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No. NEPRA/TRF-169/ZEPL-2011/17023-17025
December 1, 2015

Subject: **Decision of the Authority in the Matter of Motion for Leave for Review filed by Zorlu Enerji Pakistan Ltd. against Decision of the Authority in the matter of its Tariff adjustments at Commercial Operations Date (Case No. NEPRA/TRF-169/ZEPL-2011)**

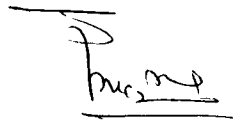
Dear Sir,

This is in continuation of this office letter No. NEPRA/TRF-169/ZEPL-2011/2173-2175 dated 20th February 2015 whereby Decision of the Authority in the matter of Tariff Adjustment at Commercial Operations Date of Zorlu Enerji Pakistan Ltd. was sent to the Federal Government for notification in the official Gazette.

2. Please find enclosed herewith the subject decision of the Authority along with Annex-I and Annex-II (22 pages) in the matter of Motion for Leave for Review filed by Zorlu Enerji Pakistan Ltd. against Decision of the Authority dated 20th February 2015.
3. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).
4. The Order of the Authority along with Annex-I (Tariff Table) and Annex-II (Debt Servicing Schedule) of the Decision needs to be notified in the official Gazette.

Enclosure: As above

Secretary,
Ministry of Water & Power,
Government of Pakistan
Islamabad.


01.12.15
(Syed Safeer Hussain)

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.



**DECISION OF THE AUTHORITY IN THE MATTER OF MOTION FOR LEAVE FOR REVIEW
FILED BY ZORLU ENERJI PAKISTAN LIMITED AGAINST DECISION OF THE AUTHORITY IN
THE MATTER OF ITS TARIFF ADJUSTMENTS AT
COMMERCIAL OPERATIONS DATE**

1. Introduction:

- 1.1 Zorlu Enerji Pakistan Limited (hereinafter referred to as "ZEPL") is a generation licensee of National Electric Power Regulatory Authority (hereinafter referred to as the "Authority"). The decision of adjustments in generation tariff of ZEPL at commercial operations date (hereinafter referred to as the "COD decision") was issued by the Authority on February 20, 2015. Being aggrieved with the COD decision, ZEPL filed a motion for leave for review (hereinafter referred to as the "Review Motion") vide their letter No. LT-1503-09 dated March 13, 2015 under Rule 16 (6) of National Electric Power Regulatory Authority (Tariff Standards and Procedure) Rules, 1998 (hereinafter referred to as the "Rules").
- 1.2 In the Review Motion, ZEPL sought review of the COD decision to the extent of following items:
1. EPC phase-I costs
 2. EPC phase-II costs
 - i. Equipment supply phase-II costs
 - ii. Balance of plant costs
 3. Construction period
 4. Non-EPC costs
 - i. Insurance during construction
 - ii. Financial charges

2. Proceedings:

- 2.1 Rule 16 (6) of the Rules requires that within ten days of the service of a final decision of the Authority, a party may file a Review Motion. Further, as per Rule 16 (6) of Rules read with Regulation 3 (2) of the National Electric Power Regulatory Authority (Review Procedure) Regulations, 2009 (hereinafter referred to as the "Regulations"), a Review Motion is competent only upon discovery of new and important matter of evidence or on account of some mistake or error apparent on the face of the record or from any other sufficient reasons.





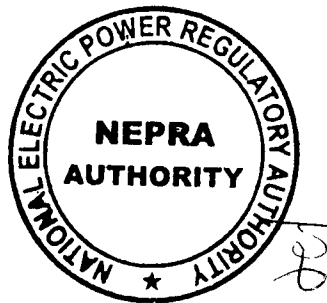
- 2.2 ZEPL, subsequent to its request for extension of time vide letter dated March 04, 2015 for filing motion for leave for review, filed the Review Motion vide letter No LT-1503-09 dated March 13, 2015.
- 2.3 To consider contentions of ZEPL and to provide opportunity to explain its point of view, a hearing in the matter was held on April 28, 2015 at NEPRA Tower, Islamabad attended by the representatives of ZEPL. During the hearing, ZEPL reiterated its written submissions and requested to review the COD decision and assured to provide the pending information.
- 2.4 ZEPL subsequently, submitted documentary evidence for the costs disallowed by the authority in its COD decision vide letter dated June 9, 2015. As per Para 15 of COD decision reads as under;

"15. Various costs disallowed through this decision, may be allowed to ZEPL up to the amounts allowed in the determination, subject to the provision of verifiable documentary evidences to the satisfaction of the Authority. However, the submission of documentary evidences should not be made in bits and pieces rather should be made one time and within one year of the date of this decision."

- 2.5 The information submitted by ZEPL along with its request was not complete. Accordingly ZEPL was directed to submit pending information through numerous correspondence.
- 2.6 Based on the submitted records, information, documents and evaluation, the Authority decided as under;

3. Energy Equipment Phase-I:

- 3.1 ZEPL, at the time of tariff determination dated Dec 18, 2007 provided the copy of EPC contract between Vensys CKD and Zorlu Endustriyel ve Enerji Tesisleri Insaat Ticaret Anonim Sirketi, Turkey (hereinafter referred to as "Zorlu Turkey"). The aforementioned EPC contract was bifurcated into two part i.e. EPC Phase-I and EPC Phase-II. The contract price for the five wind turbines for phase-I was € 8.316 million. Accordingly, the same amount was allowed by the Authority in the aforementioned determination. Furthermore, it was also decided by the Authority that the amount will be adjusted at the time of COD due to exchange rate variation.



