



# National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/TRF-189/FWEL-II-2011/8632-8634  
June 9, 2016

Subject: **Decision of the Authority in the matter of Tariff Adjustments at Commercial Operations Date (COD) of Foundation Wind Energy-II (Pvt.) Ltd. (Case No. NEPRA/TRF-189/FWEL-II-2011)**

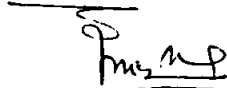
Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I, II-A & II-B (23 pages) in Case No. NEPRA/TRF-189/FWEL-III-2011.

2. 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, 1997.

3. Order of the Authority along with Tariff Table (Annexure-I) & Debt Servicing Schedules (Annex-II-A & Annex-II-B) needs to be notified in the official Gazette.

Enclosure: As above

  
( Syed Safeer Hussain ) 09.06.16

Secretary  
Ministry of Water & Power  
'A' Block, Pak Secretariat  
Islamabad

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 TARIFF ADJUSTMENTS AT  
COMMERCIAL OPERATIONS DATE (COD) OF FOUNDATION WIND ENERGY-II (PVT)  
LTD CASE NO. NEPRA/TRF-189/FWEL-II-2011**

**1. Introduction**

- 1.1 Pursuant to the tariff determination dated March 16, 2012 (hereinafter referred, to as the "Tariff Determination") of National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") in the matter of Foundation Wind Energy-II (Private) Limited (hereinafter referred to as "FWEL-II" or the "Petitioner"), the reference tariff of FWEL-II had to be adjusted at the Commercial Operations Date (hereinafter referred to as "COD"). FWEL-II after having successfully commenced commercial operations with effect from December 10, 2014, filed a request vide letter No. PD-4922/Green dated July 13, 2015 for adjustment in its reference tariff (hereinafter referred to as the "Request for COD Adjustment").
- 1.2 In support of its Request for COD Adjustment, various documents and information were submitted by the Petitioner for the consideration of the Authority which included copies of;

- Engineering, procurement and construction contracts.
- EPC invoices.
- Financing Agreements with the Banks / Lenders.
- Alternative Energy Development Board's letter no. B/3/1/GPPL/07 dated April 03, 2013 regarding financial close.
- National Transmission and Dispatch Company Limited's letter no. GM/CPPA/CE-II/MT-IV/FWEL-II/Site-02 dated December 09, 2014 of regarding notification of COD of FWEL-II.
- Relevant bank statements.
- Payment challans of duties, pay orders through which these duties were paid and goods declarations at the time of import.
- Equity/debt draw-downs schedules along with the bank statements.
- Insurance policies for construction and operations period along with their premium payment evidences.
- Other relevant source documents, information & related schedules.



1.3 After the review of the source documents and information submitted by FWEL-II, the Authority has decided to allow the following adjustments in the reference tariff of FWEL-II in view of the Request for COD Adjustment.

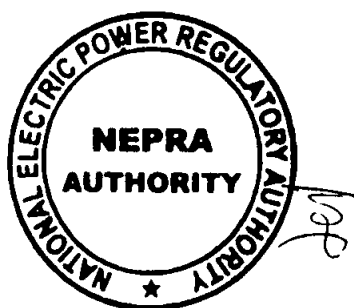
## 2. Engineering, Procurement and Construction Cost (EPC Cost)

2.1 The Authority had allowed EPC cost of US \$ 110.287 million (Rs. 9,506.739 million) in the Tariff Determination. As per the Tariff Determination, the EPC contract cost has to be adjusted at COD on account of variation in US\$/PKR and Euro/PKR parity, on production of authentic documentary evidences to the satisfaction of the Authority.

2.2 FWEL-II has requested the Authority to allow the EPC cost of US \$ 108.602 million (Rs. 11,045.853 million) along with tariff adjustments for exchange rate at the COD stage. In support of its claim FWEL-II has submitted copies of relevant documentary evidences including the contracts and particulars of payments made so far. The amounts claimed are as per the contracted amounts as allowed in the Tariff Determination. The brief summary of the allowed EPC cost in comparison with the claimed cost is reflected below;

Description	As per Determination		Claimed by FWEL-II	
	US \$ in Mln	PKR in Mln	US \$ in Mln	PKR in Mln
<b>EPC Contracts</b>				
<b>Off Shore Cost:</b>				
Euro Component	48.927 <small>(Euro 35.454 million converted into US \$ at exchange rate of 1.38)</small>	4,217.507	47.242	4,923.792
US \$ component	35.368	3,048.721	35.368	3,573.645
<b>Onshore Cost:</b>				
US \$ component	25.992	2,240.510	25.992	2,548.415
<b>Total EPC cost</b>	<b>110.287</b>	<b>9,506.739</b>	<b>108.602</b>	<b>11,045.853</b>

2.3 Based on the documentary evidences provided and verified, the Authority has decided to allow US \$ 82.673 million (Rs. 8,514.309 million) & US \$ 25.989 million



(Rs. 2,552.640 million) as EPC offshore and onshore cost respectively.

3. **Letter of Credit Charges**

- 3.1 The Authority in the Tariff Determination had allowed US \$ 0.736 million (Rs. 63.443 million) for the letter of credit charges. FWEL-II in its COD adjustment request has submitted that FWEL-II did not open LC, as foreign portion of the debt was procured from Islamic development bank (IDB) & Asian Development Bank (ADB) which being development financial institutions do not issue letters of credit (LCs) like commercial banks. Therefore FWEL-II has not claimed any expenditure on this account and accordingly no documents were submitted for approval or consideration by the Authority. In view of the foregoing the Authority has excluded the cost earlier allowed in the Tariff Determination for this purpose.

