

Shafi Energy (Pvt) Ltd.

A Shafi Group Company

15th November, 2018

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

Subject: Submission of Tariff Petition of Shafi Energy Private Limited for 50 MW Wind Power Project (SEPL) at Jhimpir Area, Thatta, Sindh

Kindly accept the Company's Tariff Petition, along with the fee as determined by the National Electric Power Regulatory Authority ("NEPRA" or the Authority-) for kind consideration and favourable approval by the Authority in accordance, inter alia, with section-31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 read with Rule 3 of the NEPRA tariff Standards and Procedure Rules, 1998 and other applicable provisions of NEPRA law.

The Tariff Petition (including its Annexures) is submitted in triplicate together with:

- The Bank Drafts No. P.O.0101.4965592 dated 13.11.2018, for PKR 636,320/- and Bank Draft No. PO.0101.4965634 dated 15.11.2018 for PKR 16,224/- total amounting to PKR.652,544/- (Pak Rupees Six hundred fifty two thousand five hundred and forty four only) drawn on Meezan Bank as requisite fee for Tariff Petition as communicated by NEPRA.
- Board Resolution of Shafi Energy Private Limited.
- Affidavit of authorized representative.

We look forward to receive an early positive determination in order to achieve the completion of project within timelines in the national interest of Pakistan.

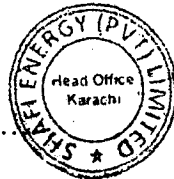
Respectfully submitted for and on behalf of:

SHAFI ENERGY PRIVATE LIMITED



ZAHID HALEEM SHAIKH

Executive Director



Registered Office: Shafi House, 35-A/3, Laiazar, Opp. Beach Luxury Hotel, P.O. Box 4524, Karachi-74000, Pakistan.

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Website: www.shafienergy.com

Shafi Energy Private Limited

BEFORE

THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
FOR

50 MW WIND POWER PROJECT AT JHIMPIR, DISTRICT THATTA,
SINDH, PAKISTAN



Shafi Energy Private Limited

22th November 2018

Tel 02135610696

Shafi House, 35-A/3, Lalazar,
Karachi.

www.shafienergy.com
Info@shafienergy.com

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1. Petitioner's Information

1.1. Name of Petitioner

Name: Shafi Energy Private Limited ("SEPL", the "Project Company" or the "Petitioner").

Address: Shafi House, 35-A/3, Lalazar, Opp. Beach Luxury Hotel Karachi.

Company Registration No: 0096697

1.2. Project Sponsors

Shafi Gluco Chem (Pvt.) Limited
Muhammad Shafi Tanneries (Pvt.) Limited
Shafi Texcel Limited

1.3. Representative of the Petitioner

Zahid Haleem Shaikh

Executive Director

1.4. Project Advisors

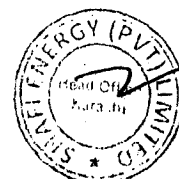
Advisors

Bridge Factor

Renewable Resources (Private) Limited

Financial Advisors

Technical Advisors



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.

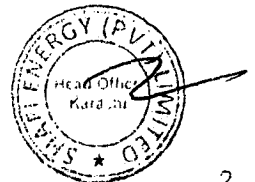
Under the NEPRA Act, the Authority is responsible for determining tariffs, rates and other terms and conditions for the supply of electric power services by the generation, transmission and distribution companies and recommending them to the Federal Government for notification. NEPRA is also responsible for determining the process and procedures for reviewing and approving tariffs and tariff adjustments.

2.2. About the Petitioner – Brief

Shafi Energy Private Limited ("SEPL") ("Project Company") (a company incorporated under the laws of Pakistan), with its office located at Shafi House, 35-A/3, Lalazar, Opp. Beach Luxury Hotel, Karachi. SEPL was incorporated on 14th December 2015 to develop, own and operate an approximately 50 MW wind power project in Jhimpir, Thatta pursuant to a Letter of Intent (LOI) dated 2nd March 2016 (Annexure 1) issued by the Energy Department Government of Sindh (EDGOS) vide its letter No. DAEWind/102/2016. 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

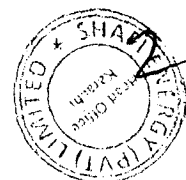
Pursuant to the relevant provisions of the Policy for Development of Renewable Energy for Power Generation 2006 (the RE Policy 2006) and the LOI, SEPL completed the detailed technical feasibility study for the Project. The same was submitted to Panel of Experts (PoE), EDGOS on 1st November 2015. The following milestones have been achieved leading up to the submission of tariff petition.



- The land for the Project has been allotted by Government of Sindh (GOS) for a period of 30 years through Land Allotment letter Reference No: DC /Reader/2870 dated 8th August 2016 (Annexure 2)
- The Project Company engaged Renewable Resources (Private) Limited, who completed the initial environmental examination for the Project (the Initial Environmental Examination) and the Project Company submitted the same to the Sindh Environmental Protection Agency (SEPA) on December 2016 . After review and analysis of the initial Environmental Examination, SEPA accorded its approval through its decision Ref: EPA/2017/01/09/IEE/109 dated 25th January 2017 (the IEE Approval Decision) (Annexure 3).
- Grid Interconnection Study was conducted by NTDC and submitted by the Project on March 2017 for approval and approved by NTDC on 1st June 2017 (Annexure 4).
- Generation License (GL) application was submitted to NEPRA on 16th November 2018. (Annexure 5).
- EPC Contract for the Project has been executed on 19th November 2018 (Annexure 6).
- Feasibility Study submitted to EDGOS Panel of Experts and the same was approved on 14th November 2018 (Annexure 7)
- Project debt funding (80% of the Project cost) has been arranged from foreign bank and SBP Re refinance facility (Annexure 8). Sponsors have arranged the remaining 20% of the Project cost as equity investments.