- 3.2 ZEPL at the time of COD adjustment claimed € 8.316 million against the aforementioned phase-I EPC contract. As per the record provided, the payments for Phase-I EPC contract have been made by Zorlu Turkey and later, this amount was reimbursed by ZEPL to Zorlu Turkey. ZEPL at the time of COD claimed exchange rate variation as per the date of invoices raised by Zorlu Turkey to ZEPL. The Authority in the absence of complete source documents did not allow the exchange rate variation as claimed by ZEPL. The Authority during the hearing dated Apr 28, 2015 directed ZEPL to provide authentic documents relating to transfer of shares, import documents, purchase order for equipment related to phase I EPC contract along with the invoices raised by Vensys CKD and payments made thereon.
- 3.3 ZEPL subsequent to its Review Motion submitted documentary evidences in support of the exchange rate claim via letter dated June 09, 2015, which included invoices, import documents, bank swift message, copy of SECP documents for share conversion etc.
- 3.4 While reviewing and correlating the payments with the contract already submitted by ZEPL the Authority noted that the swift code mentioned in swift message does not correlate with the code as mentioned in the contract. Moreover, during the scrutiny of submitted record another contract came to the notice of the Authority for the same equipment, with the same contractor having same date i.e. May 18, 2007, but with the change in the contract price i.e. € 6.742 million for five (05) Vensys 62 wind turbines. The Authority also noticed that the page 04 of the contract incorporating price € 8.316 million for five (05) Vensys turbines is not initialed by both the parties to the contract, as all other pages of the contract with the contract price of € 6.742 million were duly initialed by both the parties to the contract.
- 3.5 ZEPL was asked to explain the reason of this anomaly. ZEPL responded as under;

"The initial agreement was signed back in 2007 for fulfilling Tariff Petition requirements whereas negotiations were still in progress, it was also to set the manufacturing schedules as there was a strong pressure from GoP to start the project as soon as possible. Later when negotiations were finalized final agreement was signed with final terms and conditions. Determination of the Authority and all Import documents and payments were done in compliance with the agreement."

- 3.6 The Authority, being dissatisfied with the ZEPL response, provided the final opportunity to justify its claim by providing/presenting original contract before the Authority. However,



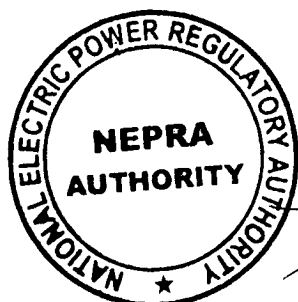
ZEPL again failed to bring original record or to justify its claim to the satisfaction of the Authority.

- 3.7 In view of the aforesaid lapses and failure of ZEPL to provide verifiable documents to support its claim, the Authority has decided to allow the amount of EPC Phase-I based on the contract that has been duly signed by both parties with the contracted value of € 6.742 million for the referred five (05) Vensys 62 wind turbines.
- 3.8 With regard to the applicability of the exchange rate variation the Authority has decided to allow the exchange rate based on the date of share capital conversion (i.e. January 24, 2012) of the outstanding amount of Zorlu Turkey into shares as converted by SECP. ZEPL in support thereof has provided the copy of SECP's approval letter dated January 04, 2012 along with copy of return of allotment of shares (Form-03) dated January 24, 2012.
- 3.9 In view of the above, the allowed amount of EPC phase I is € 6.742 million i.e. US \$ 8.764 million (Rs. 789.690 million).

4. **Transportation Cost:**

- 4.1 ZEPL was allowed € 0.842 million (US \$ 1.196 million) on account of transportation cost in the tariff determination. However at the time of COD adjustment, ZEPL was able to provide authentic supporting documents of expenditure of US \$ 0.507 million (Rs. 39.93 million). The Authority, therefore allowed the verified amount without exchange rate variation. For the balance amount and claimed exchange rate variation, the Authority gave the provision for one-time adjustment subject to submission of authentic documentary evidences to the satisfaction of the Authority.
- 4.2 ZEPL subsequent to its Review Motion submitted the documentary evidence of following expenditure vide letter dated June 09, 2015:

Contractor	Amount
	US \$ Million
Agility Logistics	0.405
Global Logistics	0.126
MR Logistics	0.024



Sub-Total	0.555
Earlier allowed	0.507
Total	1.061

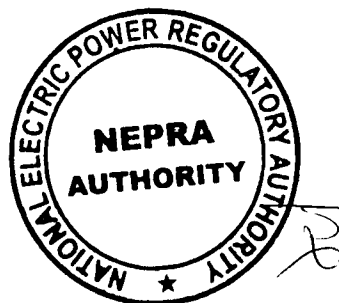
- 4.3 Based on the evaluation of the submitted documentary evidences, the Authority hereby allow US \$ 1.061 million with the exchange rate variation based on the date of share capital conversion by SECP i.e. January 24, 2015. In view of the above, the allowed transportation cost is US \$ 1.061 million (Rs. 95.621 million).

5. Civil Works:

- 5.1 ZEPL was earlier allowed upto US \$ 0.589 million on account of civil works in the tariff determination. ZEPL at the time of COD adjustments, claimed cost overruns of US \$ 0.811 million which were disallowed by the Authority. However, ZEPL at the time of COD adjustments was able to provide the documentary evidences of US \$ 0.486 million (Rs. 29.897 million), the same amount was allowed by the Authority at that time. The Authority did not allow the exchange rate variation for the payments made by Zorlu Turkey due to unavailability of documentary evidences. For the balance amount and claimed exchange rate variation, the Authority gave the provision for one-time adjustment subject to submission of authentic documentary evidences to the satisfaction of the Authority.
- 5.2 ZEPL subsequent to its Review Motion submitted the authentic documentary evidence of US \$ 0.031 million for civil work vide letter dated June 09, 2015.
- 5.3 Based on the evaluation of submitted documentary evidences, the Authority has allowed a cumulative US \$ 0.518 million (Rs. 46.529 million) with the exchange rate variation based on the date of share capital conversion by SECP i.e. January 24, 2012.

