



No.NFPRA-21062018/1

19 June 2018

Registrar
National Electric Power Regulatory Authority
NEPRA Building,
G-5/2, Islamabad

Subject: TARIFF PETITION FOR FINERGY (PRIVATE) LIMITED'S 49.8 MW WIND POWER PROJECT AT JHIMPIR, DISTRICT THATTA, SINDH.

Dear Sir,

In view of the Government of Pakistan's initiative to enhance the power generation in the country through renewable resources under the Renewable Energy Policy 2006, Sindh Government Energy Department issued an LOI to Finergy (Pvt) Limited on 13th February 2015 to develop a 50 MW wind power project at Jhimpir, Sindh.

Thus pursuant to the relevant provision of the NEPRA (Tariff Standards and Procedure Rules, 1995 read with the provisions of the Regulation for Generation, Transmission and Distribution of Electric Power Act 1997 and Rules and Regulations made thereunder AND in accordance with the RE Policy 2006 and the Guidelines for the Determination of Tariff for Wind Power Generation 2006, AND in view of the compliance of the FINERGY (PVT) LIMITED of the RE Policy 2006 in respect of meeting the requirements of the same so as to be eligible for application for a tariff: FINERGY (Pvt) Limited submits before NEPRA, the competent authority lawfully authorized to determine tariff for wind power generation companies, for its approval, its tariff petition (the "Tariff Petition") for approval of the Reference Generation Tariff and other matters set out in the Tariff Petition for the Finergy (Pvt) Limited's 49.8 MW power generation facility to be located at Jhimpir, District Thatta, Province of Sindh.

The Tariff Petition is submitted in triplicate together with

- a) Bank Draft for amount of PKR 625,952/- (Rupees Six hundred and twenty five thousand nine hundred and fifty two only).
- b) Board resolution of Finergy (Pvt) Limited authorizing the undersigned to represent the company on its behalf.
- c) Affidavit of the under signed, Mr. Farman Ahmed Khan Lodhi.

In light of the submissions, the financial analysis and the information contained in the Tariff Petition, along with the annexure attached hereto, The Tariff Petition is submitted for NEPRA's approval of the Reference Generation Tariff.

Respectfully submitted for and on behalf of:
FINERGY (PVT) LIMITED



Mr. Farman Ahmed Khan Lodhi
Chief Executive Officer

TRIPPLICATE

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GLOSSARY

| | |
|--------------------|---|
| BOO | Build, Own and Operate |
| BTU | British Thermal Unit |
| COD | Commercial Operations Date |
| CPI | Consumer Price Index |
| DISCO | Power Distribution Company |
| DSRA | Debt Service Reserve Account |
| ECC | Economic Coordination Committee |
| EPC | Engineering Procurement and Construction |
| EPP | Energy Purchase Price |
| FSA | Fuel Supply Agreement |
| GOP | Government of Pakistan |
| GST | General Sales Tax |
| IA | Implementation Agreement |
| IPP | Independent Power Producer |
| IRR | Internal Rate of Return |
| ISO | International Standards Organization |
| KIBOR | Karachi Inter Bank Offered Rate |
| KW | Kilowatt |
| KWh | Kilowatt hour |
| L/C | Letter of Credit |
| MW | Megawatt, i.e., 1,000,000 Watts |
| MWh | Megawatt hour |
| NEPRA | National Electric Power Regulatory Authority |
| NEPRA ACT | Regulation for Generation, Transmission and Distribution of Electric Power Act (XL of) 1997 |
| NEPRA RULES | NEPRA (Tariff Standards and Procedure) Rules, 1998 |
| NTDC | National Transmission & Dispatch Company |
| O&M | Operation & Maintenance |
| PKR | Pakistani Rupees, the legal currency of Pakistan |
| PPA | Power Purchase Agreement |

| | |
|-------------------------------------|---|
| PKR | Pakistani Rupees. the legal currency of Pakistan |
| PPA | Power Purchase Agreement |
| RENEWABLE ENERGY POLICY 2006 | Policy For Renewable Power Generation Projects issued by the Federal Government of Pakistan in 2006 |
| ROE | Return on Equity |
| TON | Metric Tonne i.e. 1000 kg |
| US CPI | United States Consumer Price Index |
| USD | United States Dollar. the legal currency of the United States of America |
| | |

DETAILS OF THE PETITIONER

NAME AND ADDRESS

Finergy Wind (Private) Limited

ADDRESS: C-18,
BLOCK # 4, CLIFTON, KARACHI

PHONE #: +92.21.