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

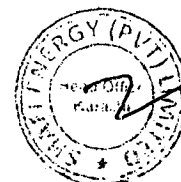
Accordingly, it is submitted that the requirements of the regulatory process for applying to NEPRA for the tariff determination of SEPL's 50 MW power generation facility to be located at District Thatta, Sindh have been completed.



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, SEPL submits herewith before NEPRA, this Petition for approval of the Reference Tariff (Negotiated Tariff under Cost-Plus regime); the energy production estimate; 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.



3.Executive Summary

Shafi Energy Private Limited (the "Project Company") is the first 50 MW Wind Power Project of the Sponsors. The Project consisting of 412 acres of Land, is in the proximity of Shafi Energy Private Limited (SEPL) is located at Deh Kohistan 7/4, Tapo Jungshahi Taluka, District Thatta, Jhimpir, Sindh, Pakistan. The salient features of the Project.

<i>Sponsors</i>	<i>Shafi Gluco Chem (Pvt.) Limited, Shafi Texcel Limited and Muhammad Shafi Tanneries (Pvt.) Limited</i>		
<i>Gross Capacity</i>	50 MW		
<i>Power Purchaser</i>	Central Power Purchasing Agency Guarantee Limited		
<i>Wind Turbine Generators</i>	GAMESA G114 – 2.0		
<i>Annual Energy Production</i>	166.44 GWh		
<i>Capacity Factor</i>	38%		
<i>Construction Period</i>	18 months		
<i>Concession Period</i>	25 Years		
<i>Project Basis</i>	BOO		
<i>Project Cost</i>	Description	US \$ Million	
	EPC Cost	68.00	
	Project Development Cost	3.00	
	Insurance during Construction	0.34	
	Financial Fee and Charges	1.71	
	Interest during Construction	2.01	
	Total Project Cost	75.07	
<i>Project Financing</i>	Description	Percentage	US \$ Million
	Equity	20%	15.01
	Debt	80%	60.06
	Total Financing	100%	75.07
<i>Debt Financing</i>	Description	Percentage	US \$ Million
	Local (SBP)	50%	30.03
	Foreign	50%	30.03
	Total Debt	100%	60.06



Financing Terms

<i>Description</i>	<i>SBP</i>	<i>Foreign</i>
Loan Term	10y	13y
Repayment (Installments)	40	52
Mark-up rate	600bps	3M LIBOR + 425bps

Operational Phase Cost

Description	Million US \$/Year		Million US \$/Year
	1-10	11-13	14-25
O & M	1.90	1.90	1.90
Insurance	0.34	0.34	0.34
Cost			

Tariff

US¢ 5.9326 per kWh

Exchange Rate

1 US\$ = PKR 120

EPC Selection

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

- China Shipbuilding Industry Corporation CSIC
- Sany Group
- HydroChina Corporation
- Orient Gamesa

Based on technical and financial bid evaluation, the Company signed EPC contract with HydroChina Corporation with GAMESA WTG (G114 - 2.0).

Major Tasks Completed

Letter of Intent	Feasibility Study
Land Allotted & Lease Signed	Grid Interconnection Study approved
Topographical Study	Initial Environment Assessment
Transportation Study	EPC and O&M Agreements
Geo-technical Study	Term sheet from Project Lenders
Wind Resource Assessment Study	



4. The Project

4.1. Pakistan's Current Electric Power Shortage

Pakistan currently has around 25.5 GW of installed capacity for 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.

Moreover, the renewable energy mix should be increased to optimize the basket price. Renewable energy is the cheapest form of energy with no environmental impacts. 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

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:

- (a) reducing dependence on fossil fuels for thermal power generation;
- (b) increasing diversity in Pakistan's electricity generation mix;
- (c) reducing greenhouse gas emissions through avoidance of thermal power generation; and
- (d) reduces pressure on Pakistan foreign exchange reserves.



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 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.

4.3. Wind Power has more usefulness when Base Load is secured

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.



4.4. About the Sponsors

SEPL is sponsored by Shafi Gluco Chem (Pvt.) Limited, Shafi Texcel Limited & Muhammad Shafi Tanneries (Pvt.) Limited.

Shafi Group

Shafi Group was formed in 1940 by the (late) Mian Muhammad Shafi, along with his elders sons, Mian Muhammad Siddiq and Mian Abdul Hafeez, founded the group in 1940, as a trading house in hides and skins. The Group is today one of the premier houses in leather, textile, garments, dairy farming and rice processing.

Shafi Group of companies includes eight manufacturing units, including four tanneries which produce all various types of leathers, one leather garment unit, one footwear unit, one textile unit, one glucose and rice syrup production unit, one unit producing specialty leather chemical and also a company involved in dairy farming. The total turnover of the group is approximately US\$ 100 million, a very major part of which is for export. The Group's international agent network spans over twelve countries in three continents with major markets being Germany, France, Italy, China, other Far Eastern, European and South and North American Countries.