6. Electrical Works:

- 6.1 ZEPL was earlier allowed upto US \$ 0.202 million on account of electrical works in the tariff determination. ZEPL at the time of COD claimed cost overruns of US \$ 0.101 million which were disallowed by the Authority. ZEPL at the time of COD adjustments was able to provide the documentary evidences of US \$ 0.049 million (Rs. 2.984 million). The Authority, therefore allowed the verified amount without exchange rate variation. For the balance amount and claimed exchange rate variation, the Authority gave the provision for one-time



adjustment subject to submission of authentic documentary evidences to the satisfaction of the Authority.

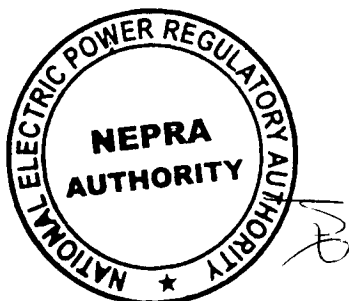
- 6.2 ZEPL subsequent to its Review Motion submitted the documentary evidence against the following expenditure vide letter dated June 09, 2015:

Contractor	Amount
	US \$ Million
BOR Energy	0.020
Net Link	0.015
DDA SPOL	0.030
PEMCON Pvt Ltd	0.056
Pak Elektron Limited	0.012
Sub-Total	0.133
Earlier allowed	0.049
Total	0.183

- 6.3 Based on the evaluation of submitted documentary evidences, Authority has allowed a cumulative US \$ 0.183 million (Rs. 15.784 million) on account of electrical works with the exchange rate variation based on the date of share capital conversion i.e. January 24, 2012 for the payments made by Zorlu turkey and actual exchange rates prevailing at the transaction date for the payments made by ZEPL.

7. **Equipment Supply Phase –II:**

- 7.1 ZEPL was earlier allowed upto € 46.080 million (US \$ 64.240 million) on account of equipment supply for phase-II. ZEPL at the time of COD adjustments claimed cost overruns of € 0.328 (US \$ 44.620 million) which were disallowed by the Authority.
- 7.2 Against the determined claim of € 46.080 (US \$ 59.220 million) ZEPL was allowed € 46.080 million (US \$ 58.841 million). The difference of US \$ 0.379 million was disallowed due to non-availability of documentary evidences w.r.t € to US \$ conversion.
- 7.3 ZEPL in its Review Motion has now submitted the relevant documents for the payments made to vendor along with the Bank Statements for verification of the actual amounts stated

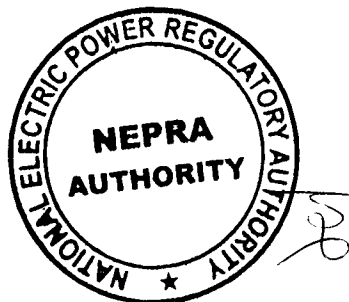


in the ZEPL's claim. The Authority being satisfied with the submitted documentary evidences has allowed upto € 46.080 million i.e. US \$ 59.220 million (Rs.5,549.716 million) determined earlier for the purpose.

8. Balance of Plant (BOP) Cost:

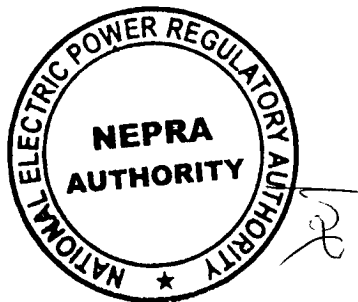
- 8.1 ZEPL was allowed US \$ 51.022 million on account of balance of plant cost in the tariff determination. At the time of tariff determination, a BOP contract, signed between Zorlu industrial Pakistan Limited (ZIPL) and Zorlu Enerji Pakistan Limited was submitted. ZEPL, however at the time of COD adjustment submitted a revised BOP contract with changes in the payment aspects for subcontractors. The contractor ZIPL accordingly had substantially subcontracted the work i.e. upto US \$ 48.987 million out of which ZEPL was able to provide the payment evidences for US \$ 45.093 million (Rs. 4226.631 million) which were paid by ZEPL itself and were accordingly allowed by the Authority at the time of COD adjustments. The Authority however did not allow the amount US \$ 1.642 million claimed for ZIPL contract at the time of COD adjustment (US \$ 0.392 million in addition to US \$ 1.642 million were paid after COD).
- 8.2 ZEPL being aggrieved with the disallowed cost of ZIPL submitted in its Review Motion of March 13, 2015;

Zorlu Industrial Pakistan (Private) Limited is the main contractor for the execution of all balance of plant works including engineering, civil, electrical, mechanical, commissioning, site management etc. . Zorlu Industrial Pakistan (Private) Limited through Balance of Plant Contract (a copy of which is already submitted to the Authority) took all responsibilities and risks involved in the construction stage. Zorlu Industrial Pakistan (Private) Limited had provided completion guarantee, guarantee for quality of works executed by its sub-contractors, and extended warranty for the works against latent defects including performance of the turbines etc. While executing its responsibilities Zorlu Industrial pakistan (Private) Limited has sub-contracted some of its works to qualified sub-contractors in portions, however, all coordination, management of subcontractors, ensuring their performance and quality, compliance with the construction schedule, and management of the all site activities along with aforementioned guaranties and warranties was still the responsibility of Zorlu Industrial Pakistan (Private) Limited.



On the other hand, Zorlu Endustriyel ve Enerji Tesisleri Insaat Ticaret A.S. is one of the subcontractors for Zorlu Industrial Pakistan for execution and management of engineering and commissioning services only. Their scope of service is only limited to the engineering and commissioning activities, which is in no way similar to the responsibilities of Zorlu Industrial Pakistan.

