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National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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No. NEPRA/R/ADG(Trf)/TRF-467/IPWP-2019/2874-2876
January 21, 2021

Subject: **Decision of the Authority in the matter of Motion for Leave for Review filed by Iran-Pak Wind Power (Pvt.) against the Tariff Determination dated August 18, 2020 (Case No. NEPRA/TRF-467/IPWP-2019)**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annex-I, II & III (18 Pages) in Case No. NEPRA/TRF-467/IPWP-2019.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.
3. Order of the Authority along with Annex- I, II & III of the Decision is to be notified in the official Gazette.

Enclosure: As above


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(Syed Safer Hussain)

Secretary
Ministry of Energy (Power Division)
'A' Block, Pak Secretariat
Islamabad

- CC: 1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'A' Block, Pak Secretariat, Islamabad



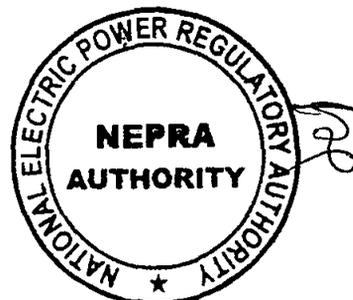
**DECISION OF THE AUTHORITY IN THE MATTER OF MOTION FOR LEAVE FOR REVIEW FILED BY
IRAN-PAK WIND POWER (PVT) LIMITED AGAINST THE TARIFF DETERMINATION DATED AUGUST
18, 2020**

1. Iran-Pak Wind Power (Pvt.) Limited (the "Petitioner" or "IPWPPL") vide letter dated August 25, 2020 filed a Motion for Leave for Review (the "Review Motion") against the Tariff Determination ("Tariff Determination" or "Impugned Determination") issued by National Electric Power Regulatory Authority (the "Authority" or "NEPRA") on August 18, 2020 in respect of IPWPPL's 50 MW wind power project (the "Project"), to be setup at Jhimpir, District Thatta, Sindh. The Authority through Impugned Determination approved tariff of Rs. 5.2549/kWh for IPWPPL along with terms and conditions.
2. The Review Motion is filed by IPWPPL under Rule 16(6) of the NEPRA (Tariff Standards and Procedure) Rules, 1998 (the "Tariff Rules") read with NEPRA (Review Procedure) Regulations, 2009 (the "Review Regulations") and provisions of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 ("NEPRA Act") and the rules and regulations made thereunder.

Proceedings

3. The Authority admitted the Review Motion on September 8, 2020 and decided to provide an opportunity of hearing to the Petitioner. The hearing in the matter was scheduled for September 23, 2020 through Zoom online and in this regard. Notices of hearing were sent to relevant stakeholders and to IPWPPL on September 11, 2020. The copy of the Review Motion was also placed on NEPRA website for information of relevant stakeholders. The hearing was conducted as per schedule which was attended by IPWPPL and the representative of Central Power Purchasing Agency Guarantee Limited ("CPPAGL"). The Petitioner has sought review on the following grounds:

- i) EPC Cost
- ii) Project Development Cost
- iii) Financial Fee and Charges
- iv) Return on Equity
- v) Bonus Energy Mechanism
- vi) Capacity Factor
- vii) O&M Cost
- viii) Time to Financial Close
- ix) Adjustment on account of NPMV



3. Following are the arguments/grounds as submitted by the Petitioner in the review motion and during the course of hearing for the review of the above listed parameters.

EPC Cost

4. According to the Petitioner, the Authority allowed EPC cost of around USD 46.12 million to the company against the claim of USD 78.901 million. The Petitioner submitted that while determining EPC cost in the instant case, the Authority relied upon international publications (issued in 2019) which predicted prices of wind turbines for 1st half of 2020, however, the COVID-19 pandemic and the resultant economic meltdown have increased challenges for financing and development of new projects, therefore, the Authority should consider higher costs associated with these challenges when pricing EPC. IPWPPL submitted that cases of particular countries cannot be made exact reference for Pakistan primarily because of difference in technology, hidden subsidies and tax credits. IPWPPL also stated that according to Bloomberg New Energy Finance ("BNEF"), the turbine price used by the Authority is for 4.1 MW series which may not be applicable for the turbine of 2.0 MW, being installed by the Petitioner. The Petitioner also submitted that the Authority allowed an average of USD 58 million EPC cost for 12 Wind Power Projects ("WPPs") in November 2018 and February 2019, and that 7 out of these 12 projects use the same technology as is being used in the instant case, meaning a slash of 20% (10% per annum in 2 years) in the case of IPWPPL. According to the Petitioner, a 3% yearly reduction in prices is reported by International Renewable Energy Agency ("IRENA") since 2010, therefore, the 20% reduction in EPC prices in the instant case compared with the previously determined cost of 7 WPPs is unjustified. The Petitioner further highlighted that as a result of inflation, cost of commodities have also gone up in the last 2 years. The local CPI, according to the Petitioner has increased by 18.8% and US CPI gone up at 2.3% over the past 2 years. Thus, according to the Petitioner a 20% reduction in EPC is unjustified. Given the above, IPWPPL has submitted that the EPC cost determined by the Authority in the instant case has rendered the project unviable and requested the Authority to allow USD 54.5 million instead.