Presented below are brief profiles of the Sponsor Companies:

Shafi Texcel Limited

Shafi Texcel Limited has a success story of over one decade; from modest start in 2004 from a weaving unit it has turned into a vertically integrated textile unit by adding yarn dyeing production in 2009 and a fabric finishing unit in 2014. Over the last 10 years, Shafi Texcel has been recognized as the leading value added fabric producer from Pakistan.

It offers woven fabrics for various end users mostly in cotton and blends with Polyester, Viscose, Lycra and other Fibers. The production weaving capacity is 1.5 million meter of fabric per month along with a capacity of 7 tons per day of yarn dyeing and 2 million meters per month of finishing.



Since its inception, Shafi Texcel has become a leading producer of yarn dyed fabrics in Pakistan. Shafi Texcel is positioned to provide customers with a vertically integrated solution to source yarn dyed fabrics. The product development team carries out extensive research to keep updated on new market trends and to stay one step ahead of the competition. Shafi Texcel constantly work hard to translate its novel and creative ideas into attractive products.

Muhammad Shafi Tanneries (Pvt.) Limited

Muhammad Shafi Tanneries (Pvt.) Ltd. (MST), Karachi, the flag-bearer company of the group, is pioneer in production of kid leather for shoe industries and is one of the best known kid tanneries in the world. It started production and export in 1959 and now "MST" is the most prestigious and widely known trademark from Pakistan and is synonymous with the best in quality of leather and reliability in business.

MST's annual production capacity is over 22 million sq. ft. and annual turnover of over US\$ 356 million. MST produces a wide range of leathers for shoe uppers and linings in various finishes/executions. It is not only the fashion trends, but also making innovations of its own in kid and goatskin leathers for shoes. Its innovative leathers are regularly chosen by Lineapelle, Bologna as well as by the ARS magazine, Italy for "FASHION TREND SECTION". MST has practically won all the Best Export Performance Trophy awards right from the inception of the award by the Federation of Pakistan Chambers of Commerce and Industry. MST displays its leather in Linea pelle, Bologna, Italy as well as in Asia-Pacific Leather Fair, Hong Kong.

Shafi Gluco - Chem (Pvt.) Limited

Established in 2003, Shafi Gluco – Chem (Pvt.) Limited (ISO 22000 Certification by UKAS in July 2011) is the most highly equipped, state of the art 'Starch Sweeteners' production facility in Pakistan. Shafi Gluco Chem (Pvt.) Limited, to assure the highest quality and service for its customers, has also appointed T.S.S. Team Starch Sweeteners (Germany), a consultancy firm, for guidance, innovation and technical advancements to prepare itself for the global market.



The Company is involved in the production of Liquid Glucose, Glucose Powder, Rice Protein & Concentrates, Organic Rice, and Rice Flour. The Company's has an annual production capacity of 22,000 tons and annual turnover of US\$ 20 million.

Sponsors' Energy Experience

Shafi Group has had experience in procurement, installation, commissioning, and operations and maintenance of over 9MW of captive power generation capacity for its group companies' manufacturing facilities. The captive power plants are based on thermal technology (gas turbine combined cycle) with their primary fuel being natural gas and diesel. The group has operated the captive power plants for the past 15 years.

Sponsor's Key Financials:

	2014	2015	2016
	PKR Million		
<i>Annual Turnover</i>	6,376	7,113	6,521
<i>Total Assets</i>	6,369	7,144	7,718
<i>Net Assets</i>	3,432	4,203	5,204

4.5. About the Project

Shafi Energy Private Limited ("SEPL") is a SPV sponsored by the Shafi Gluco Chem (Pvt.) Limited, Shafi Texcel Limited and Muhammad Shafi Tanneries (Pvt.) Limited, (the Sponsor), for the development of a 50 MW wind power project. The Sponsor has a valid LOI from the Energy Department Government of Sindh ("EDGOS") in this regard and has been provided land coordinates for approximately 412 acres in Deh Kohistan, Tapo Jungshahi Taluka, District Thatta by the Government of Sindh (GOS).

An efficient and dynamic professional team has been appointed to assist in the implementation of the Project. Bridge Factor have been appointed as Transaction Advisor, whereas a Renewable Resources (RE2) has been selected as Technical Advisor for advice on all technical matters for smooth and efficient execution of the Project.

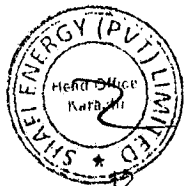


4.6. Project Location

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 approximately 120 km from Karachi.

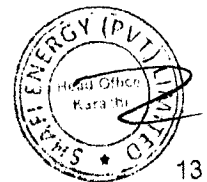
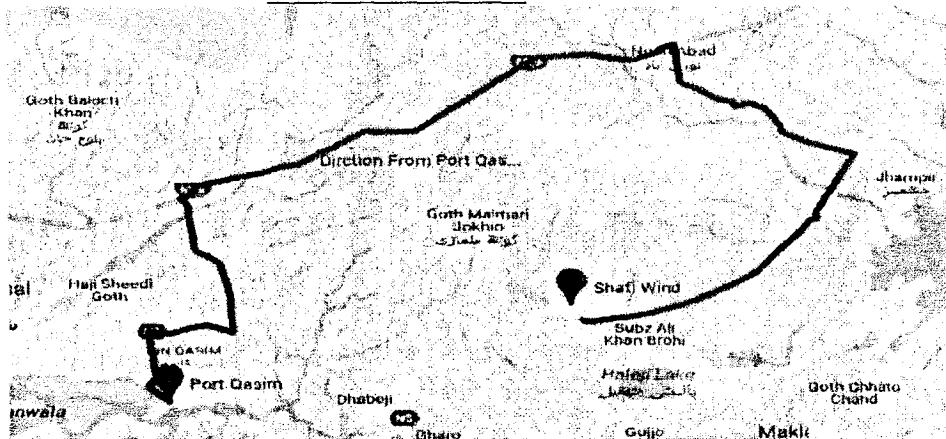
The site for the implementation of the project has been selected considering:

- (i) location in the wind corridor,
- (ii) wind conditions at the site,
- (iii) topographic conditions,
- (iv) site accessibility, and
- (v) location of the grid with reference to the site for interconnection.

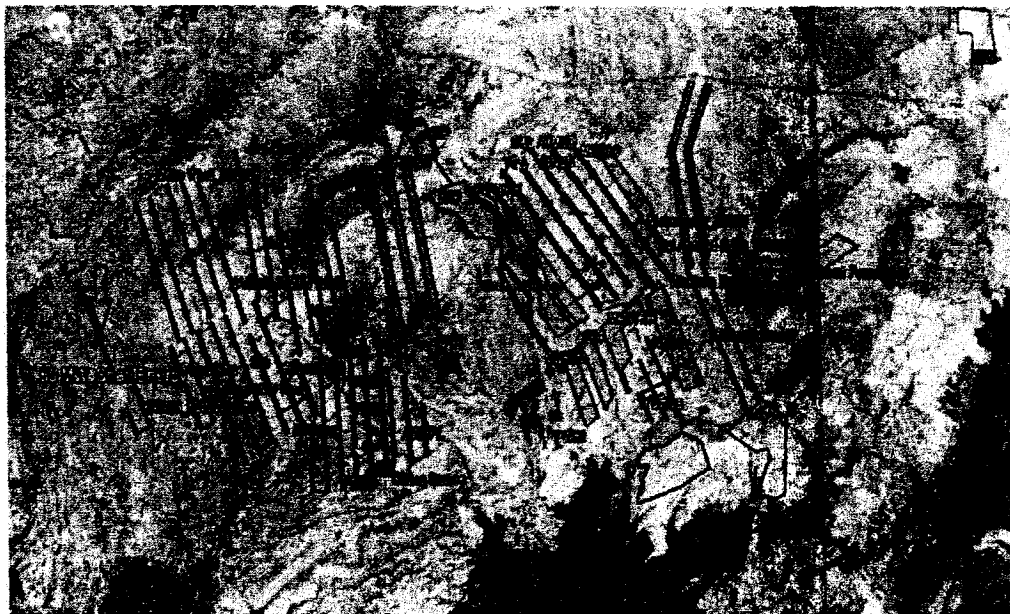


Project Site Coordinates:

Total Land Area: 412 Acres		
Geodetic Coordinates		
Point No.	Latitude (N)	Longitude (E)
1	24°54'57.57"N	67°38'12.12"E
2	24°54'53.50"N	67°38'9.27"E
3	24°53'23.04"N	67°41'1.16"E
4	24°53'27.73"N	67°41'2.61"E
5	24°54'0.30"N	67°41'23.71"E
6	24°53'55.47"N	67°41'22.17"E
7	24°53'0.91"N	67°43'15.68"E
8	24°52'57.30"N	67°43'11.80"E
9	24°52'29.42"N	67°42'55.05"E
10	24°52'24.49"N	67°42'53.78"E
11	24°52'51.52"N	67°42'12.33"E
12	24°52'47.22"N	67°42'9.79"E



The overview of the Project site is shown in figure below:



The Project site is exposed to strong winds; wind data analysis of the area suggests that 80% wind blows from the south west direction.

4.7. Wind Farms Layout at Project Site

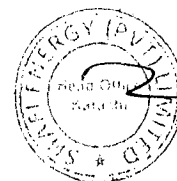
Micro-siting for the each WTG towers location setting parameters for the project is tabulated below:



Total Land Area: 412 Acres		
Coordinates (UTM z42, WGS84)		
WTG Label	Northing	Easting
Shafi_G01	2756050	362666
Shafi_G02	2755848	363009
Shafi_G03	2755645	363353
Shafi_G04	2755443	363696
Shafi_G05	2755240	364039
Shafi_G06	2755037	364382
Shafi_G07	2754835	364726
Shafi_G08	2754632	365069
Shafi_G09	2754429	365412
Shafi_G10	2754227	365755
Shafi_G11	2754024	366098
Shafi_G12	2753821	366442
Shafi_G13	2753619	366785
Shafi_G14	2754225	368040
Shafi_G15	2754022	368383
Shafi_G16	2753818	368725
Shafi_G17	2753614	369068
Shafi_G18	2753411	369410
Shafi_G19	2753207	369753
Shafi_G20	2753003	370096
Shafi_G21	2752800	370438
Shafi_G22	2752311	369023
Shafi_G23	2752110	369367
Shafi_G24	2751908	369710
Shafi_G25	2751706	370054

4.8. Grid Connectivity and Energy Production

The Project would be connected by a double circuit of 132kV looping in-out with a sub cluster also connecting nearby WPPs to Jhimpir-2 220/132 kV Grid.