FAX #: +92.21.

AUTHORIZED REPRESENTATIVES OF FINERGY WIND (PVT.) LIMITED

NAME: FARMAN AHMED KHAN LODHI

DESIGNATION: CEO

REGULATORY FRAMEWORK & PROJECT BACKGROUND

2.1 NATIONAL ELECTRIC POWER REGULATORY AUTHORITY – THE COMPETENT AUTHORITY FOR DETERMINATION OF TARIFF

2.1.1 NEPRA Act & NEPRA Rules

Under the Regulation for Generation, Transmission and Distribution of Electric Power Act (XL of) 1997 (the “NEPRA Act”), the National Electric Power Regulatory Authority (“NEPRA”) is responsible, *inter alia*, for determining tariffs and other terms and conditions for the supply of electricity through generation, transmission and distribution. NEPRA is also responsible for determining the process and procedures for reviewing tariffs and recommending tariff adjustments. Further, pursuant to the enabling provisions of the NEPRA Act, the procedure for tariff determination has been prescribed in the NEPRA (Tariff Standards and Procedure) Rules, 1998 (the “NEPRA Rules”).

2.1.2 Power Policy 2015

In accordance with the NEPRA Rules, read with the enabling provisions of the NEPRA Act and the Power Policy issued by the GOP in 2015 (the “Power Policy 2015”), Finergy Wind (Private) Limited (“Finergy” or “Petitioner”) submits its petition for tariff approval before NEPRA, the competent regulatory authority lawfully authorized to determine tariff for power generation companies.

2.2 PROJECT

Finergy is developing a 50 MW wind power generation facility at Jhimpir, Pakistan (the “Project”). This facility will supply power to Karachi and other regions on the National Transmission and Despatch Company Limited (“NTDC”) network. This Tariff Petition is for the determination of the Tariff for the Project.

2.2.1 Renewable Energy Pakistan

To further diversify its energy portfolio, Pakistan is also considering alternative energy solutions such as wind, Solar, Bio-fuels and Waste to Energy. Due to its sustainability and environmental friendliness, the Government is encouraging alternative energy development in the country. To meet the growing demand of energy and to achieve the target of 9700 MW generation by the year 2030, the AEDB has taken various initiatives. AEDB under its mandate serves as a One-window facility to process all Alternative and Renewable Energy (ARE) projects both in the

Public and the Private Sectors. It assists and facilitates development and generation of ARE, encourages transfer to technology, helps develop indigenous manufacturing bases for ARE equipment and promotes provision of ARE based energy services etc. Under AEDB Act, enacted on May 2010, AEDB now has the mandate to implement projects in addition to its authorizations under the AEDB Ordinance.

Wind Energy- International Snapshot

The global market for wind power has been expanding faster than any other source of renewable energy. From just 4,800 MW in 1995, the world total has multiplied more than twelve-fold to reach over 539,000 MW at the end of 2017. In a number of countries, the proportion of electricity generated by wind power is now challenging conventional fuels. Wind power is now established as an energy source in over 50 countries around the world. The global wind markets have grown by an average 28% per year in terms of total installed capacity during the last decade.

Wind Energy -Pakistan's Potential

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 God gifted wind corridor that is 60 km wide (Gharo -Kati Bandar) and 180 km long (up to Hyderabad). This corridor has 50,000 MW of electricity generation potential through wind energy that is ready to be exploited. In addition to this, there have been other wind sites that can be exploited in the coastal areas of Baluchistan and some Northern areas. Currently 21 wind energy projects having a combined capacity of 1050 MW are at different stages of production of development.