- 8.3 The matter was closely reviewed from both legal and financial aspects and there were no corroborative evidences that the funds transferred by ZEPL to its associated company (i.e. ZIPL) to be considered as payments for the purpose being claimed. In the light of the forgoing, US \$ 2.034 million (US \$ 1.642 million paid before COD and US \$ 0.392 million paid after COD) claimed against ZIPL contract has been disallowed by the Authority.
- 8.4 ZEPL subsequent to its Review Motion has submitted the details for the balance amount of US \$ 3.894 (US \$ 48.987 million- US \$ 45.093 million) vide letter dated June 09, 2015 which includes WHT receipts and bank statements/bank debit note for the payment made after COD. Based on the submitted documentary evidences Authority has allowed US \$ 48.987 million (Rs. 4,663.443 million) with the exchange rate variation prevailing at the date of payment.
9. Construction period:
- 9.1 The Authority in its COD decision allowed construction period of 14 months from May 29, 2012 to July 25, 2013 (i.e. from the date of financial close till commercial operations date) to ZEPL, for its wind farm complex of 56.4 MW.
- 9.2 ZEPL through its instant Review Motion sought the review of construction period on the grounds that the construction start date has been explicitly defined in the EPA and ZEPL had issued notice to proceed to the wind turbine manufacturer M/s. VESTAS RUZAR ENERJIS SISTEMLERI SAN.VE TIC. LTD. ST1 on January 03, 2012. ZEPL further iterated that, in order to timely complete the project and for an earliest supply, ZEPL had put all efforts by starting the construction as early as possible and completed the project 3 months before the required date (November 29, 2013). Therefore, the construction period should not be restricted from financial close (May 29, 2012) to commercial operations date (July 26, 2013).
- 9.3 The Authority considered that 'required commercial operations date' and 'construction start



date' have been defined in the Energy Purchase Agreement of ZEPL as follows:

"Required Commercial Operation Date: The date that is eighteen (18) months following the date on which Financial Closing occurs, -----."

"Construction Start Date: The date of issuance of the "notice to commence" by the Seller to the EPC Contractor and the release by the Seller to the EPC Contractor of funds equaling in aggregate at least seven percent (7%) of the EPC Cost."

- 9.4 The Authority has considered the issue in detail and observed that according to tariff determination of ZEPL dated July 19, 2011, the issue of construction period was addressed as follows:

"The petitioner has submitted that its EPC contractors have already been mobilized at site. ZEPL has already completed installation of 5 turbines in 2009 and its new turbines from Vestas will be delivered during this summer. In view of this the time required to complete its project should be comparatively less. As per the terms of ZEPL's proposed EPA with the power purchaser, a project construction period of 17 months after the financial closing date has been indicated. Its EPA at this stage is however not final and signed as yet. Nevertheless the Authority considers that the ZEPL should complete its project expeditiously but not exceeding 17 months starting from the date of its financial close. The Authority also considers that construction period for its Phase-I (6 MW) should be agreed judiciously and commensurate with its size, in the Energy Purchase Agreement to be signed between the CPPA and ZEPL." - Emphasis added

- 9.5 After deliberations on the matter and also considering the peculiar circumstances of the case, and keeping in view the fact that there was no agreement on construction period for Phase-I with power purchaser. The Authority has therefore allowed a maximum construction period of 17 months prior to COD (July 26, 2013) i.e. from February 26, 2012 to July 25, 2013) for the entire wind farm complex of ZEPL.

10. Insurance During Construction:

- 10.1 The Authority in its COD decision restricted the insurance during construction to the extent



of cost pertaining to the construction period allowed by the Authority. ZEPL sought review of the same on the grounds that insurance during construction should be allowed on prorata basis for phase-I and up to 1.35% of EPC costs for phase-II. This claim of the petitioner is not in accordance with the one- time adjustment allowed in the tariff adjustment which reads as under;

“----- ZEPL will be entitled for adjustment of insurance cost during construction period at the time of COD based on actual subject to maximum of 1.35% of the adjusted aggregated EPC cost i.e. both for EPC phase I and II on provision of authentic documentary evidence to the satisfaction of the Authority.”

10.2 Authority noticed that ZEPL did not agree any construction period for Phase-I with the power purchaser despite of the directions in the tariff determination. The Authority has to consider and allow insurance during construction cost on accumulated basis for the entire complex of 56.4 MW as per the construction period allowed. Therefore, the claim of ZEPL with regard to the allowance of insurance for phase I on pro-rata basis lacks merit and basis as it is not covered under the aforesaid construction period, therefore, not allowed.

10.3 Moreover on the matter of unpaid insurance cost the Authority earlier in its COD decision had decided;

“The Authority has decided to restrict insurance during construction to the extent of cost pertaining to the construction period allowed by the Authority. Further, according to the information provided by ZEPL, Rs. 11.65 million (US \$ 0.116 million) on account of insurance during construction are still unpaid. The Authority has decided to allow the same on submission of proof of payment by ZEPL.”

10.4 ZEPL has now submitted the payment evidences for the amount US \$ 0.116 million paid after COD. Out of this amount only US \$ 0.0813 million relates to the construction period allowed through this decision. Further, during the scrutiny of some documents it was noticed that insurance cost was allowed in COD adjustment decision inclusive of sales tax (which is adjustable tax in nature). This has been accordingly rectified through this decision. The total amount of insurance for the allowed construction period, exclusive of sales tax, works out US \$ 0.963 million (Rs. 91.447 million).