Annual Energy Production of 166.44 GWh has been estimated for the Project. The table below shows key details relating to power generation from the Project.

1	Total installed / Gross ISO Capacity (MW)	50 MW
2	Annual Energy Generation (GWh)	166.44
3	Net Capacity Factor	38%



5. EPC – Process & Selection

5.1. WTG Technology & EPC Selection

In order to select EPC and O&M contractors for the Project, the Project Company carried out a competitive bidding process by issuing RFPs to the EPC contractors/WTG manufacturers for awarding the turnkey contracts for the development of the Project. Following EPC contractor/WTG manufacturers submitted the bids:

- China Shipbuilding Industry Corporation (CSIC)
- Sany Group
- HydroChina Corporation
- Orient Gamesa

Based on combined technical and financial evaluation, HydroChina Corporation was declared as the preferred bidder for the EPC with Gamesa G114 - 2.0WTGs.

After negotiations the Company signed EPC contract with "HydroChina Corporation" on dated 19th November 2018 as the technology for its Project with a fixed price and fixed Commercial Operations Date.

5.2. GAMESA – The WTG Manufacturer

With 20 years' experience, Gamesa is a global leader in the design, manufacture, installation and maintenance of wind turbines, with over 28,800 MW installed in 43 countries across five continents. Operation & Maintenance (O&M) is one of the key activities upon which Gamesa bases its development, having 70% of its fleet under an Operation & Maintenance contract thanks to an expansion of this activity in over 30 countries.

In April 2017 Siemens merged its wind power business with Gamesa. Siemens Wind Power and Gamesa now form a world-leading wind power provider in the name of "Siemens Gamesa Renewable Energy", with an unrivalled global presence with over



75 GW installed globally in more than 90 countries. The two companies complement one another almost perfectly and boast a unique product portfolio.

The Project comprises of 25 Gamesa G114-2.0 MW CIIA Wind Turbines at 93m hub height. The output of the farm will be 50 MW with capacity factor of 38%. The Project construction timeline will be 18 months after issuance of Notice to Proceed (NTP).

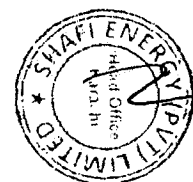
The specifications of Gamesa's G 114-2.0 turbine are as follows:

	Description	Specs.
1	Wind Turbine Type, Make & Model	G 114-2.0
2	Installed Capacity of Wind Farm (MW)	50 MW
3	Number of Wind Turbine Units/Size of each Unit (KW)	25 x 2.0 MW
4	Number of blades	3
5	Rotor diameter	114m
6	Hub Height	93m
7	Generator Voltage	690 V
8	Cut-in wind speed	3 m/s
9	Cut-out wind speed	25 m/s
10	Extreme wind speed (3 Second average)	59.5 m/s

5.3. The EPC Contractor – Hydro China

HYDROCHINA CORPORATION, affiliated to POWERCHINA which is one of the world's top 500 enterprises and a comprehensive construction group with diversified industrial structures, is a large consultation enterprise for development of water resource and renewable energy, and serves as an important institution for undertaking and implementation of oversea business in the POWERCHINA group. HYDROCHINA Corporation has 12 subsidiaries. As a sub-brand of POWERCHINA, HYDROCHINA is focused on providing services in development of hydropower, wind power and solar power, involving resources survey, planning, investigation, design, consultation, financing, procurement, EPC contracting, safety appraisal, construction supervision, construction inspection and final acceptance, and operation maintenance for renewable energy projects.

HYDROCHINA has ranked No.1 in the 60 China engineering design enterprises ENR, 15th in the Global top 150 engineering design companies and 59th of 225 international



engineering design companies. Over the years, HYDROCHINA has developed three core business sectors, design and consultation, EPC contract and investment, and set up overseas representative offices or branches for providing high quality services abroad.



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 120.

A summary of the Project Cost is given below:

Project Cost Items	US \$ Million
<i>EPC Cost</i>	68.00
<i>Project Development Cost</i>	3.00
<i>Insurance during Construction</i>	0.34
<i>Financial Fee and Charges</i>	1.71
<i>Interest during Construction</i>	2.01
Total Project Cost	75.07

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 \$ 68.00 Million**. As identified above, SEPL adopted an effective and efficient bidding process for procuring the services of EPC Contractor at the most competitive prices.

6.2. Project Development Cost

This head includes the cost for development of Project and includes all costs, fees and expenses incurred or to be incurred for such purpose. A total of US\$ 3.00 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 / AEDS,
- 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;
- 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.

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. These cost estimates at US \$ 0.34 Million on the most recent tariff determinations issued by NEPRA for other wind power projects. Authority is hereby requested to allow Insurance during Construction US \$ 0.34 Million.

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:

- (a) Construction All Risk Insurances (CAR);



- (b) CAR Delay in Start-up Insurance;
- (c) Terrorism Insurance;
- (d) Marine and Inland Transit Insurance;
- (e) Marine - Delay-in Startup Insurances; and
- (f) 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 US\$ 1.71 Million.

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 US \$ 2.01 Million on the terms offered by financial institutions and banks to the Project at 3-month LIBOR plus a spread of 4.25% for foreign loan and SBP RE refinance facility at rate of fixed 6%. 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 15 months, which is in line with the construction period agreed with the EPC Contractors. It is pertinent to mention that all bidders proposed the same construction period for the Project.

