



**National Electric Power Regulatory Authority**  
**Islamic Republic of Pakistan**

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No. NEPRA/TRF-348/TGSWFPL-2016/4136-4138  
March 31, 2016

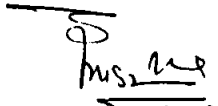
**Subject: Decision of National Electric Power Regulatory Authority in the matter of Application of Three Gorges Second Wind Farm (Private) Ltd. Opting for Upfront Tariff for Wind Power Projects [Case No. NEPRA/TRF-348/TGSWFPL-2016]**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I (09 pages) in Case No. NEPRA/TRF-348/TGSWFPL-2016.

2. The Decision is being intimated to the Federal Government for the purpose of notification of the approved tariff in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).
3. Order of the Authority at para 4 of the Decision needs to be notified in the official Gazette.

Enclosure: As above

  
31.03.16  
( Syed Safer Hussain )

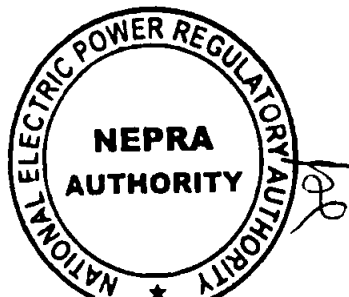
Secretary  
Ministry of Water & Power  
'A' Block, Pak Secretariat  
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.

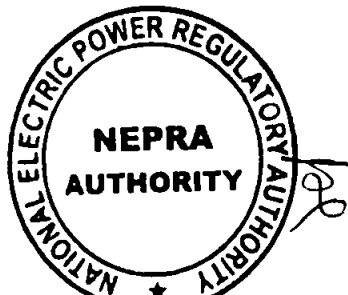
**DECISION OF NATIONAL ELECTRIC POWER REGULATORY AUTHORITY IN THE MATTER OF APPLICATION  
OF THREE GORGES SECOND WIND FARM (PVT.) LIMITED OPTING FOR UPFRONT TARIFF FOR WIND POWER  
PROJECTS**

1. Three Gorges Second Wind Farm (Private) Limited (hereinafter referred to as "TGSWFPL" or "the Applicant" ) on January 28, 2016 re-submitted application for unconditional acceptance (hereinafter referred to as "Application") of upfront tariff for wind power generation projects determined by the National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") vide its determination dated June 24, 2015 revised on October 19, 2015 (hereinafter referred to as the "Upfront Tariff, 2015"), with all the terms, conditions and assumptions provided therein, for its proposed wind power generation project of 49.5 MW installed capacity to be located at Jhimpir, District Thatta, Sindh. TGSWFPL's earlier application dated December 23, 2015 was returned by the Authority due to shortcomings of certain essential documents and information.
2. The Authority noted that the Applicant has applied for grant of Upfront Tariff, 2015 on the basis of 100% foreign loan. Alternative Energy Development Board vide its letter dated January 14, 2016 recommended the Applicant for the award of Upfront Tariff. In accordance with the Annex-IV of the Upfront Tariff, 2015, the Applicant has certified that all the plant and machinery to be installed for TGSWFPL shall be brand new and of international standards. The Authority noted that the power purchaser, i.e. Central Power Purchasing Agency Guarantee Limited ("CPPA-G") vide its letter dated September 08, 2015 has confirmed that necessary arrangements will be in place, to evacuate and absorb power in the national grid, supplied by TGSWFPL as per the format attached as Annex-V with Upfront Tariff, 2015 and the Authority may award upfront tariff to the Applicant. Later on, CPPA-G vide its letter no. CPPA(G)L/CEO/CE-II/MT-IV/NEPRA/851-54 dated 07.02.2016, inter alia, provided a list of the wind power projects for which National Transmission and Dispatch Company Limited ("NTDCL") has approved the grid interconnections studies and CPPA-G has issued power evacuation certificates. It was noted that the TGSWFPL was included in that list by the power purchaser. The Authority decides that any penalties/liquidated damages/non-project missed volumes, etc. by whatever name called, payable by the power purchaser on account of its default in providing the interconnection facilities on the committed date, will not be allowed by the Authority to the power purchaser as a part of its tariff.
3. TGSWFPL's Application was processed in accordance with the relevant provisions of NEPRA Upfront Tariff (Approval and Procedure) Regulations, 2011 and Upfront Tariff, 2015. Considering the Application along with other relevant information and documents, the Authority has decided to grant Upfront Tariff, 2015 to the Applicant. The Authority hereby directs that the Energy Purchase Agreement, agreed between the Applicant and the power purchaser shall be submitted to the Authority for review.