4. **Duties and Taxes**

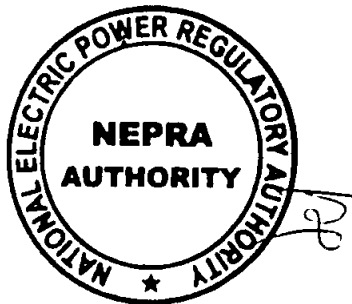
- 4.1 The Authority had allowed US \$ 0.716 million (Rs. 61.719 million) as duties and taxes in the Tariff Determination, adjustable in accordance with the mechanism as referred hereunder;

*"Adjustment of duties and taxes on actual at COD stage, will be allowed for only those duties and taxes which are imposed on the petitioner. Adjustment of taxes/duties payable on fee/charges, etc of various third parties, not directly imposed on the petitioner will not be allowed."*

- 4.2 The mechanism stipulated in order also referred;

*"Duties and /or taxes, not being of refundable nature imposed on the petitioner upto the commencement of its commercial operations will be subject to adjustment at actual on COD, as against US\$ 0.716 million allowed now, upon production of verifiable documentary evidence to the satisfaction of the Authority".*

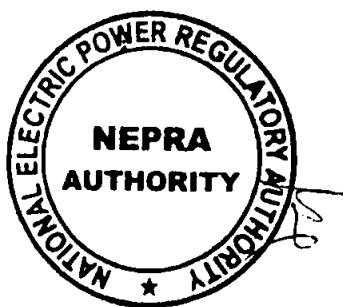
- 4.3 FWEL-II has claimed duties and taxes of Rs. 109.433 million (US \$ 1.109 million) at the COD stage and has provided following break-up of its claim:



S.No	Description	Rs. in Million
i.	Import stage surcharges / SIDS	77.114
ii.	Federal Insurance Fee(FIF)	1.284
iii.	Federal Excise Duty (FED)	30.650
iv.	Professional tax on paid up capital	0.385
<b>Total</b>		<b>109.433</b>

However, during the process of verification FWEL-II reduced and revised the claim of Federal Excise Duty (hereinafter referred to as "FED"), as Rs. 0.346 million with the result that total claim of duties and taxes became Rs. 79.129 million. In support of its claim, FWEL-II submitted copies of goods declarations, payment challans of duties & SIDS invoices and payment evidences for remittances from banks.

- 4.4 FWEL-II has claimed Rs. 0.346 million as Federal Excise Duty (FED) under the head of Duties/Taxes. FED was charged to the FWEL-II on various banking services. During the review FED adjustment status was sought from FWEL-II. FWEL-II submitted an opinion of their tax advisor "KPMG Taseer Hadi & Co., Chartered Accountants" which in their letter No. ITL-449-2016 dated March 9, 2016, it has mentioned that Under section 2 (14) (c) read with section 7 of the Sales Tax Act, a registered person can claim input tax credit against his output tax liability in case of a valid sales tax invoice. The Authority also deliberated and observed that FED is adjustable against the Sales Tax and the Petitioner can claim it as admissible input tax credit. Thus cannot be included along with the duties and taxes which are neither adjustable nor refundable.
- 4.5 FWEL-II has also claimed professional tax of Rs. 0.385 million pertaining to the FY 2004-05 to 2014-15 paid in favor of Excise & Taxation officer. The Authority decided to allow the professional tax as applicable and paid consistent to the construction period allowed i.e. from April 03, 2013 to October 03, 2014.
- 4.6 FWEL-II has also claimed Rs. 1.284 million Federal Insurance Fee (FIF) as a part of duties and taxes. The Authority has decided to allow Federal Insurance Fee (FIF) as a part of insurance during construction consistent with the earlier decisions.



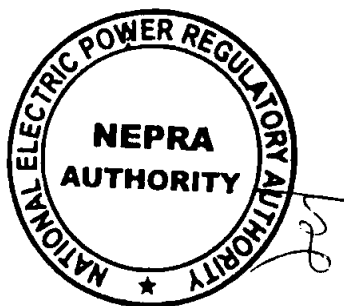
- 4.7 The Authority has accordingly decided to allow the verified amount of Rs. 77.098 million (US \$ 0.738 million) as import stage surcharge or SIDS & Rs. 0.175 million (US \$ 0.002 million) as professional tax. The aggregate duties and taxes allowed by the Authority to FWEL-II accordingly cumulate to Rs. 77.273 million (US \$ 0.740 million).

5. Interest During Construction

- 5.1 FWEL-II was allowed interest during construction (hereinafter referred to as "IDC") of US \$ 5.287 million (Rs. 455.739 million) in the tariff determination. The adjustment mechanism given in the Tariff Determination is given below;

*"The Interest during construction will be adjusted at COD on the basis of actual debt draw downs (within the overall debt allowed by the Authority at COD), actual PKR/US\$ exchange rate variation for foreign loan denominated in US\$ and actual interest rates not exceeding the limit of 6 months KIBOR plus 2.95% for local financing and 6 months LIBOR per annum plus 4.50% for foreign financing, during the project construction period allowed by the Authority. Further the benefit of savings in spread on local financing of 0.20% per annum allowed, will be passed on to the petitioner."*

- 5.2 Further, the Authority in the Tariff Determination has allowed tariff adjustments at the COD for maximum project construction period of 18 months starting from construction start date stipulated in the EPA.
- 5.3 FWEL-II has requested the Authority to allow IDC of US \$ 7.970 million (Rs. 809.428 million) for the project construction period i.e from construction start date till actual COD (19 months & 24 days). FWEL-II had entered into a Musharaka, financed equally by National Bank of Pakistan, Allied Bank Limited and Meezan Bank Ltd for cumulative amount of Rs. 3,000 million. The interest has been computed on the basis of 6 months KIBOR plus 2.95% for local financing.
- 5.4 For foreign financing, as per Schedule I of the Common Terms Agreement, FWEL-II had entered into Ijarah (a Shariah-compliant financing structure) with IDB for an amount of



USD 66.36 million. This cumulative amount has been equally divided among Tranche A and Tranche B as per the financial structure reflected below:

Description	Terms with IDB	ADB Guarantee Fee
Trench A	6 months LIBOR + 4.60% markup	-
Trench B	6 months LIBOR + 0.35% markup	4.25%

FWEL-II has submitted copies of relevant documents including term agreements with the lenders, interest invoices, bank statements, bank advices, etc.