Electricity Supply from Power Plant to Power Consumer: The project site will allow Finergy to reduce energy transformation losses due to its proximity to the city of Karachi - a large power demand centre. This not only reduces the cost burden on end-consumers who end up paying for the power wasted in some form or the other but will also reduce the gas consumption required for producing "lost power".

Site: The project site is located about 91 km North of Karachi along the super highway. The nearest settlement to the proposed site is Nooriabad (8 km West). The geographical location of the site on the map is given below. The site is located in a strong and partly rocky area at 58m to 115m above sea level. The size of the whole wind farm is 424 acres. The company has received the land from Government of Sindh on 30 years of lease for the development of 50 MW wind power project. The geodetic coordinates of proposed wind farm site are given under:

Table 1.1: Land Coordinates

| 424 Acres | | |
|------------|----------------------|---------------|
| Point No. | Geodetic Coordinates | |
| | Latitude (N) | Longitude (E) |
| FINERGY 1 | 25.00677237 | 67.83687102 |
| FINERGY 2 | 24.95661237 | 67.87817314 |
| FINERGY 3 | 24.95741095 | 67.87938653 |
| FINERGY 4 | 24.98705986 | 67.85497127 |
| FINERGY 5 | 24.98944654 | 67.85895184 |
| FINERGY 6 | 24.9553255 | 67.88704732 |
| FINERGY 7 | 24.95600335 | 67.88834687 |
| FINERGY 8 | 24.98268487 | 67.8663972 |
| FINERGY 9 | 24.99129418 | 67.85742989 |
| FINERGY 10 | 24.98980829 | 67.85865386 |
| FINERGY 11 | 24.98742161 | 67.85467328 |
| FINERGY 12 | 25.0071538 | 67.83841527 |
| FINERGY 13 | 25.00724856 | 67.83738894 |

2.3 PROJECT PROGRESS

2.3.1 Letter of Intent (LOI)

Sindh Government Department of Energy issued the Letter of Intent (the "LOI") to Finergy for the Project on 13th February 2013, and issued an amendment to the LOI on 16th May 2018. Copies of the LOI and its amendment are attached as **Schedule A**.

2.3.2 Generation License

Finergy submitted an application for grant of generation license along with relevant documents to NEPRA on 22nd August 2013. A copy of the GL is attached as **Schedule B**.

2.4 SUBMISSION

PURSUANT TO the relevant provisions of the NEPRA Rules, read with the provisions of the NEPRA Act and the Rules and Regulations made thereunder; AND in accordance with the Power Policy 2015; AND in light of the LOI pursuant to which Sindh Government has approved the establishment of the Project, THE PETITIONER SUBMITS HERewith TO NEPRA, the competent regulatory authority lawfully authorized to determine tariff for power generation companies, for its determination, a

tariff petition (the **Tariff Petition**) for approval of the reference generation tariff for Operation (the **Reference Generation Tariff**) for the Petitioner's Project.

It is also hereby requested that the immediate application of the Reference Generation Tariff be allowed / ordered in terms of Rule 4 of NEPRA (Tariff Standards and Procedure) Rules, 1998 along with other enabling provisions of law.

Any benefit/concession/incentives given, previously or in future, to any other IPP/power projects may also be given to the Petitioner.

2.5 PROJECT SUMMARY

| | | |
|---------------------------|---|------------|
| Company Name | FINERGY (PVT) LIMITED | |
| Sponsor | JS Group | |
| Location | Jhimpir, Sindh | |
| Land Area | 424 | |
| Concession Period | 25 Years | |
| Power Purchaser | Central Power Purchasing Agency | |
| Wind Turbine | Acciona Wind (Spain) | |
| Annual Energy Production | 162.6 GWhr | |
| EPC Contractor | TBEA | |
| Project Capital Cost | Project Cost Overview | |
| | EPC cost | 68 |
| | <i>Offshore EPC Cost</i> | <i>58</i> |
| | <i>Onshore EPC Cost</i> | <i>10</i> |
| | Non-EPC Cost | 4 |
| | <i>Project Development & Advisors' Cost</i> | <i>3</i> |
| | <i>Operating Fixed Assets & Land</i> | <i>0.3</i> |
| | <i>Insurance During Construction</i> | <i>0.7</i> |
| | <i>Other Project Costs</i> | <i>0.3</i> |
| | Custom Duties & Cess | |
| | Financial Fees & Charges | 1.7 |
| | Interest During Construction | 2.9 |
| | | |
| Total Project Cost | 76.9 | |