Project Development Cost

5. The Authority allowed the Project Development Cost ("PDC") of USD 1.667 million to IPWPPL against the claim of USD 3.515 million. In the Review Motion, the Petitioner has requested to allow USD 2.5 million under this head. IPWPPL submitted that the instant Project was conceived back in 2006 and the delays in implementation were primarily due to Government entities. In addition, the Petitioner submitted that the Authority allowed PDC of USD 2.5 million (or Rs. 300 million at US/Rs. 120) to previous 15 WPPs from August to November 2018 and reduced the same to USD 1.677 million (or Rs. 283 million at PKR/USD of 168.75) without providing any basis. Besides above, according to the Petitioner, a sizable



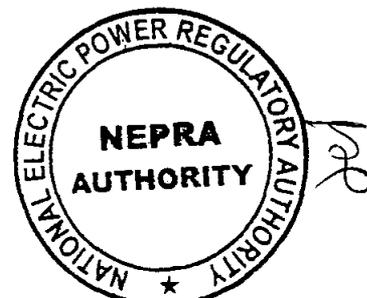
portion of the PDC is remitted to foreign consultants/advisors, therefore, any commitment made by the Petitioner in 2018 would now cost 29% more due to devaluation of PKR over that time.

Financing Fee & Charges

6. IPWPPL submitted that the Authority has allowed it USD 0.768 million under the captioned head against the claimed amount of USD 1.862 million. The approved amount was calculated at 2% of debt portion of project cost (excluding financial charges and interest during construction). According to the Petitioner, the Authority approved the captioned charges at 2.5% the debt portion of capital cost for 15 WPPs between August to November 2018 after the issuance of NEPRA (Benchmarks for Tariff Determination) Guidelines, 2018 ("Benchmarking Guidelines"), and subsequently, neither any basis for reduction was provided nor any evidence suggests that this cost item has reduced over this time period. The Petitioner also submitted that it is unjustified to determine financial charges as a function of project cost less financial charges and interest during construction as debt is based on the total project cost which includes both of the above said heads. Also, according to the Petitioner, it has become impossible for smaller projects to manage financial charges within this benchmark. Given the above, the Petitioner has requested the Authority to allow financing fee & charges at 2.5% of total debt.

Return on Equity

7. The Petitioner has requested Return on Equity ("ROE") of 14% against the determined ROE at 13%. According to the Petitioner, issuance of huge number of Letter of Intent ("LOIs") by the Sindh Government should not be the basis of reduction of ROE. The Petitioner also highlighted that Withholding Tax (WHT) on dividends has increased from 7.5% to 15% and since the Authority has not allowed WHT as pass-through item in the instant case, therefore, the allowed ROE is reduced further. Besides that, according to the Petitioner, the sponsor is required to open contingency L/C to cover debt service and cost overruns, which also has an adverse impact on the sponsor's ROE. The Petitioner estimates a total of 5% drop in ROE due to these factors. The Petitioner also stated that it is unfair to share annual profits in excess of the approved ROE when the Petitioner assumes all the risk, including wind risk and investment risk. IPWPPL also requesting to share the claw back formula. The Petitioner has also objected to the Authority's decision regarding payment of ROE component on annual basis while stating that this step does not allow the lenders to approve the project for debt commitment. Given the above, the Petitioner has requested to (a) allow 14% ROE net of WHT (b) remove the condition regarding sharing of excess profits beyond allowed ROE, (c) remove the condition of repayment of ROE at the end of each year.





Bonus Energy Mechanism

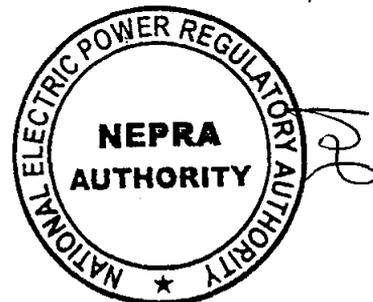
8. According to the Petitioner, the mechanism for bonus energy sharing has been changed heavily by the Authority in the favor of the power purchaser. According to the Petitioner, while the upside has been restricted to 40% in the instant case vs 100% for the 2018 determinations, the company has not protection on the downside. This, according to the Petitioner, will discourage efficiency and hamper future investments in the sector. Given the above, the Petitioner has requested to keep bonus energy mechanism the same as was approved in 2018 determinations.

O&M Costs

9. The Petitioner has requested USD 38,000/MW/year (USD 1.9 million, 25% local, 75% foreign) against the determined O&M cost of USD 21,000/MW/year (USD 1.05 million 50% local, 50% foreign). According to the Petitioner, the Authority has not provided any justification for reduction of O&M cost of USD 23,000/MW/Year determined in 2018 to USD 21,000/MW/Year allowed in the instant case. Further, the Petitioner submitted that the Authority has introduced following new mechanism in respect of the O&M cost:

"The Authority has decided to allow O&M cost into local and foreign components in the ratio of 50:50. Additionally, the Authority has decided that the approved O&M shall be applicable for first two years of operations. Afterward, the Authority may consider making revisions in the O&M cost, while capping the allowed prevailing level, anytime during the tariff control period. Those revisions may also entail changing the mix of the approved O&M cost (local and foreign) as well as the indexation mechanism (indices, frequency etc.). For that purpose, the Authority may also direct the Petitioner to carry out the competitive bidding to select the contractor for the provision of the O&M cost."

10. According to the Petitioner, similar clause was included in the determinations of 3 WPPs in August 2018, but the condition of competitive bidding for O&M was removed later after the Authority acknowledged lenders require getting O&M done through the OEMs during the debt servicing period. Given the above, the Petitioner has requested the Authority to (1) revalue the O&M costs to the level it awarded to the above referred 16 WPPs, (2) remove the condition that approved O&M cost will be allowed for first two years only as well as the provision of making any subsequent revisions and (3) remove the condition of competitive bidding for O&M.