- 5.5 The Authority has observed that energy purchase agreement (hereinafter referred to as "EPA") of FWEL-II has defined construction start date as;

*"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".*

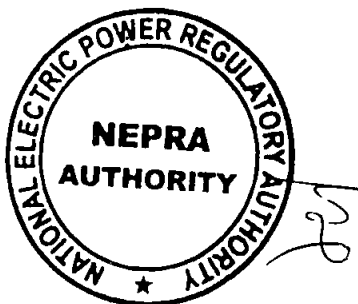
Accordingly construction start date of FWEL-II works out to be April 01, 2013.

- 5.6 The Authority also considered that EPA has defined required commercial operations date (hereinafter referred to as "RCOD") of FWEL-II as;

*"The date that is eighteen (18) months following the date on which financial closing occurs, as such date may be extended pursuant to section 6.5, section 8.1(b), section 8.9 or by a reason of a force majeure event,...."*

In view of the above, the Authority has noted that with financial close of FWEL-II achieved on April 03, 2013, RCOD works out to October 03, 2014. The Authority therefore has decided to allow FWEL-II the construction period from April 03, 2013 to October 03, 2014 (18 months) and has considered the IDC for the same period.

- 5.7 FWEL-II has earned mark-up income after tax, amounting to US \$ 0.318 million (Rs. 33.846 million), which is also attributable to the construction period allowed by



the Authority. For consistent treatment, the Authority has vetted off the IDC with the referred interest income.

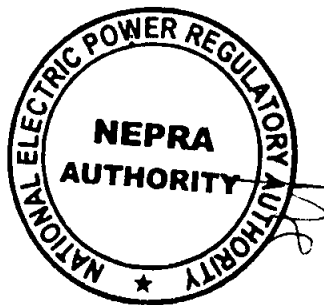
- 5.8 Furthermore, the benefit of savings in spread on local financing of 0.20% per annum has also been allowed by the Authority as per mechanism provided in the Tariff Determination.
- 5.9 In the light of above decisions in the preceding paragraphs, and prorating the amount of net IDC US \$ 6.951 million (Rs. 702.119 million) upto to the debt of US \$ 88.919 million (Rs. 9,011.990 million) allowed by the Authority at COD, the amount of IDC at the COD stage, works out to be US \$ 6.849 million (Rs. 691.816 million), which is hereby allowed by the Authority.

**6. Financial Charges**

- 6.1 The Authority had allowed US \$ 2.632 million (Rs. 226.878 million) as financial charges in the Tariff Determination, which was to be adjusted at COD upto the limit of 3% of total debt allowed (excluding the impact of IDC and financial charges).
- 6.2 FWEL-II at COD stage has claimed US \$ 2.845 million (Rs. 271.529 million) as financial charges and provided financing agreements along with invoices and payment evidences. The Authority has decided to allow financial charges of US \$ 2.466 million (Rs. 250.016 million) to FWEL-II upto the limit of 3% of total debt allowed (excluding the impact of IDC and financial charges) in the Tariff Determination.

**7. Pre-COD Insurance Cost**

- 7.1 The Authority had allowed US \$ 1.499 (Rs. 129.213 million) on account of pre-COD insurance cost in its Tariff Determination. The Tariff Determination allowed adjustment of this cost at COD, on the basis of actual amount not exceeding 1.35% of EPC cost.





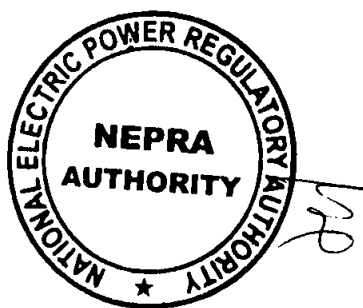
- 7.2 FWEL-II has claimed actual paid insurance premium of US \$ 1.290 million (Rs. 128.026 million) as pre-COD insurance and has submitted relevant documents and related evidences i.e. insurance policies, premium payment receipts, bank statement etc, in support thereof.
- 7.3 The Authority has decided to allow insurance cost during construction consistent with the construction period allowed by the Authority i.e. from April 03, 2013 to October 03, 2014. Further, federal insurance fee of Rs. 1.284 million, as detailed in paragraph 4.5, after adjustment upto RCOD i.e. Rs. 1.048 million (US \$ 0.010 million) is classified as insurance during construction. Based on the documentary evidence and in line with decisions enumerated above, the Authority has allowed insurance during construction of Rs. 105.872 million (US \$ 1.029 million) is allowed to FWEL-II.

**8. Non-EPC and Project Development Costs**

- 8.1 The Authority in the Tariff Determination had allowed cost of US \$ 1 million (Rs. 86.200 million) and US \$ 2.750 million (Rs. 237.050 million) on account of non-EPC and project development costs. Against the determined costs, FWEL-II claims an aggregate amount of US \$ 4.734 million (Rs. 432.170 million) on account of non-EPC and project development cost at the COD adjustment stage.
- 8.2 The Authority after due consideration has decided to allow the claims of FWEL-II consistent to costs allowed in the Tariff Determination, and also in line with the treatment allowed to other IPPs. Further, the Authority has also decided to allow actual exchange rate variation to FWEL-II, for costs incurred in foreign currency. Accordingly the Authority has allowed a cumulative amount of US \$ 3.750 million (Rs. 324.725 million) on account of non-EPC & project development costs.

