



National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/TRF-352/HAEPL-2016/4142-4144
March 31, 2016

Subject: Decision of National Electric Power Regulatory Authority in the matter of Application of Hartford Alternative Energy (Private) Ltd. (HAEPL) Opting for Upfront Tariff for Wind Power Projects [Case No. NEPRA/TRF-352/HAEPL-2016]

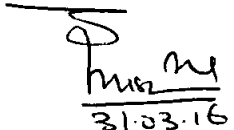
Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I (09 pages) in Case No. NEPRA/TRF-352/HAEPL-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 6 of the Decision needs to be notified in the official Gazette.

Enclosure: As above


31.03.16
(Syed Safeer Hussain)

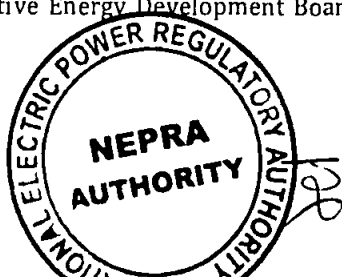
Secretary
Ministry of Water & Power
'A' Block, Pak Secretariat
Islamabad

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 HARTFORD ALTERNATIVE ENERGY (PVT.) LIMITED OPTING FOR UPFRONT TARIFF FOR WIND POWER
PROJECTS

1. Hartford Alternative Energy (Private) Limited (hereinafter referred to as "HAEPL" or "the Applicant") on February 11, 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 49.3 MW installed capacity to be located at Jhimpir, District Thatta, Sindh.
2. HAEPL earlier vide its letter dated September 02, 2015 submitted application for unconditional acceptance of Upfront Tariff, 2015. The application was not considered as filed owing to deficiency of certain documents. In the meanwhile, the Authority received a letter from National Transmission and Dispatch Company Limited ("NTDCL") dated November 23, 2015 wherein it was, inter alia, stated that **"the grid interconnection study of all Renewable Energy (RE) projects including the subject power projects have not been vetted/approved yet by this office"**. The Authority considered the aforementioned letter of NTDCL and was of the view that the communicated stance of NTDCL affects the validity of the approvals/consents, if any, issued by NTDCL/ Central Power Purchasing Agency Guarantee Limited ("CPPA-G") in respect of HAEPL. Since those consents/approvals are the integral and mandatory requirements for grant of Upfront Tariff, 2015, therefore, the Authority decided to return that application of HAEPL.
3. At the same time, the Authority decided to hold a meeting with NTDCL and CPPA-G for explanation of their position with respect to aforementioned NTDCL's letter dated November 23, 2015. During the meeting and vide its letter no. CPPA(G)L/CEO/CE-II/MT-IV/NEPRA/851-54 dated February 07, 2016, CPPA-G informed the Authority that the projects for which the interconnection studies have already been approved are not affected by NTDCL's letter dated November 23, 2015. With its said letter, CPPA-G also provided a list of the wind power projects for which NTDCL has approved the grid interconnection studies and CPPA-G has issued power evacuation certificates. It was noted that the HAEPL was included in that list by the power purchaser. The Authority further noted that as per the format prescribed vide Annex-V of Upfront Tariff, 2015, the Applicant has provided a copy of CPPA-G's letter dated February 10, 2016 wherein CPPA-G has confirmed that necessary arrangements will be in place, to evacuate and absorb power in the national grid, supplied by HAEPL and the Authority may award upfront tariff to the Applicant.
4. The Authority found that the Applicant has applied for grant of Upfront Tariff, 2015 on the basis of 100% local loan. Alternative Energy Development Board vide its letter dated August 31, 2015 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 HAEPL shall be brand new and of international standards. 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.

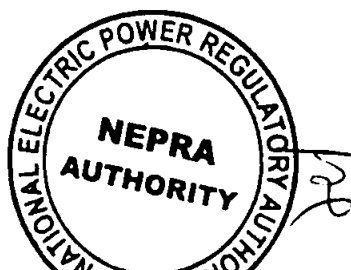
5. HAEPL's Application was processed in accordance with the relevant provisions of NEPRA Upfront Tariff (Approval and Procedure) Regulations, 2011 and Upfront Tariff, 2015. Considering the Application along with other relevant information and documents, the Authority has decided to grant Upfront Tariff, 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.