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Capacity Factor

11. The Petitioner submitted that it had originally requested 38% capacity factor on the basis of Wind Resource and Energy Yield Assessment Report of the Project while the Authority allowed 44.5% capacity factor. The Petitioner has requested the Authority to provide the basis of arriving at 44.5% capacity factor. According to the Petitioner, the technology and hub height of the instant project are the same as that of 5 WPPs for which Authority determined capacity factor of 38% in November 2018. Therefore, according to the Petitioner, increasing the capacity factor on the grounds that there has been any change in turbine design through improvement in hub height, nameplate capacity or enhancement in rotor diameters is unjustified. Given the above, the Petitioner has requested to determine its tariff on the basis of capacity factor of 38%.

Adjustments on account of time to achieve Financial Close

12. According to the Petitioner, the Authority has allowed it one year time to achieve financial close. The Petitioner has requested the Authority to allow one-year time of achieving financial close from the date of this Review Motion's decision less 10 days allowed to the Petitioner for filing of the said motion.

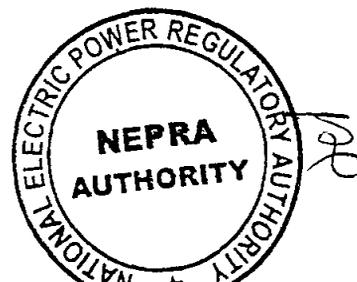
Adjustments on account of NPMV

13. The Petitioner has submitted that the Authority has overlooked its request regarding Non Project Missed Volume ("NPMV") in its tariff petition. IPWPPL requested to allow compensation, in case of inability of the power purchaser to evacuate power produced by the Project, on the same basis as per which penalties are imposed on it as the curtailment of energy is continued by the power purchaser, due to grid constraints, especially during summer months (high wind season).

Comments of CPPAGL

14. CPPAGL vide letter dated September 21, 2020 as well as during the hearing provide following comments:

"It is submitted that all of the 5 wind power projects namely Moro Power Company, Sino Well, Shafi Energy, Iran-Pak Wind Power and Norinco International Thatta Power fall under category-III of the CCoE decisions dated March 29, 2019, April 19, 2019 and June 16, 2020 whereby CCoE directed that "Projects that have been issued LOI prior to the expiry of RE Policy, 2006 on March 8, 2018, but have not received a tariff from NEPRA, may be allowed to proceed ahead subject to becoming successful in the competitive bidding process to be undertaken by AEDB specifically designed for each technology under this category



based on the quantum ascertained for each technology by Indicative Generation Capacity Expansion Plan (IGCEP) by NTDCL."

The above mentioned decisions of CCoE is binding on CPPAGL. Therefore, stance of this office as communicated vide letter referred may be considered for instant determination also. Furthermore, it is reiterated that tariff be awarded to subject WPPs through process of competitive bidding under ARE Policy 2019."

Analysis and Decision of the Authority

15. The Authority noted that most of the submissions made with respect to aforementioned grounds/parameters have already been deliberated upon by the Authority in the Impugned Determination and that the Petitioner has neither produced new and important documentary evidence in support of its claim nor pointed out any error or mistake therein as required under Review Regulations. That is, regarding EPC cost, the Authority noted that while requesting for additional amount, the Petitioner failed to produce new documentary evidence to support the same. Likewise, in the case of PDC, the grounds raised by the Petitioner were already considered in the Impugned Determination wherein it is clearly stated that PDC, as considered rationale by NEPRA, was allowed. While determining Financing Fee & Charges, the Authority approved costs in line with its Benchmark for Tariff Determination Guidelines, 2018, which were issued well in advance and were applicable on all subsequent projects including the instant case. Regarding O&M costs, the impact of inflation (both foreign and local) was duly taken into account while approving the amount of USD 21,000/MW/Year. About the ROE, the Authority considered the arguments of the petitioner, however, decided to maintain the approved figure of 13%. The Authority also considered the request of IPWPPL of allowing time of one year to achieve financial close from Review Decision, however, decided not to accede therewith. With regards to NPMV, the Authority is of the view that the aforesaid matter may be negotiated between the power purchaser and the Petitioner while signing the EPA. In case of any conflict, the said issue may be raised at the forum, considered to be appropriate, while following the relevant provisions of law.

16. With respect to the condition of revision of the O&M cost (amount, mix, indexation) through, inter alia, competitive bidding, the Authority noted that since 2013, reduction in the approved O&M costs to the tune of around 50% has been made in light of the decreasing O&M cost trends that occurred across the world primarily due to the increase in competition in this industry. The Authority noted that this decrease may continue in the future as well, therefore, it may not be considered appropriate and justified to let the approved O&M cost remain fixed for the whole tariff term. However, the Authority noted that it is in the process

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of developing the legal framework for the review of O&M cost through, inter alia, competitive bidding and this matter shall be governed under that document.