**9. Summary of Allowed Project Cost**

- 9.1 The Authority had originally determined project cost of US \$ 124.907 million (Rs. 10,766.983 million). FWEL-II has claimed project cost of US \$ 126.552 million (Rs. 12,796.441 million) at the COD stage. Based on decisions in the preceding paragraphs, the overall project cost allowed at this stage to FWEL-II, works out to



US \$ 123.499 million (Rs. 12,516.653 million). The summary of the approved costs is given below;

Description	Approved	
	(US \$ in Million)	(PKR in Million)
EPC Cost	108.663	11,066.949
Duties and Taxes	0.740	77.273
Non-EPC Cost	0.820	70.696
Project Development Cost	2.929	254.029
Financial Charges	2.466	250.016
Pre-COD Insurance	1.029	105.872
Interest During Construction	6.849	691.816
<b>Total</b>	<b>123.499</b>	<b>12,516.653</b>

- 9.2 The Authority has allowed the debt to equity ratio of 75:25 in the tariff determination. However at the time of COD, it has been observed that the actual debt equity ratio is 72:28. Accordingly the Authority has decided to adjust the tariff on the basis of actual debt to equity composition at the time of COD.

#### 10. Net Annual Benchmark Energy

- 10.1 FWEL-II has requested for correction of a mathematical/summation error in the benchmark energy production table. According to FWEL-II, the total of monthly benchmark energy table works out to be 143.6 GWh instead of 143.7 GWh as mentioned in the Tariff Determination.
- 10.2 The Authority has noted that net annual benchmark energy for wind power generation projects in Pakistan is normally fixed at the time of Tariff Determination on the basis of energy estimates worked out by the Alternative Energy Development Board. In the instant case the energy estimates confirmed by AEDB were 143.7 GWh and the same were incorporated by the Authority in the Tariff Determination.



## 11. Pre-COD Sale of Electricity

- 11.1 FWEL-II has claimed Rs. 29.133 million for export of 2,098 MWh electricity during the testing and grid energizing phase. The Authority in the tariff determination with respect to pre-COD provided that;

*"The Authority has in earlier comparable determination allowed sale of electricity prior to COD pursuant to bilateral agreement on mutually agreed terms between the buyer and the seller. The Authority here by maintains its decision on this issue in the case of the petitioner. The mutually agreed tariff for COD sale of energy shall in no case be higher than the tariff determined by the Authority."*

- 11.2 In view of the above the Authority noted that the process and mechanism on any sales prior to COD was already provided by the Authority in the tariff determination and thus needs no further consideration.

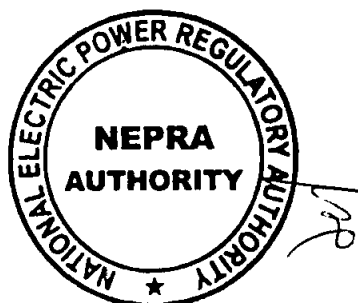
## 12. O & M Costs

- 12.1 The O & M tariff components and their reference values allowed in the Tariff Determination were as follows:

Years	Local Rs/kWh.	Foreign Rs/kWh.
1 -2	0.2947	0.5751
3 -5	0.3125	1.2771
6 -10	0.3151	1.4245
11-20	0.2652	1.4744

	Index value	Month
Pakistani WPI (Manufactures)	209.470	July 2011
US CPI	226.889	Sept 2011
Exchange rate parity (PKR vs. US \$)	86.20	



- 12.2 Based on indexation formulas allowed in the determination, and in the light of earlier decisions of the Authority issued vide No. NEPRA/TRF-90/FPCDL-2007/11019-11021 dated December 20, 2012, regarding replacement of WPI (Manufactures) with CPI – General, the O & M tariff components and their reference values, applicable to the units delivered, post COD, are as follows:

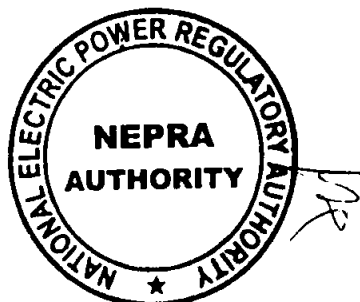
Years	Local Rs/kWh.	Foreign Rs/kWh.
1 -2	0.3798	0.7167
3 -5	0.4027	1.5916
6 -10	0.4061	1.7753
11-20	0.3418	1.8375
	Index value	Month
CPI –General	199.40	September 2014
US CPI	238.03	September 2014
Exchange rate parity (PKR vs. US \$)	102.40	As at RCO Oct, 03, 2014

13. Insurance During Operations

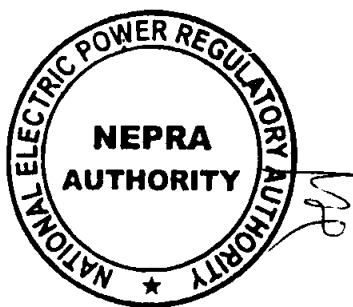
- 13.1 The Authority had allowed Rs.0.6616/kWh as insurance component to FWEL-II in the Tariff Determination. FWEL-II has requested to allow insurance component of Rs. 0.3836/kWh at the COD stage. As per the information submitted by FWEL-II, verified insurance cost for the first year of post COD operations works out to Rs. 47.555 million and insurance component of its tariff accordingly works out to be Rs. 0.3309/kWh. The Authority has decided to allow the same to FWEL-II and has also decided that for future, insurance will be adjusted annually, on the basis of actual expenditure, not exceeding 1.35% of the approved EPC cost, upon production of authentic documentary evidence by FWEL-II.

14. Return on Equity (ROE) & Return on Equity during Construction (ROEDC):

- 14.1 The Authority in the original tariff determination had allowed Rs. 3.1844/kWh as ROE and Rs. 0.3708/kWh as ROEDC to FWEL-II. The