| | | | |
|---------------------------------|--------------------------------|---|-----------------|
| Debt Equity Structure | 75 / 25 | | |
| Equity (US \$ millions) | 19.925 | | |
| Long-term Debt (US \$ millions) | 59.775 | | |
| Lenders | | | |
| Terms of Long term Debt | Term | 15 years (door to door) | |
| | Grace Period | <i>Upto 24 months</i> | |
| | Repayment Period | <i>13 years</i> | |
| | Debt Repayment | <i>In equal Semi-annual installments</i> | |
| | Interest Rate | <i>For Local Currency Debt Base Rate: 6 month Kibor Spread: 300 basis points For Foreign Currency Debt: Base Rate: 6 month LIBOR Spread: 450 basis points</i> | |
| O&M Contractor | Consortium of Acciona and TBEA | | |
| Project O&M Costs | O&M Cost Breakup | US \$ MN | Rs. /kWh |
| | Fixed O&M – Local | 0.245799 | 0.1738 |
| | Fixed O&M - Foreign | 1.59971 | 1.1314 |
| | Variable O&M - Local | 0.0674878 | 0.0477 |
| | Total | 1.9129968 | 1.3529 |
| Levelized Tariff - US cents | 6.903 | | |
| Applicable Policy | Renewable Energy Policy 2006 | | |
| Technical Advisors | Wood Group | | |
| Independent Engineer | Aleph Systems | | |
| Legal Advisors | RIAA | | |

PROJECT DETAILS

3.1 PROJECT COMPANY

Finergy wind (Pvt) Limited is an entity incorporated under the Companies Ordinance, 1984 to act as a Special Purpose Vehicle and develop the Project, a copy of its incorporation certificate is attached as **Schedule C**.

3.2 PROJECT SPONSOR

Finergy is a wholly owned subsidiary of JS Limited (“**JS Energy**”). JS is one of the largest financial services group (banking and non-banking) in Pakistan and a leading diversified industrial investments holding company. Its flagship company, Jahangir Siddique and Company Limited (“**JSCL**”), is primarily an investment company in financial services and also makes long term investments in growing companies in Pakistan. In financial services, its investments cover all sectors including asset management, commercial banking, investment banking, Islamic banking, securities brokerage and insurance. JSCL also benefits from strategic long term investments including in technology, transportation, media, and industrial sector companies.

3.3 POWER OFF-TAKER

Finergy will be signing 20-years Energy Purchase Agreement (“**EPA**”) with Central Power Purchasing Authority.

3.4 PROJECT CONSTRUCTION PERIOD

The Project is anticipated to have a construction period of 18 months from financial close.

3.5 PLANT SPECIFICATION

Finergy will set up a 50MW wind power complex based on Acciona 3.0/3.150 MW wind turbine generators. The gross size will be 50 MW and will have sixteen WTGs installed.

3.6 TURBINE TECHNOLOGY

3.6.1 **WTG TECHNOLOGY & EPC CONTRACTOR SELECTION PROCESS**

The objective of Finergy Wind was to select the right technology and EPC contractor. This meant setting up its project in compliance with the highest standards and inter alia, and to select the most efficient and reliable wind turbine generator (the WTG), supplier and engineering, procurement & construction (the EPC) contractors. With the

assistance of their technical advisors Finergy reviewed various technologies and invited several WTG vendors to participate in this project. Various factors were considered in the selection of the WTG manufacturer and the EPC contractors, such as, (i) technology, megawatt class and efficiency of equipment, (ii) suitability of the proposed WTG with site conditions, (iii) commitment of applicants to work in Pakistan, (iv) background of WTG supplier and EPC contractors under similar environment (references and experiences), (v) track record of the turbine type, (vi) cost/price and payment terms, (vii) performance warranties and guarantees of facility, (viii) contractual and commercial terms for entering into the contractual arrangements, (ix) completion timeline and schedule, (x) grid compatibility and (xi) suitability of operation and maintenance concept for the size and location of projects with suitable availability of spare parts, consumables and main components.