17. With respect to payment of return on equity components on monthly instead of yearly basis, it is viewed that the Petitioner has put forth sufficient reasons and the Authority has decided to approve monthly payment of the said components. For that purpose, the tariff being approved through the instant decision has been computed taking into account the monthly payments of return on equity components such that annual rate comes out as 13%. Regarding the request of the Petitioner to disclose the mechanism of claw back, the Authority noted that it is in the process of developing the related legal framework wherein the said mechanism shall be stated and this matter then shall be governed under that document.
18. The Authority has noted that the capacity factor approved in the Impugned Determination was assessed by NEPRA using the standard tools. One of the arguments put forth by the Petitioner was that capacity factor should be approved based on studies submitted to NEPRA. The Authority noted that it was analyzed and stated in the Impugned Determination that the results presented in the study, as submitted by IPWPPL, are on the lower side. It is found that a number of operational wind power plants that submitted studies of achieving annual capacity factor of not more than 34-35% have agreed on producing energy to the level of 40-42% (90% probability level) in their financing documents. This actually strengthens the position of the Authority that the estimated energy number, as stated in the WRAs submitted to NEPRA, are conservative. Nevertheless, the Authority has also considered the submissions put forth by the Petitioner with respect to bankability of the Project and has decided to approve the tariff of IPWPPL based on capacity factor 39%. However, keeping in view the assessed potential of higher generation, the Authority has decided to approve the following sharing mechanism.

Net Annual Plant Capacity Factor	% of prevalent tariff allowed to power producer
Upto 44.5%	-
44.5% to 46.5%	10%
46.5% to 47.5%	20%
47.5% to 48.5%	30%
Above 48.5%	40%



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19. ORDER

In pursuance of section 7(3)(a) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 read with NEPRA (Tariff Standards & Procedure) Rules, 1998, the Authority hereby determines and approves the following generation tariff along with terms and conditions for Iran-Pak Wind Power (Pvt.) Limited (IPWPPL) for its 50 MW wind power project for delivery of electricity to the power purchaser:

- Levelized tariff works out to be Rs. 5.9214/kWh (US Cents 3.5090/kWh).
- The tariff has been worked out on Build, Own and Operate basis.
- EPC cost of USD 46.120 million has been approved.
- PDC cost, including cost of land, of USD 1.677 million has been approved.
- Insurance during construction at the rate of 0.5% of the EPC cost has been allowed.
- Financing fee & charges at the rate of 2.0% of the debt portion of the capital cost has been approved.
- Debt to Equity ratio of 80:20 has been approved.
- Financing mix of 50% foreign and 50% local has been used.
- The cost of debt of 3 month LIBOR (0.302%) + spread (4.25%) has been used for foreign financing.
- The cost of debt of 6% (SBP Scheme) has been used for local financing.
- Debt Repayment period of 10 years has been taken into account for local financing under SBP Scheme.
- Debt Repayment period of 13 years has been taken into account for foreign financing.
- Annual ROE & ROEDC of 13% has been allowed.
- Net Annual Plant Capacity Factor of 39% has been approved.
- O&M Cost of USD 21,000 per MW per year has been approved.
- Insurance during Operation has been calculated as 0.4% of the allowed EPC Cost.
- Reference Exchange Rates of 168.75 PKR/USD has been used.
- Construction period of fifteen (15) months has been used for the workings of ROEDC and IDC.
- IDC and ROEDC have been worked out using following drawdown schedule:

Quarter 1	20%
Quarter 2	20%
Quarter 3	20%

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Quarter 4	20%
Quarter 5	20%

- Detailed component wise tariff is attached as **Annex-I** of this decision.
- Debt Servicing Schedule for local loan is attached as **Annex-II** of this decision.
- Debt Servicing Schedule for foreign loan is attached as **Annex-III** of this decision.

A. One Time Adjustments at COD

- The EPC cost shall be verified and adjusted at actual considering the approved amount as the maximum limit. Applicable foreign portion of the EPC cost will be adjusted at COD on account of variation in PKR/USD parity during the construction period, on production of authentic documentary evidence by the Petitioner to the satisfaction of the Authority. The adjustment in applicable portion of the approved EPC cost shall be made only for the currency fluctuation against the reference parity values.
- The Petitioner has submitted M/s Det Norske Veritas certification No. TC-231903-A-3 dated July 01, 2015 about the design, specification and country of origin of various components of the wind turbine to be installed for the Project. At the time of COD stage tariff adjustments, the Petitioner will have to provide a confirmation from the EPC Contractor as to the fullest compliance of the equipment having same design and origin of manufacture as given in the type certificate. Where needed, the bill of lading and other support documents will also have to be submitted.
- PDC, Insurance during construction and Financing fee & charges shall be adjusted at actual at the time of COD considering the approved amount as the maximum limit. The amounts allowed on these accounts in USD will be converted in PKR using the reference PKR/USD rate of 168.75 to calculate the maximum limit of the amount to be allowed at COD.
- Duties and/or taxes, not being of refundable nature, relating to the construction period directly imposed on the company up to COD will be allowed at actual upon production of verifiable documentary evidence to the satisfaction of the Authority.
- The tariff has been determined on debt : equity ratio of 80 : 20. The tariff shall be adjusted on actual debt : equity mix at the time of COD, subject to equity share of not more than 20%. For equity share of more than 20%, allowed ROE shall be neutralized for the additional cost of debt : equity ratio.



- IDC will be recomputed at COD on the basis of actual timing of debt draw downs (for the overall debt allowed by the Authority at COD) for the project construction period of 15 months starting from the date of financial close. For foreign loan, IDC shall also be allowed adjustment for change in applicable LIBOR.
- ROEDC will be adjusted at COD on the basis of actual equity injections (within the overall equity allowed by the Authority at COD) during the project construction period of 15 months from the date of financial close.
- For foreign and local loans, the savings in the approved spreads shall be shared between the power purchaser and power producer in the ratio of 60:40.