- Authority had also decided to allow 17% ROE to FWEL-II as already been allowed to other wind power projects.
- 14.2 FWEL-II has requested to allow it ROE of Rs. 4.3490 per kWh and return on equity during construction (hereinafter referred to as "ROEDC") of Rs. 1.275 per kWh at the COD stage.
- 14.3 The ROE is subject to adjustment on the basis of revised amount of equity allowed by the Authority and variation in exchange rate parity between US \$/PKR. On the basis of revised equity and exchange rate of US\$/PKR of 102.40 the ROE component of tariff works out to Rs. 4.1890 per kWh which is hereby allowed by the Authority.
- 14.4 Furthermore, based on (a) actual equity injections (b) variation in exchange rate parity between US \$/PKR (c) construction period allowed by the Authority (d) and by prorating the ROEDC to the equity allowed by the Authority at COD i.e. US \$ 34.579 million (Rs. 3,540.976 million), ROEDC in the instant case works out to be US \$ 7.086 million (Rs. 725.621 million) i.e. Rs. 0.8973 /kWh, which is hereby allowed.
15. **Withholding Tax**
- 15.1 Based on the revised ROE and ROEDC, the tariff component of withholding tax has also been revised from Rs. 0.2666 /kWh to Rs. 0.3815 /kWh.
16. **Debt Servicing Component**
- 16.1 The Authority had assessed levelized debt servicing component of Rs. 6.1587/kWh in the Tariff Determination. The Tariff Determination provided that principal repayment and cost of debt shall be adjusted at COD as per the actual borrowing composition within the parameters allowed. Further, the determination also stated that FWEL-II has procured local financing on the basis of KIBOR plus 295 basis points. The determination specified that the benefit of 5 basis points (being lesser than 300 basis points allowed in similar projects) in the debt servicing cost shall be accordingly shared in a ratio of 60:40 between the power purchaser and FWEL-II.

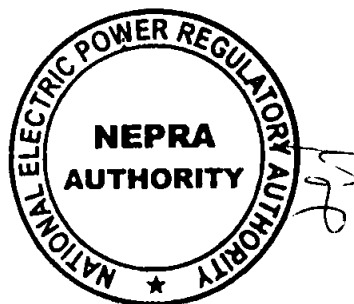


- 16.2 FWEL-II has now requested to allow it levelized debt servicing component of Rs. 6.6281 / kWh at the COD stage.
- 16.3 The Authority has noted that 40% share of FWEL-II in the saving of 5 basis point spread on debt i.e. difference between 3% benchmark spread and 2.95% actual spread on debt of FWEL-II, works out to be 0.02%. The Authority has accordingly allowed to add 0.02% to debt servicing cost of FWEL-II.
- 16.4 Based on the project cost of US \$ 123.499 million (Rs. 12,516.653 million) allowed at this stage by the Authority, debt as 72% of the referred project cost works out to be US \$ 88.919 (Rs. 9,011.990 million). Accordingly, the revised levelized foreign debt servicing component, on the basis of 6 months LIBOR of 0.33% + 4.50% margin works out to Rs. 4.1123/kWh and the revised levelized local debt servicing component on the basis of 6 months KIBOR of 10.17%+2.97% works out to Rs. 2.4243/kWh, which is hereby allowed.

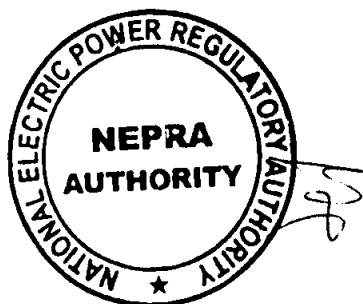
## 17. Order

Pursuant to Rule 6 of the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000, read with Sec 31(4) of Regulation of Generation Transmission and Distribution of Electric Power Act, 1997 Foundation Wind Energy - II (Private) Limited (the petitioner) is allowed to charge the following specified/approved tariff for delivery of electricity to the power purchaser:

Tariff Components	Year 1-2	Year 3-5	Year 6-10	Year 11-20	Indexation
	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	
Fixed O&M					
Local	0.3798	0.4027	0.4061	0.3418	CPI General
Foreign	0.7167	1.5916	1.7753	1.8375	PKR/US\$ & US CPI
Insurance	0.3309	0.3309	0.3309	0.3309	PKR/US\$
Return on equity	4.1890	4.1890	4.1890	4.1890	PKR/US\$
Return on equity during construction	0.8973	0.8973	0.8973	0.8973	PKR/US\$
Debt service (Local)	3.3589	3.3589	3.3589	-	KIBOR
Debt Service (Foreign)	5.6978	5.6978	5.6978	-	PKR/US\$ & LIBOR



- i) The reference tariff has been calculated on the basis of net annual benchmark energy generation of 143.700 GWh at annual net plant capacity factor of 32.81% for installed capacity of 50 MW.
- ii) The above charges will be limited to the extent of net annual energy generation of 143.700 GWh. Net annual generation supplied to the power purchaser in a year, in excess of benchmark energy of 143.700 GWh will be charged at 10% of the prevalent approved tariff.
- iii) In the above tariff no adjustment for carbon emission reduction receipts, has been accounted for. However, upon actual realization of carbon emission reduction receipts, the same shall be distributed between the power purchaser and the petitioner in accordance with the approved mechanism given in the GoP Policy for Development of Renewable Energy for Power Generation 2006, as amended from time to time.
- iv) The reference PKR/dollar rate has been taken as 102.4.
- v) The above tariff is applicable for a period of twenty (20) years commencing from the commercial operations date.
- vi) The monthly benchmark energy table along with monthly power curves should be verified by the Alternative Energy Development Board (AEDB)/power purchaser before finalization of energy purchase agreement.
- vii) The petitioner 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, as amended from time to time and the mechanism approved by the AEDB.
- viii) The component wise tariff is indicated at Annex-I.
- ix) Debt Servicing Schedules are attached as Annex II-A and Annex II-B.



## I. Pass-Through Items

No provision for income tax has been accounted for in the tariff. If any tax is imposed on the petitioner, the exact amount paid by the petitioner shall be reimbursed by the power purchaser to the petitioner on production of original receipts. This payment will be considered as a pass-through payment spread over a 12 months period. Furthermore, in such a scenario, the petitioner shall also submit to the power purchaser details of any tax shield savings and the power purchaser shall deduct the amount of these savings from its payment to the petitioner on account of taxation.

