National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/TRF-417/WEPL-2017/2518-2520
February 12, 2019

Subject: **Decision of the National Electric Power Regulatory Authority in the matter of Review Motion filed by Western Energy (Pvt.) Limited against the Tariff Determination dated August 20, 2018 [Case # NEPRA/TRF-417/WEPL-2017]**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I & II (24 pages) in the matter of Review Motion filed by Western Energy (Pvt.) Limited against the Tariff Determination dated August 20, 2018 in Case No. NEPRA/TRF-417/WEPL-2017.

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. The Order part along with Annexure-I & II of the Authority's Decision needs to be notified in the official Gazette.

Enclosure: As above

12.2.19

(Syed Safeer 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, 'Q' Block, Pak Secretariat, Islamabad.

DECISION OF THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY IN THE MATTER OF REVIEW MOTION FILED BY M/S WESTERN ENERGY (PVT.) LIMITED AGAINST THE TARIFF DETERMINATION DATED AUGUTST 20, 2018

Background:

1. M/s Western Energy (Pvt.) Ltd. (hereinafter referred to as the "WEPL" or "the petitioner" or "the company") vide its letter dated August 31, 2018 filed a motion of leave for review ("review motion") under rule 16(6) of NEPRA Tariff(Standards and Procedure) Rules, 1998 read with NEPRA (Review Procedure) Regulations, 2009 against tariff determination ("impugned determination") issued by National Electric Power Regulatory Authority ("NEPRA" or "the Authority") dated August 20, 2018 in respect of WEPL's 50 MW wind power project ("the project") to be setup at Jhimpir, District Thatta, Sindh.

Proceedings:

2. The Authority admitted the review motion on September 13, 2018 for further proceedings. The Authority also decided to provide an opportunity of hearing to the petitioner. Notices of hearing were sent to the petitioner as well as relevant parties/stakeholders vide letters dated October 08, 2018. Hearing in this regard was held on October 17, 2018 which was attended by the petitioner. In the review motion, the petitioner has requested the Authority for review of the following parameters of the impugned determination:

   i) EPC Cost
   ii) O&M Cost
   iii) Project Development Cost
   iv) Insurance During Construction
   v) Financing Fee and Charges
   vi) Insurance During Operations
   vii) Return on Equity
   viii) Construction Period
   ix) Capacity Factor
   x) Financing/Debt Terms/ Interest During Construction
   xi) Time of Financial Close

NEPRA AUTHORITY
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

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.

i. **EPC Cost:**

The petitioner submitted that the Authority has approved the EPC cost of USD 57.251 million in the impugned determination against the EPC cost of USD 76 million as claimed by the petitioner. WEPL submitted that it executed Offshore Supply and Services Contract with Shanghai Marine Diesel Engine Research Institute ("SMDERI") on December 15, 2014 and Onshore Supply and Services Contract on January 30, 2015. The copies of the signed contracts have been provided to NEPRA and the company has also made down payments to the EPC contractor. The petitioner submitted that if it had received the approval of Upfront Tariff of 2015 (application returned by NEPRA for not getting power consent from CPPA-G) then it could have survived and have sustained the cost overruns. It submitted that the delay and change of circumstances of today's market are not on company's account. WEPL further submitted that NEPRA has not considered the fact that its project is on the list of China Pakistan Economic Corridor ("CPEC") projects and has conditional finances and support from China, therefore; entire arrangement is conditional to selection of EPC contractor which is supported for CPEC arrangements to avail the Sinosure backed financing. The petitioner also stated that it is unfair to ask WEPL to cancel or renegotiate signed contracts which were executed at the best terms prevailing in the market during 2014-15. It stated that such an action is impractical and will lead to legal consequences for the company. The petitioner also submitted that any reduction in project costs may render wind power projects unviable and would discourage investment in this important and clean energy sector. In the light of foregoing, the petitioner requested the Authority to review the approved EPC price.

ii. **O&M cost:**

The petitioner submitted that the Authority allowed O&M Costs of USD 1.15 million per annum i.e. USD 23,000 per MW per annum which is to be shared into local and foreign components in the ratio of 25:75 against the average O&M cost of USD 2.71 million per