ORDER

6. 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, HAEPL (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% LOCAL LOAN)

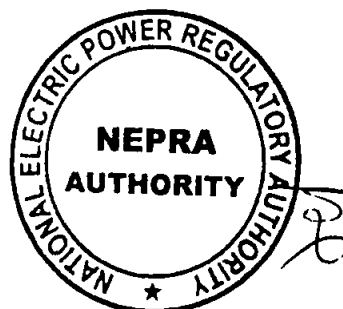
Years	O & M	Insurance	Return on equity	Principal repayment of debt	Interest	Total tariff
1	1.5039	0.6349	3.7820	3.2424	6.1594	15.3226
2	1.5039	0.6349	3.7820	3.6218	5.7800	15.3226
3	1.5039	0.6349	3.7820	4.0456	5.3561	15.3226
4	1.5039	0.6349	3.7820	4.5190	4.8828	15.3226
5	1.5039	0.6349	3.7820	5.0478	4.3540	15.3226
6	1.5039	0.6349	3.7820	5.6384	3.7634	15.3226
7	1.5039	0.6349	3.7820	6.2981	3.1036	15.3226
8	1.5039	0.6349	3.7820	7.0351	2.3666	15.3226
9	1.5039	0.6349	3.7820	7.8583	1.5435	15.3226
10	1.5039	0.6349	3.7820	8.7778	0.6241	15.3226
11 to 20	1.5039	0.6349	3.7820	-	-	5.9208
Levelized Tariff – Rs./kWh						12.7064
Indexation	PKR/US \$ & US CPI	PKR/US \$	PKR/US \$	-	KIBOR	



- 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:

<u>Net annual plant capacity factor</u>	<u>% of the prevalent tariff</u>
Above 35% to 36%	75%
Above 36% to 37%	80%
Above 37%	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% local 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) Onetime adjustment for PKR / US \$ exchange rate variation

The base amount for quarter 1 (as indicated in Annex-I) will be adjusted for exchange rate variation, for 270 days after financial close of the relevant company, in accordance with the onetime adjustment mechanism stipulated below:

$$B_{(LFIN)} = (B_{(LREF)} \times 20\%) + (B_{(LREF)} \times 80\% \times ER_{(REV)} / ER_{(REF)})$$

Where:

$B_{(LFIN)}$ = The revised base amount for the first quarter after allowing onetime adjustment for exchange rate parity

$B_{(LREF)}$ = The reference base amount (as indicated in Annex-I) for the first quarter

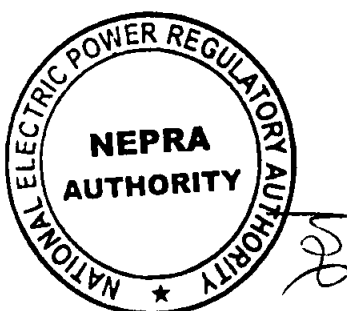
$ER_{(REV)}$ = The average, for a period of 270 days after financial close, of TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

$ER_{(REF)}$ = Reference TT & OD selling rate of US dollar i.e. 101.50

Note: After the revision of the base amount of quarter 1, in accordance with the onetime adjustment mechanism stipulated above, the debt service schedule at Annex-I will be recalculated, on the same computation basis as already adopted, and revised principal repayment and interest tariff components will be worked out for subsequent indexations, where applicable.

xii) Adjustment on account of savings in cost of debt: This upfront tariff has been worked out on the basis of 3 months KIBOR of 8.22% plus a premium of 300 basis points. In case negotiated spread is less than the said limits, the savings in the spread over KIBOR 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 KIBOR is higher than that mentioned above, no adjustment on the basis of actual higher premium will be allowed.

xiii) Adjustment on account of variations in KIBOR: The Authority has assessed interest during construction of USD 0.192 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



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the same computation basis as already adopted, by applying 3 months KIBOR 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 the aforesaid adjustment within fifteen days of the commercial operations date of the relevant company.