The project company floated its tender document to all EPC contractors and wind turbine manufactures working in Pakistan Wind market and received interest from various international WTG suppliers and EPC contractors, such as Hydrochina Corporation, China Northwest Electric Company, Xinjiang Goldwind Science and Technology Co. Ltd and Nordex AG. Based on its thorough due diligence and following an intense negotiations process with the various nominees, Finergy selected "Acciona WTG model as the technology for its wind farm and "TBEA Corporation" as their Procurement and Supply of Equipment contractor, and a separate Construction Contract. Based on such Terms and Arrangements, the engineering, procurement and construction of the project will be undertaken by the TBEA with a fixed price and fixed commercial operation date (the COD).

3.7 POWER EVACUATION

As the plant is located close to the sea it will be connected to NTDC's grid via a state of the art Gas Insulated Switchyard (GIS) system. NTDC has decided to construct new double circuit transmission lines from the premises of the plant to its new 220/132 kV grid station situated in Jhampir.

3.8 EPC BIDDING CRITERIA

- i. Technical Bid was evaluated by an Independent Consultant, M/S Aleph Systems (Pvt) Limited, based on following weightage criteria

| Criteria | Score |
|--------------------------------------|-------|
| Contractor Experience and Capability | 30 |
| Design Experience and Capability | 10 |
| Construction Planning and Methods | 20 |
| Electrical and Mechanical Equipment | 15 |
| Construction Schedule | 20 |

| | |
|--------------|------------|
| HSE | 5 |
| Total | 100 |

ii. Financial Bid was evaluated based on following weightage:

| Criteria | Weightage |
|------------------------------------|------------|
| Bid Price | 70 |
| Reasonableness of Pricing | 5 |
| Financial Strength | 10 |
| Condition of Contract Deliverables | 15 |
| Total | 100 |

Evaluation Bid score was achieved by adjusting the Bid Price as follows:

- Bid Price was adjusted for arithmetic corrections.
- Price adjustment was made for any quantifiable non-conformity to be provided by the bidder.
- Bids guaranteeing higher capacity factors were given higher marks.
- Earlier scheduled completion of COD was marked higher.
- Value of Cash flow proposed by the bidder, discounted to present value on the contract commencement date.

Evaluation Bid Price was obtained by summation of the above criteria. The lowest evaluated bid was given a score of 70 and other bids were assigned points on pro-rata basis as follows:

$$\text{Evaluated Bid Score} = \frac{\text{Lowest Evaluated Bid Price} * 70}{\text{Evaluated Bid Price}}$$

Winning Bid was the bid having the highest combined ranking which comprised 60% of Financial Score and 40% of Technical Score.

Evaluation matrix is attached at Schedule H

3.9 EPC BIDDING PROCESS

In October 2017, Finergy approached 06 EPC companies to participate in EPC bidding. Six companies submitted their expressions of interest and received Finergy's invitation to bid (ITB) package (for details refer **Schedule F**). They were given two months to submit their bids. A pre-bid meeting was held in December 2017 that was attended by 06 different companies. On 15th January 2018, the bid submission deadline, Finergy received four turnkey EPC bids, out of which two were disqualified because they did not comply with the ITB. Two were qualified for having the best

technical proposal and shortlisted for commercial negotiations. EPC contract signed with M/s Acciona and is attached with this petition as **Schedule G**.