The spreads are considered to be reasonable given:



- i. Pakistan's security situation, due to which international lenders shall require a premium for taking on the additional risk of investing in Pakistan,
- ii. Rates offered by the Pakistan government on recent euro-bonds issued by the government.



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 debt financing have been executed prior to financial close. For the purpose of this Petition, a debt: equity ratio of 80:20 has been assumed, thereby resulting in the following debt and equity injections for the Project:

	MILLION US \$
DEBT	60.06
EQUITY	15.01
TOTAL PROJECT COST	75.07

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

	SBP Financing	Foreign Financing
Base Rate	6.00%	0.60%
Spread		4.25%
Total Rate	6.00%	4.85%
Repayment period	10 years	13 years
Repayment basis	Quarterly	Quarterly

Sponsors are planning to inject 20% equity into the Project. The financing structure of 80:20 debt: equity might change later on based on mutual arrangement between Banks and Sponsors.

7.2. 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:

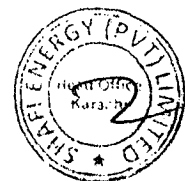


- ☐ ROE of 15% (IRR based) return on invested equity net of withholding tax.
- ☐ ROEDC at a rate of 15% over the remaining life of the Project.

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.

7.3. Carbon Credits

Wind Power is a clean form of energy and will reduce CO₂ emission. SEPL 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. Break-up of the same is provided hereunder:

	USD IN MILLION (PER ANNUM)
O&M COST	1.90
INSURANCE	0.34

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. O&M cost for the Project is estimated at US\$1.9 Million per annum. 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 will be incurred in local as well as foreign currency and indexations are requested to be applicable accordingly.

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. SEPL requests the Authority to allow annual insurance cost at US\$ 0.34 Million per annum.



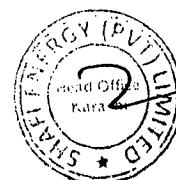
9. Reference Tariff

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 three (03) bands i.e. year 1 – 10, 11-13 and year 14 – 25 to cover the variations due to the debt repayment period.

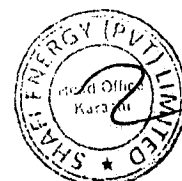
A summarized Reference Generation Tariff table setting out the two bands is provided below:

		<i>PKR/kWh</i>		
Years		1 – 10	11-13	14 – 25
O&M		1.3699	1.3699	1.3699
INSURANCE		0.2451	0.2451	0.2451
ROE		1.7802	1.7802	1.7802
DEBT SERVICING	LOCAL	2.8946	-	-
	FOREIGN	2.2548	2.2548	-
TOTAL		8.5446	5.6500	3.3952



9.1. Reference Generation Tariff

	O&M	Insurance	ROE	SBP		Foreign		Tariff	
				Principal	Interest	Principal	Interest	PKR	US cents
				PKR/kWh				kWh	kWh
1	1.3699	0.2451	1.7802	1.6319	1.2627	1.2269	1.0279	8.5446	7.1205
2	1.3699	0.2451	1.7802	1.7321	1.1625	1.2875	0.9673	8.5446	7.1205
3	1.3699	0.2451	1.7802	1.8384	1.0562	1.3511	0.9037	8.5446	7.1205
4	1.3699	0.2451	1.7802	1.9512	0.9434	1.4179	0.8369	8.5446	7.1205
5	1.3699	0.2451	1.7802	2.0709	0.8237	1.4879	0.7669	8.5446	7.1205
6	1.3699	0.2451	1.7802	2.1980	0.6966	1.5614	0.6934	8.5446	7.1205
7	1.3699	0.2451	1.7802	2.3329	0.5617	1.6385	0.6163	8.5446	7.1205
8	1.3699	0.2451	1.7802	2.4760	0.4186	1.7194	0.5354	8.5446	7.1205
9	1.3699	0.2451	1.7802	2.6280	0.2666	1.8043	0.4505	8.5446	7.1205
10	1.3699	0.2451	1.7802	2.7892	0.1054	1.8935	0.3614	8.5446	7.1205
11	1.3699	0.2451	1.7802	-	-	1.9870	0.2678	5.6500	4.7083
12	1.3699	0.2451	1.7802	-	-	2.0851	0.1697	5.6500	4.7083
13	1.3699	0.2451	1.7802	-	-	2.1881	0.0667	5.6500	4.7083
14	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
15	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
16	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
17	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
18	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
19	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
20	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
21	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
22	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
23	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
24	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
25	1.3699	0.2451	1.7802	-	-	-	-	3.3952	2.8293
Levelized Tariff								7.1192	5.9326



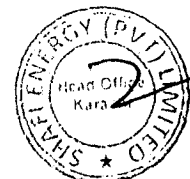
9.2. Reference Debt Servicing Schedule – SBP Facility

