Copy — I

Reference No: ZEPL/NEPRA/RTP-2011/05. Date: March 9, 2011.

To,
The Registrar
National Electric Power Regulatory Authority (NEPRA)
2nd Floor, OPF Building, G-F/2
Islamabad

Subject: **Revised Tariff Petition for ZORLU Enerji Pakistan 56.4MW Wind Power Project at Jhimpir District Thatta, Sindh.**

Dear Sir,

Due to increase of the generation capacity from 49.5MW to 56.4MW ZORLU Enerji Pakistan Limited would request for the Revision of Tariff Petition determined by the National Electric Power Regulatory Authority (NEPRA) wide letter No. NEPRA/TRF-95/ZEPL-2008/7618, dated 23rd May 2008.

The Revised Tariff Petition including its Annexures are submitted in triplicate together with the

1. Requisite fee.
2. Board Resolution of ZORLU Energy Pakistan Limited.
3. Affidavit of Syed Mumtaz Hassan (Authorized representative of ZORLU Energy Pakistan Ltd.)
4. We enclose Bank on account of fee for Revised Tariff Petition, bearing number 245679 dated 09th March 2011 issued by Standard Chartered Bank Limited, the payment break up is as follows:
   - Fee foe Revised Tariff Petition: PKR. 692,712.00
   - Less Withholding Tax @ 6%: PKR. -37,783.00 (Challan will be dispatched after 7days)
   - Net Payment: PKR. 654,929.00

We look forward for an early determination of revised tariff petition by the Authority in order to achieve the completion of the remaining 50.4MW renewable wind energy power project in Pakistan.

Thanking You
For & on behalf of ZORLU Enerji Pakistan Limited.

Yours Sincerely

Syed Mumtaz Hassan
Country Manager.

For n/a pl.
AD(MR)/PA
11/3

Received / Triplicate

Registrar
Dy. No. 1208
Dated 11-03-11

Standard Chartered

Standard Chartered Bank (Pakistan) Limited

KARACHI MAIN BRANCH
PKR 2425679

REF : [illegible] 2425679

Pay

Or Order

09-03-2011

For Standard Chartered Bank (Pakistan) Limited

NATIONAL ELECTRICAL POWER REGULATORY AUTHORITY

PKR *591,929.00**

PAKISTAN RUPEE FIVE HUNDRED NINETY ONE THOUSAND NINE HUNDRED TWENTY NINE ONLY.

A/C PAYEE ONLY

Authorised Signatory

Authorised Signatory

A/C # 09-9016430-74
BILLS PAYABLE SCB CORPORATE

PAYABLE AT ANY BRANCH IN PAKISTAN.

⑈2425679⑈038007⑆ ⑈020⑈

EXTRACTS OF THE MINUTES OF THE BOARD OF DIRECTORS MEETING OF ZORLU ENERJI PAKISTAN LIMITED HELD ON 01, 03, 2011 AT AT ZORLU PLAZA, ISTANBUL, TURKEY

RESOLUTION

"RESOLVED THAT Zorlu Enerji Pakistan Limited (**"Company"**) be and is hereby authorized to file a tariff petition (including and review petitions and any motion for leave for review) for submission to National Electric Power Regulatory Authority for determination of the reference generation tariff in respect of the Project and in relation thereto, enter into and execute all required documents, make all filings and pay all applicable fees, in each case, of any nature whatsoever."

"**FURTHER RESOLVED THAT** in respect of filing a tariff petition (including and review petitions and any motion for leave for review) for submission to National Electric Power Regulatory Authority, Syed Mumtaz Hassan being Country Manager of the company be and are hereby jointly authorized and empowered for and on behalf of the Company to:

(i) review, execute, submit, and deliver the tariff petition (including any review petitions and any motion for leave for review) and any related documentation required by National Electric Power Regulatory Authority for the determination of the reference generation tariff, including any contracts, documents, powers of attorney, affidavits, statements, letters, forms, applications, deeds, guarantees, undertakings, approvals, memorandum, amendments, letters, communications, notices, certificates, request. statements and any other instruments of any nature whatsoever;

(ii) represent the Company in all negotiations, representations, presentations, hearings, conferences and/or meetings of any nature whatsoever with any entity (including, but in no manner limited to National Electric Power Regulatory Authority any private parties, companies, partnerships, individuals, governmental and/or semi governmental authorities and agencies, ministries, boards, departments, regulator authorities and/or any other entity of any nature whatsoever);

(iii) sign and execute the necessary documentation, pay the necessary fees, appear before the National Electric Power Regulatory Authority as needed, and do all acts necessary for completion and processing of the tariff petition (including any review petitions and any motion for leave for review) and procuring National Electric Power Regulatory Authority's tariff determination;

(iv) appoint or nominate any one or more officers of the Company or any other person or persons, singly or jointly, in their discretion to make communicate with, make presentations to and attend the National Electric Power Regulatory Authority hearings;

(v) do all such acts, matters and things as may be necessary for carrying out the purposes aforesaid and giving full effect to the above resolutions/ resolution'

CERTIFIED TO BE TRUE COPY

Company Secretary
Selen Zorlu Melik

ZORLU ENERJI PAKISTAN LIMITED

Standard Chartered

Standard Chartered Bank (Pakistan) Limited

NOT TO EXCEED PKR ***[illegible]

REF : [illegible]

2425679

PAYABLE MAIN BRANCH
PKR 7425679

Pay

NATIONAL ELECTRICAL POWER REGULATORY AUTHORITY

PAKISTAN RUPEE FIVE HUNDRED NINETY ONE THOUSAND NINE HUNDRED TWENTY NINE ONLY.

A/C # 09-9016420-74
BILLS PAYABLE SCB CORPORATE

A/C PAYEE ONLY

PAYABLE AT ANY BRANCH IN PAKISTAN.

Or Order

For Standard Chartered Bank (Pakistan) Limited

PKR ***591,929.00**

Authorised Signatory

Authorised Signatory

⑈2425679⑈038007 1⑆

⑈020⑈

ZAIN-UL-ABEDIN STAMP VENDOR
Lic. # 319, Suite # 3-5, Sharia Chambers
Boulton Market Karachi
S.No. ..... Date .....
Issued To With Address .....
Through With Address .....
Purpose .....
Value Rs. ..... Affixed .....
Stamp Vendor's Signature .....

09 MAR 2011

BEFORE THE
NATIONAL ELETRIC POWER REGULATORY AUTHORITY

AFFIDAVIT

I, Syed Mumtaz Hassan son of S.M Mazhar-ul-Hassan adult, Muslim, resident of 701/1, Oyster View Residency, Block-2 Clifton, Karachi, holder of CNIC No. 42301-4366039-3 being the authorized representative of Zorlu Enerji Pakistan Limited do hereby solemnly affirm and declare that:

(i) I am the authorized representative of Zorlu Enerji Pakistan Limited having its offices at C-117, Clifton Block 2, Karachi.

(ii) That the contents of accompanying Tariff Petition dated 10th March 2011 (**"Tariff Petition"**) including all supporting documents are true and correct to the best of my knowledge and belief and that nothing material or relevant has been concealed or withheld therefrom.

(iii) That all further information to be provided by me in respect of the Tariff Petition shall be true and correct to the best of my knowledge and belief.

DEPONENT

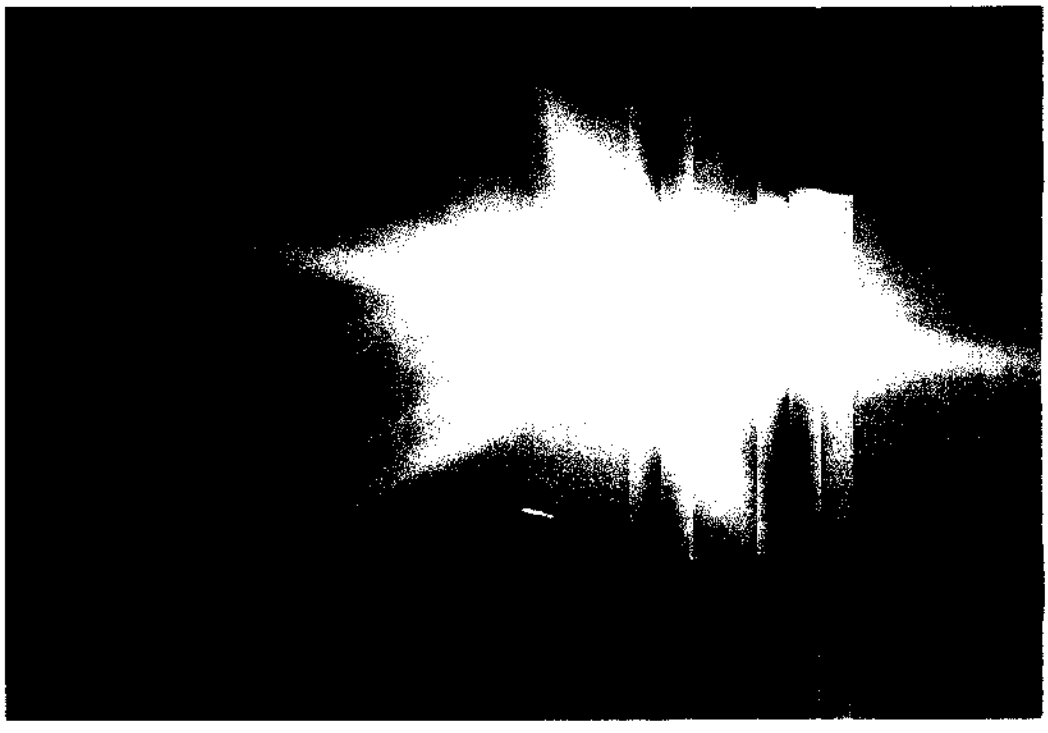
DATED: March 09, 2011

Solemnly affirmed before me on oath on _____ day of _____ 2011 by _____ who is known to me personally.