KEY ASSUMPTIONS

| | |
|---------------------------------|---------------------------------|
| TARIFF PERIOD | 25 years |
| EXCHANGE RATES | Rs.115/US\$ US\$ 1.14 / Euro |
| 6 MONTH LIBOR | 2.0% |
| 3 MONTH KIBOR | 6.3% |
| US CPI | 249 |
| PAKISTAN CPI | 220.25 |
| DEBT: EQUITY RATIO | 75% : 25% |
| DISCOUNT RATE FOR TARIFF | 10% |

- Any additional costs incurred to cater for any modifications or additions required by NTDC will form part of the Project Cost at the COD.
- Impact of foreign currency fluctuations relating to project cost payments to be made post construction period such as retention money are also assumed to be compensated.
- Grid connection shall be the responsibility of NTDC.

PROJECT COSTS

5.1 PROJECT COST SUMMARY

| Project Cost Overview | |
|--|-------------|
| EPC cost | 68.0 |
| <i>Offshore EPC Cost</i> | 58 |
| <i>Onshore EPC Cost</i> | 10 |
| Non-EPC Cost | 4.4 |
| <i>Project Development & Advisors' Costs</i> | 3.0 |
| <i>Operating Fixed Assets & Land</i> | 0.3 |
| <i>Insurance During Construction</i> | 0.7 |
| <i>Other Project Costs</i> | 0.4 |
| Customs Duties & Cess | |
| Financial fees and Charges | 1.6 |
| Interest During Construction | 2.9 |
| | |
| Total Project Cost | 76.9 |

5.2 PROJECT COST EXPLANATION

5.2.1 EPC Costs

EPC cost is the turnkey price for the engineering, procurement and construction of the complex. The scope includes construction of civil works, temporary roads, substation, installation and testing of 16 WTGs. Details of the scope and commercial terms are further elaborated in the EPC contract, a copy of which is attached as **Schedule G**. The petition assumes exchange rates of PKR 115/USD and USD 1.23/EUR and Finergy requests that the exchange rates for EPC payments are actualized as per actual exchange rates prevailing on the dates the payments are made.

5.2.2 Project Development & Advisors' Costs

This includes costs incurred in developing the project and in taking it to financial close like costs of project studies, costs of setting up the company and issuing shares, rent, utilities, salaries & wages and travel. Also, includes advisory and consultancy fees (Legal, HSE, Audit, Tax, Insurance etc.).

| Project Development & Advisors' Costs (\$ Million) | 3.0 |
|---|------------|
| Project Studies | |
| Company Formation Costs & Regulatory Fees | |
| Rent and Utilities | |
| Advisors & Consultants (Technical, Legal, HSE, Audit, Tax, Insurance, etc.) | |
| Salaries and Wages | |
| Travelling, Communication and Other Miscellaneous Office Expense | |

This includes cost of EPC management team overseeing the project during construction based on quote received from service provider. This head also covers miscellaneous administrative costs that are expected to be incurred during construction like annual rent & maintenance fees, purchase of cars, vehicles and porta cabins, head office rent & utilities, computers & software, food & meals, communication and stationary costs.

5.2.3 Land Cost

This includes the cost of 424 acres of land and associated taxes, stamp duties and Government of Sindh charges required for setting up the project. Detailed working of the land cost and third party valuation of per acre land price is attached as **Schedule 1**. The Authority is requested to allow as a pass-through item any changes in land related taxes, stamp duties and Government of Sindh charges.

5.2.4 Security and Surveillance Costs

This includes cost of security in owner's scope related to Head Office security and escort security services (especially for foreign consultants and OEM engineers). Cost calculation assumes 120 private security personnel on permanent payroll working in 3 shifts and four security vehicles.

5.2.5 Insurance During Construction

Insurance cover includes construction and marine insurance. The insurance cost has been calculated after considering risk exposure at 1.00% of the EPC cost.

5.2.6 Custom Duties and Cess

Customs duties and Sindh Infrastructure Cess on the import of plant, equipment, material and spare parts are not assumed to be part of calculations at this time. However, any imposition or any change in the customs duties, or any other cess, duty or tax on import of equipment and material imposed is requested to be pass-through.

