National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

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No. NEPRA/TRF-246/TGL-2013/4065-4067
April 23, 2014

Subject: **Decision of National Electric Power Regulatory Authority in the matter of Application of Tenaga Generasi Ltd. Opting for Upfront Tariff for Wind Power Projects** [Case No. NEPRA/TRF-246/TGL-2013]

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I & II and Additional Note of Mr. Habibullah Khilji, Member NEPRA (22 pages) in Case No. NEPRA/TRF-246/TGL-2013.

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. Please note that only Order of the Authority at para 9 of the Decision along with Annexure-I & II needs to be notified in the official Gazette.

Enclosure: As above

23/4

(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 TENAGA GENERASI LIMITED OPTING FOR UPFRONT TARIFF FOR WIND POWER PROJECTS

1. Tenaga Generasi Limited (hereinafter referred to as "Tenaga") submitted application dated July 25, 2013 for unconditional acceptance of upfront tariff for wind power generation projects (hereinafter referred to as the "upfront tariff"), determined by the National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") vide determination dated April 24, 2013, with all the terms, conditions and assumptions provided therein, for its proposed wind power generation project of 49.50 MW installed capacity to be located at Khuttikun, Taluka Mirpur Sakro, District Thatta, Sind. On scrutiny, the application was found incomplete and the registrar asked Tenaga to furnish the necessary information/documents. Tenaga thereafter furnished the deficient information/documents/explanations. Since the upfront tariff was only valid for first 500 MW approvals granted by the Authority, therefore the Authority strictly followed the principle of merit and transparency while considering the applications and accepted only those applications which first fulfilled the requirements of National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011 and determination of the Authority in the matter of upfront tariff dated April 24, 2013.

2. The Authority noted that in order to ensure the alignment of activities of construction of wind power plants with the construction of power evacuation facilities, the upfront tariff stipulated that only those wind power generation companies who have a certificate from the power purchaser, that the power purchaser will have the necessary infrastructure ready and in place to evacuate all the power supplied by the applicant, will be eligible for the upfront tariff. The Authority observed that the upfront tariff required an unconditional certification from the power purchaser, however, the power purchaser while providing the aforesaid certification, in majority of cases, specified numerous stages and timelines by which it will be in a position to evacuate power from the various applicants of upfront tariff. The Authority observed that the interconnection availability dates specified by the power purchaser for some of the applicants of upfront tariff, were even beyond the commercial operations dates envisaged by these applicants or by the upfront tariff. The Authority also observed that although the certification initially provided by the power purchaser fulfilled the requirements of National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011 and determination of the Authority in the matter of upfront tariff dated April 24, 2013, however, in order to avoid any issues regarding evacuation of power it was decided by the Authority to settle this issue before grant of upfront tariff.

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3. The Authority took up the issue of evacuation of power with the power purchaser and vide letter no. NEPRA/CM/16/13 dated October 08, 2013 also brought the said issue to the attention of the Secretary, Ministry of Water and Power, with a request that a final comprehensive plan along with the power purchaser comments to provide connectivity for evacuation of 500 MW power may be provided. In response thereto, the power purchaser vide letter no. MD/NTDCL/4306-11 dated October 23, 2013 submitted that four power plants who have opted for the upfront tariff already fall in stage 2 and 3 of its power evacuation plan, whereas timeline for the remaining 300 MW can be crashed by six months. On the basis of confirmation provided by the power purchaser regarding availability of evacuation arrangements, applications of four wind power companies considered in stage 2 and 3 by the power purchaser were accepted by the Authority.

4. The power purchaser subsequently vide letter no. MD/NTDCL/PS/4403-13 dated December 09, 2013 communicated that the completion plans of transmission lines and grid stations have been revised so as to complete the whole project up to December 2015.