COMMISSIONER FOR TAKING AFFIDAVIT

TARIFF PETITION

ZORLU ENERJI PAKISTAN LIMITED



56.4 MW WIND POWER PROJECT

JHAMPIR – PAKISTAN

2011

Contents

1. DETAILS OF THE PETITIONER

1.1 NAME AND ADDRESS

Zorlu Enerji Pakistan Limited
C-117, Block 2
Clifton, Karachi - Pakistan
Web: http://www.zoren.com.tr

1.2 REPRESENTATIVES

Mr. Syed Mumtaz Hassam,
Country Manager
Telephone No: +92.21.777 9706
Fax No: +92.21. 529 16 81
E-Mail: mumtaz.hassan@zorlu.com

1.3 BACKGROUND

1.3.1 Under the "Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of) 1997, (hereinafter referred to as 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 by the generation, transmission and distribution companies and to recommend these to the Federal Government, subject to the need to comply with guidelines, not inconsistent with the provisions of the NEPRA Act, laid down by the Federal Government. NEPRA is also responsible for determining the process and procedures for reviewing tariff and recommending tariff adjustments.

1.3.2 Zorlu Enerji Elektrik Üretim A.Ş. (**"Zorlu Enerji"**) is one of the nine companies of Zorlu Energy Group engaged in is supplying uninterrupted, high-quality, low-cost electricity to

nearly 300 industrial and commercial companies since 1993. Zorlu Enerji is ranked among the largest energy providers in the Turkish electricity market and is listed on the Istanbul Stock Exchange Market (IMKB) with an installed capacity of 747 MW (which is planned to be further enhanced to go over 1,000 MW by 2011) comprising of six (6) natural gas combined cycle power plant having an installed capacity of 467 MW, seven (7) hydro electric power plants having an installed capacity of 111 MW, one (1) 15 MW geothermal power plant and a wind farm having an installed capacity of 135 MW (being Turkey's largest installed capacity wind farm).

1.3.3 Awarded a TS/EN ISO 9001:2000 quality certificate in 2001, Zorlu Enerji received OHSAS 18001:1999 Work Health and Safety Certificate and ISO 14001 Environmental Management System Certificate on 12 October 2004. Ranked among Europe's 100 fastest-growing companies, with its source to outlet vision, Zorlu Enerji adheres to a strategy of pursuing growth by adapting state-of-the-art technologies to its needs as it proactively diversifies its activities.

1.3.4 Zorlu Enerji aims to be a sought-after name in the energy sector through effective operations in the sector's highly competitive global market and is committed to maintaining the highest level of customer satisfaction with a professional approach focused on a dynamic and flexible structure, and continuously providing high-quality service. Zorlu Enerji is presently involved in completion of two (2) power plants in Moscow having a total capacity of 340 MW (with an option of expanding the capacity to 680 MW) in Moscow and four (4) power plants in Israel having with a total capacity of 1050 MW.

1.3.5 Zorlu Enerji enjoys a superior position in its sector thanks to its advanced maintenance and operations techniques, to its control system and remote performance monitoring systems, and to its high-efficiency power station designs. Its primary goal is to develop a self sufficient engineering infrastructure fully capable of designing, installing, and maintaining power stations without the need for any external resources. The group has also been making significant progress in the direction of exploiting alternative energy resources.

1.3.6 In 2006, Zorlu Enerji became desirous of utilizing its expertise to ease power shortage being presently faced in Pakistan by providing high-quality, low-cost electricity by establishing a wind energy project near Karachi. Accordingly, Zorlu Enerji was granted a development license by the Alternative Energy Development Board of Pakistan (**"AEDB"**, www.aedb.org). Zorlu Enerji aims to initially establish a 56.4 MW wind farm in Pakistan (**"Project"**), which shall be expanded up to 300 MW depending on successful completion of the Project. .

1.3.7 In order to proceed with establishing a wind farm in Pakistan, Zorlu Enerji incorporated a private limited company "Zorlu Enerji Pakistan Limited" (**"ZEPL"** or **"Company"**), registered under the Companies Ordinance 1984 in September 2007. One of the 'Objects' of the Company, as has been stated in its Memorandum of Association, is *"...To carry on*

business of power generation by installing wind turbines, allied equipment and power houses to feed electricity into the national grid....". The Company is seeking to develop the Project in province of Sindh.

1.3.8 In this regard, AEDB has issued to the Company a Letter of Interest (LOI) and has allocated land in the wind corridor identified by AEDB in Jhampir near Nooriabad, District Thatta, Sindh.

1.3.9 The initial capacity of the Project was 49.5 MW comprising of 5x VENSYS62 1.2 MW and 29x VENSYS77 1.5 MW (**"Initial Project"**). The feasibility study for the Initial Project had been successfully conducted by IPEK Energy GmbH ("IPEK"), an experienced wind energy consultant of international repute and was approved by AEDB vide its letter bearing reference no. B/3/1/ZE/07 dated 5th October 2008 (Annexure A- (I)). However, Zorlu decided to change turbine supplier and enhance capacity of the Initial Project to 56.4 MW. The capacity enhancement of the Project is approved by AEDB vide its letter with reference no B/3/1/ZEPL/07 dated 9th June 2010 (attached herewith and marked as Annexure A- (II). Accordingly, IPEK has conducted a new feasibility study of the Project dated 29th September 2010 (**"Project Feasibility Study"**) which has been submitted by Zorlu to AEDB for its scrutiny and approval vide letter dated 1st October 2010. (Annexure A- (III)). Further to submission of Project Feasibility Study, as per the standard practice for the approval of Project Feasibility Study, AEDB requires approval on Environmental Impact Assessment Report, approval on Grid Interconnection Study by the relevant authorities and verification of the power production estimates through its technical consultant Risoe National Laboratory (**"RISOE"**), Denmark. Approval on Environmental Impact Assessment by Sindh Environmental Protection Agency (**"SEPA"**) is granted vide its letter with reference no EPA/9/EPA/2008/4/9/EIA/90 dated 19th October 2009. (Attached herewith and marked as Annexure A- (IV)). ZEPL have also conducted Grid Interconnection Study through its consultant Power Planners International, and the report is approved by National Transmission& Dispatch Company (**"NTDC"**) through its letter with reference no COO/CPPA/CE/MT-III/Planning/1579-88 dated 22nd February 2011. The letter is attached herewith and marked as Annexure A- (V). Moreover, Risoe has completed the verification of power production estimates and AEDB have intimated same to ZEPL vide its letter dated 18th January 2011 which further clarified through letter dated 28th January 2011. The letter for verification of Net Annual Power Production is attached herewith and marked as Annexure A- (IV).

1.3.10 The electricity which shall be generated by the Project shall be purchased by the National Transmission and Despatch Company (**"NTDC"**). A copy of the last negotiated draft of the Energy Purchase Agreement (**"EPA"**) is attached herewith and marked as Annexure C. Zorlu intends to initial the Energy Purchase Agreement with NTDC in a short time, which will also be submitted to NEPRA in due course.

1.4 COMPLIANCE WITH TARIFF STANDARDS AND PROCEDURE

1.4.1 Zorlu hereby submits this petition to NEPRA for determining tariff for the Project, in accordance with the NEPRA Tariff Standards and Procedures Rules, 1998.

1.4.2 The petition has been prepared in light of Ministry of Water and Power/ AEDB's "Guidelines for Determination of Tariff for Wind Power Generation", 2006.

1.4.3 NEPRA has already issued to Zorlu a generation license bearing no. WPGL/06/2008 dated August 21, 2008 for the purposes of the Initial Project (**"Generation License"**). However, as the capacity of the Initial Project has now enhanced to 56.4 MW, Zorlu has applied to NEPRA for modification in its Generation License in accordance with NEPRA Generation Licensing Rules, 2000.

1.4.4 Information required to be filed under Rule 3 of the Tariff Standards and Procedures Rules, 1998 has been included in and /or with this petition and a summary thereof is also appended herewith and marked as Annexure D.

2. FACTS AND GROUNDS FOR THE PETITION

2.1 RATIONALE FOR WIND POWER

2.1.1 With the rising prices of oil and gas across the globe, generating energy through conventional thermal sources is becoming very expansive and almost beyond the reach of developing nations. The fluctuations in oil prices to more than US$ 113.51 [1]per barrel as end of February, 2011 and even US$ 140.73 per barrel on July 3, 2008 underlines the necessity to rollout a strategic plan aimed at curtailing dependence on imported fuel. The price of hydrocarbon fuels is linked to political events and in the long run remains unpredictable and unstable. This instability may compromise the economic growth especially in emerging markets.

2.1.2 Pakistan has increased its reliance on the electricity generated through thermal sources (fuel oil and natural gas) over the last decade. This, coupled with fluctuating oil prices, has adversely affected Pakistan's oil import bill. This is not only an economic threat as any shortfall in fuel supply can further deteriorate power crisis presently prevalent in Pakistan.

2.1.3 The Government of Pakistan (**"GOP"**) aims to generate 10% of electricity through renewable sources by 2015. This translates into a target generation of 2,700 MW of which major portion will be acquired through electricity generation based on utilization of wind energy[2]. The development of wind generation projects in Pakistan not only supports the overall objectives of GOP to reduce the exorbitant deficit by reducing Pakistan's dependence on fuels for thermal power generation and to increase diversity in Pakistan's electricity generation mix, but also supports environmental objectives of GOP as use of wind energy shall result reduction in greenhouse gas (GHG) emissions through the avoidance of thermal power generation.

2.1.4 Initial wind studies conducted by GOP through Pakistan Meteorological Department (MET Office) and AEDB have shown very encouraging results. Based on these studies GOP has offered private investors the opportunity to develop Independent Power Producer (IPP) companies for generating electricity from wind in the coastal regions of the province of Sindh.

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[1] Source: www.forex.com

[2] Source: Alternative Energy Development Board, Government of Pakistan.

2.2 PROJECT BRIEF

2.2.1 The Project is based on Build Own Operate (**"BOO"**) basis and planned for an operational life of twenty (20) years, extendable up to twenty-five (25) years. The Project is divided into:

(i) 5 x VENSYS62 machines of 1.2 MW each (**"Phase I"**); and

(ii) 28 x VESTAS V90 machines of 1.8 MW each (**"Phase II"**).