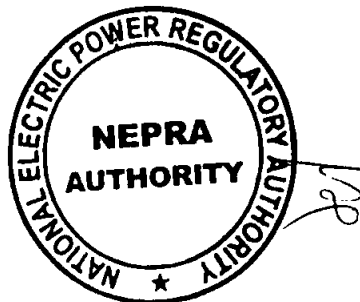
Withholding tax on dividends is also a pass through item just like other taxes as indicated in the government guidelines for determination of tariff for new IPPs. The power purchaser shall make payment on account of withholding tax at the time of actual payment of dividend, subject to maximum of 7.5% of 17% return on equity (including return on equity during construction). In case the petitioner 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 the petitioner is able to recover the same as a pass through from the power purchaser 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 local inflation and O&M foreign component will be adjusted on account of variation in dollar/rupee exchange rate and US CPI. Quarterly adjustments for inflation and exchange rate variation will be made on 1<sup>st</sup> July, 1<sup>st</sup> October, 1<sup>st</sup> January and 1<sup>st</sup> April respectively on the basis of latest available information with respect to CPI-General (notified by the Federal Bureau of Statistics)/alternative index determined by the Authority, 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:

$$F O\&M_{(LREV)} = O\&M_{(LREF)} * CPI-G_{(REV)} / 199.40$$

$$F O\&M_{(FREV)} = O\&M_{(FREF)} * US CPI_{(REV)} / 238.03 * ER_{(REV)} / 102.4$$

Where:

$F O\&M_{(LREV)}$  = The revised applicable fixed O&M local component of tariff

$F O\&M_{(FREV)}$  = The revised applicable fixed O&M foreign component of tariff indexed with US CPI and exchange rate variation

$O\&M_{(LREF)}$  = The reference fixed O&M local component of tariff for the relevant period

$O\&M_{(FREF)}$  = The reference fixed O&M foreign component of tariff for the relevant period

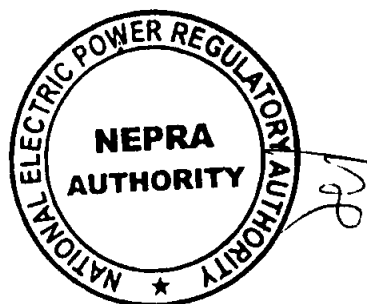
$CPI-G_{(REV)}$  = The Revised Consumer Price Index (General)

$CPI-G_{(REF)}$  = 199.40 Consumer Price Index (General) of September 2014 notified by the Pakistan Bureau of Statistics

$US CPI_{(REV)}$  = The revised US CPI (all urban consumers)

$US CPI_{(REF)}$  = 238.03 US CPI (all urban consumers) for the month of September 2014 as notified by the US Bureau of Labor Statistics

$ER_{(REV)}$  = the revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan




ii) Adjustment of insurance component

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 1.35% of the EPC cost, on annual basis upon production of authentic documentary evidence by the petitioner.

iii) Return on equity

The return on equity component of tariff will be adjusted on the basis of revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan according to the following formula:

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

Where:

$ROE_{(REV)}$  = Revised return on equity component of tariff expressed in Rs/kWh.

$ROE_{(REF)}$  = Reference return on equity component of tariff expressed in Rs/kWh.

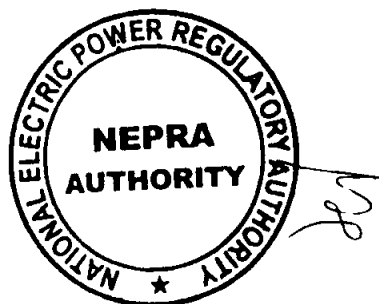
$ER_{(REV)}$  = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

$ER_{(REF)}$  = The reference TT & OD selling rate of US dollar

iv) Return on equity during construction

The return on equity during construction component of tariff will be adjusted on the basis of revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan according to the following formula:

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



Where:

ROEDC<sub>(REV)</sub> = Revised return on equity during construction component of tariff expressed in Rs/kWh.

ROEDC<sub>(REF)</sub> = Reference return on equity during construction component of tariff expressed in Rs/kWh.

ER<sub>(REV)</sub> = The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

ER<sub>(REF)</sub> = The reference TT & OD selling rate of US dollar

v) 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 6 months LIBOR/KIBOR, while spread of 4.50% on 6 months LIBOR and 2.95% on 6 months KIBOR remaining the same, according to the following formula:

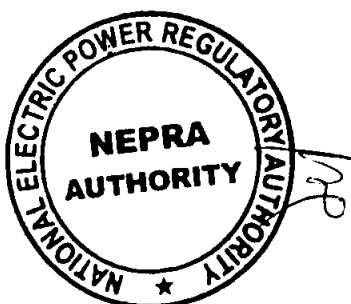
For foreign financing

$$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 0.33\%) / 2$$

Where:

$\Delta I$  = the variation in interest charges applicable corresponding to variation in 6 months LIBOR.  $\Delta I$  can be positive or negative depending upon whether 6 months LIBOR<sub>(REV)</sub> per annum > or < 0.33%. The interest payment obligation will be enhanced or reduced to the extent of  $\Delta I$  for each half year under adjustment.

$P_{(REV)}$  = is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex-II) on a biannual basis at the relevant six monthly calculations date.




For local financing

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 10.17\%) / 2$$

Where:

$\Delta I$  = the variation in interest charges applicable corresponding to variation in 6 months KIBOR.  $\Delta I$  can be positive or negative depending upon whether 6 months KIBOR<sub>(Rev)</sub> per annum > or < 10.17%. The interest payment obligation will be enhanced or reduced to the extent of  $\Delta I$  for each half year under adjustment.

$P_{(REV)}$  = is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex-II) on a biannual basis at the relevant six monthly calculations date.

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

Note:

Adjustments on account of inflation, foreign exchange rate variation, LIBOR/KIBOR variation and actual insurance will be approved and announced by the Authority within fifteen working days after receipt of the petitioner's request for adjustment in tariff in accordance with the requisite indexation mechanism stipulated herein.