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**ORDER**

4. Pursuant to section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 read with Rule 6 of the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000 and Regulation 4 (7) of the National Electric Power Regulatory Authority Up-front Tariff (Approval & Procedure) Regulations, 2011, TGSWFPL (the Applicant) is allowed to charge the following specified/approved tariff for delivery of electricity to the power purchaser;

**REFERENCE TARIFF ON BOO BASIS (BASED ON 100% FOREIGN LOAN)**

Years	O & M	Insurance	Return on equity	Principal repayment of debt	Interest	Total tariff
1	1.5039	0.6349	3.6070	4.2656	2.4669	12.4782
2	1.5039	0.6349	3.6070	4.4727	2.2597	12.4782
3	1.5039	0.6349	3.6070	4.6900	2.0425	12.4782
4	1.5039	0.6349	3.6070	4.9177	1.8147	12.4782
5	1.5039	0.6349	3.6070	5.1566	1.5759	12.4782
6	1.5039	0.6349	3.6070	5.4070	1.3255	12.4782
7	1.5039	0.6349	3.6070	5.6696	1.0629	12.4782
8	1.5039	0.6349	3.6070	5.9450	0.7875	12.4782
9	1.5039	0.6349	3.6070	6.2337	0.4988	12.4782
10	1.5039	0.6349	3.6070	6.5364	0.1960	12.4782
11 to 20	1.5039	0.6349	3.6070	-	-	5.7458
Levelized - Rs./kWh.						10.6048
Indexation	PKR/US \$ & US CPI	PKR/US \$	PKR/US \$	PKR/US \$	PKR/US \$ & LIBOR	

Levelized tariff discounted at 10% per annum works out to US Cents 10.4481/kWh.

- i) This tariff is applicable for wind power generation only.
- ii) This tariff will be limited to the extent of net annual energy generation supplied to the power purchaser up to 35% net annual plant capacity factor. Net annual energy generation supplied to the power purchaser in a year, in excess of 35% net annual plant capacity factor will be charged at the following tariffs:

**Net annual  
plant capacity factor**

Above 35% to 36%  
Above 36% to 37%  
Above 37%

**% of the prevalent tariff**

75%  
80%  
100%



- iii) The power purchaser will not take the wind risk; the Applicant will be required to account for this risk.
- iv) The Applicant will have to achieve financial close within one year from the date of decision of the Authority awarding upfront tariff to it. The upfront tariff granted to the Applicant will no longer remain applicable/valid, if financial close is not achieved by the Applicant in the above mentioned timeline or a generation license is declined to it.
- v) The decision to opt for upfront tariff is irrevocable.
- vi) In the tabulated above tariff no adjustment for certified emission reductions has been accounted for. However, upon actual realization of carbon credits, the same shall be distributed between the power purchaser and the Applicant in accordance with the applicable GOP Policy for Development of Renewable Energy for Power Generation, 2006, as amended from time to time.
- vii) The targeted maximum construction period after financial close is 18 months. No adjustment will be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of the Applicant to complete construction within 18 months of financial close will not invalidate the tariff granted to it.
- viii) This tariff will be applicable for a period of twenty (20) years from the commencement of commercial operations.
- ix) The terms and conditions specified herein form an integral part of this tariff.
- x) This tariff has been worked out on the basis of information provided by the Applicant regarding its loan structure i.e. 100% foreign loan and will not be subject to any further change, regardless of any subsequent change(s) in the financing structure, etc. except for the Application of relevant indexations/adjustments as detailed below in this order.
- xi) Adjustment on account of savings in cost of debt: This upfront tariff has been worked out on the basis of 3 months LIBOR of 0.2706% plus a premium of 450 basis points. In case negotiated spread is less than the said limits, the savings in the spread over LIBOR shall be shared by the Applicant and the power producer in the ratio of 60:40 respectively. The Applicant shall submit relevant authentic documentary evidence to the Authority, for the aforesaid adjustment within 15 days of commercial operations date. In case the premium on LIBOR is higher than that mentioned above, no adjustment on the basis of actual higher premium will be allowed.
- xii) Adjustment on account of variations in LIBOR/KIBOR: The Authority has assessed interest during construction of USD 0.080 million per MW. The interest during construction will be reassessed after commercial operations date for the allowed construction period of eighteen months, starting from the date of financial close of the Applicant, on the same computation basis as already adopted, by applying 3 months LIBOR of last day of the preceding quarter (plus allowed spread thereon), on the basis of phasing for debt injection considered in the computation of upfront tariff. The Applicant shall submit relevant authentic documentary evidence to the Authority, for