NEPRA AUTHORITY
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

annum i.e. around 54,000 per MW per annum as claimed by WEPL. The petitioner submitted that the claimed O&M cost is based on actual O&M agreement signed on January 30, 2015 which provides output guarantees. The petitioner submitted that extraordinary security arrangements are required for CPEC projects which increase the manning cost of this parameter. WEPL further submitted that for projects having 100% foreign financing, lenders require reviews, reporting and meetings in and outside of Pakistan which lead to engagement of consultants, higher traveling costs and other administrative costs. Furthermore, it submitted that there are certain security protocols of the Pakistan Air Force ("PAF") Base which require special lightings and safety markings to be maintained on the tower and turbine for the life of the project. The petitioner stated that NEPRA has relied on media reports and unrelated wind sites having different climatic conditions, operating environment and different risk profiles to approve the O&M cost in the impugned determination. It stated that those sources do not account for the realities on the ground which requires the wind risk and sovereign risk also to be priced by the O&M Company to provide availability and dispatch guarantees. In addition, the petitioner stated that NEPRA has directed that a process similar to EPC bidding guidelines be followed for selection of the O&M contractor which cannot happen especially when the timeline to achieve financial close of merely six months has been allowed. In view of the above submissions, the petitioner requested that the O&M cost as claimed in the tariff petition be allowed to ensure smooth, efficient, and effective operation of the project.

iii. **Project Development Cost**

The petitioner submitted that the Authority has allowed USD 2.5 million on account of Project Development Cost ("PDC") which will be adjusted at actual, up to the maximum allowed cost, based on production of verifiable documents at the time of Commercial Operations Date ("COD"). The petitioner submitted that the Non-EPC cost includes the items that are not part of the EPC contractor's scope of work while PDC include the costs incurred for the purpose of project development work, fees and expenses incurred or to be incurred for such purpose. These include, inter alia, costs of feasibility studies, grid interconnection studies, environmental studies, topographical survey of land, geotechnical investigation of land, fees of consultants, costs related to

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

the purchaser letter of credit to be furnished to the power purchaser pursuant to the provisions of Energy Purchase Agreement ("EPA"), various regulatory fees to be paid to Alternative Energy Development Board ("AEDB"), NEPRA and other governmental agencies, costs incurred during the project company's formation and capital enhancement; and costs relating to various permits for the project, land cost, post financial close technical supervision and site security etc. The petitioner submitted that the long delays beyond WEPL's control have led to an abnormal increase in its development expenses involving extensive travelling, meetings with lenders and various other administrative expenses. It stated that significant time and resources have been spent on major development activities as those had to be done twice due to relocation of its site to address the concerns of the PAF Bholari Base thereby increasing its development time and cost for no fault of company. The petitioner further submitted that the reduction by NEPRA in the PDC cost is arbitrary and not on sound grounds as there is no comparison of costs associated to a solar project with wind project due to technical differences and difference in size of plant site, security issues etc. WEPL also submitted that the requirements imposed by the power purchaser in respect of factory acceptance tests have increased over the recent years, which has resulted in higher project development costs on travelling and on inspections during the project development period. In view thereof, the petitioner requested that USD 4.613 million as claimed in tariff petition may be allowed.

iv. **<u>Insurance during construction</u>**

The petitioner submitted that the Authority allowed insurance during construction at 0.50% of the approved EPC cost which works out to be around USD 0.286 million. The petitioner submitted that the insurance cost as claimed in the tariff petition was estimated based on feedback from insurance companies. It stated that the insurance cost is very volatile and moves on the international insurance markets and therefore to put thresholds thereon may lead to compromise on the quality of insurance that is required under the EPA. WEPL submitted that keeping in view the construction period of eighteen month, as assumed by the company, insurance during construction at 0.50% of EPC cost as determined by the Authority is at lower side. In view thereof, the petitioner requested to allow insurance during construction at 0.75% of claimed EPC

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

cost including taxes and duties. Further, the petitioner requested that in case of any deviation, the actual pre-COD insurance cost capped at 1.35% of the EPC cost in line with earlier tariff determinations for other Independent Power Producers ("IPPs") may be allowed by the Authority.