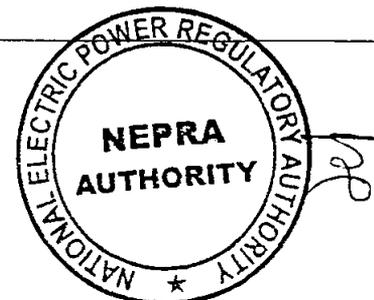
B. Indexations during Operations

ROE, ROEDC, Debt Servicing and O&M components shall be allowed adjustment on quarterly basis starting from 1st July, 1st October, 1st January and 1st April. Insurance shall be allowed adjustment on yearly basis starting from either 1st July or 1st January. The indexation mechanisms are given hereunder:

i) Operation and Maintenance Costs

O&M components of tariff shall be adjusted based on revised rates of local Inflation (CPI) as notified by Pakistan Bureau of Statistics, foreign inflation (US CPI) as notified by US Bureau of Labour Statistics and TT&OD selling rate of US Dollar as notified by National Bank of Pakistan according to the following formula;

$F. O\&M_{(REV)}$	=	$F. O\&M_{(REF)} * US\ CPI_{(REV)} / US\ CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$
$L. O\&M_{(REV)}$	=	$L. O\&M_{(REF)} * CPI_{(REV)} / CPI_{(REF)}$
Where;		
$F. O\&M_{(REV)}$	=	The revised O&M Foreign Component of Tariff
$L. O\&M_{(REV)}$	=	The revised O&M Local Component of Tariff
$F. O\&M_{(REF)}$	=	The reference O&M Foreign Component of Tariff
$L. O\&M_{(REF)}$	=	The reference O&M Local Component of Tariff
$US\ CPI_{(REV)}$	=	The revised US CPI (All Urban Consumers)
$US\ CPI_{(REF)}$	=	The reference US CPI (All Urban Consumers) of 256.394 for the month of May, 2020
$CPI_{(REV)}$	=	The revised CPI (General)
$CPI_{(REF)}$	=	The reference CPI (General) of 268.25 for the month of May, 2020



ER _(REV)	=	The revised TT & OD selling rate of US dollar
ER _(REF)	=	The reference TT & OD selling rate of RS. 168.75/USD

Note: (i) The reference index of CPI shall be revised for making the required adjustments in local O&M component at the time of COD. For the adjustment of local O&M component at COD, the revised CPI General value for the middle month of preceding quarter prior to the date of COD shall be considered. Thereafter, the CPI value taken at COD shall become reference for subsequent adjustments in the local O&M component.

(ii) The reference indices of US CPI and exchange rate shall be revised for making the required adjustments in foreign O&M component at the time of COD. For the adjustment of foreign O&M component at COD, the revised US CPI for the middle month of preceding quarter prior to the date of COD shall be considered. The revised exchange rate for the last day of the preceding quarter prior to the date of COD shall be considered. Thereafter, the values of US CPI and exchange rates taken at COD shall become reference for subsequent adjustments in the foreign O&M component.

ii) Insurance during Operation

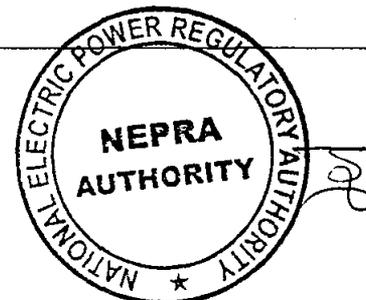
The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser, not exceeding 0.4% of the approved EPC cost, will be treated as pass through. Insurance component of reference tariff shall be adjusted annually as per actual upon production of authentic 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 @ 0.4% of approved EPC Cost at Rs. 168.75/USD
P _(Act)	=	Actual premium or 0.4% of the approved EPC Cost converted into Pak Rupees on exchange rate prevailing on 1 st day of the insurance coverage period whichever is lower

iii) Return on Equity

The ROE (ROE + ROEDC) component of the tariff will be adjusted quarterly on account of change in PKR/USD parity. The variation relating to these components shall be worked out according to the following formula:

ROE _(Rev)	=	$ROE_{(Ref)} * ER_{(Rev)} / ER_{(Ref)}$
Where;		



$ROE_{(Rev)}$	=	Revised ROE Component of Tariff
$ROE_{(Ref)}$	=	Reference ROE Component of Tariff
$ER_{(Rev)}$	=	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 Rs. 168.75/USD

Note: The reference tariff component shall be revised after making the required adjustments at the time of COD.

iv) **Indexations applicable to debt**

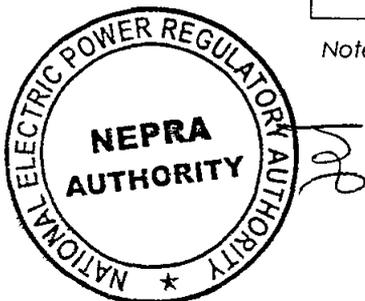
For foreign debt, respective principal and interest components will be adjusted on quarterly (bi-annual/annual, if applicable) basis, on account of revised TT & OD selling rate of US Dollar, as notified by the National Bank of Pakistan as at the last day of the preceding period, over the applicable reference exchange rate as approved at COD.

v) **Variations in LIBOR**

The interest part of tariff component for the foreign loan shall also be subject to variation in interest rate as a result of variation in LIBOR according to the following formula:

ΔI	=	$P_{(REV)} * (LIBOR_{(REV)} - 0.3020\%) / 4$
Where;		
ΔI	=	The variation in interest charges applicable corresponding to variation in 3 month LIBOR. ΔI can be positive or negative depending upon whether 3 month LIBOR (REV) per annum > or < 0.3020%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment.
$P_{(REV)}$	=	The outstanding principal (as indicated in the attached debt service schedule to this order), at the relevant quarterly calculations date. Quarter 1 shall commence on the COD (i.e. the first figure will be used for the purposes of calculation of interest for the first quarter after COD).
$LIBOR_{(REV)}$	=	Revised 3 month LIBOR as at the last day of the preceding quarter.