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 1st July, 1st October, 1st January and 1st April. Insurance component will be adjusted annually. The mechanism of indexations/adjustment will be as under:

a) Indexations applicable to O & M:

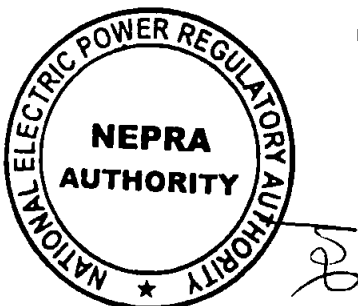
$$OM_{(LREV)} = OM_{(LREF)} * US\ CPI_{(REV)} / US\ CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$$

Where:

$OM_{(LREV)}$ = The revised applicable O & M tariff component indexed with US CPI and exchange rate parity

$OM_{(LREF)}$ = 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)



$US\text{CPI}_{(REF)}$ = 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 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 the installed capacity or 1% of US \$ 1.9179 million converted into Pak Rupees on exchange rate prevailing on the 1 st day of the insurance coverage period whichever is lower

c) Indexations applicable to return on equity

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

Where:

$ROE_{(LREV)}$ = The revised applicable return on equity tariff component indexed with exchange rate parity

$ROE_{(LREF)}$ = 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) Indexation applicable to interest after achieving COD

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 8.22\%) / 4$$

Where:

ΔI = The variation in interest charges applicable corresponding to variation in 3 months KIBOR. ΔI can be positive or negative depending upon whether 3 months $KIBOR_{(REV)}$ per annum > or < 8.22%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment.

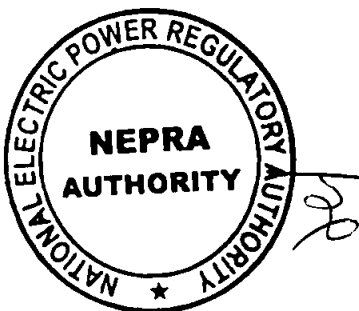
$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order at Annex I), on a quarterly basis at the relevant quarterly calculations date. Quarter 1 shall commence on the commercial operations date (i.e. the first figure will be used for the purposes of calculation of interest for the first quarter after commercial operations date).

$KIBOR_{(REV)}$ = Revised 3 months KIBOR 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.



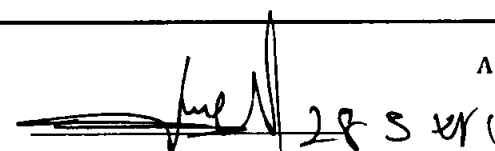
b. Emissions Trading/Carbon Credits:

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.

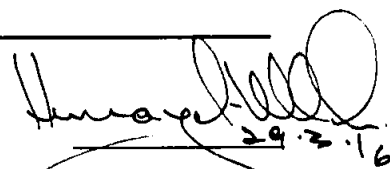
c. General:

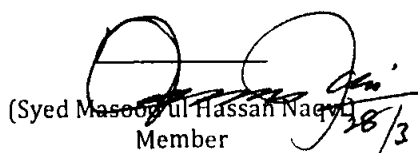
- The power purchaser before signing the Energy Purchase Agreement shall satisfy itself that the plant and machinery proposed to be installed is of a quality acceptable to it.
- Pre COD sale of electricity is allowed to the Applicant, subject to the terms and conditions of Energy Purchase Agreement, 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, Upfront Tariff, 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.