2.2.2 For the purposes of this Project, AEDB has allocated land in Jhampir, District Thatta; Sindh located about 100 km east of Karachi (**"Site"**). The geographical situation is shown in Figure below.

Location of WF Zorlu Land; Source of Map: Google Earth

The Site is located in a strong and partly rocky area at 35m to 45m above sea level. One hill is passing the site from SSW direction to NNE with a height of about 60m asl. The size is of the whole WF area with its almost 1,148 acres (~4.64km^2) area is big enough for the installation of the Project.

2.2.3 Phase I of the Project, having an installed capacity of 6 MW has already been successfully commissioned by Zorlu at the Site. Phase One being the Project is the first successful wind power generation of Pakistan, has been entirely financed by Zorlu. This substantiates Zorlu's commitment to the Project and Pakistan as well.

2.2.4 The financial structuring of the Project has been done at a debt/ equity ratio of 70 / 30 to minimize the financial costs. The Project has attracted international as well as local financing institutions. Negotiations in respect of financing of the Project have been initiated by Zorlu with International Finance Corporation ("IFC"), Asian Development Bank ("ADB"), Eco Trade & Development Bank ("ETDB") and Habib Bank Limited ("HBL") and the same is at final stages. IFC, ADB and ETDB will be foreign currency (US$) financing of up to 60% of the Project cost, whereas HBL will participate with local currency (PKR) financing of up to 10% of the Project cost.

("IFC", "ADB", "ETDB" and "HBL" are hereinafter collectively referred to as **"Lenders"**)

2.2.5 With feasibility study of the Project having been completed, availability of Site, debt and equity in place, technical expertise on side and a willing power purchaser available, Zorlu sees no delay in completion of the Project once the formalities namely tariff approval and execution of the EPA and Implementation Agreement are duly completed. The Project's summary, current status, future milestones are set out herein below and implementation schedule is attached herewith and marked as Annexure B.

2.2.6 **PROJECT SUMMARY:**

PROJECT SUMMARY		
PROJECT IN GENERAL	PROJECT	Zorlu Enerji Pakistan Limited Wind Power Project
	CAPACITY	56.4 MW
	PHASE-I	5x1.2 MW VENSYS 62 (6 MW)
	PHASE-II	28x1.8 MW VESTAS V90 (50.4 MW)
	AREA	Jhamphir, District Thatta
	CONCESSION PERIOD	20 Years (5 Years extension)
	SPONSOR COMPANY	Zorlu Enerji Elektrik Üretim A.Ş.
	TURBINE SUPPLIER	Vensys(Phase-I)/Vestas (Phase-II)
	EPC CONTRACTOR	Zorlu Industrial Pakistan (Pvt) Limited
	O&M CONTRACTOR	Zorlu O&M Pakistan Limited
	ESTIMATED GENERATION	167.659 GWh
	PROJECT COSTS	161.880 USD million
	O&M COSTS (YEAR 1-2)	3.434 USD million/year
	O&M COSTS (YEAR 3-10)	2.709 USD million/year
	O&M COSTS (YEAR 11-20)	2.833 USD million/year

FINANCING	DEBT/EQUITY	70/30
	FINANCING	A mixture of foreign and local, long term project financing
	LENDERS	International Finance Corporation (**"IFC"**) Asian Development Bank (**"ADB"**) Eco Trade & Development Bank (**"ETDB"**) Habib Bank Limited (**"HBL"**)
	LOAN TERM	12 Years
	GRACE PERIOD	24 Months
	REPAYMENT SCHEDULE	20 equal semi-annual installments
	INTEREST RATE	LIBOR+4.5% (Foreign portion of the loan) KIBOR+3.0% (Local Portion of the loan)

2.2.7 **PRESENT STATUS OF THE PROJECT:**

ACTIONS	COMPLETION DATE
LOI received	Jul2006
Land allocated to ZORLU	Oct 2006
Approval Upfront Tariff	Jan 2007
NOC MET Mast A	Aug 2007
Feasibility Study Completed (Version 1)	Sept 2007
Transportation Study Completed	Sep 2007
Feasibility study approved by AEDB	Oct 2007
Seismic Study Completed	Nov 2007
Site sub-leased deed	Dec 2007
Approval Tariff 1	Dec 2007
Soil Study Completed	Dec 2007
Generation License received	Jan 2008
Grid Study Completed (Version 1)	Apr 2008
Approval Tariff 2	May 2008
Arrival of Parts for 5 WTG	May 2008
Permission to initiate work on site	Jun 2008
Start of Foundation Works	July 2008
EIA Study Completed	Sept 2008
Start of First WTG Erection	Nov 2008
Initialed EPA with HESCO	Jan 2009
LoS received	Feb 2009
NoC for EIA received	Mar 2009
First connection to national grid	Apr 2009
Commercial inaguration of 1st Turbine	Apr 2009

All WTG erections completed	June 2009
Extention for LoS	Feb 2010
All WTGs in operation	May 2010
Approval for Enhancement of Contract Capacity	July 2010
Grid Study Version 2 Completed	Aug 2010
Feasibility Study Version 2 completed	Sept 2010
Feasibility Study Submitted to AEDB	Oct 2010
Generation License Modification Application	Oct 2010
Verification of Annual Energy Production by AEDB	Feb 2011
Approval for Grid Interconnection Study	Feb 2011
Execution of Turbine Supply Agreement	Feb 2011
Tariff Petition	Mar 2011

2.2.8 **FUTURE MILESTONES:**

ACTION
Approval of Feasibility Study by AEDB
Generation Licence for 56,4MW
Execution of Energy Purchase Aggrement
Execution of Implementation Aggrement
Execution of Balance of Plant Contract
Execution of O&M Contract
Tariff Determination
Execution of Financing Documents
Financial Closing
Commencing with Phase-II Construction

2.3 PRODUCTION ESTIMATE

2.3.1 This section presents the preliminary production estimates for the Project. The estimated net annual electricity generation of the Project is verified by independent consultant Risoe, National Laboratory Denmark "RISOE" of Alternative Energy Development Board "AEDB" as 167.1 GWh per annum vide AEDB's letter no B/3/1/ZEPL/07 dated 18th January 2011.

The production estimate has been calculated using data recorded by Zorlu at site for a period starting from 2007 to 2010, which is also verified by AEDB through its independent consultant. The data has minute wise wind velocities for each twenty-four (24) hour period.

2.3.2 Zorlu has separately conducted energy yield analysis through its consultant İpek. İpek has come out with slightly different energy yield as 167.659 GWh per annum, as the assumptions taken for calculation may vary from Risoe. Zorlu elects to use production estimate prepared by İpek as the base for this Tariff calculations. In previous projects, NEPRA have allowed for any production estimate greater than the verified estimate of AEDB's consultant, therefore this is consistent with the previous Tariff Determinations. Details of the production estimates are given below in Section 2.3.5.

2.3.3 The production estimates include array losses due to shadowing effects (wake effects) from one turbine to another within the wind farm. Micrositing of turbines was done in the available land area so as to minimize such wake effects.

2.3.4 Selection criteria of the wind turbines to be used in the Project is based on latest technology, high efficiency and reliability, low maintenance cost, conformity to latest IEC standards and the fastest delivery dates. Zorlu has selected the following types of wind turbine for the Project:

(i) 5 VENSYS 62 turbines having capacity of 1.2 MW, hub height 69 meters, rotor diameter of 62 meters; and

(ii) 28 VESTAS V90 turbines having capacity of 1.8 MW, hub height 80 meters, rotor diameter of 90 meters.

2.3.5 The uncertainties in any energy yield prediction are a function of many independent factors (e.g. measurement or transfer of data errors). Many of the factors that influence the uncertainty value cannot be adequately quantified by calculation and rely on estimates based on judgement and experience. It is this approach, estimating and judgment rather than calculation which has been adopted in any uncertainty analysis. Therefore it cannot be foreseen which uncertainties will arise to 100% or not since there is a range to from top to bottom.

In a worst case scenario of the calculation of the preliminary production estimates the losses of 23,718MWh/a would be reduced from the value of 173,837MWh/a (which is the reduction of the uncertainties from the P50 gross value of 191,377MWh/a). The result of 150,109mWh/a would be achieved. In this case the loss value was deducted from the P50 gross value of 191,377MWh/a and the result of 167,659MWh/a was achieved. This result of 167,659MWh/a was confirmed by the independent consultant "RISOE" of AEDB.

The preliminary production estimates of the Project are shown in the table below:

WF JHAMPIR	**VENSYS 62**	**VESTAS V90**
Type of Turbine	Vensys62	VESTAS V90
Turbine Capacity [kW]	1,200	1,800
Number of WTG [-]	5	28
Installed wind farm capacity [kW]	56,400	
[MW]	56.4	
Hub Height [m]	69	80
Rotor Diameter [m]	62	90
Rotor Area [m^2]	3,019	6,362

	Unit	**Value [MWh/a]**
Calculated WF energy production (P50)		**191,377**
Uncertainties	9.17%	173,837
Losses		
Wake losses within the WF (WAsP)	0*1	-
Topographic/ roughness/ obstacle effect	0*2	-
Wake losses from neighbouring WFs (WAsP)	1.0	1,914
Electrical transmission efficiency (wires WTG transformer & Grid transformer)	3.0	5,684
Substation availability (32 hrs downtime assumed)	0.4	671
Grid availability and disruption	0	-
WTG availability	4	7,324
Power curve density correction	0*2	-
Power curve performance (nominal)	0*2	-
Extreme temperature effects on turbine (anemometer & blades)	1	1,758
Wind hysteresis (in shut down and start up)	0.7	1,192

Blade contamination, degradation & Off-design	1	1,728
Ancillary systems	0.1	120
Grid compliance control loss	1.0	1,781
Scheduled outages	0.9	1,545
Total corrections & losses [MWh/a]	23,718	
P50 WF yield - net [MWh/a]**	**167,659**	
P50 Capacity factor – net [%]	33.9	

*1 This loss is already inserted in the gross P50 value.
*2 The values are already inserted in the uncertainties.
*3 These values are under considering the wake effects besides the two planned wind farms north of Zorlu ("FFC" and "Masterwind") also several potential wind farms north-west of Zorlu site which may could come in the next years. Result based on the reduction from calculated WF energy production (P50 gross).