Note: The reference tariff component shall be revised after making the required adjustments at the time of COD. These variations may also be approved on



biannually/yearly basis depending on the final terms approved at the time of COD.

C. Terms and Conditions

The following terms and conditions shall apply to the determined tariff:

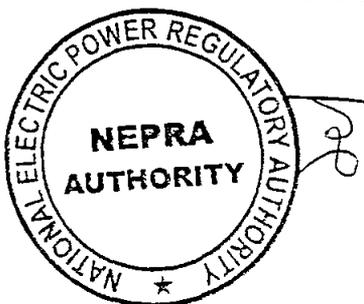
- All plant and equipment shall be new and of acceptable standards. The verification of the plant and equipment will be done by the Independent Engineer at the time of the commissioning of the plant duly appointed by the power purchaser.
- This tariff will be limited to the extent of net annual energy generation supplied to the power purchaser up to 39% net annual plant capacity factor. Net annual energy generation supplied to the power purchaser in a year, in excess of 39% net annual plant capacity factor will be charged at the following tariffs:

<u>Net annual plant capacity factor</u>	<u>% of prevalent tariff allowed to power producer</u>
Up to 44.5%	-
Above 44.5% up to 46.5%	10%
Above 46.5% up to 47.5%	20%
Above 47.5% up to 48.5%	30%
Above 48.5%	40%

- The Petitioner is required to ensure that all the equipment is installed as per the details/specifications provided in the Generation License/Tariff Determination. Any change in the power curve of the turbines as provided in studies along with the petition and the relevant assumptions contained therein shall not be allowed.
- The Petitioner is required to maintain the availability levels as declared in the Tariff Petition and the studies provided therein. Necessary clauses shall be included in the EPA so that the power producer cannot intentionally suppress the capacity factors. NPCC shall conduct detailed monitoring/audit of the operational record/log of all the wind turbines on quarterly basis to verify output/capacity of the power plant.
- The risk of wind resource shall be borne by the power producer.
- 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 power producer in accordance with the applicable GOP Policy, amended from time to time.



- The Petitioner is hereby directed to secure the maximum available loan under the SBP Scheme. The savings in the cost of financing under SBP Scheme shall be shared between power purchaser and power producer in the ratio of 60:40 at the time of COD or during any time of the loan tenor, as applicable. The savings in the approved limit of spread over foreign loan shall also be shared between power purchaser and power producer in the ratio of 60:40 at the time of COD or during any time of loan tenor, as applicable.
- In case the company shall secure full or part of local conventional loan then the tariff of company shall be adjusted at the time of COD at applicable KIBOR + spread of 2.25%. The savings in the approved spreads during the loan tenor shall be shared between the power purchaser and power producer in the ratio of 60:40. The tenor of the debt servicing shall not be less than thirteen years for this loan.
- In case the company shall secure foreign loan under any credit insurance (Sinasure etc.) then the cost of that insurance shall be allowed to the maximum limit of 0.6% of the approved yearly outstanding principal and interest amounts. For financing with Sinasure, the spread/margin over LIBOR shall be adjusted to the extent such that the total financing cost (applicable LIBOR + Adjusted Margin + Sinasure) shall not exceed the financing cost without Sinasure (applicable LIBOR + Approved Margin).
- After two years of operations, the Authority may consider making changes in the O&M cost while capping the allowed prevailing level, which shall be governed under legal framework to be approved by the Authority in this regard.
- In case the company earns annual profit in excess of the approved return on equity (including ROEDC), then that extra amount shall be shared between the power producer and consumers through claw back formula to be decided by the Authority through relevant framework. For that purpose, the share of producer as given in the bonus energy mechanism shall be take in to account.
- The company will have to achieve financial close within one year from the date of issuance of Tariff Determination. The tariff granted to the company will no longer remain applicable/valid, if financial close is not achieved by the company, for whatever reason, in the abovementioned timeline or its generation license is declined/revoked by NEPRA.
- The targeted maximum construction period from prescribed date/time of financial close is 15 months. No adjustment will be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of



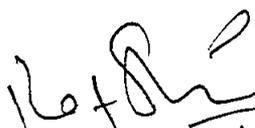
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the company to complete construction within 15 months will not invalidate the tariff granted to it.

- Pre COD sale of electricity is allowed to the project company, subject to the terms and conditions of EPA, at the reference tariff excluding debt servicing and return on equity components. However, pre COD sale will not alter the required commercial operations date stipulated by the EPA in any manner.
 - In case the company is obligated to pay any tax on its income from generation of electricity, or any duties and/or taxes, not being of refundable nature, are imposed on the company, the exact amount paid by the company on these accounts shall be reimbursed on production of original receipts. This payment shall be considered as a pass-through payment. However, withholding tax on dividend shall not be a pass through item.
 - No provision for the payment of Workers Welfare Fund and Workers Profit Participation has been made in the tariff. In case, the company has to pay any such fund, that will be treated as pass through item in the EPA.
 - The approved tariff along with terms & conditions shall be made part of the EPA. General assumptions, which are not covered in this determination, may be dealt with as per the standard terms of the EPA.
20. The Order part along with three Annexures is recommended for notification by the Federal Government in the official Gazette in accordance with Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