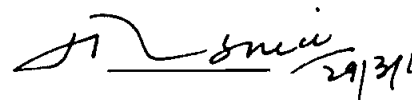
7. The order at paragraph 6 is recommended for notification by the Federal Government in the official gazette in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

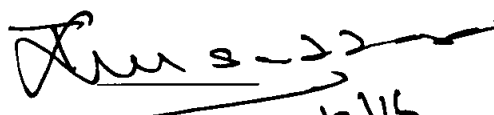

(Khawaja Muhammad Naeem)
Member

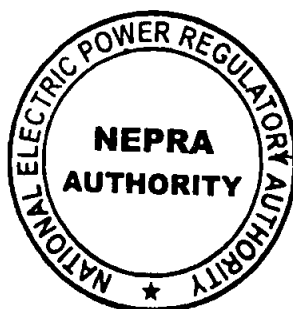
AUTHORITY

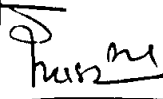

(Himayat Ullah Khan)
Member


(Syed Masood ul Hassan Naqvi)
Member


(Maj. (R) Haroon Rashid)
Member


(Brig. (R) Tariq Saddozai)
Chairman




31.03.16

Hartford Alternative Energy Private Limited
Debt Servicing Schedule for the purpose of Indexation of debt component only

Relevant Quarter	Base amount (Rs.)	Principal Repayment (Rs.)	Interest (Rs.)	Balance Principal (Rs.)	Principal Repayment of debt Rs./kwh.	Interest Rs./kWh
1	171,954,445	2,383,165	4,823,322	169,571,280	3.2424	6.1594
2	169,571,280	2,450,013	4,756,474	167,121,267		
3	167,121,267	2,518,736	4,687,752	164,602,531		
4	164,602,531	2,589,386	4,617,101	162,013,145		
5	162,013,145	2,662,019	4,544,469	159,351,126	3.6218	5.7800
6	159,351,126	2,736,688	4,469,799	156,614,438		
7	156,614,438	2,813,452	4,393,035	153,800,986		
8	153,800,986	2,892,370	4,314,118	150,908,616		
9	150,908,616	2,973,501	4,232,987	147,935,116	4.0456	5.3562
10	147,935,116	3,056,907	4,149,580	144,878,208		
11	144,878,208	3,142,654	4,063,834	141,735,555		
12	141,735,555	3,230,805	3,975,682	138,504,750		
13	138,504,750	3,321,429	3,885,058	135,183,321	4.5190	4.8828
14	135,183,321	3,414,595	3,791,892	131,768,726		
15	131,768,726	3,510,374	3,696,113	128,258,351		
16	128,258,351	3,608,840	3,597,647	124,649,511		
17	124,649,511	3,710,068	3,496,419	120,939,442	5.0478	4.3540
18	120,939,442	3,814,136	3,392,351	117,125,307		
19	117,125,307	3,921,122	3,285,365	113,204,184		
20	113,204,184	4,031,110	3,175,377	109,173,074		
21	109,173,074	4,144,183	3,062,305	105,028,892	5.6384	3.7634
22	105,028,892	4,260,427	2,946,060	100,768,465		
23	100,768,465	4,379,932	2,826,555	96,388,533		
24	96,388,533	4,502,789	2,703,698	91,885,744		
25	91,885,744	4,629,092	2,577,395	87,256,652	6.2981	3.1037
26	87,256,652	4,758,938	2,447,549	82,497,714		
27	82,497,714	4,892,426	2,314,061	77,605,288		
28	77,605,288	5,029,659	2,176,828	72,575,629		
29	72,575,629	5,170,741	2,035,746	67,404,888	7.0351	2.3667
30	67,404,888	5,315,780	1,890,707	62,089,108		
31	62,089,108	5,464,888	1,741,599	56,624,220		
32	56,624,220	5,618,178	1,588,309	51,006,042		
33	51,006,042	5,775,768	1,430,719	45,230,274	7.8583	1.5435
34	45,230,274	5,937,778	1,268,709	39,292,496		
35	39,292,496	6,104,333	1,102,155	33,188,163		
36	33,188,163	6,275,559	930,928	26,912,604		
37	26,912,604	6,451,589	754,899	20,461,015	8.7778	0.6241
38	20,461,015	6,632,556	573,931	13,828,460		
39	13,828,460	6,818,599	387,888	7,009,861		
40	7,009,861	7,009,861	196,627	0		