5. The Authority vide letter no. NEPRA/R/TRF-100-WPT/395-96 dated January 09, 2014 brought to the notice of the Secretary, Ministry of Water and Power that the power purchaser initially did not provide confirmation that it will have the capacity to evacuate power from wind power companies, except for the four companies whose upfront tariff applications have already been accepted by the Authority, within the maximum timeline for commencing commercial operations considered for the development of upfront tariff i.e. March 31, 2016. However, the power purchaser has recently changed its stance and has confirmed that it will have the capacity to evacuate power from number of other wind power companies by end of December 2015. The Authority informed the Secretary, Ministry of Water and Power that in case the power purchaser fails to meet its commitment regarding evacuation of power, then the relevant wind power companies may become entitled to claim penalties/liquidated damages/non project missed volumes, etc., by whatever name called, on account of default of the power purchaser in providing the interconnection facilities on the committed date. The Authority required the confirmation, that in case power purchaser fails to meet the target date, do they undertake that the penalties/liquidated damages/non project missed volumes, etc., by whatever name called, will be borne by the power purchaser. The power purchaser vide

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letter no. MD/COO/GM/CPPA/CE-II/MT-IV/NEPRA/4176-81 dated January 15, 2014 responded to the aforesaid letter of the Authority and submitted that it has issued certificates to ten companies as per their requests, clearly specifying the availability of grid by December 2015. It further submitted that the issue of application or otherwise of penalties pertains to commercial operations date (hereinafter referred to as "COD") which is function of achieving financial close by the sponsors and energy purchase agreement (hereinafter referred to as " EPA ") provisions.

6. The Authority not fully satisfied with the response of power purchaser again vide letter no. NEPRA/R/TRF-100-WPT/1305-06 dated February 07, 2014 brought to the knowledge of Secretary, Ministry of Water and Power that according to the standard EPA for upfront tariff, the purchaser is required to complete the interconnection works so as to be able to accept net delivered energy at the interconnection point to carry out the commissioning tests no later than 180 days prior to the scheduled COD. This stipulation when read in conjunction with the terms of upfront tariff means that the interconnection should be ready at least 180 days prior to March 31, 2016 and not by December 31, 2015. The Authority also informed that in case the power purchaser fails to meet its commitment regarding evacuation of power, it will have serious financial and business consequences. The power purchaser vide letter no. MD/COO/GM/CPPA/CE-II/MT-IV/NEPRA/4234-37 dated February 11, 2014 in response to the aforesaid letter submitted that it will be facilitating the upcoming wind power projects, opting for upfront tariff and achieving financial close by September 30, 2014, by providing them the infrastructure ready for testing within the stipulated time frame. Hence there would be least chances of liquidated damages/penalties on account of delay on the part of power purchaser. Furthermore, it pointed out that delay in meeting contractual milestones by either party, would be dealt with in terms of the EPA signed between the parties. The power purchaser reiterated its submissions, that power evacuation arrangements will be ready for the upcoming wind power projects, within the stipulated time frame, in a presentation given to the Authority on March 12, 2014. The Authority, after due consideration of all the relevant facts, has concluded that the power purchaser has confirmed the availability of power evacuation arrangements. The Authority has further decided 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

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the committed date, will not be allowed by the Authority to the power purchaser as a part of its tariff.

7. The Authority has noted that Tenaga has applied for granting upfront tariff on the basis of loan structure of 25% local loan and 75% foreign loan. The Authority has also noted that the AEDB vide letter no. B/3/1/TGL/07 dated July 09, 2013 has recommended Tenaga for grant of upfront tariff and in the said letter has also stated that the wind turbines proposed by Tenaga are internationally certified as per IEC standards. Further, in the said letter it has also been confirmed by AEDB that Tenaga is holding valid LOS for its 50 MW wind power project. The Authority furthermore noted that the power purchaser vide its letter no. GM/CPPA/CE-II/MT-IV/TGL/7917-21 received by the Authority on September 02, 2013 has certified that necessary infrastructure is expected to be ready to evacuate all the power supplied by Tenaga. The Authority hereby directs that the EPA, agreed between Tenaga and the power purchaser, shall be submitted to the Authority for review.

8. Considering the application along with other relevant information and documents, the Authority has decided to grant upfront tariff to Tenaga. The Authority has also seen that on a tariff petition filed by Tenaga under rule 3 of the National Electric Power Regulatory Authority (Tariff Standards and Procedure) Rules, 1998, the Authority has already issued tariff determination on April 26, 2012, for proposed wind power generation project of 49.50 MW installed capacity of Tenaga, therefore, the Authority has decided that this decision on application opting for upfront tariff, will supersede the tariff determination of Tenaga dated April 26, 2012.