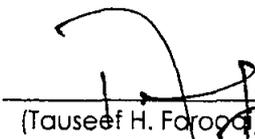
AUTHORITY


(Rafique Ahmed Shah)
Member


(Eng. Bahadur Khan)
Member


(Rehmatullah Baloch)
Member

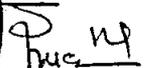

(Saif Ullah Chattha)
Vice Chairman


(Tauseef H. Farooq)
Chairman

7-1-2024

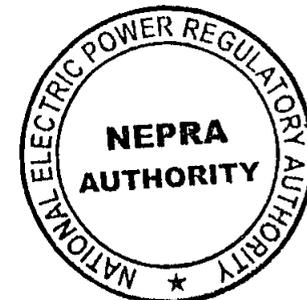


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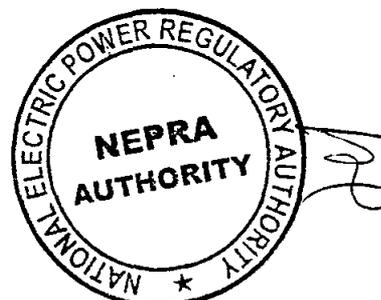
IRAN-PAK WIND POWER (PVT.) LIMITED
Reference Tariff

Year	O&M Foreign	Insurance	Return on Equity	Return on Equity During Construction	Loan Repayment	Interest Charges	Tariff
	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh
1	1.0373	0.1822	1.2173	0.1031	2.6372	2.0415	7.2186
2	1.0373	0.1822	1.2173	0.1031	2.7820	1.8967	7.2186
3	1.0373	0.1822	1.2173	0.1031	2.9349	1.7438	7.2186
4	1.0373	0.1822	1.2173	0.1031	3.0964	1.5823	7.2186
5	1.0373	0.1822	1.2173	0.1031	3.2669	1.4118	7.2186
6	1.0373	0.1822	1.2173	0.1031	3.4469	1.2317	7.2186
7	1.0373	0.1822	1.2173	0.1031	3.6371	1.0416	7.2186
8	1.0373	0.1822	1.2173	0.1031	3.8380	0.8407	7.2186
9	1.0373	0.1822	1.2173	0.1031	4.0501	0.6286	7.2186
10	1.0373	0.1822	1.2173	0.1031	4.2741	0.4045	7.2186
11	1.0373	0.1822	1.2173	0.1031	1.8016	0.2281	4.5696
12	1.0373	0.1822	1.2173	0.1031	1.8854	0.1443	4.5696
13	1.0373	0.1822	1.2173	0.1031	1.9730	0.0567	4.5696
14	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
15	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
16	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
17	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
18	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
19	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
20	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
21	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
22	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
23	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
24	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
25	1.0373	0.1822	1.2173	0.1031	-	-	2.5399
Levelized Tariff	1.0373	0.1822	1.2173	0.1031	2.4035	0.9780	5.9214



IRAN-PAK WIND POWER (PVT.) LIMITED
Reference Debt Servicing Schedule - Local

Relevant Quarters	Base amount (USD)	Principal Repayment (USD)	Interest (USD)	Balance Principal (USD)	Total Debt Service (Million USD)	Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh
1	3,384,245,275	62,361,832	50,763,679	3,321,883,443	113,125,511		
2	3,321,883,443	63,297,259	49,828,252	3,258,586,183	113,125,511	1.4935	1.1555
3	3,258,586,183	64,246,718	48,878,793	3,194,339,465	113,125,511		
4	3,194,339,465	65,210,419	47,915,092	3,129,129,046	113,125,511		
5	3,129,129,046	66,188,575	46,936,936	3,062,940,471	113,125,511		
6	3,062,940,471	67,181,404	45,944,107	2,995,759,067	113,125,511	1.5851	1.0639
7	2,995,759,067	68,189,125	44,936,386	2,927,569,942	113,125,511		
8	2,927,569,942	69,211,962	43,913,549	2,858,357,980	113,125,511		
9	2,858,357,980	70,250,141	42,875,370	2,788,107,839	113,125,511		
10	2,788,107,839	71,303,893	41,821,618	2,716,803,946	113,125,511	1.6824	0.9666
11	2,716,803,946	72,373,452	40,752,059	2,644,430,494	113,125,511		
12	2,644,430,494	73,459,054	39,666,457	2,570,971,440	113,125,511		
13	2,570,971,440	74,560,939	38,564,572	2,496,410,501	113,125,511		
14	2,496,410,501	75,679,353	37,446,158	2,420,731,147	113,125,511	1.7856	0.8634
15	2,420,731,147	76,814,544	36,310,967	2,343,916,604	113,125,511		
16	2,343,916,604	77,966,762	35,158,749	2,265,949,842	113,125,511		
17	2,265,949,842	79,136,263	33,989,248	2,186,813,578	113,125,511		
18	2,186,813,578	80,323,307	32,802,204	2,106,490,271	113,125,511	1.8952	0.7538
19	2,106,490,271	81,528,157	31,597,354	2,024,962,114	113,125,511		
20	2,024,962,114	82,751,079	30,374,432	1,942,211,035	113,125,511		
21	1,942,211,035	83,992,345	29,133,166	1,858,218,690	113,125,511		
22	1,858,218,690	85,252,231	27,873,280	1,772,966,459	113,125,511	2.0115	0.6375
23	1,772,966,459	86,531,014	26,594,497	1,686,435,445	113,125,511		
24	1,686,435,445	87,828,979	25,296,532	1,598,606,466	113,125,511		
25	1,598,606,466	89,146,414	23,979,097	1,509,460,052	113,125,511		
26	1,509,460,052	90,483,610	22,641,901	1,418,976,441	113,125,511	2.1349	0.5141
27	1,418,976,441	91,840,864	21,284,647	1,327,135,577	113,125,511		
28	1,327,135,577	93,218,477	19,907,034	1,233,917,100	113,125,511		
29	1,233,917,100	94,616,754	18,508,756	1,139,300,345	113,125,511		
30	1,139,300,345	96,036,006	17,089,505	1,043,264,340	113,125,511	2.2659	0.3831
31	1,043,264,340	97,476,546	15,648,965	945,787,794	113,125,511		
32	945,787,794	98,938,694	14,186,817	846,849,100	113,125,511		
33	846,849,100	100,422,774	12,702,736	746,426,325	113,125,511		
34	746,426,325	101,929,116	11,196,395	644,497,209	113,125,511	2.4050	0.2440
35	644,497,209	103,458,053	9,667,458	541,039,156	113,125,511		
36	541,039,156	105,009,924	8,115,587	436,029,233	113,125,511		
37	436,029,233	106,585,072	6,540,438	329,444,160	113,125,511		
38	329,444,160	108,183,849	4,941,662	221,260,312	113,125,511	2.5526	0.0964
39	221,260,312	109,806,606	3,318,905	111,453,705	113,125,511		
40	111,453,705	111,453,705	1,671,806	0	113,125,511		