11. Financial Charges:

- 11.1 The Authority in its COD decision allowed financial charges to ZEPL as per the mechanism stipulated for the adjustment of financial charges in its determination dated July 19, 2011 i.e. up to 3% of debt, excluding the impact of interest during construction and financial charges.
- 11.2 ZEPL being aggrieved with the above mentioned decision submitted in its Review Motion that US \$ 0.743 million in addition to the allowed benchmark should be allowed to it in view of the fact that it had contributed a lot towards the development of indigenous resource of Pakistan i.e. wind power. ZEPL claimed that it was the pioneer in this technology and had to bear additional costs on this account.
- 11.3 The Authority has considered ZEPL's claim and cannot allow a cost on the basis submitted. The Authority thus being consistent with its earlier decision has decided to restrict the financial charges upto 3% of debt, excluding the impact of interest during construction and financial charges. Accordingly, the allowed financial charges are US \$ 2.622 million (Rs.245.880 million)

12. Interest during construction:

- 12.1 The Authority in its COD decision dated February 20, 2015 directed ZEPL to submit the details of interest income generated on loan amount placed in saving account. The certificates duly signed by Habib Bank Limited and Bank of New York Mellon certifying the amounts of interest income until Commercial Operations Date (e.g. 26 July 2013) along with bank statements were submitted by ZEPL via letter dated June 09, 2015. As certified by BNYM, there is no interest income from the Bank of New York Mellon account, whereas there is an interest income of US \$ 0.0925 million (Rs. 8.854 million) for the allowed construction period on account maintained with HBL. The same has been deducted from interest expense claimed for the allowed construction period. The Authority hereby decided to allow US \$ 4.844 million (Rs. 477.839 million) as interest cost during construction net of interest income.

13. Debt Service Reserve Account (DSRA) LC charges:

- 13.1 The Authority in its decision on motion for leave for review dated December 13, 2011 allowed ZEPL adjustment of the cost of letter of credit, for fulfilling lenders requirement of debt service reserve account, at actual subject to maximum of 2% per annum of the adjusted





amount of semi-annual debt service on producing verifiable documentary evidence at COD.

- 13.2 During the review and reconciliation of cost it was noticed that the actual cost of DSRA LC (US \$ 16.745 million) was higher than the 2% of the semi-annual debt service (US \$ 12.012 million) and DSRA LC component of Rs. 0.1053/kWh was allowed on the actual cost (US \$ 16.745 million) at the time of COD. This has been rectified through this decision. The Authority hereby allows DSRA LC cost of US \$ 12.012 million upto the maximum limit of 2% of semi-annual debt. Accordingly the revised DSRA LC component of Rs 0.075/kWh has been allowed by the Authority which shall be applicable retrospectively.

14. Below is the table of total cost allowed to ZEPL;

PROJECT COSTS		
Cost Head	US\$	Rs.
Energy Equipment	8,764,600	789,690,460
Transportation Costs	1,061,284	95,621,664
Civil Works	518,942	46,529,507
Electrical Works	183,648	15,784,402
Project Management & Supervision	72,270	6,511,530
Engineering & Design	15,512	1,293,602
Phase-I EPC Costs	10,616,257	955,431,166
Energy Equipment	59,220,060	5,549,716,476
Balance of Plant	48,987,912	4,663,443,352
Sindh Infrastructure Development Surcharge	520,771	49,054,000
Phase-II EPC Costs	108,728,743	10,262,213,828
Project Development Costs	4,088,000	356,971,762
Insurance During Construction	963,357	91,447,234
Other Project Costs	500,000	42,532,434
Financial Charges	2,622,823	245,880,525
Interest During Construction	4,844,132	477,839,916
Non-EPC Costs	13,018,313	1,214,671,871
Total Project Cost	132,363,312	12,432,316,865

15. ORDER

Zorlu Enerji Pakistan Limited (ZEPL) is allowed to charge the following specified/approved tariff for delivery of electricity to power purchaser of NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:





Tariff Components	Years 1-2	Years 3-10	Years 11-20	Indexation
	Rs/kWh	Rs/kWh	Rs/kWh	
Fixed O&M				
- local	0.5149	0.8758	0.8758	CPI – General
- foreign	0.2562	0.4449	0.4449	PKR/US\$, US CPI
Variable O&M	0.0054	0.0054	0.0054	PKR/US\$, US CPI
Insurance	0.3571	0.3571	0.3571	PKR/US\$
Return on equity	4.2751	4.2751	4.2751	PKR/US\$
Return on equity during construction	1.1042	1.1042	1.1042	PKR/US\$
Debt service	As per Annex-II			PKR/US\$ (for foreign loan), LIBOR/KIBOR
Cost of letter of credit in lieu of debt service reserve account	0.0755	0.0755	-	-

- i) The reference tariff has been calculated on the basis of net annual benchmark energy production of 159.010 GWh at annual net plant capacity factor of 32.18% for its total complex installed capacity of 56.4 MW
- ii) The above charges will be limited to the extent of net annual energy production of 159.010 GWh. Any excess energy supplied to the Power Purchaser in a year, over the benchmark energy of 159.010 GWh will be charged at 10% of the prevalent approved tariff.
- iii) In the above tariff no adjustment for Carbon Emission Reduction (CER) receipts, has been accounted for. However, upon actual realization of CERs, the same shall be distributed between the power purchaser and ZEPL in accordance with the approved mechanism given in the GoP Policy for Development of Renewable Energy for Power Generation, 2006.
- iv) The reference PKR/Dollar rate has been assumed at 100.70.



- v) The above tariff is applicable for a period of twenty (20) years commencing from the Commercial Operation Date (COD).
- vi) ZEPL is entitled to payment of Wind Speed Risk by the Power Purchaser in accordance with the GoP Policy for Development of Renewable Energy for Power Generation 2006 and the mechanism approved by the Alternate Energy Development Board (AEDB).
- vii) The component wise tariff is indicated at Annex-I.
- viii) Debt Servicing Schedule is attached as Annex-II

I. Pass-Through Items

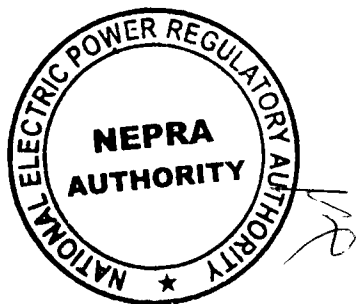
No provision for income tax has been accounted for in the tariff. If ZEPL is obligated to pay any tax on its income from generation of electricity from wind,, the exact amount paid by ZEPL may be reimbursed by Power Purchaser/CPPA-G to ZEPL on production of original receipts. This payment may be considered as pass-through payment (as Rs./kWh) spread over a 12 months period in addition to fixed charges proposed in the Reference Tariff. Furthermore, in such a scenario, ZEPL may also submit to Power Purchaser/CPPA-G details of any tax shield savings and Power Purchaser/CPPA-G will deduct the amount of these savings from its payment to ZEPL on account of taxation.