2.4 Setup and Operations Cost Estimate

2.4.1 Unlike thermal generation technologies, considerable part of the costs of wind power generation is fixed. These include upfront capital costs and ongoing cost of debt and operations and maintenance ("**O&M**") costs. Wind power generation, per unit output cost is determined by these costs, together with plant capacity and plant lifetime. Moreover, unlike thermal energy, wind energy is capital intensive but there is no fuel component in the energy cost for wind energy.

2.4.2 The expected total cost and the average annual O&M costs for the 20 years operation period of the Project are shown in the table below:

TOTAL PROJECT COSTS	**%**	**USD Millions**
Farm Size [MW]		56.4
Project Cost		161.880
Cost / MW		2.870
Funded by:		
Equity	30%	48.564
Debt	70%	113.316
Annual O & M Costs:		
Fixed O & M		2.752
Insurance (pass through)		1.388
Variable O & M		0.091
Total O & M Cost per year		4.231

2.5 CARBON CREDITS

2.5.1 In the recent decades scientists have perceived new forces at work. The burning of fossil fuels, on which most modern economies depend, releases Carbon Dioxide (**"CO_2"**) into the air. Since the 19th century, scientists have theorized that this would have an effect on the earth's climate as CO_2 and a few similar gases tend to trap infra-red heat on earth that would otherwise dissipate into space. This is known as the greenhouse effect and the gases are according referred to as greenhouse gases.

2.5.2 To fight global poverty, we need three kinds of capital namely: financial, human and environmental. Restoration of environmental capital after it has been damaged is a costly and often time consuming affair. Accordingly, it is better to keep such capital intact then undermining them in the first place.

2.5.3 Over the years, most developed nations have realised the importance of environmental capital as targeted investment therein has a high rate of return in terms of development. This is substantiated by a rapid increase in trading of Carbon which involves buying carbon units (mainly in tons), through a middle entity that aggregates contracts from companies who meet the criteria of carbon conservation through adoption of a range of conservation practices. The carbon units are then sold to a company needing to offset CO_2 released to the atmosphere through their manufacturing activities.

2.5.4 The Kyoto Protocol which came into effect in February 2005 (**"Protocol"**) was drawn up under the auspices of the United Nations in the late 1990s with an objective to slow, and eventually halt, the effects of human actions on the climate. It requires developed nations to cut their emissions of CO_2 and other greenhouse gases by an average 5% against levels prevalent in the 1990's.

2.5.5 The Protocol introduced the idea of trading greenhouse gas emissions in international agreements. In order to make it easier for poorer nations to cut their emissions, without enforcing sanctions placed on developed countries, the Protocol provided for a way in which developing countries could gain access to more expensive technologies required to harness alternative energy sources.

2.5.6 In view of the above, the Project may be able to benefit from receiving carbon credits under the Clean Development Mechanism (CDM), one of the three mechanisms established by the Kyoto Protocol to meet an objective of stabilizing greenhouse gas concentrations in the atmosphere.

2.5.7 While it appears possible that the Project may be able to realize monetary gains from such carbon credit schemes, the actual timing, amount, and other details of the outcome are quite uncertain at this point (and it may remain uncertain until after the plant becomes operational). It is thus proposed that the tariff for the Project be approved independent of

the outcome of the Carbon Credits and any incremental income from carbon credits will hundred (100) percent be allocated to Zorlu.

3. TARIFF STRUCTURE

3.1 SUMMARY

3.1.1 The proposed tariff for the Project is designed to cover the project costs both initial and on-going including return on equity over the project life cycle. Components of costs covered by the proposed tariff are as follows:

(i) EPC Costs;

(ii) Project Development costs (Cots other than EPC Costs);

(iii) Financing costs;

(iv) Debt service costs;

(v) O&M costs, (Foreign and Local);

(vi) Administration and Management costs;

(vii) Return on Equity (**"ROE"**);

(viii) Insurance; and

(ix) Other Project Costs;

3.1.2 Additionally, in order to properly match the actual expected expenditure of the Project, the proposed tariff would need to include the appropriate escalable components and actual cost structures of the Project, so that the tariff is properly adjusted to account for any change in the Project's revenue requirements (with regards to inflation, foreign exchange, interest rates etc).

3.1.3 Based on these requirements, the proposed tariff would consist of:

- **NON-ESCALABLE ENERGY COMPONENT:**
  - Debt service
  - ROE
- **ESCALABLE ENERGY COMPONENT**
  - O & M costs – Local
  - O & M costs – Foreign

3.1.4 It may be emphasized that this working of tariff will hold good for sixty days from the date of submission. Beyond that date, a 2% increase per month shall be added till financial

close. This is to cater for local and foreign inflation as well as Euro/Dollar and Rupee/Dollar parity etc.

The present working is based on PKR 85.0553= US$ 1.00 and US$ 1.3941 = Euro 1.00 being the prevalent foreign exchange rates as of 8th March 2011 as notified by State Bank of Pakistan.

3.2 NON-ESCALABLE ENERGY COMPONENT

3.2.1 DEBT SERVICE COST COMPONENT

3.2.1.1 The debt service cost component covers both repayment of the principal amount and payment of interest charges. The Project's debt is planned to be financed in both a mixture of foreign currency (US$), and local currency (PKR) with a door to door tenor of up to 12 years including grace period up to 24 months which is based on maximum estimated time required for the project to achieve Commercial Operation status. Therefore, the debt service cost is structured to reflect the debt service obligations in the first 10 years of the Project's operation. For the remaining 10 years of the Tariff Control Period, the debt service cost component would be zero, consequently.

3.2.1.2 As presented in Annexure E, the debt service component (including interest charge portion) will be indexed to the foreign exchange rate (PKR/US$) as applicable, due to the foreign financing of the Project. The interest charge portion will be indexed against variations in the LIBOR for foreign tranches of financing and KIBOR for local tranche of financing.

3.2.1.3 Additionally, one-time adjustment in the Project Costs will also be required at the time of the financial closing of the Project, which will result in an update to the debt service cost and return on equity components as of the closing date. Such concessions are already provided by NEPRA in Upfront Tariff of other power projects.

3.2.1.4 Details of the planned debt financing are discussed in Section 4 and a draft summary term sheet agreed between Zorlu and the Lenders is attached herewith and marked as Annexure F. The executed term sheet will be submitted separately in due course.

3.2.2 RETURN ON EQUITY:

3.2.2.1 The ROE component includes return on invested equity giving an IRR of 17% net of withholding tax on the basis of maximum dividends payouts possible to the shareholders during each particular year of the Tariff Control Period.

3.2.2.2 30% of the Project Cost is envisaged to be financed by Sponsor Equity Contribution. Zorlu have already put major portion of the required Equity portion in place for the construction of Phase-I of the Project. The final portion of equity investment will be submitted after financial closing and will be in US$. It is therefore requested that indexation for PKR/US$ Exchange Rate and US CPI inflation be allowed for the Project.

3.3 ESCALABLE ENERGY COMPONENT

The escalable component covers the following items:

(i) Local O&M Costs

(ii) Foreign O&M Costs; and

3.3.1 LOCAL O&M COSTS

3.3.1.1 This represents the fixed costs of all the local payments for O&M including the employees' pay and allowances, administrative costs including rent, utilities and overheads. It also includes costs of procurement of some local equipments such as electrical cables and basic mechanical equipments for the purpose of operation. This component is therefore subject to local CPI indexation/adjustment.

3.3.2 FOREIGN O&M COSTS

3.3.2.1 Preventive and scheduled maintenance of all plant/equipment is required as per manufacturer's recommendations. This is to ensure that the Plant remains available for reliable dispatch and for completing its contracted life. This component also includes the cost of spare parts and time change items as well as Management Fee and other fees of the O&M Operator. Due to an European manufacturer of the Equipments, these costs will be denominated in Euro. This component would therefore be subject both to Euro zone HICP as well as Euro/PKR adjustment/indexation.

3.3.2.2 Insurance Cost can also accounted as a foreign O&M cost. It consists of all risk insurance/re-insurance for the Project, as well as delay in start-up, business-interruption, and third party liability insurance, which is both EPA and lender's stipulated requirements.

3.3.2.3 As per practice in Pakistan, such large projects are reinsured with foreign specialist companies. The local industry normally retains only about 5% of the risk while 95% is reinsured abroad. Lenders also require coverage of machinery breakdown, natural calamities (like earthquake), sabotage and business interruption. Since the EPC cost is the major cost of the project and also totally funded in US$, it is imperative that all aspects of the risk are covered adequately and no compromise is made in this respect. This cost would therefore be subject to US$/PKR adjustment/indexation. Insurance cost also subject to adjustment as per actual premium paid by the company within the cost limits acceptable by NEPRA.

3.4 TARIFF ASSUMPTIONS

3.4.1 The following assumptions have been made in the calculation of the proposed tariff. If any of these assumptions change, which is possible between now and financial close, the tariff will have to be recalculated to account for these adjustments.

(i) Financing terms have been taken into these calculations based on initial discussions with the Lenders (a summary term sheet agreed between Zorlu and the Lenders is attached herewith and marked as Annexure F). Final terms, however, will be negotiated once tariff has been determined by NEPRA. This will include mainly the debt-equity ratio, grace period and loan repayment term, benchmark index (LIBOR/KIBOR) and the spread margin and other financial charges as applicable (front-end fee and commitment fee) for the financial institutions.

(ii) This tariff has been calculated based on the debt-equity ratio of 70/30. 60% of the project costs will be financed in US dollars debt, and 10% of the project cost will be financed in Pakistani Rupees debt component. Further, 100% of the equity investment has been assumed in US dollars.

(iii) Insurance cost has been assumed at 1.35% of EPC Costs during construction period and 1.00% of EPC Costs during operation period on the indicative rates received from foreign insurance companies which are attached herewith and marked as Annexure G. Currency for the premium payment has been assumed as US$. Premium rate and base currency for the insurance arrangements will be finalized at the time of financial close.