3

the aforesaid adjustment within fifteen days of the commercial operations date of the relevant company.

xiii) Adjustment on account of Sinosure Fees

An appropriate adjustment in benchmark project cost will be allowed on account of Sinosure or other credit insurance fees, where applicable, at actual not exceeding 7% of the total benchmark foreign debt. In case the Applicant manage better alternative Sinosure or other credit insurance arrangement, the same will be considered at the time of allowing adjustment of such fees. The Applicant, if it intends to claim Sinosure or other such fees, shall submit relevant authentic documentary evidence to the Authority, within 15 days of commercial operations date of the project.

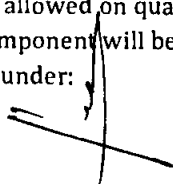
xiv) Pass-through items

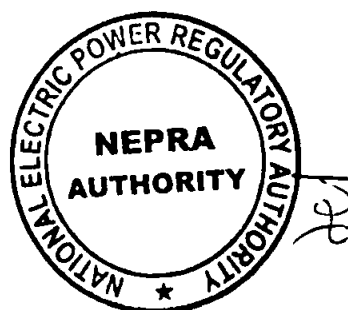
If the Applicant is obligated to pay any tax on its income from generation of electricity from wind, or any duties and/or taxes, not being of refundable nature, are imposed on the Applicant up to the commencement of its commercial operations for import of its plant, machinery and equipment, the exact amount paid by the applicant on these accounts shall be reimbursed by the power purchaser on production of original receipts. This payment should be considered as a pass-through payment spread over a twelve months period. Furthermore, in such a scenario, the Applicant shall also submit to the power purchaser details of any tax savings and the power purchaser shall deduct the amount of these savings from its payment to the Applicant on account of taxation.

The adjustment for duties and/or taxes will be restricted only to the extent of duties and/or taxes directly imposed on the Applicant. No adjustment for duties and/or taxes imposed on third parties such as contractors, suppliers, consultants, etc., will be allowed. Further, withholding tax on dividend will also not be allowed as a pass through item.

xv) Indexations/adjustment

The tariff allowed to Applicant, will remain unchanged throughout the tariff control period, except for the adjustments due to indexations/adjustment detailed in this order. The indexations of O & M, return on equity, principal repayment of debt and interest will be allowed on quarterly basis on 1<sup>st</sup> July, 1<sup>st</sup> October, 1<sup>st</sup> January and 1<sup>st</sup> April. Insurance component will be adjusted annually. The mechanism of indexations/adjustment will be as under:





a) Indexations applicable to O & M:

$$OM_{(FREV)} = OM_{(FREF)} * US\ CPI_{(REV)} / US\ CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$$

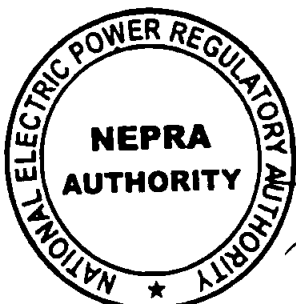
Where:

- $OM_{(FREV)}$  = The revised applicable O&M tariff component indexed with US CPI and exchange rate parity
- $OM_{(FREF)}$  = The reference O&M tariff component for the relevant period
- $US\ CPI_{(REV)}$  = The revised US CPI (all urban consumers) based on latest available information with respect to US CPI (notified by US Bureau of Labor Statistics)
- $US\ CPI_{(REF)}$  = Reference US CPI (all urban consumers)-current reference 233.707 US CPI (all urban consumers) for the month of January, 2015 as notified by the US Bureau of Labor Statistics
- $ER_{(REV)}$  = Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter
- $ER_{(REF)}$  = Reference TT & OD selling rate of US dollar - current reference 101.50

b) Adjustment of insurance component

The actual insurance cost for the minimum cover required under contractual obligations with the power purchaser not exceeding 1% of Rs. 194.67 million per MW (US \$ 1.9179 million per MW) will be treated as pass-through. Insurance component of reference tariff shall be adjusted annually as per actual, upon production of authentic documentary evidence by the Applicant, according to the following formula:

AIC	=	$Ins_{(Ref)} / P_{(Ref)} * P_{(Act)}$
Where		
AIC	=	Adjusted insurance component of tariff
$Ins_{(Ref)}$	=	Reference insurance component of tariff
$P_{(Ref)}$	=	Reference premium @ 1% of Rs.194.67 million
$P_{(Act)}$	=	Actual premium per MW of installed capacity or 1% of US \$ 1.9179 million converted into Pak Rupees on exchange rate prevailing on the 1 <sup>st</sup> day of the insurance coverage period, whichever is lower



c) Indexations applicable to return on equity

$$ROE_{(REV)} = ROE_{(REF)} * ER_{(REV)} / ER_{(REF)}$$

Where:

$ROE_{(REV)}$	=	The revised applicable return on equity tariff component indexed with exchange rate parity
$ROE_{(REF)}$	=	The reference return on equity tariff component for the relevant period
$ER_{(REV)}$	=	Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter
$ER_{(REF)}$	=	Reference TT & OD selling rate of US dollar - current reference 101.50

d) Indexations applicable to debt

Foreign debt and its interest will be adjusted on quarterly basis, on account of revised TT & OD selling rate of US Dollar, as notified by the National Bank of Pakistan as at the last day of the preceding quarter, over the applicable reference exchange rate.

e) Indexations applicable to interest after achieving COD

$$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 0.2706\%) / 4$$

Where:

$\Delta I$	=	The variation in interest charges applicable corresponding to variation in 3 months LIBOR. $\Delta I$ can be positive or negative depending upon whether 3 months LIBOR <sub>(REV)</sub> per annum > or < 0.2706%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta I$ for each quarter under adjustment.
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$P_{(REV)}$	=	is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex-I), on a quarterly basis at the relevant
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*[Handwritten mark]*



quarterly calculations date. Quarter 1 shall commence on the commercial operations date (i.e. the first figure will be used for the purposes of calculation of interest for the first quarter after commercial operations date).

$LIBOR_{(REV)}$  = Revised 3 months LIBOR rate as at the last day of the preceding quarter

xvi) **Other Terms and Conditions of Tariff:**

a. **Design & Manufacturing Standards:**

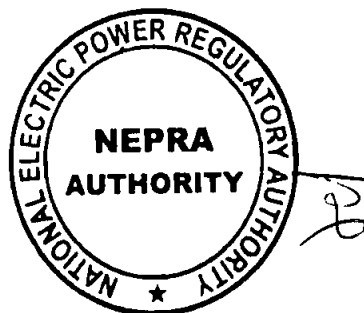
Wind turbine generation system shall be designed, manufactured and tested in accordance with the latest IEC standards or other equivalent standards. All plant and equipment shall be new.

b. **Emissions Trading/Carbon Credits:**

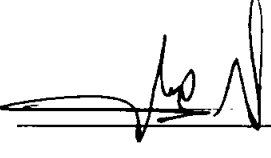
The Applicant shall process and obtain emissions/carbon credits expeditiously and credit the proceeds to the power purchaser in accordance with the applicable GOP Policy for Development of Renewable Energy for Power Generation, 2006, as amended from time to time.