9. <u>ORDER</u>

In supersession of the determination of National Electric Power Regulatory Authority dated April 26, 2012, in the matter of tariff petition filed by Tenaga Generasi Limited (the applicant), and exercise of powers under 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

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(Approval & Procedure) Regulations, 2011, the applicant is allowed to charge the following specified/approved tariff for delivery of electricity to the power purchaser:

REFERENCE TARIFF ON BOO BASIS

Years	O & M	Insurance	Return on equity	Principal repayment of debt	Interest	Total tariff
1	1.6040	0.7833	4.7622	4.8898	4.5644	16.6037
2	1.6040	0.7833	4.7622	5.2161	4.2382	16.6037
3	1.6040	0.7833	4.7622	5.5686	3.8856	16.6037
4	1.6040	0.7833	4.7622	5.9502	3.5041	16.6037
5	1.6040	0.7833	4.7622	6.3636	3.0907	16.6037
6	1.6040	0.7833	4.7622	6.8121	2.6422	16.6037
7	1.6040	0.7833	4.7622	7.2992	2.1551	16.6037
8	1.6040	0.7833	4.7622	7.8290	1.6253	16.6037
9	1.6040	0.7833	4.7622	8.4058	1.0485	16.6037
10	1.6040	0.7833	4.7622	9.0347	0.4196	16.6037
11 to 20	1.6040	0.7833	4.7622	-	-	7.1495
Levelized – Rs./kWh.						13.9730

Levelized tariff discounted at 10% per annum works out to US cents 14.3166/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 31% net annual plant capacity factor. Net annual energy generation supplied to the power purchaser in a year, in excess of 31% net annual plant capacity factor will be charged at the following tariffs:

Net annual plant capacity factor	% of the prevalent tariff
Above 31% to 32%	75%
Above 32% to 33%	50%

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Above 33% to 34%	25%
Above 34% to 35%	20%
Above 35%	10%

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 by September 30, 2014. The up-front tariff granted to the applicant will no longer remain applicable/valid, if financial close is not achieved by the applicant by September 30, 2014 or generation license is declined to the applicant.

v) The decision of the applicant to opt for upfront tariff is irrevocable.

vi) In the 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 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 years (20) from the commencement of commercial operations.

ix) The terms and conditions specified here in 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. 25% local loan plus 75% foreign loan

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and will not be subject to any further change, regardless of any subsequent change(s) in the financing structure, etc., except for the adjustment in accordance with the onetime adjustment mechanism, where applicable, and the application of relevant indexations/adjustments as detailed in this order.

The allowed tariff is split into two parts for the purposes of indexation(s)/adjustment(s) as follows:

Part 1 - Calculated on the basis of project financing structure of equity plus 100% foreign loan

REFERENCE TARIFF ON BOO BASIS

Tariff figures in Rs./kwh.

Years	O & M	Insurance	Return on equity	Principal repayment of debt	Interest	Total tariff
1	1.2030	0.5875	3.5177	3.9248	2.4372	11.6701
2	1.2030	0.5875	3.5177	4.1269	2.2351	11.6701
3	1.2030	0.5875	3.5177	4.3393	2.0227	11.6701
4	1.2030	0.5875	3.5177	4.5627	1.7993	11.6701
5	1.2030	0.5875	3.5177	4.7975	1.5645	11.6701
6	1.2030	0.5875	3.5177	5.0445	1.3175	11.6701
7	1.2030	0.5875	3.5177	5.3041	1.0579	11.6701
8	1.2030	0.5875	3.5177	5.5772	0.7848	11.6701
9	1.2030	0.5875	3.5177	5.8643	0.4977	11.6701
10	1.2030	0.5875	3.5177	6.1661	0.1959	11.6701
11 to 20	1.2030	0.5875	3.5177	-	-	5.3081
Indexation	PKR/US $ & US CPI	PKR/US $	PKR/US $	PKR/US $	PKR/US $ & LIBOR	/

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Indexations/adjustment for part 1 will be allowed in accordance with the mechanism for indexations/adjustment applicable for tariff calculated on the basis of project financing structure of equity plus 100% foreign loan as detailed in xiii (A) below.

Part 2 - Calculated on the basis of project financing structure of equity plus 100% local loan

REFERENCE TARIFF ON BOO BASIS

Tariff figures in Rs./kwh.