(iv) The foreign exchange rates applied to calculation of this Tariff Components are as follows: 85.0553 for US Dollar/ Pak Rupee and 1.3941 for Euro/ US Dollar.

3.4.2 Any changes in the above mentioned assumptions will require automatic adjustment in the tariff without referring back to NEPRA

3.4.3 Other assumptions considered for the calculation of this tariff is given in Annexure N.

4. RATIONALE FOR PROPOSED TARIFF

4.1 SUMMARY

4.1.1 The tariff determination for a wind power project entails the following:

(i) The tariff control period, over which the fixed cost are allocated. A shorter tariff control period will result in higher annual tariffs;

(ii) Capital cost for equipment and construction;

(iii) Cost of Debt and Equity;

(iv) O&M Costs; and

(v) Variable cost (which may vary over the term of the EPA, based on inflation, foreign exchange rate and interest rate variations)

4.1.2 A summary of the contribution of each of the costs to the total annual tariff is shown in table below. This is based on a 20-year asset life and estimated production of 167.657 MWh/annum.

	AVERAGE ANNUAL COSTS Years-1-2 (Rs./kwh)	**AVERAGE ANNUAL COSTS Years-3-10 (Rs./kwh)**	**AVERAGE ANNUAL COSTS Years-11-20 (Rs./kwh)**
Debt Service Cost	8.0305	8.0305	0.0000
ROE Cost(inc. Withholding Tax @7,5)	4.7061	4.7061	4.7061
DSRA LC Cost	0.1405	0.1405	0.0000
O&M Costs	1.7419	1.3743	1.4370
Insurance Cost	0.7042	0.7042	0.7042
TOTAL COSTS	**15.3232**	**14.9556**	**6.8472**

4.1.3 Each of these components is discussed in detail in this Section 4.

4.2 TARIFF CONTROL PERIOD

4.2.1 The level of the proposed tariffs is highly sensitive to the length of the Tariff Control Period i.e. the tenure of the EPA. As in recent determinations made by NEPRA, typical power generation projects in Pakistan require long-term Tariff Control Period. This is driven both by the needs of debt providers/lenders, and in recognition of NTDC's role as the purchaser of the Project's electricity output.

4.2.2 The debt provider/lender's willingness to provide financing for power projects is often conditional on repayment of the loan within 10 years. As the project is envisaged to be 70% debt funded with a stipulation of the loan tenor, this implies to higher debt service cost requirement (in terms of fixed charges) in the first 10 years of the project, as compared to the later years after the loan has been repaid. As a result, the purchaser (NTDC) will face higher tariffs in the earlier years due to debt servicing. In the latter years, however, the fixed tariff will be reduced to reflect those lower associated costs.

4.3.2 A 20-year EPA (**"Tariff Control Period"**) is therefore proposed for this project. The tariff during this period would specify different rates for the first 10 years and the remaining 10 years, in accordance with Rule 6 of the NEPRA Licensing (Generation) Rules, 2000.

4.3.3 Moreover, a 20-year Tariff Control Period is mainly in-tandem with the 20 year design life (usually 120,000 hours of operation) of wind turbines. The design lifetime concept simply means that all components used in the wind turbines are designed to have a very small probability of failure within 20 years (e.g. cars are designed for a life of 4,000 to 6,000 hours). While the actual life of any particular wind generation installation may be longer than this, depending on factors such as turbine quality and local climatic conditions, realistically the design life represents the expected life of the assets. A tariff control period longer than 20 years would therefore be inappropriate in this case. On the contrary, the expected life of a typical combined cycle gas turbine generator is 30 years. Investors in such a plant would be likely, if submitting a tariff application, to seek a longer tariff control period commensurate with this.

4.3 PROJECT COST

4.3.1 BREAKDOWN OF THE TOTAL PROJECT COST

4.3.1.1 Following reflects a breakdown of the total Project cost of US $ 161.880 Million:

PROJECT COST	Million USD
EPC Costs	138.801
Project Development Costs	5.736
Operating Fixed Assets	0.425
Financial Charges	3.759
Interest During Construction	5.524
Insurance During Construction	1.874
Other Project Costs	5.762
TOTAL PROJECT COSTS	**161.880**

4.3.1.2 As this project is the first of its kind in Pakistan, no local wind generation cost information is available for comparison and, wind generation costs are not directly comparable with any other type of generation in use in Pakistan. However, per MW project cost of the project may be considered as within the limit NEPRA allowed for other Wind Power Projects.

4.3.2 EPC COSTS

4.3.2.1 Zorlu has set-up a unique structure for EPC arrangements to provide international expertise mitigating and/or covering any risk to the Project Company, itself from any risk associated during construction period. The EPC structure for the Project is as follows:

(i) Phase I of the Project has already been constructed by Zorlu through its interim sub-contractors, and sub-suppliers. Zorlu have completed all civil, electrical and mechanical, erection and commissioning of 6 MW consisting of 5 WTGs.

(ii) the EPC structure for Phase II of the Project is as follows:

(a) a fixed price Balance of Plant Contract (**"BOP Contract"**) to be entered into between Zorlu and Zorlu Industrial Pakistan Limited (**"ZIPL"**). At present, BOP Contract Price is agreed and other legal and commercial terms are under

negotiation between parties. A copy of latest draft version of BOP Contract is attached herewith and marked as Annexure H); and

(b) a fixed price turbine supply agreement (**"Turbine Supply Agreement"**) executed between Zorlu and Turbine Supplier ("VESTAS") for supply of wind turbines for the Project. A copy of executed Turbine Supply Agreement is attached herewith and marked as Annexure I.

4.3.2.2 ZIPL will be fully responsible for management of the Turbine Supply Agreement. All risks associated with Phase I of the Project and or the Turbine Supply Agreement will be covered in full by ZIPL which saves Project Company from any possible construction period risks.

4.3.2.3 The total EPC cost under Zorlu's proposal is US$ 138.801 million and consists of:

(i) EPC costs already incurred by Zorlu in respect of construction of Phase I of the Project;

(ii) cost of BOP Contract to be entered into between Zorlu and ZIPL;

(iii) cost of the Turbine Supply Agreement to be entered into between Zorlu and VESTAS;

EPC COSTS	**Million USD**
EPC costs for Phase One	22.876
BoP Costs	51.022
Turbine Supply Costs	64.902
TOTAL EPC COSTS	138.801

4.3.2.4 EPC Costs for Phase One: This cost consist of the EPC cost incurred for the completion of Phase-I WTGs including but not limited to equipment supply, civil construction, electrical construction, transportation, custom clearance, erection and commissioning of the Phase-I. This cost also covers the Site mobilization costs including mobilization of all sub-contractors, equipments and machineries as well as camp area to be used for the Phase –II of the Project.

4.3.2.5 BoP Costs: BoP Costs covers all EPC costs except procurement of WTGs and its accessories. , This includes, engineering works, civil works, supply and installation of electrical equipments, and transportation and custom clearance of all equipments including WTGs, step-up transformer station, cranes etc. BoP Contractor (ZIPL) is also responsible for the management and coordination of the all site activities like a standard EPC Contract. A copy of draft BoP Contract is attached to this Tariff for detailed information.

4.3.2.6 Turbine Supply Costs: Zorlu have entered into a Turbine Supply Agreement with VESTAS for the purchase of 28 Vestas V90 1.8 MW Wind Turbines. This cost includes the contract price of Turbine Supply Agreement and extra costs as stipulated in the Turbine Supply Agreement. The payments in respect of Turbine Supply Agreement will denominated in Euro, therefore one-time adjustment on the Project Costs at Commercial Operation Date is required to reflect the changes in Euro/US$ and US$/PKR exchange rates.

Moreover, US$ 0.662 Million considered for the account of Sindh Infrastructure Development Surcharge at a rate of 0.85% over the Turbine Supply Costs is included in the Turbine Supply Costs.

4.3.3 SELECTION OF EQUIPMENT FOR THE PROJECT

4.3.3.1 The technology selected for the Project has been selected after detailed analysis of various power generation technologies available internationally for the purposes of power generation through wind. A range of technologies were reviewed by Zorlu for wind power generation, which included, inter alia, below one MW to multi Megawatt WTGs, synchronous or asynchronous generators and geared or gearless WTGs. Various factors were considered in selection of equipment and technology.

4.3.3.2 Zorlu together with IPEK sought proposals from wind generation equipment manufacturers based on the following defined criteria:

(i) Wind conditions: Compliance of proposed wind turbine with wind conditions;

(ii) Prices for delivery, transport, erection and commissioning of WTGs including terms of payment; specific costs: relation between final investment costs and operation cost to the estimated energy yield;

(iv) Cost of Equipment;

(v) Commitment to the market: Willingness to commit to Pakistan's market with regard to set-up or support in setting up a local service organization;

(vi) Delivery time: Lead time and conditions to be fulfilled in order to have the agreed delivery time started;

(vii) Energy output: Warranted power curve, performance warranty;

(viii) Grid compatibility: WTG must comply with the latest grid condition requirements;

(ix) Documentation: Completeness of technical documentation for the proposed turbine model or time schedule for the completion (not delaying the application for the generation license procedure)'

(x) Track record:

- Turbine: number of installed turbines of the proposed type(s) of WTG, location and year of installation; availability figures giving evidence of the turbine's maturity;

- Company: position in market, financial strength, growth in relation to market, service quality.

(xi) O&M: suitability of O&M concept for the size and location of projects, availability of spare parts, consumables and main components.

4.3.3. Based on the above and after conducting extensive evaluation of various manufacturers, Zorlu selected Vestas wind turbines for the purposes of this Project. All wind turbine equipments, accessories and spare parts will be manufactured in Europe at Vestas manufacturing facilities. Zorlu decided to use Vestas wind turbines for the following reasons:

(i) Vestas showed great interest in Pakistan's market and as compared to other manufacturers has prepared itself best to supply to Pakistan;

Vestas is a world class leading supplier of equipment and materials relating to wind turbines generators ("WTG") for the wind power generation markets.