Withholding tax on dividend is also a pass through item just like other taxes as indicated in the government guidelines for Power Purchaser/CPPA-G (NTDC) shall make payment on account of withholding tax at the time of actual payment of dividend subject to, production of original receipts, upto maximum of 7.5% of 17% return on equity according to the following formula:

$$\text{Withholding Tax Payable} = [(17\% * (E_{(Ref)} - E_{(Red)})) \times 7.5\%]$$

Where:

$E_{(Ref)}$ = The reference amount of equity, including reference amount of return on equity during construction, for the relevant year



$$E_{(Red)} = \text{Equity Redeemed, if any}$$

In case ZEPL does not declare a dividend in a particular year or only declares a partial dividend, then the difference in the withholding tax amount (between what is paid in that year and the total entitlement as per the Net Return on Equity) would be carried forward and accumulated so that ZEPL is able to recover the same as a pass through from the Power Purchaser/CPPA-G in future on the basis of the total dividend payout.

II. Indexations:

The following indexation shall be applicable to the reference tariff;

i. Indexation applicable to O&M

The local part of O&M cost will be adjusted on account of inflation (CPI-General) and O&M foreign will be adjusted on account of variation in Rupee/Dollar exchange rate and US CPI. Quarterly Adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1st July, 1st October, 1st January & 1st April respectively on the basis of latest available information with respect to CPI - General (notified by the Pakistan Bureau of Statistics), US CPI (notified by US bureau of labor statistics) and revised TT & OD Selling rate of US Dollar as notified by the National Bank of Pakistan. The mode of indexation will be as follows:

$$F O\&M_{(LREV)} = FO\&M_{(LREF)} * CPI (G)_{(REV)} / 179.94$$

$$F O\&M_{(FREV)} = FO\&M_{(FREF)} * US CPI_{(REV)} / 233.504 * ER_{(REV)} / 100.70$$

$$V O\&M_{(FREV)} = O\&M_{(FREF)} * USCPI_{(REV)} / 233.504 * ER_{(REV)} / 100.70$$

Where:

$$F O\&M_{(LREV)} = \text{The revised applicable Fixed O\&M local component of the Fixed Charges indexed with CPI - General}$$

$$FO\&M_{(FREV)} = \text{The revised applicable Fixed O\&M foreign}$$





		component of the Fixed Charges indexed with US CPI and currency fluctuation
V O&M _(FREV)	=	The revised applicable Variable O&M foreign component of the Variable Charges indexed with US CPI and currency fluctuation
FO&M _(FREF)	=	The reference fixed O&M foreign component of the Fixed Charges for the relevant period.
FO&M _(LREF)	=	The reference fixed O&M local component of the Fixed Charges for the relevant period
O&M _(FREF)	=	The reference Variable O&M foreign component of the Variable Charges for the relevant period
CPI –(G) _(REV)	=	The Revised Consumer Price Index (General)
CPI – (G) _(REF)	=	179.94, Reference Consumer Price Index (General) of June 2013 as notified by the Federal Bureau of Statistics
US CPI _(REV)	=	The Revised US Consumer Price Index (All Urban Consumers) notified by US Bureau of Labor Statistics.
US CPI _(REF)	=	233.504, Reference US CPI notified by the US Bureau of Labor Statistics (All Urban Consumers) for the month of June 2013
ER _(REV)	=	The Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan



ii. Insurance

In case of insurance denominated in US \$, insurance cost component of tariff will be adjusted on account of US\$/PKR exchange rate variation on annual basis. Further, insurance component of the reference tariff will be adjusted as per actually incurred prudent costs, subject to maximum of 1% of the total approved aggregate EPC cost of Phase-I and Phase-II, on annual basis upon production of authentic documentary evidence by ZEPL.

iii. Return on Equity and Return on Equity During Construction

The Return on Equity (ROE) and Return on Equity during Construction (ROEDC) components of tariff will be adjusted on the basis of revised TT & OD selling rate of US Dollar notified by the National Bank of Pakistan according to the following formula;

$$ROE_{(REV)} = ROE_{(REF)} \times ER_{(REV)} / ER_{(REF)}$$

$$ROEDC_{(REV)} = ROEDC_{(REF)} \times ER_{(REV)} / ER_{(REF)}$$

Where:

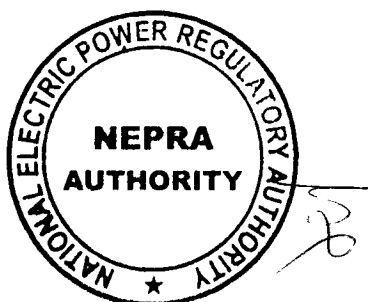
ROE_(REV) = The revised ROE component of the tariff expressed in Rs/kWh

ROE_(REF) = The reference ROE component of the tariff expressed in Rs/kWh

ROEDC_(REV) = The revised ROEDC component of the tariff expressed in Rs/kWh

ROEDC_(REF) = The reference ROEDC component of the tariff expressed in Rs/kWh

ER_(REV) = The revised US\$/PKR exchange rate as notified by the National Bank of Pakistan





$ER_{(REF)}$ = The reference exchange rate of PKR 100.70=1 US\$

iv. Adjustment for LIBOR/KIBOR variation

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variation in the interest rate as a result of 6-monthly variation in LIBOR and KIBOR while spread (4.50%) on LIBOR and (3.00%) on KIBOR remaining the same according to the following formula:

For foreign financing

$$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 0.3965\%) / 2$$

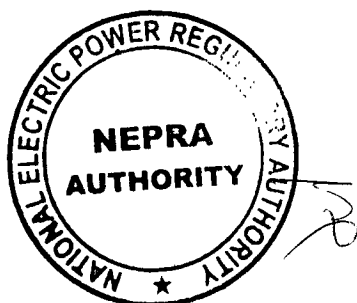
For local financing

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 9.07\%) / 2$$

Where:

ΔI = The variation in interest charges applicable corresponding to variation in 6-month LIBOR & KIBOR. ΔI can be positive or negative depending upon whether $LIBOR_{(REV)} / KIBOR_{(REV)} > \text{or} < 0.3965\% / 9.07\%$ respectively. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each six-monthly adjustment on the basis of applicable six-monthly LIBOR/KIBOR.

ii) $P_{(REV)}$ = Is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex-II) on a bi-annual basis at the relevant six-monthly calculations date. Period 1 shall commence on the date on which the 1st installment is due after



availing the grace period.

Note:

Foreign debt and its interest shall be adjusted on account of actual variation in PKR/US\$ over the applicable reference PKR/US\$ exchange rate on bi-annual basis.

v. Cost of letter of credit in lieu of debt service reserve account

This component of reference tariff will be adjusted as per actual, subject to maximum of 2% per annum of the adjusted amount of semi-annual debt service, on annual basis, upon production of authentic documentary evidence by ZEPL.

III. Adjustments as detailed above will be approved and announced by the Authority within fifteen working days after receipt of ZEPL's request for adjustment in tariff in accordance with the requisite indexation mechanism stipulated herein.

IV. **Terms and Conditions of Tariff:**

Design & Manufacturing Standards:

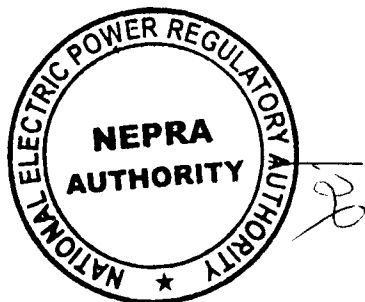
Wind Turbine Generation system shall be designed, manufactured and tested in accordance with the latest IEC standards or other equivalent standards. All plant and equipment shall be new.

Wind Power Plant's Performance Data:

ZEPL shall install monitoring masts with properly calibrated automatic computerized wind speed recording meters at the same height as that of the Wind Turbine Generators and a compatible Communication/SCADA system both at the Wind Farm and Power Purchaser's control room for transmission of wind speed and power output data to the Power Purchaser's control room for record of data.

Delivery Point:

ZEPL shall deliver power at 132 kV at the door step of its wind farm. Up-gradation of generation voltage up to 132 kV will be the responsibility of ZEPL.



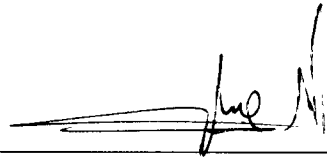


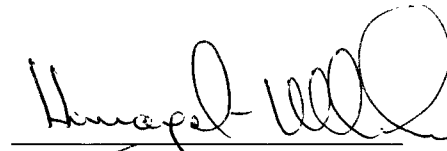
Emissions Trading/ Carbon Credits:

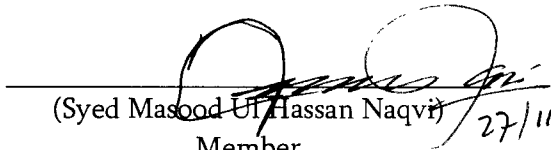
ZEPL shall process and obtain emissions/carbon credits expeditiously and credit the proceeds to the Power Purchaser/CPPA-G as per the policy issued by the Federal Government.

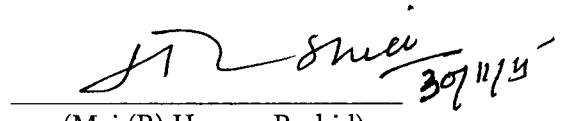
- V. The Order along with tariff table and debt servicing schedule as attached thereto are to be intimated to the Federal Government for notification in the official gazette in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.


AUTHORITY


(Khawaja Muhammad Naeem)
Member
27/11/15

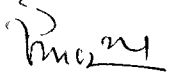

(Himayat Ullah Khan)
Member
30/11/15


(Syed Masood Ul Hassan Naqvi)
Member
27/11/15


(Maj (R) Haroon Rashid)
Vice Chairman
30/11/15


(Brig. (R) Tariq Saddozai)
Chairman
27/11/15




01/12/15

**ZORLU ENERJI PAKISTAN LTD.
REFERENCE TARIFF**

	Variable O&M Foreign	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity During Construction	Return on Equity	Withholding Tax@7.5%	Loan Repayment	Interest Charges	DSRA LC Cost	Tariff
Year	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh	Rs./kwh
1	0.0054	0.5149	0.2562	0.3571	1.1042	4.2751	0.4034	4.2898	3.2650	0.0755	14.5467
2	0.0054	0.5149	0.2562	0.3571	1.1042	4.2751	0.4034	4.5433	3.0253	0.0755	14.5605
3	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	4.8153	2.7688	0.0755	15.1256
4	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	5.1072	2.4941	0.0755	15.1428
5	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	5.4205	2.1992	0.0755	15.1611
6	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	5.7618	1.8824	0.0755	15.1857
7	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	6.1234	1.5412	0.0755	15.2061
8	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	6.5274	1.1734	0.0755	15.2423
9	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	6.9568	0.7756	0.0755	15.2739
10	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034	7.4197	0.3451	0.0755	15.3063
11	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
12	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
13	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
14	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
15	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
16	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
17	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
18	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
19	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
20	0.0054	0.8758	0.4449	0.3571	1.1042	4.2751	0.4034				7.4659
Levelized Tariff	0.0054	0.8022	0.4064	0.3571	1.1042	4.2751	0.4034	3.9205	1.5834	0.0545	12.9123

Benchmark Energy 159,010,300.00

Benchmark Energy 159.010GWh

US\$/Rs. 100.70

Discount Rate 10%

Period 20.00

The above rate is limited to annual benchmark energy production of 159.010GWh. Any generated energy beyond 159.010 Gwh in a year will be charged at 10% of the relevant latest Tariff for that year.