Similarly, any change in custom duties on spare parts after COD are also requested to be a pass-through item.

No provincial taxes on import of plant, equipment, material and spare parts have been considered and if applicable in the future it is requested to be allowed as pass-through items.

Sindh sales tax on services or any other provincial sales tax on services/FED has also not been considered and if applicable, they are requested to be allowed as pass-through items.

5.2.7 Financing Fees and Charges

This is estimated at 3% of total debt. Given that the debt size may change and it will change with LIBOR and KIBOR rates (as IDC changes), the Petitioner requests the Authority that Financing Fees and Charges are actualized at COD based on actual debt levels.

5.2.8 Interest During Construction (IDC)

The Petitioner requests that IDC cost is actualized at COD as per actual debt drawdown profile, LIBOR rate, KIBOR rate and local and foreign debt split. Details of debt arrangements are given in Section F of Tariff Break-Up below.

TARIFF BREAK-UP

5.3 O&M

Operations and Maintenance of the power plant will be managed by in-house team with related services outsourced to the OEM (TBEA).

5.3.1 Variable O&M Cost:

It consists of some replacement cost of imported spare parts on completion of their service life or in case of premature failure (unscheduled maintenance) and technical services obtained from local and foreign experts during maintenance. This component is requested to be indexed on a quarterly basis with US\$ to Pak Rupee exchange rate and US CPI.

5.3.2 Local Fixed O&M Cost

It includes O&M staff costs and administrative cost of the project including remuneration to non-technical employees, rents and utilities. It also includes security, transportation, professional fees (audit, tax and legal) and contract services. This component is requested to be indexed with Pakistan CPI on a quarterly basis.

5.3.3 Foreign Fixed O&M Cost

It includes fixed costs for obtaining technical services and costs of major overhauls including spares, consumables and miscellaneous administration expense. This component is requested to be indexed on a quarterly basis with US\$ to Pak Rupee exchange rate and US CPI.

| O&M Cost Breakup | US \$ MN | Rs. /kWh |
|---------------------|------------------|---------------|
| Fixed O&M – Local | 0.245799 | 0.1738 |
| Fixed O&M - Foreign | 1.59971 | 1.1314 |
| Variable O&M | 0.0674878 | 0.0477 |
| Total | 1.9129968 | 1.3529 |

5.4 INSURANCE

This consists of all-risk insurance/reinsurance for the Project, as well as business-interruption insurance. The insurance cost component has been calculated after considering risk exposure at 1% of the EPC cost during construction period.

5.5 RETURN ON EQUITY

The Petitioner requests an internal return (IRR) on equity of 17% with any taxes payable on revenues, income and dividends as pass-through items as laid out in the Renewable Energy Policy 2006 and amended since. Finergy also approached insurance market to understand if any of these risks could be insured. Initial feedback suggests that insuring some of these risks like foreign exchange, expropriation/nationalisation and war & civil disturbance (excluding change in law and power purchaser default etc.) would cost over 2% of the amount insured.

The Petitioner requests that this tariff component is indexed to the USD/PKR exchange rate and adjusted for actual equity drawdown during construction.

5.6 OTHER PASS THROUGH ITEMS

No provision has been made for income tax, worker's profit participation fund, workers' welfare fund and any provincial or federal taxes on revenues, income and dividends. If any of these are incurred at any time during the term of the PPA, then the Authority is requested to allow these as pass through items to the consumers.

5.7 SUMMARY OF TARIFF INDEXATION

| COMPONENT | INDEXATION | FREQUENCY |
|------------------------|--|-------------|
| Fixed O&M (Local) | Pakistan CPI (General) | Quarterly |
| Fixed O&M (Foreign) | US\$ to Pak Rupee rate and US CPI | Quarterly |
| | | |
| Return On Equity | US\$ to Pak Rupee rate | Quarterly |
| Principal Repayment | US\$ to Pak Rupee rate for Foreign Loans | Semi-Annual |
| Interest Payment | 6-Month LIBOR, 3-Month KIBOR US\$ to Pak Rupee rate for Foreign Loans | Semi-Annual |
| | | |
| Variable O&M (Local) | Pakistan CPI (General) | Quarterly |
| Variable O&M (Foreign) | US\$ to Pak Rupee rate and US CPI | Quarterly |