c. **General:**

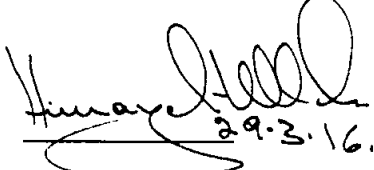
- The power purchaser before signing the Energy Purchase Agreement shall satisfy itself that the plant and machinery proposed to be installed is of a quality acceptable to it.
- Pre COD sale of electricity is allowed to the Applicant, subject to the terms and conditions of Energy Purchase Agreement, at the applicable tariff excluding principal repayment of debt component and interest component. However, pre COD sale will not alter the required commercial operations date stipulated by the Energy Purchase Agreement in any manner.
- General assumptions, which are not covered in this decision, determination of the Authority in the matter of upfront tariff for wind power generation dated June 24, 2015 and National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011, may be dealt with as per the standard terms of the Energy Purchase Agreement.

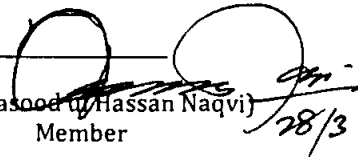


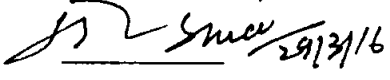
5. The order at paragraph 4 is recommended for notification by the Federal Government in the official gazette in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.


  
(Khawaja Muhammad Naeem)  
Member

AUTHORITY

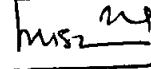
  
(Himayatullah Khan)  
Member

  
(Syed Masood Hassan Naqvi)  
Member

  
(Maj. (R) Haroon Rashid)  
Member

  
(Brig. (R) Tariq Saddozai)  
Chairman



  
31.03.16

**Three Gorges Second Wind Farm (Private) Limited**  
**Debt Servicing Schedule for the purpose of Indexation of debt component only**

Relevant Quarter	Base amount (USD)	Principal Repayment (USD)	Interest (USD)	Balance Principal (USD)	Principal Repayment of debt Rs./kwh.	Interest Rs./kWh
1	1,609,855	31,642	19,200	1,578,213	4.2656	2.4669
2	1,578,213	32,019	18,823	1,546,194		
3	1,546,194	32,401	18,441	1,513,792		
4	1,513,792	32,788	18,054	1,481,005		
5	1,481,005	33,179	17,663	1,447,826	4.4727	2.2597
6	1,447,826	33,574	17,267	1,414,252		
7	1,414,252	33,975	16,867	1,380,277		
8	1,380,277	34,380	16,462	1,345,897		
9	1,345,897	34,790	16,052	1,311,107	4.6900	2.0425
10	1,311,107	35,205	15,637	1,275,902		
11	1,275,902	35,625	15,217	1,240,278		
12	1,240,278	36,050	14,792	1,204,228		
13	1,204,228	36,480	14,362	1,167,748	4.9177	1.8147
14	1,167,748	36,915	13,927	1,130,834		
15	1,130,834	37,355	13,487	1,093,479		
16	1,093,479	37,800	13,041	1,055,678		
17	1,055,678	38,251	12,591	1,017,427	5.1566	1.5759
18	1,017,427	38,707	12,134	978,720		
19	978,720	39,169	11,673	939,551		
20	939,551	39,636	11,206	899,914		
21	899,914	40,109	10,733	859,805	5.4070	1.3255
22	859,805	40,587	10,254	819,218		
23	819,218	41,071	9,770	778,147		
24	778,147	41,561	9,281	736,585		
25	736,585	42,057	8,785	694,529	5.6696	1.0629
26	694,529	42,559	8,283	651,970		
27	651,970	43,066	7,776	608,904		
28	608,904	43,580	7,262	565,324		
29	565,324	44,099	6,742	521,225	5.9450	0.7875
30	521,225	44,625	6,216	476,599		
31	476,599	45,158	5,684	431,442		
32	431,442	45,696	5,146	385,745		
33	385,745	46,241	4,601	339,504	6.2337	0.4988
34	339,504	46,793	4,049	292,712		
35	292,712	47,351	3,491	245,361		
36	245,361	47,916	2,926	197,445		
37	197,445	48,487	2,355	148,958	6.5364	0.1960
38	148,958	49,065	1,777	99,893		
39	99,893	49,650	1,191	50,243		
40	50,243	50,243	599	(0)		