Exchange Rate Used 1 US \$ = Rupees 100.7, Levelized Tariff discounted at 10% per annum works out to be US cents 12.8225/kWh



ZORLU ENERJI PAKISTAN LTD
DEBT SERVICING SCHEDULE

Period	FOREIGN LOAN				LOCAL LOAN				Annual Principal Repayment Rs/kWh	Annual Interest Rs/kWh	Annual Debt Service Rs/kWh
	Outstanding Balance	Principal Repayment (Rs.)	Interest Charges (Rs.)	Total Repayment (Rs.)	Outstanding Balance	Principal Repayment (Rs.)	Interest Charges (Rs.)	Total Repayment (Rs.)			
1	7,875,234,316	308,709,185	192,805,424	501,514,609	1,182,837,263	27,389,506	71,384,229	98,773,735			
2	7,566,525,131	316,584,420	185,247,452	501,831,871	1,155,447,757	29,436,872	69,731,272	99,168,144			
YEAR 1	7,875,234,316	625,293,605	378,052,876	1,003,346,480	1,182,837,263	56,826,378	141,115,501	197,941,879	4.2898	3.2650	7.5548
3	7,249,940,712	324,459,654	177,496,673	501,956,327	1,126,010,885	31,637,278	67,954,757	99,592,035			
4	6,925,481,058	332,334,888	169,553,090	501,887,978	1,094,373,607	34,002,165	66,045,447	100,047,612			
YEAR 2	7,249,940,712	656,794,542	347,049,763	1,003,844,305	1,126,010,885	65,639,443	134,000,204	199,639,647	4.5433	3.0253	7.5686
5	6,593,146,170	340,997,646	161,416,701	502,414,347	1,060,371,442	36,543,827	63,993,417	100,537,243			
6	6,252,148,524	348,872,880	153,068,226	501,941,106	1,023,827,615	39,275,477	61,787,997	101,063,474			
YEAR 3	6,593,146,170	689,870,526	314,484,927	1,004,355,453	1,060,371,442	75,819,304	125,781,413	201,600,717	4.8153	2.7688	7.5841
7	5,903,275,644	357,535,638	144,526,946	502,062,584	984,552,138	42,211,320	59,417,722	101,629,041			
8	5,545,740,006	366,985,919	135,774,580	502,759,499	942,340,819	45,366,615	56,870,268	102,236,884			
YEAR 4	5,903,275,644	724,521,557	280,300,526	1,004,822,083	984,552,138	87,577,935	116,287,990	203,865,925	5.1072	2.4941	7.6013
9	5,178,754,087	375,648,677	126,788,847	502,437,524	896,974,203	48,757,770	54,132,393	102,890,163			
10	4,803,105,410	385,098,958	117,592,028	502,690,986	848,216,433	52,402,414	51,189,862	103,592,275			
YEAR 5	5,178,754,087	760,747,635	244,380,875	1,005,128,510	896,974,203	101,160,184	105,322,255	206,482,439	5.4205	2.1992	7.6197
11	4,418,006,452	394,549,239	108,163,843	502,713,082	795,814,019	56,319,494	48,027,376	104,346,870			
12	4,023,457,212	404,787,044	98,504,291	503,291,335	739,494,526	60,529,376	44,628,495	105,157,871			
YEAR 6	4,418,006,452	799,336,283	206,668,134	1,006,004,417	795,814,019	116,848,870	92,655,871	209,504,740	5.7618	1.8824	7.6442
13	3,618,670,168	414,237,325	88,594,092	502,831,417	678,965,150	65,053,946	40,975,547	106,029,493			
14	3,204,432,843	424,475,130	78,452,527	502,927,657	613,911,203	69,916,729	37,049,541	106,966,270			
YEAR 7	3,618,670,168	838,712,455	167,046,619	1,005,759,074	678,965,150	134,970,676	78,025,088	212,995,763	6.1234	1.5412	7.6646
15	2,779,957,714	435,500,458	68,060,315	503,560,772	543,994,474	75,143,005	32,830,067	107,973,071			
16	2,344,457,256	446,525,786	57,398,175	503,923,961	468,851,469	80,759,944	28,295,186	109,055,130			
YEAR 8	2,779,957,714	882,026,243	125,458,489	1,007,484,733	543,994,474	155,902,949	61,125,253	217,028,202	6.5274	1.1734	7.7008
17	1,897,931,470	457,551,114	46,466,107	504,017,221	388,091,525	86,796,751	23,421,324	110,218,074			
18	1,440,380,356	468,576,442	35,264,112	503,840,554	301,294,774	93,284,808	18,183,140	111,467,947			
YEAR 9	1,897,931,470	926,127,556	81,730,219	1,007,857,775	388,091,525	180,081,558	41,604,463	221,686,021	6.9568	0.7756	7.7325
19	971,803,915	480,389,293	23,792,189	504,181,483	208,009,967	100,257,846	12,553,401	112,811,248			
20	491,414,621	491,414,621	12,031,058	503,445,680	107,752,120	107,752,121	6,502,840	114,254,961			
YEAR 10	971,803,915	971,803,915	35,823,248	1,007,627,162	208,009,967	208,009,967	19,056,242	227,066,209	7.4197	0.3451	7.7649