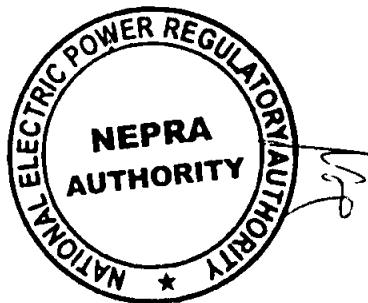
**IV. Terms and Conditions of Tariff:**

**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:**

The petitioner 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.

**Emissions Trading/ Carbon Credits:**

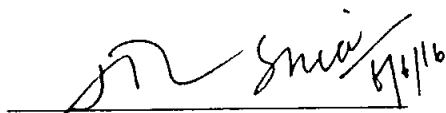
The petitioner shall process and obtain emissions/carbon credits expeditiously and credit the proceeds to the power purchaser as per the GoP Policy for Development of Renewable Energy for Power Generation 2006, as amended from time.

**Other:**

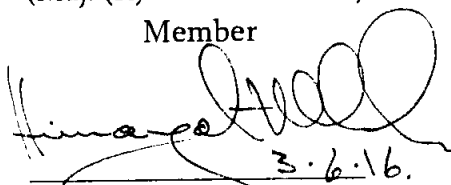
The Authority has allowed/approved only those cost(s), term(s), condition(s), provision(s), etc. which have been specifically approved in this tariff determination. Any cost(s), term(s), condition(s), provision(s), etc. contained in the tariff petition or any other document which are not specifically allowed/approved in this tariff determination, should not be implied to be approved, if not adjudicated upon in this tariff determination.

- V. The order along with, revised tariff table and debt servicing schedules as attached thereto are recommended for notification by the Federal Government in the official gazette in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

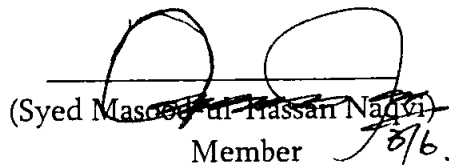
**AUTHORITY**



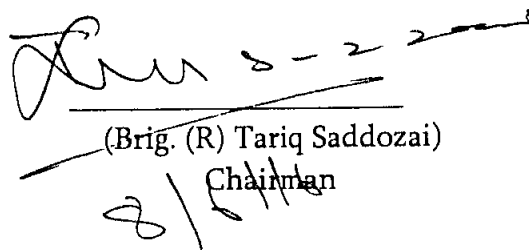
(Maj. (R) Haroon Rashid)  
Member



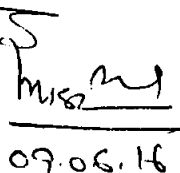
(Himayat Ullah Khan)  
Member/VC



(Syed Masood ul Hassan Naqvi)  
Member



(Brig. (R) Tariq Saddozai)  
Chairman



09.06.16

**FOUNDATION WIND ENERGY - II (PRIVATE) LIMITED**  
**REFERENCE TARIFF TABLE**

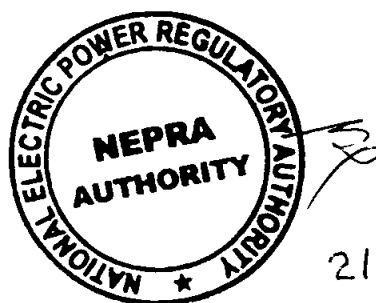
Annex - I

Year	O&M		Insurance	ROE	ROEDC	Withholding tax @7.5%	Loan repayment	Interest charges	Tariff
	Local	Foreign							
	Rs. / kWh	Rs. / kWh							
1	0.3798	0.7167	0.3309	4.1890	0.8973	0.3815	4.5498	4.5069	15.9519
2	0.3798	0.7167	0.3309	4.1890	0.8973	0.3815	4.8565	4.2001	15.9519
3	0.4027	1.5916	0.3309	4.1890	0.8973	0.3815	5.1898	3.8669	16.8498
4	0.4027	1.5916	0.3309	4.1890	0.8973	0.3815	5.5523	3.5044	16.8498
5	0.4027	1.5916	0.3309	4.1890	0.8973	0.3815	5.9473	3.1094	16.8498
6	0.4061	1.7753	0.3309	4.1890	0.8973	0.3815	6.3784	2.6783	17.0368
7	0.4061	1.7753	0.3309	4.1890	0.8973	0.3815	6.8496	2.2070	17.0368
8	0.4061	1.7753	0.3309	4.1890	0.8973	0.3815	7.3655	1.6911	17.0368
9	0.4061	1.7753	0.3309	4.1890	0.8973	0.3815	7.9312	1.1254	17.0368
10	0.4061	1.7753	0.3309	4.1890	0.8973	0.3815	8.5525	0.5042	17.0368
11	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
12	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
13	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
14	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
15	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
16	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
17	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
18	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
19	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
20	0.3418	1.8375	0.3309	4.1890	0.8973	0.3815	-	-	7.9780
<b>Levelized</b>	<b>0.3820</b>	<b>1.5325</b>	<b>0.3309</b>	<b>4.1890</b>	<b>0.8973</b>	<b>0.3815</b>	<b>4.3162</b>	<b>2.2203</b>	<b>14.2498</b>

The reference tariff has been calculated on the basis of net annual benchmark energy generation of 143.700 GWh. Net annual generation supplied to the power purchaser in a year, in excess of benchmark energy of 143.700 GWh will be charged at 10% of the prevalent approved tariff.