Vestas was founded by H.S. Hansen in 1898 in Denmark to manufacture steel windows for industrial buildings. In 1970s - During the second oil crisis, Vestas began to examine the potential of the wind turbine as an alternative source of clean energy and in 1979 - Vestas delivered the first wind turbines.

Today Vestas has supplied 41,000 turbines that to 65 countries across five continents and engaged more than 20,000 people worldwide. With more than 23% share on the world wide turbines supply is Vestas the number one on the chart lists.

Vestas has a record of innovative wind energy systems with all geographic regions including coastal, non coastal, strong wind and weak wind sites. Vestas delivers all sorts of power plant solutions ranging from 1 MW to 300 MW and has extensive experience in power plant solutions based on wind energy.

Together with Zorlu Vestas is entering the Pakistani market; it is going to be a new beginning in setting high technical standards in employing and training more skilled labour in Pakistan.

Vestas is the only manufacturer offering Turbines manufactured in Europe with higher quality processes.

(ii) Vestas V90-1.8MW wind turbine is a pitch regulated upwind turbine with active yaw and a three-blade rotor. Vestas V90-1.8MW turbine has a rotor diameter of 90 m with a generator rated at 1.8 MW, depending on wind conditions. The turbine utilises the OptiTip® and the OptiSpeed TM concepts. With these features, the wind turbine is able to

operate the rotor at variable speed (RPM), helping to maintain the output at or near rated power.

The generator is a 3-phase asynchronous generator with wound rotor, which is connected to the Vestas Converter System (VCS) via a slip ring system. The generator is an air-to-air cooled generator with an internal and external cooling circuit. The external circuit uses air from the nacelle and exhausts it out through the rear end of the nacelle. The generator has four poles. The generator is wound with form windings in both rotor and stator. The stator is connected in star at low power and delta at high power. The rotor is connected in star and is insulated from the shaft.

(iii) The transformer is located in a separate locked room in the nacelle with surge arresters mounted on the high voltage side of the transformer. The transformer is a two winding, three-phase dry-type transformer. The windings are delta-connected on the high voltage side unless otherwise specified. The low voltage windings have a voltage of 690 V and a tapping at 480 V and are star-connected. The 690 V and 480 V systems in the nacelle are a TN-system, which means the star point is connected to earth.

(iv) The Vestas has a certificate from Germanischer Lloyd demonstrating that the Vestas can work with ambient temperatures up to 50°C

(v) The total production of the total wind power plant (sum of all turbines) is higher than for any other WTG type;

(vi) Vestas provided the lowest cost per kWh due to its superior production numbers at the same wind speed.

4.3.4 PROJECT COSTS (OTHER THAN EPC COSTS):

4.3.4.1 Details of the Project Costs (other than EPC Costs) are exhibited in the table below:

PROJECT COST (Other than EPC Costs)	Million USD
Project Development Costs	5.736
Operating Fixed Assets	0.425
Financial Charges	3.759
Interest During Construction	5.524
Insurance During Construction	1.874
Other Project Costs	5.762
TOTAL PROJECT COSTS	**23.079**

4.3.4.2 The Project Development Cost is based on the following items:

4.3.4.5 Interest During Construction: The project cost will be financed 60% by foreign currency loan and 10% by local currency loan. The reference rates based on assumptions by Zorlu and spread rates agreed with Lenders are as below which are also presented in Annexure F. Interest during construction is estimated as US$ 5.524 Million based on mark-up rates and debt drawdown schedule anticipated by Zorlu. Therefore, this needs to be adjusted and trued-up as per actual on COD.

	Local Loan[3]	Foreign Loan[4]
Kibor / Libor	13.76%	0.4615%
Spread	3.00%	4.50%

4.3.4.6 Insurance During Construction: Based on the indicative quotations from insurance companies, (attached herewith and marked as Annexure G) the insurance costs for the construction period of the Project have been envisaged to be 1.35% of the EPC Costs where this rate is within the limit allowed by NEPRA in other tariff determinations. Insurance during construction will be adjusted and trued-up as per actual upon the Project achieving COD.

4.3.4.7 Other Project Costs:

(i) This includes other soft costs of the project such as, general expenses, initial working capital, insurance costs already incurred in respect of Phase-I and LoC Cost upon Financial Closing. Zorlu have started this project in 2007. As the only purpose of the Project Company is to implement this project, general expenses starting from 2007 is included under this head. These expenses are inclusive of both office and site expenses such as messing, housekeeping, water supply, security etc from the commencement of construction till today.

(ii) Due to mismatch between the inflows and outflows in the cash flow of Zorlu, the sponsor will finance this gap through one time equity injection on the Commercial Operations Date which is envisaged to be 2 months of O&M costs plus debt servicing costs. The company will need this working capital in order to have a robust operational period and to guarantee the first debt repayment of the project financing. Moreover, for a secure and preventive operation, O&M Contractor should keep a reasonable amount of spares in inventory because supply terms of spare parts may take longer lead times in wind

[3] Reference rate for local financing is considered to be the prevailing KIBOR Rates for 6-month as notified by State Bank of Pakistan for the date 8th March 2011.(http://www.sbp.org.pk/ecodata/kibor/2011/Mar/kibor-08-Mar-11.pdf)

[4] Reference rate for foreing financing is considered to be prevailing LIBOR Rates for 6-months US$ for the date 8th March 2011 . (Source: Forex Financial Services)

(i) Project Development & Consultancy: this is cost of developing and managing the Project since obtaining the initial LOI in June 2006 including environmental, financial, legal and technical consultants' costs of Zorlu.

(ii) Administration During Construction: this is the cost of administration such as travel, overhead and personnel administration expenses incurred by both Zorlu and sponsor company Zorlu Enerji in respect of the Project. As Zorlu had commenced the Project and investment in relation thereto in 2006, therefore, in addition to the major management and administration activities held by sponsor company, Zorlu has spent up to date 1.2 Million US$ for the account of management and administration of the Project and will spent an anticipated amount of 0.650 Million US$ for the rest of the construction period. Hence, NEPRA is requested to allow this component to be included in the Project Development Cost.

(iii) Licences & Other Fees: this includes fees paid or payable to NEPRA in respect of obtaining and modification of generation license, tariff applications, annual fees; and fees paid or payable to AEDB for the purpose of legal advisory, technical advisory, and LOI for the implementation of the Project.

The costs explained in details above in item (i), (ii) and (iii) are listed as follows:

PROJECT DEVELOPMENT COSTS	**Million USD**
Project Development & Consultants' Costs	3,732
Administration During Construction	1,852
Licenses and Other Reg. Fees	0,152
TOTAL PROJECT DEVELOPMENT COSTS	**5,736**

4.3.4.3 Operating Fixed Assets Costs: this includes the various equipments needed for site activities such as:

(i) Electrical Connection at the Site: The amount paid to Hyderabad Electric Supply Company (**"HESCO"**) for electricity line connection to the Site for the electricity utilities required for site activities.

(ii) Equipment Rental: The cost of generator, and equipments (fork lifters etc.) on rental basis. The rental costs of forklifts and generators are considered only for construction period of the Project.

(iii) Site Mast: Zorlu have erected two wind masts at Site for the measurement of wind data. The wind masts will be required during operation period for the purpose of determining actual wind speed for the calculation of monthly payments as per EPA requirements. Zorlu

have already incurred US$ 0.126 Million for the procurement, installation and maintenance of these 2 wind masts.

Moreover, Zorlu will also install further 3 wind masts for the purpose of Power Curve tests as stipulated in the Turbine Supply Agreement. This practise is an IEC Standard to have a reliable Power Curve Tests of the Wind Turbines. The cost of additional wind mast is estimated as US$ 0.167 Million.

(iv) Land Lease: Zorlu have paid 5,740 Million PKR in advance (500 PKR/acre per year) to Alternate Energy Development Board as lease fee of 1,148 acres land for the first ten years of lease period as per Site Sub-Lease Deed dated 14th December 2007 (**"Initial Site Sub Lease Deed"**) (Initial site sub-lease deed is attached herewith and marked as Annexure K).

OPERATING FIXED ASSETS	Million USD
Electrical Connection to Site	0.011
Equipment Rental (Vehicles, Generators etc.)	0.053
Wind Mast as per EPA (2*80m)	0.126
Extra Wind Masts for Power Curve Tests	0.167
Land Lease for first 10 years	0.067
TOTAL OPERATING FIXED ASSETS	**0.425**

4.3.4.4 Financial Charges: This consists of the Lenders' structuring fees such as commitment fees and front-end fees. Commitment fee at a rate of 0.75% per annum over undisbursed amount of the loan during construction period and front-end fee is 1.50% of the total debt amount is stipulated for the Project. Lender's structuring fees mentioned in below table is the estimated costs as per the anticipated debt amount and drawdown schedule and may vary as per the actual drawdown schedule. Therefore, NEPRA is required to allow onetime adjustment/true-up as per actual on Commercial Operation Date.

Moreover, as a general practice in international project finance market, Lender's consultants' fees and mandate fees are payable also by Project Company. This includes international & local legal counsels, technical advisor, insurance advisor and financial modelling services required by Lenders.

The cost break-up of above mentioned Financial Charges are as follows:

FINANCING COSTS	Million USD
Establishment / Commitment Fee	0.297
Lead Bank / Participation Fee	1.622
Lenders' Consultants & Mandate Fee	1.840
TOTAL FINANCING COSTS	**3.759**

industry. Therefore, NEPRA is requested to allow this initial working capital as a capital expenditure of Project Company and include in the Other Project Costs.

(iii) As defined in Section 2.7 of EPA, Zorlu shall deliver a Letter of Credit (**"LOC"**) to Purchaser (NTDC) upon achieving financial closing. The financial charges anticipated for this LOC is also included under other project costs head.

