is requested to allow following cost components as pass-through to TAEI 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 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 TAEI (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.
- Any "Contingent Equity" that is asked by the lenders to provide as sponsor support for any deficiency, this can be upto 5% of the project cost.
- Taxes and charges that constitute as part of the Project Cost for construction period and operation period shall be treated as pass through.



12.2 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 both local and foreign financial institutions. Exact composition of local and foreign 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 110 / 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 of 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 and LIBOR 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 TAEI without any discrimination.

Trans Atlantic Energy (Pvt) Limited
Dated: 21-03-2018