IRAN-PAK WIND POWER (PVT.) LIMITED
Reference Debt Servicing Schedule - Foreign

Relevant Quarters	Base amount (USD)	Principal Repayment (USD)	Interest (USD)	Balance Principal (USD)	Total Debt Service (Million USD)	Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh
1	20,054,787	284,519	229,126	19,770,268	513,645		
2	19,770,268	287,770	225,875	19,482,498	513,645	1.1437	0.8860
3	19,482,498	291,058	222,588	19,191,440	513,645		
4	19,191,440	294,383	219,262	18,897,057	513,645		
5	18,897,057	297,746	215,899	18,599,311	513,645		
6	18,599,311	301,148	212,497	18,298,163	513,645	1.1969	0.8328
7	18,298,163	304,589	209,057	17,993,574	513,645		
8	17,993,574	308,069	205,577	17,685,505	513,645		
9	17,685,505	311,588	202,057	17,373,917	513,645		
10	17,373,917	315,148	198,497	17,058,769	513,645	1.2525	0.7772
11	17,058,769	318,749	194,896	16,740,020	513,645		
12	16,740,020	322,390	191,255	16,417,630	513,645		
13	16,417,630	326,074	187,571	16,091,556	513,645		
14	16,091,556	329,799	183,846	15,761,757	513,645	1.3107	0.7189
15	15,761,757	333,567	180,078	15,428,190	513,645		
16	15,428,190	337,378	176,267	15,090,812	513,645		
17	15,090,812	341,233	172,413	14,749,579	513,645		
18	14,749,579	345,131	168,514	14,404,448	513,645	1.3717	0.6580
19	14,404,448	349,074	164,571	14,055,373	513,645		
20	14,055,373	353,063	160,583	13,702,311	513,645		
21	13,702,311	357,096	156,549	13,345,215	513,645		
22	13,345,215	361,176	152,469	12,984,038	513,645	1.4354	0.5942
23	12,984,038	365,303	148,343	12,618,736	513,645		
24	12,618,736	369,476	144,169	12,249,260	513,645		
25	12,249,260	373,697	139,948	11,875,562	513,645		
26	11,875,562	377,967	135,678	11,497,596	513,645	1.5022	0.5275
27	11,497,596	382,285	131,360	11,115,310	513,645		
28	11,115,310	386,653	126,992	10,728,658	513,645		
29	10,728,658	391,070	122,575	10,337,587	513,645		
30	10,337,587	395,538	118,107	9,942,049	513,645	1.5720	0.4577
31	9,942,049	400,057	113,588	9,541,992	513,645		
32	9,541,992	404,628	109,017	9,137,364	513,645		
33	9,137,364	409,251	104,394	8,728,113	513,645		
34	8,728,113	413,926	99,719	8,314,187	513,645	1.6451	0.3846
35	8,314,187	418,656	94,990	7,895,531	513,645		
36	7,895,531	423,439	90,206	7,472,092	513,645		
37	7,472,092	428,277	85,369	7,043,816	513,645		
38	7,043,816	433,170	80,476	6,610,646	513,645	1.7216	0.3081
39	6,610,646	438,119	75,527	6,172,528	513,645		
40	6,172,528	443,124	70,521	5,729,404	513,645		
41	5,729,404	448,187	65,458	5,281,217	513,645		
42	5,281,217	453,307	60,338	4,827,910	513,645	1.8016	0.2281
43	4,827,910	458,486	55,159	4,369,423	513,645		
44	4,369,423	463,725	49,921	3,905,699	513,645		
45	3,905,699	469,023	44,623	3,436,676	513,645	1.8854	0.1443
46	3,436,676	474,381	39,264	2,962,295	513,645		
47	2,962,295	479,801	33,844	2,482,494	513,645		
48	2,482,494	485,283	28,362	1,997,211	513,645		
49	1,997,211	490,827	22,818	1,506,384	513,645		
50	1,506,384	496,435	17,210	1,009,950	513,645	1.9730	0.0567
51	1,009,950	502,107	11,539	507,843	513,645		
52	507,843	507,843	5,802	0	513,645		