TARIFF TABLES

| Agreement Year | Variable O&M | Operations and Maintenance | | Insurance | Return on Equity | | Reference Foreign Debt Services | | Reference Local Debt Service | | Total Tariff | |
|----------------|--------------|----------------------------|-----------------|-----------|------------------|-----|---------------------------------|----------|------------------------------|----------|--------------|--------|
| | | Foreign Component | Local Component | | ROE | Tax | Principal | Interest | Principal | Interest | Rs./kWh | ¢/kWh |
| | | | | | | | | | | | | |
| 1 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.0372 | 1.3033 | 0.9471 | 1.8561 | 9.0327 | 7.8545 |
| 2 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.1062 | 1.2342 | 0.9287 | 1.7745 | 9.0327 | 7.8545 |
| 3 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.1799 | 1.1606 | 1.0181 | 1.6851 | 9.0327 | 7.8545 |
| 4 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.2585 | 1.0820 | 1.1161 | 1.5976 | 9.0327 | 7.8545 |
| 5 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.3424 | 0.9982 | 1.2236 | 1.4795 | 9.0327 | 7.8545 |
| 6 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.4317 | 0.9088 | 1.3424 | 1.3617 | 9.0327 | 7.8545 |
| 7 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.5271 | 0.8134 | 1.4706 | 1.2325 | 9.0327 | 7.8545 |
| 8 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.6296 | 0.7117 | 1.6122 | 1.0909 | 9.0327 | 7.8545 |
| 9 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.7403 | 0.6032 | 1.7675 | 0.9357 | 9.0327 | 7.8545 |
| 10 | 0.0477 | 1.1314 | 0.1431 | 0.3366 | 2.3302 | - | 1.8593 | 0.4875 | 1.9377 | 0.7655 | 9.0327 | 7.8545 |
| 11 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | 1.9764 | 0.3641 | 2.1243 | 0.5789 | 9.0379 | 7.8591 |
| 12 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | 2.1080 | 0.2325 | 2.3288 | 0.3744 | 9.0379 | 7.8591 |
| 13 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | 2.2484 | 0.0921 | 2.5531 | 0.1501 | 9.0379 | 7.8591 |
| 14 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | - | - | - | - | 3.9943 | 3.4733 |
| 15 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | - | - | - | - | 3.9943 | 3.4733 |
| 16 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | - | - | - | - | 3.9943 | 3.4733 |
| 17 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | - | - | - | - | 3.9943 | 3.4733 |
| 18 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | - | - | - | - | 3.9943 | 3.4733 |
| 19 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | - | - | - | - | 3.9943 | 3.4733 |
| 20 | 0.0477 | 1.1314 | 0.1483 | 0.3366 | 2.3302 | - | - | - | - | - | 3.9943 | 3.4733 |
| 21 | 0.0477 | 1.1314 | 0.1561 | 0.3366 | 2.3302 | - | - | - | - | - | 4.0021 | 3.4801 |
| 22 | 0.0477 | 1.1314 | 0.1561 | 0.3366 | 2.3302 | - | - | - | - | - | 4.0021 | 3.4801 |
| 23 | 0.0477 | 1.1314 | 0.1561 | 0.3366 | 2.3302 | - | - | - | - | - | 4.0021 | 3.4801 |
| 24 | 0.0477 | 1.1314 | 0.1561 | 0.3366 | 2.3302 | - | - | - | - | - | 4.0021 | 3.4801 |
| 25 | 0.0477 | 1.1314 | 0.1561 | 0.3366 | 2.3302 | - | - | - | - | - | 4.0021 | 3.4801 |
| Levelled | 0.0477 | 1.1314 | 0.1453 | 0.3366 | 2.3302 | - | 1.1298 | 0.7018 | 1.0808 | 1.0345 | 7.9382 | 6.9028 |