OTHER PROJECT COSTS	Million USD
Already incurred General Expenses (Pakistan)	1.128
Already incurred General Expenses (Central)	0.135
Already incurred Insurance Costs for Phase-I	0.452
Future General Expenses (Pakistan)	0.604
Future General Expenses (Central)	0.070
Initial Working Capital	3.287
LoC on Financial Closing (as per EPA)	0.086
TOTAL OTHER PROJECT COSTS	**5.762**

4.3.5 EURO-DOLLAR CONVERSION

4.3.5.1 As noted above, the EPC structure of the Project comprises of a BOP Contract and a Turbine Supply Agreement respectively. The BOP Contract is to be funded in US$ whereas, the Turbine Supply Agreement is to be funded in Euro. Also, some of the Non EPC Costs may also be funded in Euro or PKR. Hence, the cost of the Euro portion of project cost quoted above has been converted to US$ figures, based on an exchange rate of 1.3941 US$ is equal to 1.00 Euro and 85.0553 PKR is equal to 1.00 US$. The actual Project cost is subject to possible fluctuations in the exchange rate between the Euro (being the currency of Turbine Supply Agreement) and the US$ (being the currency for the major part of the financing and equity) hence Zorlu requests NEPRA to allow a one-time adjustment in Project Cost at the time of the Project's Commercial Operations Date.

4.3.6 TAXES & DUTIES:

4.3.6.1 Government of Pakistan has given tax concessions to IPPs generating electricity through renewable sources, applying Custom Duty & Sales Tax at a rate of 0% on the imported equipment, spares and machinery required for implementation of the Project through Renewable Energy Development Policy, 2006 and Serial Number 13 of SRO 575 (I)/2006. Therefore, no custom duty is considered for this Tariff. However, as per Serial Number 11 of SRO 575 (I)/2006 and Wind Tariff Guidelines, 2006 Custom Duty is considered to be at a reduced rate of 5%. Because of this uncertainty and ambiguity on the applicable rate of custom duty, in case any custom duty is applicable for the import of equipment, spares and

machinery in relation with the Project, NEPRA is required to allow Zorlu for an adjustment on project cost as per actual on COD.

4.3.6.2 Zorlu assumed US$0.662 million for the account of Sindh Infrastructure Development Surcharge at a rate of 0.85% over the Turbine Supply Costs. As Sindh Infrastructure Development Surcharge is applicable depending on the weight of the imported equipment and distance to be transported from the Port, NEPRA is requested to allow adjustment as per actual on COD.

4.4 DEBT VS EQUITY

The total project cost is US$ 161.880 million. The capital structure of the company has been envisaged at a Debt-Equity ratio of 70/30. Given this capital structure and the reference project cost detailed in the prior Section, the table below details the amount of equity contributed and the debt to be raised from the capital markets.

Debt & Equity Structure	%	USD (Millions)
Equity	30%	48.564
Debt	70%	113.316
Total Project Costs	**100%**	**161.880**

4.4.1 EQUITY STRUCTURE

4.4.1.1 Sponsor Company Zorlu Enerji will be committing up to 30 percent of the project costs as equity. The projected total equity required as per the capital structure is approximately US$ 48.564 million.

RATIONALE FOR RETURN ON EQUITY FOR WIND POWER PROJECTS

The Guidelines for the Determination of Tariffs for Wind Power Projects, 2006 requires that the tariff should be determined after allowing for reasonable Internal Rate of Return ("IRR") on equity investment.

EQUITY INVESTMENT IN FOREIGN CURRENCY [US$]

In line with recent tariff determinations by NEPRA, Zorlu proposes a return on invested equity of 17 percent net of 7.5 percent withholding tax on dividends. This is based on the premise that the Project will be implemented on BOO over a 20 year term for the EPA.

WITHHOLDING TAX ON DIVIDENDS

According to the Income Tax Ordinance, 2001 income from dividends is subject to withholding tax (7.5% for power generation projects).

4.4.2 DEBT STRUCTURE

4.4.2.1 The loan of approximately US$ 113.316 million, at the reference Project cost detailed in the prior Section, will be raised from the debt capital markets, and shall comprise of:

(i) Local currency component of 10% of Project Cost approximately PKR equivalent of US$ 16.188 million (**"Local Currency Loan"**)

(ii) Foreign currency component of 60% of Project Cost approximately US$ 97.128 million (**"Foreign Currency Loan"**)

	USD (Millions)
Debt	
Local Currency Loan	16.188
Foreign Currency Loan	97.128
Total Debt	**113.316**
Equity	
Sponsors' Contribution	48.564
Total Equity	**48.564**

4.4.2.2 The commercial loan facility will have 10 years repayment period plus up to 24 months grace period, in foreign and local currency term facilities, and will be payable in semi-annual instalments.

4.4.2.3 For foreign currency portion of Financing, an annual interest rate of 6 months LIBOR plus 4.50% spread, which covers lenders' risk assessment of the project in Pakistan, therefore equating to around 4.9615% based on current prevailing LIBOR rate of 0.4615% has been considered for the purpose of calculation.

4.4.2.4 For local currency portion of financing, an annual interest rate of KIBOR plus lender's spread of 3.00%, therefore equating to around 16.76% based on current prevailing KIBOR rate of 13.76% has been considered by Zorlu for initial working purposes.

Fund Raising Cost	**Local Loan**	**Foreign Loan**
Kibor / Libor	13.76%	0.4615%
Spread	3.00%	4.9615%

4.5 OPERATING COST

4.5.1 INSURANCE

4.5.1.1 The fixed annual insurance expense during the operational phase is estimated at US$ 1.388 million. Zorlu have estimated approximately 1.00% of the EPC Cost each year for the Operations period insurance, which is to an extent based on indicative quotes of international insurance companies (attached herewith and marked as Annexure G). This expense is expected to be denominated in foreign currency since the underlying costs are also based in foreign currency. The rationale for the assumed cost is as under:

(i) Local insurance companies would not be in a position to adequately provide cover for this kind of project given the total cost (in foreign currency) and the lack of precedents for wind power projects in Pakistan.

(ii) The lender/financial institutions will require insurance of the Project's assets on a replacement cost basis, which will inevitably be in foreign currency.

(iii) Considering the increased risk perception of the region as well as the country, insurance companies offer higher premium rates for the projects in Pakistan. Global Political Risk map provided by insurance company is attached herewith and marked as Annexure G.

4.5.2 OPERATION & MAINTENANCE (O&M)

4.5.2.1 The operation and maintenance functions for this Project will be handled by Zorlu O&M Pakistan Limited (**"Zorlu O&M"**) through an O&M contract **("O&M Contract")**. At present, O&M Contract negotiations are still ongoing and expected to be finalized within Tariff Determination period. (A copy of the latest version of O&M Contract attached herewith and marked as Annexure J). The executed Contract will be submitted to NEPRA in due course.

4.5.2.2. O&M Cost of the Project consists of Fixed O&M Foreign and Fixed O&M Local, Variable O&M and Insurance Components. The details of these costs are given herein below:

	Million USD		
O&M Costs	**Years 1-2**	**Years 3-10**	**Years 11-20**
Fixed O&M Foreign	2.392	1.702	1.794
Fixed O&M Local	0.922	0.922	0.949
Variable O&M	0.120	0.085	0.090
Insurance	1.388	1.388	1.388
TOTAL O&M COSTS	**4.822**	**4.097**	**4.221**
O&M Costs without Insurance	3.434	2.709	2.833

4.5.2.3 **Fixed O&M Foreign:**

The foreign O&M cost is consist of fees payable to Operator. For the first two years of the operation period, technical support to be provided by Vestas being the manufacturers of the wind turbines (operation & maintenance of 28 VESTAS WTGs, remote support, technical services etc.) results an increase in O&M Costs. It is an internationally accepted practice in Wind Industry that the manufacturers of the wind turbines provide warranty for their products only if the manufacturer and/or an affiliate/partner of the manufacturer provide O&M services during that warranty period. In addition, for a successful operation period, it is the general practice to transfer the risk of initial operation phase to the supplier who is more experienced and capable of mitigating any potential risk to be appearing in the initial operation period. For the remaining period, Zorlu O&M, as the operator, will be delivering all O&M services, which results a remarkable decrease in Fixed O&M Foreign Costs. The fees payable to the Operator also covers the supply of spare parts, scheduled and unscheduled maintenance costs of the Wind Farm.

Moreover, as wear and tear of the Wind Turbines is likely to increase after 10th year of the operation, it is therefore assumed that cost of spare parts of the Project will be increased consequently which results a slight increase in Fixed O&M Foreign Costs. The draft O&M Agreement to be executed between Zorlu O&M Pakistan Limited (**"ZOMP"**) and Zorlu is attached herewith and marked as Annexure J for your reference. In the light of foregoing, the Fixed O&M Foreign cost is expected as follows:

	Million USD		
Fixed O&M Foreign	**Years 1-2**	**Years 3-10**	**Years 11-20**
Operator Fee	2.392	1.702	1.794
TOTAL Fixed O&M Foreign	**2.392**	**1.702**	**1.794**

As the equipment manufacturer is a European company Foreign O&M Costs will be denominated in Euro, therefore NEPRA is requested to allow indexation/adjustment against Euro/PKR exchange rate and consumer price index for Eurozone ("HICP") as applicable.

4.5.2.4 **Fixed O&M Local** comprises of payrolls, Site lease, and local costs/expenses associated with operating expenses. The breakdown of Fixed O&M Local is as follows:

Million USD

Fixed O&M Local	Years 1-2	Years 3-10	Years 11-20
Payroll	0.292	0.292	0.292
Other Operating Expenses	0.630	0.630	0.630
Land Lease	0.000	0.000	0.027
Total Fixed O&M Local	**0.918**	**0.918**	**0.945**

(i) Payroll: US$ 0.292 Million per annum is foreseen as payroll expenses during operation period of the Project. This cost includes the management and administration staff as well as site security, to be employed at site and office at Karachi. In total, Zorlu is planning to directly or indirectly through Operator employ more than 50 people including 25 security staff. This figure is also inclusive of tax and EOBI as well as other fringe benefits.