Quarter	Principal	Principal Component	Interest	Interest Component	Installment	Installment Component
1	553,304	0.3989	450,400	0.3247	1,003,704	0.7237
2	561,604	0.4049	442,100	0.3187	1,003,704	0.7237
3	570,033	0.4110	433,676	0.3127	1,003,704	0.7237
4	578,538	0.4171	425,126	0.3065	1,003,704	0.7237
5	587,257	0.4234	416,442	0.3003	1,003,704	0.7237
6	596,068	0.4298	407,638	0.2939	1,003,704	0.7237
7	605,007	0.4362	398,697	0.2875	1,003,704	0.7237
8	614,062	0.4427	389,622	0.2809	1,003,704	0.7237
9	623,293	0.4494	380,411	0.2743	1,003,704	0.7237
10	632,642	0.4561	371,064	0.2675	1,003,704	0.7237
11	642,132	0.4630	361,572	0.2607	1,003,704	0.7237
12	651,764	0.4699	351,940	0.2537	1,003,704	0.7237
13	661,540	0.4770	342,163	0.2467	1,003,704	0.7237
14	671,463	0.4841	332,240	0.2395	1,003,704	0.7237
15	681,535	0.4914	322,168	0.2323	1,003,704	0.7237
16	691,758	0.4987	311,945	0.2249	1,003,704	0.7237
17	702,135	0.5062	301,569	0.2174	1,003,704	0.7237
18	712,667	0.5138	291,037	0.2098	1,003,704	0.7237
19	723,357	0.5215	280,347	0.2021	1,003,704	0.7237
20	734,207	0.5293	269,497	0.1943	1,003,704	0.7237
21	745,220	0.5373	258,483	0.1864	1,003,704	0.7237
22	756,399	0.5453	247,305	0.1783	1,003,704	0.7237
23	767,745	0.5535	235,959	0.1701	1,003,704	0.7237
24	779,261	0.5618	224,443	0.1618	1,003,704	0.7237
25	790,950	0.5703	212,754	0.1534	1,003,704	0.7237
26	802,814	0.5788	200,890	0.1448	1,003,704	0.7237
27	814,856	0.5875	188,848	0.1362	1,003,704	0.7237
28	827,079	0.5963	176,625	0.1273	1,003,704	0.7237
29	839,488	0.6053	164,219	0.1184	1,003,704	0.7237
30	852,077	0.6143	151,626	0.1093	1,003,704	0.7237
31	864,859	0.6235	138,845	0.1001	1,003,704	0.7237
32	877,832	0.6329	125,872	0.0908	1,003,704	0.7237
33	890,999	0.6424	112,705	0.0813	1,003,704	0.7237
34	904,364	0.6520	99,340	0.0716	1,003,704	0.7237
35	917,929	0.6618	85,774	0.0618	1,003,704	0.7237
36	931,698	0.6717	72,005	0.0519	1,003,704	0.7237
37	945,674	0.6818	58,030	0.0418	1,003,704	0.7237
38	959,859	0.6920	43,845	0.0316	1,003,704	0.7237
39	974,257	0.7024	29,447	0.0212	1,003,704	0.7237
40	988,871	0.7130	14,833	0.0107	1,003,704	0.7237



9.3. Reference Debt Servicing Schedule – Foreign Facility

Quarter	Principal	Principal Component	Interest	Interest Component	Installment	Installment Component
1	417,783	0.3012	364,073	0.2625	856	0.5637
2	422,849	0.3049	359,007	0.2588	856	0.5637
3	427,976	0.3086	353,880	0.2551	856	0.5637
4	433,165	0.3123	348,691	0.2514	856	0.5637
5	438,417	0.3161	343,439	0.2476	856	0.5637
6	443,733	0.3199	338,123	0.2438	856	0.5637
7	449,113	0.3238	332,743	0.2399	856	0.5637
8	454,559	0.3277	327,298	0.2360	856	0.5637
9	460,070	0.3317	321,786	0.2320	856	0.5637
10	465,649	0.3357	316,208	0.2280	856	0.5637
11	471,295	0.3398	310,562	0.2239	856	0.5637
12	477,009	0.3439	304,847	0.2198	856	0.5637
13	482,793	0.3481	299,063	0.2156	856	0.5637
14	488,647	0.3523	293,210	0.2114	856	0.5637
15	494,572	0.3565	287,285	0.2071	856	0.5637
16	500,568	0.3609	281,288	0.2028	856	0.5637
17	506,638	0.3653	275,219	0.1984	856	0.5637
18	512,781	0.3697	269,076	0.1940	856	0.5637
19	518,998	0.3742	262,858	0.1895	856	0.5637
20	525,291	0.3787	256,565	0.1850	856	0.5637
21	531,660	0.3833	250,196	0.1804	856	0.5637
22	538,107	0.3880	243,750	0.1757	856	0.5637
23	544,631	0.3927	237,225	0.1710	856	0.5637
24	551,235	0.3974	230,622	0.1663	856	0.5637
25	557,918	0.4022	223,936	0.1615	856	0.5637
26	564,683	0.4071	217,173	0.1566	856	0.5637
27	571,530	0.4121	210,326	0.1516	856	0.5637
28	578,460	0.4171	203,397	0.1466	856	0.5637
29	585,474	0.4221	196,383	0.1416	856	0.5637
30	592,572	0.4272	189,284	0.1365	856	0.5637
31	599,757	0.4324	182,099	0.1313	856	0.5637
32	607,029	0.4377	174,827	0.1260	856	0.5637
33	614,390	0.4430	167,467	0.1207	856	0.5637
34	621,839	0.4483	160,017	0.1154	856	0.5637
35	629,379	0.4538	152,477	0.1099	856	0.5637
36	637,010	0.4593	144,846	0.1044	856	0.5637
37	644,734	0.4648	137,122	0.0989	856	0.5637
38	652,551	0.4705	129,305	0.0932	856	0.5637
39	660,464	0.4762	121,393	0.0875	856	0.5637
40	668,472	0.4820	113,385	0.0817	856	0.5637
41	676,577	0.4878	105,279	0.0759	856	0.5637
42	684,780	0.4937	97,076	0.0700	856	0.5637
43	693,083	0.4997	88,773	0.0640	856	0.5637
44	701,487	0.5058	80,369	0.0579	856	0.5637
45	709,992	0.5119	71,864	0.0518	856	0.5637
46	718,601	0.5181	63,255	0.0456	856	0.5637
47	727,314	0.5244	54,542	0.0393	856	0.5637
48	736,133	0.5307	45,723	0.0330	856	0.5637
49	745,058	0.5372	36,798	0.0265	856	0.5637
50	754,092	0.5437	27,764	0.0200	856	0.5637
51	763,236	0.5503	18,621	0.0134	856	0.5637
52	772,490	0.5570	9,366	0.0068	856	0.5637