v. **Financing Fee and Charges:**

The petitioner submitted that the Authority allowed financing fee and charges with the cap of 2.5% of the allowed debt portion of the approved capital cost which works out to be around USD 1.201 million against USD 2.779 million as claimed by WEPL. The petitioner submitted that the claimed financing fee and charges include the costs related to the arrangement of 100% foreign currency debt financing for the project. Such costs include, inter alia, the advisory and arrangement fee to secure Sinosure cover, the lenders' up-front and commitment fee, mandate and processing fee, fees payable and stamp duty applicable on the financing documents, agency fee, security trustee fee, lenders' project monitoring fee and the fees for the lenders' legal and other advisors customary for a foreign lender to engage in order to carry out the due diligence, drafting of financing documents and monitoring of the project during the construction period. WEPL submitted that these financial charges are in line with the prevailing market conditions and practices applicable for project financing transactions and as allowed by NEPRA in its other tariff determinations. The petitioner stated that financing cost for local and foreign financing is very different and it is unreasonable to compare the cost of financing arrangement for foreign loan with the local sourced rupee based loans. The petitioner also stated that the cap set by NEPRA is arbitrary and against the market norms especially considering the economic realities of Pakistan which is making arrangement of foreign financing more and more difficult for the projects. The petitioner submitted that the financing cost estimated by WEPL is based on signed term sheet and actual due diligence done by foreign lenders. In view of the above, WEPL requested that financing fee and charges amounting to USD 2.779 million may be allowed. Further, it requested that any duties and taxes, if applicable, on account of these costs may be allowed as adjustment at actual at the time of COD.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

vi. **Insurance during Operation:**

The petitioner submitted that the Authority has allowed insurance during operation at 0.40% per annum of the approved EPC cost in the impugned determination against the WEPL's claimed cost of 0.50% per annum of the claimed EPC cost including duties and taxes. WEPL submitted that the claimed cost is based on market norms and actual quote obtained from leading insurance company of Pakistan. This cost covers the insurances required under the Implementation Agreement ("IA") and the EPA coupled with coverage customarily required for project financing transactions. The petitioner further submitted that the claimed amount is in line with actual insurance numbers allowed by NEPRA to other 50 MW wind power projects and with the benchmark tariff issued by NEPRA. The petitioner submitted that it is critical that all risks associated with the project are adequately addressed and all insurable events are catered for in a fool proof manner. Keeping in view the generally adopted global trends and the magnitude of the project, a comprehensive operational insurance and reinsurance arrangement is also fundamental to ensure bankability of the project. In view of the above, the petitioner requested that insurance during operation at 0.5% per annum of the EPC cost, including taxes and duties, may be allowed. Further, it requested that any increase therefrom up to 1.35% of the EPC cost may be allowed upon submission of evidences.

vii. **Return on Equity:**

The petitioner submitted that the Authority has allowed Return on Equity ("ROE") at 14% against the WEPL's claimed ROE of 17%. The petitioner submitted that the risk profile should be considered with reference to the international agencies rating set for investment in Pakistan based on sovereign risk, economic stability, ratings for ease of doing business and payment security of the power purchasers. Considering these criteria, the overall rating for investment in Pakistan has deteriorated and needs to be revised upwards therefore it is beyond understanding that how ROE rate of 14% has been determined. The petitioner further submitted that the NEPRA Tariff Standards prescribed that the return on investment should be "commensurate with other investments of comparable risk". Based on this principle, it is observed that NEPRA earlier

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

considered 17% ROE to be fair rate in view of the return rates for other investments of comparable risk. The petitioner submitted that despite the fact that wind risk has been passed on to the power producer and term of the project has been increased to 25 years which has augmented the risk profile, however, WEPL claimed 17% ROE consistent with the earlier practice of NEPRA. The petitioner further submitted that given the standard lending norms, debt service reserve of six (6) months is a pre-requisite of all foreign financiers. This requirement is covered by sponsors out of their profit due to which they suffer significant reduction in their returns. Moreover, the petitioner stated that the wind power being a cleaner indigenous environmentally friendly technology that leads to reduction of CO_2 emissions should be offered higher rate than the rate of return as other power projects like coal and LNG which are dependent on imported fuel source. In view of the above, the petitioner requested to allows the ROE at the rate of 17%.

viii. <u>Construction Period</u>

The petitioner submitted that the Authority has allowed construction period of fifteen months against the claim of eighteen months. It submitted that the construction period of 18 months for the project is as per the signed EPC Agreement. The petitioner also submitted that the requirements imposed by the power purchaser in respect of factory acceptance tests have increased over the recent years which require approvals from the relevant entities resulting in longer construction periods. Stating above, the petitioner requested the Authority to allow construction period of eighteen months.

ix. <u>Capacity Factor:</u>

The petitioner submitted that the Authority has determined a 41.40% net annual plant capacity factor against the claimed 37%. WEPL submitted that it agrees with the Authority that the capacity factors have improved as new machines yield better energy output due to change in turbine design through improvement in hub height, nameplate capacity and especially the enhancement in rotor diameters. However, it submitted that there are certain impediments imposed on our site by PAF base which are also endorsed by AEDB through an MOU signed with the PAF Authorities. Due to