Exchange rate 1 US \$ = 102.4 PKR

Levelized tariff @ 10% works out to be US cents 13.9158



# FOUNDATION WIND ENERGY - II (PRIVATE) LIMITED DEBT SERVICING SCHEDULE

LIBOR                      0.33%  
Spread                     4.50%  
Effective                  4.83%  
Interest rate

Period	Foreign Debt					Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	Principal Million Rs	Repayment Million Rs	Interest Million Rs	Balance Million Rs	Total Debt Service Million Rs			
1	6,433.51	254.02	155.37	6,179.49	409.38			
	6,179.49	260.15	149.23	5,919.34	409.38			
	6,433.51	514.17	304.60	5,919.34	818.77	3.5780	2.1197	5.6978
	5,919.34	266.43	142.95	5,652.91	409.38			
2	5,652.91	272.87	136.52	5,380.04	409.38			
	5,919.34	539.30	279.47	5,380.04	818.77	3.7530	1.9448	5.6978
	5,380.04	279.46	129.93	5,100.59	409.38			
	5,100.59	286.21	123.18	4,814.38	409.38			
3	5,380.04	565.66	253.11	4,814.38	818.77	3.9364	1.7614	5.6978
	4,814.38	293.12	116.27	4,521.26	409.38			
	4,521.26	300.20	109.19	4,221.07	409.38			
	4,814.38	593.31	225.46	4,221.07	818.77	4.1288	1.5689	5.6978
4	4,221.07	307.45	101.94	3,913.62	409.38			
	3,913.62	314.87	94.51	3,598.75	409.38			
	4,221.07	622.32	196.45	3,598.75	818.77	4.3307	1.3671	5.6978
	3,598.75	322.47	86.91	3,276.27	409.38			
5	3,276.27	330.26	79.12	2,946.01	409.38			
	3,598.75	652.74	166.03	2,946.01	818.77	4.5424	1.1554	5.6978
	2,946.01	338.24	71.15	2,607.77	409.38			
	2,607.77	346.41	62.98	2,261.37	409.38			
6	2,946.01	684.65	134.12	2,261.37	818.77	4.7644	0.9334	5.6978
	2,261.37	354.77	54.61	1,906.59	409.38			
	1,906.59	363.34	46.04	1,543.25	409.38			
	2,261.37	718.11	100.66	1,543.25	818.77	4.9973	0.7005	5.6978
7	1,543.25	372.12	37.27	1,171.14	409.38			
	1,171.14	381.10	28.28	790.04	409.38			
	1,543.25	753.22	65.55	790.04	818.77	5.2416	0.4562	5.6978
	790.04	390.31	19.08	399.73	409.38			
8	399.73	399.73	9.65	(0.00)	409.38			
	818.77	790.04	28.73	28.73	818.77	5.4978	0.2000	5.6978



**FOUNDATION WIND ENERGY - II (PRIVATE) LIMITED  
DEBT SERVICING SCHEDULE**

KIBOR 10.17%  
Spread 2.97%  
Effective interest rate 13.14%

Period	Local Debt					Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	Principal Million Rs	Repayment Million Rs	Interest Million Rs	Balance Million Rs	Total Debt Service Million Rs			
1	2,644.46	67.60	173.74	2,576.86	241.34			
	2,576.86	72.04	169.30	2,504.83	241.34			
	<b>2,644.46</b>	<b>139.63</b>	<b>343.04</b>	<b>2,504.83</b>	<b>482.68</b>	<b>0.9717</b>	<b>2.3872</b>	<b>3.3589</b>
	2,504.83	76.77	164.57	2,428.05	241.34			
2	2,428.05	81.81	159.52	2,346.24	241.34			
	<b>2,504.83</b>	<b>158.59</b>	<b>324.09</b>	<b>2,346.24</b>	<b>482.68</b>	<b>1.1036</b>	<b>2.2553</b>	<b>3.3589</b>
	2,346.24	87.19	154.15	2,259.05	241.34			
	2,259.05	92.92	148.42	2,166.13	241.34			
3	<b>2,346.24</b>	<b>180.11</b>	<b>302.57</b>	<b>2,166.13</b>	<b>482.68</b>	<b>1.2534</b>	<b>2.1056</b>	<b>3.3589</b>
	2,166.13	99.02	142.31	2,067.11	241.34			
	2,067.11	105.53	135.81	1,961.58	241.34			
	<b>2,166.13</b>	<b>204.55</b>	<b>278.12</b>	<b>1,961.58</b>	<b>482.68</b>	<b>1.4235</b>	<b>1.9354</b>	<b>3.3589</b>
4	1,961.58	112.46	128.88	1,849.12	241.34			
	1,849.12	119.85	121.49	1,729.27	241.34			
	<b>1,961.58</b>	<b>232.31</b>	<b>250.36</b>	<b>1,729.27</b>	<b>482.68</b>	<b>1.6167</b>	<b>1.7423</b>	<b>3.3589</b>
	1,729.27	127.72	113.61	1,601.54	241.34			
5	1,601.54	136.12	105.22	1,465.43	241.34			
	<b>1,729.27</b>	<b>263.84</b>	<b>218.83</b>	<b>1,465.43</b>	<b>482.68</b>	<b>1.8361</b>	<b>1.5229</b>	<b>3.3589</b>
	1,465.43	145.06	96.28	1,320.37	241.34			
	1,320.37	154.59	86.75	1,165.78	241.34			
6	<b>1,465.43</b>	<b>299.65</b>	<b>183.03</b>	<b>1,165.78</b>	<b>482.68</b>	<b>2.0852</b>	<b>1.2737</b>	<b>3.3589</b>
	1,165.78	164.75	76.59	1,001.03	241.34			
	1,001.03	175.57	65.77	825.46	241.34			
	<b>1,165.78</b>	<b>340.32</b>	<b>142.36</b>	<b>825.46</b>	<b>482.68</b>	<b>2.3682</b>	<b>0.9907</b>	<b>3.3589</b>
7	825.46	187.11	54.23	638.36	241.34			
	638.36	199.40	41.94	438.96	241.34			
	<b>825.46</b>	<b>386.50</b>	<b>96.17</b>	<b>438.96</b>	<b>482.68</b>	<b>2.6897</b>	<b>0.6693</b>	<b>3.3589</b>
	438.96	212.50	28.84	226.46	241.34			
8	226.46	226.46	14.88	0.00	241.34			
	<b>482.68</b>	<b>438.96</b>	<b>43.72</b>	<b>43.72</b>	<b>482.68</b>	<b>3.0547</b>	<b>0.3042</b>	<b>3.3589</b>