10. Indexation & 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:

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

The applicable formula shall be as follows:

$$O\&M_{(FRev)} = \text{Relevant Reference Generation Tariff Component} *$$

$$(\text{US CPI}_{(Rev)} / \text{US CPI}_{(Ref)}) * (\text{FX USD}_{(Rev)} / \text{FX USD}_{(Ref)})$$

Where:

$O\&M_{(FRev)}$ = the revised Foreign O&M Cost

* Component applicable for the relevant quarter

$\text{US CPI}_{(Rev)}$ = 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

$\text{US CPI}_{(Ref)}$ = the US CPI (for all Urban-consumers) for the relevant month, as issued by the US Bureau of Labor Statistics.

$\text{FX USD}_{(Rev)}$ = 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 120 for USD 1

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:

$$O\&M_{(LRev)} = \text{Relevant Reference Generation Tariff Component} *$$

$$\left(\frac{CPI_{(Rev)}}{CPI_{(Ref)}} \right)$$

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.

10.1.4. Indexation Formula

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

$$Insurance_{(Rev)} = \text{Relevant Reference Generation Tariff Component} *$$

$$\left(\frac{FX USD_{(Rev)}}{FX USD_{(Ref)}} \right)$$



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 120 for USD 1

10.1.5. 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:

$$\boxed{\text{ROE}_{(\text{Rev})}} = \boxed{\text{Relevant Reference Generation Tariff Component}^*}$$

$$\boxed{(\text{FX USD}_{(\text{Rev})} / \text{FX USD}_{(\text{Ref})})}$$

$$\boxed{\text{ROE-DC}_{(\text{Rev})}} = \boxed{\text{Relevant Reference Generation Tariff Component}^*}$$

$$\boxed{(\text{FX USD}_{(\text{Rev})} / \text{FX USD}_{(\text{Ref})})}$$

Where:

10.1.6. 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 120 for USD 1

10.1.7. Debt Component

- a) **Foreign Financing** - 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 $LIBOR_{(Rev)} > \text{or} < 0.6\%$. 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.

10.2. 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.

10.3. 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.



10.4. Adjustments

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

- (a) The Principal Repayment and cost of debt be adjusted at COD as per the actual borrowing composition;
- (b) Interest During Construction be adjusted as per actual based on actual disbursement of loans and prevailing LIBOR rates during the Project construction period;
- (c) 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;
- (d) Customs duty and other taxes (including SIDS) be adjusted/allowed as per actual;
- (e) 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.
- (f) Pre-COD Insurance Cost be adjusted at actual subject to a cap of 1% of the EPC cost in line with earlier tariff determinations by NEPRA for other IPPs.
- (g) 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).
- (h) ROEDC is to be allowed at the time of COD, as true-up adjustment, based on actual equity injections to the SEPL by the Project Sponsors.



11. Pass Through Items & Tariff Assumptions

11.1. Pass Through Items

Authority is requested to allow following cost components as pass-through to SEPL 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.

- a) 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.
- b) 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.
- c) 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.
- d) Zakat deduction on dividends as required under Zakat Ordinance is considered as a pass through;
- e) No tax on income of SEPL (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;
- f) 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;
- g) 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.



h) any other 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:

- a) Debt for the Project will be sourced from SBP RE refinance facility and foreign financial institutions. Exact composition of SBP and foreign debt will be finalized prior to financial close; adjustment against the same will be requested at the time of COD;
- b) An exchange rate of PKR 120/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;
- c) 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;
- d) Similarly, adjustments in Project Cost due to variation in PKR / USD variations will be catered for at the time of COD;
- e) Taxes and Custom duties shall be claimed on actual at the time of COD tariff adjustment;
- f) Withholding tax at 8% on supplies and Onshore Contract, which is the base date stipulated in Bidding document pursuant to the Onshore Contract have been catered for under the Project Cost. 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;



- g) 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;
- h) The power purchaser shall be solely responsible for the financing, engineering, procurement, construction, testing and commissioning of the interconnection and transmission facilities uptill 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;
- i) 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;
- j) 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;
- k) Any additional indexation or concession allowed by the GOP, NEPRA or any other Govt. entity to any IPP will be allowed to SEPL without any discrimination.


Shafi Energy Private Limited

Dated: 22nd November 2018