Years	O & M	Insurance	Return on equity	Principal repayment of debt	Interest	Total tariff
1	0.4010	0.1958	1.2445	0.9650	2.1273	4.9336
2	0.4010	0.1958	1.2445	1.0892	2.0031	4.9336
3	0.4010	0.1958	1.2445	1.2293	1.8629	4.9336
4	0.4010	0.1958	1.2445	1.3875	1.7048	4.9336
5	0.4010	0.1958	1.2445	1.5661	1.5262	4.9336
6	0.4010	0.1958	1.2445	1.7676	1.3247	4.9336
7	0.4010	0.1958	1.2445	1.9951	1.0972	4.9336
8	0.4010	0.1958	1.2445	2.2518	0.8405	4.9336
9	0.4010	0.1958	1.2445	2.5416	0.5507	4.9336
10	0.4010	0.1958	1.2445	2.8686	0.2237	4.9336
11 to 20	0.4010	0.1958	1.2445	-	-	1.8413
Indexation	PKR/US $ & US CPI	PKR/US $	PKR/US $	-	KIBOR	

Indexations/adjustment for part 2 will be allowed in accordance with the mechanism for indexations/adjustment applicable for tariff calculated on the

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basis of project financing structure of equity plus 100% local loan as detailed in xiii (B) below.

xi) Onetime adjustment for PKR/US$ exchange rate variation

Part 2 initially granted, will be subsequently adjusted, after 270 days of financial close of the applicant. The applicant shall make a request for allowing onetime adjustment within 15 days of adjustment becoming due i.e. after 270 days of its financial close.

The base amount for quarter 1 (as indicated in Annex-II) will be adjusted for exchange rate variation, after 270 days of the financial close of the applicant, 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-II) 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. 97.60

Note: After the revision of base amount of quarter 1, in accordance with the onetime adjustment mechanism stipulated above, the debt service schedule at

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Annex — II will be recalculated, on the same computation basis as already adopted, and revised principal repayment of debt and interest tariff components will be worked out for subsequent indexations, where applicable.

xii) <u>Pass-Through Items</u>

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., excluding adjustment for taxes imposed on dividend as stated below, will be allowed.

Withholding tax on dividends will also be allowed as a pass through item just like other taxes. The power purchaser shall make payment on account of withholding tax at the time of actual payment of dividend, on production of original receipts, subject to maximum of 7.5% of return on equity. In case the applicant 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 applicant is able to recover the same as a pass through from the power purchaser in future on

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the basis of the total dividend payout. Adjustment for variation in tax rate on dividend from 7.5% shall also be allowed as a pass through item by the power purchaser, after satisfying itself that tax rates have actually varied. 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.

xiii) Indexations/adjustment

The tariff allowed to the applicant, after onetime adjustment where applicable, 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 mode of indexations/adjustment will be as under:

A) INDEXATIONS/ADJUSTMENT APPLICABLE TO PART 1 FOR TARIFF CALCULATED ON THE BASIS OF PROJECT FINANCING STRUCTURE OF EQUITY PLUS 100% FOREIGN LOAN

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

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$US\ CPI_{(REV)}$	=	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 229.601 US CPI (all urban consumers) for the month of December 2012 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 97.60

b) Adjustment of insurance component

In case of insurance denominated in US $, insurance cost component of tariff will be adjusted only on account of US $/PKR exchange rate variation annually, not exceeding the insurance cost actually incurred. For availing this adjustment, the applicant will have to substantiate through authentic documentary evidence that the insurance cost allowed to it (from COD to date) does not exceed the insurance cost actually incurred.

c) Indexations applicable to return on equity

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

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Where:

$ROE_{(FREV)}$	=	The revised applicable return on equity tariff component indexed with exchange rate parity
$ROE_{(FREF)}$	=	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 97.60

d) <u>Indexations applicable to principal repayment of debt</u>

$$P_{(FREV)} = P_{(FREF)} * ER_{(REV)} / ER_{(REF)}$$

Where:

$P_{(FREV)}$	=	The revised applicable principal repayment of debt tariff component indexed with exchange rate parity
$P_{(FREF)}$	=	The reference principal repayment of debt tariff component for the relevant period
$ER_{(REV)}$	=	Revised TT & OD selling rate of US Dollar as notified by the National Bank of

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Pakistan as at the last day of the preceding quarter

$ER_{(REF)}$	=	Reference TT & OD selling rate of US dollar – current reference 97.60

e) <u>Indexations applicable to interest after achieving COD</u>

$$I_{(FREV)} = [\, I_{(FREF)} * ER_{(REV)} / ER_{(REF)}] + [\, B_{(FREF)} * ER_{(REV)} * (LIBOR_{(REV)} - 0.301\%)/135{,}780{,}000]$$

Where:

$I_{(FREV)}$	=	The revised applicable interest tariff component indexed with 3 months LIBOR and exchange rate parity
$I_{(FREF)}$	=	The reference interest 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 97.60
$B_{(FREF)}$	=	The base amount (as indicated in Annex – I) on a quarterly basis. Quarter 1 shall commence on the commercial operations date (i.e. the first figure will be used for calculation purposes of interest for the

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first quarter after COD)

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

B) INDEXATIONS/ADJUSTMENT APPLICABLE TO PART 2 FOR TARIFF CALCULATED ON THE BASIS OF PROJECT FINANCING STRUCTURE OF EQUITY PLUS 100% LOCAL LOAN

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 CPI $_{(REF)}$	=	Reference US CPI (all urban consumers) — Current reference 229.601 US CPI (all urban consumers) for the month of December 2012 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

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$ER_{(REF)}$	=	Reference TT & OD selling rate of US dollar — current reference 97.60

b) Adjustment of insurance component:

In case of insurance denominated in US $, insurance cost component of tariff will be adjusted only on account of US $/PKR exchange rate variation annually, not exceeding the insurance cost actually incurred. For availing this adjustment, the applicant will have to substantiate through authentic documentary evidence that the insurance cost allowed to it (from COD to date) does not exceed the insurance cost actually incurred.

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 97.60

d) Indexations applicable to interest:

$$I_{(LREV)} = I_{(LFIN)} + [B_{(LFIN)} * (KIBOR_{(REV)} - 9.29\%)/135,780,000]$$

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Where:

$I_{(LREV)}$	=	The revised applicable interest tariff component indexed with 3 months KIBOR
$I_{(LFIN)}$	=	The interest tariff component after allowing onetime adjustment for exchange rate parity
$B_{(LFIN)}$	=	The revised base amount (as indicated in Annex-II) on quarterly basis after allowing onetime adjustment for exchange rate parity. Quarter 1 shall commence on the commercial operations date (i.e. the first figure will be used for calculation purposes of interest for the first quarter after COD)
$KIBOR_{(REV)}$	=	Revised 3 months KIBOR as at the last day of the preceding quarter

Note:

Above described indexations/adjustments will be approved and announced by the Authority within fifteen days of the applicant's request for indexations/adjustments in tariff in accordance with the requisite mechanisms stipulated herein.

xiv) 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.

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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 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 new, is of a quality acceptable to it and is the same as certified to be of acceptable quality by the AEDB.

- The Energy Purchase Agreement should stipulate terms and conditions, regarding periodic physical inspection of plant and machinery, ensuring that the power plant of the applicant is properly maintained and continues to supply energy for the entire tariff control period of 20 years.

- Pre COD sale of electricity is allowed to the applicant, subject to the terms and conditions of EPA, 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 April 24, 2013 and National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure)

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Regulations, 2011, may be dealt with as per the standard terms of the Energy Purchase Agreement.

AUTHORITY

Addl. Note attached.

22/4/2014

(Habibullah Khilji)
Member

22/4/14

(Maj. (R) Haroon Rashid)
Member

22 4 XIV

(Khawaja Muhammad Naeem)
Vice Chairman

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Tenaga Generasi Limited
Table for Base amount (Foreign Financing)

Relevant quarter	Base amount (in million US $)
1	69,152,339
2	67,812,876
3	66,456,499
4	65,082,994
5	63,692,145
6	62,283,734
7	60,857,537
8	59,413,332
9	57,950,889
10	56,469,980
11	54,970,370
12	53,451,824
13	51,914,103
14	50,356,964
15	48,780,162
16	47,183,450
17	45,566,574
18	43,929,282
19	42,271,315
20	40,592,412
21	38,892,308
22	37,170,737
23	35,427,426
24	33,662,101
25	31,874,485
26	30,064,296
27	28,231,249
28	26,375,055
29	24,495,421
30	22,592,053
31	20,664,650
32	18,712,908
33	16,736,521
34	14,735,178
35	12,708,562
36	10,656,355
37	8,578,234
38	6,473,871
39	4,342,936
40	2,185,092

Note: According to the applicant's loan structure, foreign loan is 75 % of its total loan.