(ii) Other Operating Expenses- covers operation overhead costs of the Project including but not limited to Site catering, housekeeping, equipment and car rental, water supply, office rent, stationery, and other general expenses for site and office at Karachi. A monthly amount of approximately US$ 0.053 Million has been estimated by Zorlu in this respect.

(iii) Site Lease- Zorlu have executed a Site Sub-Lease Deed with Alternative Energy Development Board as given bearing reference no B/3/1/Land/07, dated 14th December 2007 in respect of the Site having an area of 1.148 acres_(**"Initial Site Sub Lease"**)(attached herewith and marked as Annexure K) . However, for consistency with the Energy Purchase Agreement and Implementation Agreement and standardization of Site Sub-Lease Deed for Wind Power Projects, Zorlu now negotiates a new draft of Site Sub-Lease (**"Revised Site Sub Lease"**) (attached herewith and marked as Annexure L). In terms whereof, the cost of lease of the Site for first 10 years have been paid by Zorlu and included in the Operating Fixed Assets Costs of the Project Costs, and PKR 5000/acres per year for remaining 10 years of the lease period.

4.5.2.5 **Variable O&M Costs:** Variable O&M costs have been estimated as 5% of the operator fee in accordance with the terms of the O&M Contract.

4.6.1 INDEXATION, ESCALATIONS AND COST ADJUSTMENT

4.6.1.1 The purpose of indexation is to remove any exposure of an investor to cost escalations, over the life of a project, over which they have no direct control. With that principle in mind, the following sections discuss the proposed indexation for various components of the tariff. Indexation formulae have been prepared taking into account the guidelines presented in the Ministry of Water and Power/Alternative Energy Development Boards, "Guidelines for Determination of Tariff for Wind Power Generation 2006."

4.6.2 FOREIGN EXCHANGE

4.6.2.1 A foreign exchange indexation should be applied to those cost elements that are denominated in foreign currency (US$ or Euro). For these items, the investor will have no control over cost changes caused by exchange rate fluctuations, and these should therefore be passed through to the purchaser. The proposed tariff structure for Zorlu implies that the following components should be indexed to variations in foreign exchange rate (US$/PKR and/or Euro/PKR as applicable):

(i) Portions of the O&M components that are denominated in foreign currency;

(ii) The Foreign Currency Loan of the Project debt.

(iii) The insurance component as discussed previously will provide cover on a replacement cost basis, which will be incurred in foreign currency. Premiums will therefore be constructed on that basis, and insurance costs will therefore fluctuate with exchange rate movements; and

(iv) The ROE.

4.6.2.2 Indexation for these components should be applied quarterly, on 1st of January, 1st of April, 1st of June and 1st of September in each year of Tariff Control Period respectively, on the basis of the TT & OD selling rate as notified by the National Bank of Pakistan (in US$/PKR or Euro/PKR).

4.6.3 LIBOR/KIBOR

4.6.3.1 The wind farm investor will have no direct control over changes in interest rates. Appropriate indexation should therefore be applied so that the interest charge portion of

the debt service component of the tariff reflects changes in the London Interbank Offered Rate (LIBOR) and Karachi Interbank Offered Rate (KIBOR). The debt repayment schedule of the project is semi annually. This portion should thus be adjusted semi-annually for:

(i) Variations in the 6-month US$ LIBOR as published by the British Bankers Association;

(ii) Variations in the 6-Month KIBOR as published by State Bank of Pakistan.

4.6.4 LOCAL INFLATION

4.6.4.1 As with currency exchange rates and interest rates, a wind farm investor will not be able to influence local inflation. Appropriate indexation should therefore be applied to reflect the portion of the tariff that is subject to local inflation. For the proposed tariff structure, the following components should be indexed to the local CPI:

(i) Portions of the O&M component that are denominated in local currency (PKR);

4.6.4.2 Indexation for these components should be applied quarterly, on 1st of January, 1st of April, 1st of June and 1st of September in each year of Tariff Control Period, on the basis of CPI as notified by the Federal Bureau of Statistics (FBS) for applicable period.

4.6.5 UNITED STATES CONSUMER PRICES INDEX ("US CPI")

4.6.5.1 The equity investment and insurance costs are denominated in US$. As with currency exchange rates and interest rates, a wind farm investor will not be able to influence US inflation. Appropriate indexation should therefore be applied to reflect the portion of the tariff. It is thus proposed that these costs should be adjusted for US inflation per USCPI as published monthly by the Department of Labour, United States Government. The indexation/adjustment is requested to be in quarterly arrears on 1st of January, 1st of April, 1st of June and 1st of September in each year of Tariff Control Period.

4.6.6 EUROZONE HARMONIZED INDEX OF CONSUMER PRICES ("HICP")

4.6.6.1 The Foreign O&M costs will be denominated in Euros as the equipment manufacturers are European companies. These are recurrent costs whose amount will be affected by the home country inflation. It is thus proposed that these costs should be adjusted on quarterly basis on 1st January, 1st April, 1st July and 1st October for Eurozone inflation per Harmonized Index of Consumer Prices (HICP) as published by the European Central Bank (ECB). The index is published on monthly basis by ECB.

5. REQUEST TO NEPRA FOR TARIFF DETERMINATION

5.1 SUMMARY OF DETERMINATION SOUGHT

5.1.1 The National Electric Power Regulatory Authority (NEPRA) is requested to kindly grant the Tariff Determination in respect of the following:

(i) Tariff as requested in the Reference Tariff Tables, attached herewith and marked as Annexure M , to remain effective for a period of 20 years from the date of Commercial Operations; and

(ii) Monthly Benchmark Energy Tables and Complex Monthly Energy Curves attached herewith and marked as Annexure O.

(iii) Approve the proposed escalations in the Tariff, as set out in Annexure E.

(iv) Financing of project as 70:30 debt to equity ratio

(v) Allow the project assumptions as set out in Annexure N.

(vi) Allow the company for the additional approvals required in respect of Project and Energy Purchase Agreement to be signed with National & Transmission Dispatch Company, given below in Section 6.

5.2 REFERENCE TARIFF

5.2.1 The proposed Reference Tariff comprising the non-escalable cost component and the escalable cost component, as described in Section 3 is presented in the Table below:

	PKR/kWh	US¢/kWh
Average Tariff (20 years)	10.9382	12.8601
Discount Factor	10%	10%
Levelized Tariff	12.7743	15.0188
The **tariff shown above is subject to indexation** as given in this petition.		
This tariff is **valid for 60 days** from date of submission;		
Beyond that date a 2% increase per month will be required to account for.		

5.2.2 Details of the Reference Tariff are shown in Table placed at **Annexure** M and Assumption for Tariff Table at Annexure N.

5.2.3 The Project's financial projections on the basis of Reference Tariff Table, as set out in Annexure M, are shown in Annexure Q.

5.2.4 The specified tariff, along with the indexation, when approved, would set the rate at which Zorlu will sell power to the off taker.

5.3 TARIFF INDEXATION

5.3.1 Indexation of cost of components of a tariff provides an investor certainty with regard to return on investment by removing exposure to such cost escalations over which investor has no control. This approach is efficient and hence minimizes total cost. Commonly, indexation protects investors against risks arising from exchange rate fluctuations, and local inflation.

5.3.2 Tariff indexation for the Zorlu's tariff has been requested in relation to known and accepted consumer price indices (CPIs), LIBOR/KIBOR, the Euro/Dollar and Dollar/Rupee exchange rate on quarterly and semi-annually basis as discussed in detail in Section 4. These adjustments are consistent with those that have been provided in other upfront tariffs or to other IPPs by NEPRA and are also the norm around the world.

5.3.3 Details of proposed indexations requested is placed at Annexure E.

6. Additional Approvals Required

6.1 EPA Approval

6.1.1 Zorlu hereby requests NEPRA to approve the following Clauses of the EPA:

(i) Section 15.6; and

(ii) Section 15.8.

6.2 Pre-Commercial Operations Date (COD) and Early Power

6.2.1 The Ministry of Water and Power vide its Office Memorandum No 7/166/2006-P.II dated July 30, 2009 has permitted new gas and residual fuel oil based power plants pre-COD sale of electric energy on tariff.

6.2.2 As pre-COD sale has already been permitted by the GOP to gas and residual fuel oil based power plants, Zorlu hereby requests NEPRA to permit sale of any energy generated by the Project prior to the Project having achieved COD on rates determined by NEPRA in accordance with the Reference Tariff (attached herewith and marked as Annexure M) excluding the debt service component mentioned therein.

6.2.3 Zorlu request NEPRA to allow pre-COD sale of electricity generated with a price of first year Reference Tariff excluding Debt Service Component thereof. Payments made prior to COD shall not be adjusted from post COD payments.

ZORLU ENERJI PAKISTAN LTD.

REFERENCE TARIFF

Year	Variable O&M Foreign	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity	Witholding Tax@7.5%	Loan Repayment	Interest Charges	L/C Costs for DSRA top-up	Tariff	
	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	¢/kwh
1	0,0607	0,4676	1,2136	0,7042	4,3778	0,3283	4,2718	3,7588	0,1405	15,3232	18,0155
2	0,0607	0,4676	1,2136	0,7042	4,3778	0,3283	4,5310	3,4996	0,1405	15,3232	18,0155
3	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	4,8109	3,2196	0,1405	14,9556	17,5834
4	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	5,1141	2,9164	0,1405	14,9556	17,5834
5	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	5,4433	2,5873	0,1405	14,9556	17,5834
6	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	5,8016	2,2290	0,1405	14,9556	17,5834
7	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	6,1927	1,8378	0,1405	14,9556	17,5834
8	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	6,6209	1,4096	0,1405	14,9556	17,5834
9	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	7,0911	0,9395	0,1405	14,9556	17,5834
10	0,0432	0,4676	0,8635	0,7042	4,3778	0,3283	7,6089	0,4217	0,1405	14,9556	17,5834
11	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
12	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
13	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
14	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
15	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
16	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
17	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
18	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
19	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
20	0,0455	0,4813	0,9102	0,7042	4,3778	0,3283				6,8472	8,0503
								AVERAGE TARIFF		10,9382	12,8601
								LEVELIZED TARIFF		12,7743	15,0188