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Tenaga Generasi Limited
Debt Servicing Schedule For Indexations Only (Local Loan)

Relevant Quarter	Base amount	Repayment	Interest @ 9.29% + 3% spread	Closing Balance	Principal Repayment of debt Rs./kwh.	Interest Rs./kwh.
1	2,398,120,508	31,285,541	73,682,253	2,366,834,966	0.9650	2.1273
2	2,366,834,966	32,246,790	72,721,004	2,334,588,176		
3	2,334,588,176	33,237,572	71,730,222	2,301,350,604		
4	2,301,350,604	34,258,797	70,708,997	2,267,091,808		
5	2,267,091,808	35,311,398	69,656,396	2,231,780,409	1.0892	2.0031
6	2,231,780,409	36,396,341	68,571,453	2,195,384,069		
7	2,195,384,069	37,514,618	67,453,176	2,157,869,450		
8	2,157,869,450	38,667,255	66,300,539	2,119,202,195		
9	2,119,202,195	39,855,307	65,112,487	2,079,346,888	1.2293	1.8629
10	2,079,346,888	41,079,861	63,887,933	2,038,267,028		
11	2,038,267,028	42,342,040	62,625,754	1,995,924,988		
12	1,995,924,988	43,642,999	61,324,795	1,952,281,989		
13	1,952,281,989	44,983,930	59,983,864	1,907,298,059	1.3875	1.7048
14	1,907,298,059	46,366,061	58,601,733	1,860,931,998		
15	1,860,931,998	47,790,658	57,177,136	1,813,141,340		
16	1,813,141,340	49,259,026	55,708,768	1,763,882,314		
17	1,763,882,314	50,772,510	54,195,284	1,713,109,804	1.5661	1.5262
18	1,713,109,804	52,332,495	52,635,299	1,660,777,309		
19	1,660,777,309	53,940,411	51,027,383	1,606,836,898		
20	1,606,836,898	55,597,730	49,370,064	1,551,239,167		
21	1,551,239,167	57,305,971	47,661,823	1,493,933,197	1.7676	1.3247
22	1,493,933,197	59,066,696	45,901,097	1,434,866,500		
23	1,434,866,500	60,881,521	44,086,273	1,373,984,979		
24	1,373,984,979	62,752,105	42,215,688	1,311,232,874		
25	1,311,232,874	64,680,164	40,287,630	1,246,552,710	1.9951	1.0972
26	1,246,552,710	66,667,462	38,300,332	1,179,885,248		
27	1,179,885,248	68,715,820	36,251,974	1,111,169,428		
28	1,111,169,428	70,827,113	34,140,681	1,040,342,315		
29	1,040,342,315	73,003,276	31,964,518	967,339,039	2.2518	0.8405
30	967,339,039	75,246,302	29,721,492	892,092,737		
31	892,092,737	77,558,245	27,409,549	814,534,492		
32	814,534,492	79,941,222	25,026,572	734,593,270		
33	734,593,270	82,397,416	22,570,378	652,195,855	2.5416	0.5507
34	652,195,855	84,929,076	20,038,718	567,266,778		
35	567,266,778	87,538,522	17,429,272	479,728,256		
36	479,728,256	90,228,143	14,739,651	389,500,113		
37	389,500,113	93,000,403	11,967,391	296,499,710	2.8686	0.2237
38	296,499,710	95,857,840	9,109,954	200,641,869		
39	200,641,869	98,803,073	6,164,721	101,838,797		
40	101,838,797	101,838,797	3,128,997	(0)		

Notes:

1. Denominator for tariff component calculation : 135,780,000
2. According to the applicant's loan structure, local loan is 25 % of its total loan.

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Additional Note of Member (Sindh) in the matter of upfront tariff for Wind Power Projects

The Authority fixed the Cap of 500 MW for upfront tariff in respect of Wind Power Plants, keeping in view incomplete studies regarding absorption of this renewable energy in system and the same have not been completed as yet.

2) NTDC in its different correspondences and presentations to the Authority, submitted that the interconnection and dispersal arrangement for the Jhampir and Gharo wind-corridors would be completed in four stages (i.e. up to December 2016). Later on NTDC decided to complete the above mentioned scope of work in three stages (i.e. up to Dec-2015).

3) Due to the changed position of NTDC in issuing confirmation certificate for availability of grid to project sponsors at different times, created ambiguity in completion of applications as stipulated in the upfront regulation and other applicable documents.

4) In view of above, I am of the considered view that NTDC must have been given an explanation as to why it had been changing its position in issuing confirmation certificates for grid-availability at different times?

22/4/2014

HABIBULLAH KHILJI
MEMBER (SINDH)
April 23, 2014

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