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

those limitations, the selected technology was restricted to a hub height of 80 m and wind turbine size of 2 MW. Further, the revised micro siting of wind turbines lead to distance between two wind turbines to be less than 3 rotor diameter in some cases which increases the wake effect and reduces the energy yield. The petitioner submitted that the lenders rely on the P90 factor when evaluating the risk profile of a project which in WEPL case results in plant annual capacity factor of 29.63% which means that the entire wind risk is taken up by the sponsors of the project. The petitioner submitted that it is unclear how a capacity factor of 41.40% has been calculated, as none of the wind resource assessment studies support such an ambitious capacity factor. Such a move will certainly discourage potential investors from investing in wind power projects in Pakistan and works against the Government's commitment to address the energy crisis and promote renewable energy. In view of the foregoing, the petitioner requested to reconsider the net annual capacity factor of 41.40% and reduce the same to 37% and allow 100% tariff to the company on energy generated beyond 37%.

x. **Financing/ debt terms/Interest during construction:**

The petitioner submitted that the Authority has allowed interest during construction amounting to USD 1.939 million based on SBP rupee based refinancing terms, construction period of fifteen months, while considering notional drawdowns of 20% in each quarter. Further, the Authority has approved reference tariff on debt to equity proportion of 80:20 regardless of any form of financing secured by WEPL. The petitioner submitted that despite knowing that the project is being developed under CPEC where the criteria set in the bilateral arrangement of the two countries obligates China to arrange for loan for its own sourced products, NEPRA has assumed local sourced financing. The petitioner further submitted that the foreign currency financing arrangement is also supportive to the fact that Pakistan is desperately in need of foreign currency loans with longer repayment terms. The petitioner submitted that it has secured financing on softer terms with tenor of 13 years while the requirement to secure rupee loan is more expensive with shorter tenor of 10 years which will lead to higher tariff in initial years putting more burden on the power purchaser to arrange more payments during initial years. The petitioner further submitted that as the sponsors

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

and EPC Contractors are the guarantors of finances and the project is a CPEC project, the financing arranged from ICBC is at the most favored financing terms with margin as low as 4.2% (including arranger's fee) on 3 months LIBOR with an extended repayment term of 13 years. This rate is the lowest for any foreign currency loan even lower than the threshold set by NEPRA, i.e. LIBOR + 4.25% margin. The petitioner also submitted that it is against all norms that NEPRA on one hand is allowing six months to achieve financial close and on the other hand NEPRA wants us to abandon the arrangement made for foreign loan at a time when the country is in desperate need of foreign currency, disregard the term sheet signed with ICBC and start a fresh discussion with local lenders who are yet to start their due diligence and achieve financial close in the NEPRA stipulated time. In case SBP concessional financing is refused NEPRA assumes that the true up on the foreign loan will be given at the COD. The petitioner submitted that it is highly unlikely to get any loan disbursed based on such a conditional order unless the matching terms of loan are reflected in the NEPRA tariff determination. The petitioner further submitted that the arbitrary drawdown assumption is also not fair and the capital structure of the project should be set at 75:25 (Debt: Equity) which is also in accordance with the Schedule I of NEPRA (Benchmarks for Tariff Determination) Guidelines, 2018 dated June 19, 2018. Furthermore, the petitioner also submitted that it is a set practice of NEPRA that the treatment of Sinosure fee allowed to all CPEC projects is based on upfront payment. In view of the above, the petitioner requested the Authority to allow the foreign financing for the project as secured by WEPL and recalculate interest during construction based on foreign financing terms, 18 months construction period which is adjustable at COD based on actual LIBOR, timing and amount of loans drawdown during the project construction period after financial close. Further, it is also requested that Authority allows the costs and fees associated with Sinosure cover as part of the project costs or as pass-through item in the tariff.

xi. <u>Time to achieve Financial Close</u>:

The petitioner submitted that the Authority in the impugned determination has directed to achieve financial close within six months from the date of issuance of the said determination. The petitioner submitted that there are a number of requirements that

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

a project has to fulfil before financial close, which include negotiation and signing of EPA, IA especially considering that CPPA-G has to also ensure that the timeline given for grid interconnection can be met. The petitioner submitted that the company can endeavour to secure financial close in six months' timeline if it is guaranteed cooperation of CPPA-G and AEDB to get the EPA and IA signed well in time and provided our signed agreements and financing term sheets are accepted by NEPRA as it is impossible to renegotiate EPC, O&M and financing Agreements in a short span of six months. In view of the above submissions, the petitioner requested to allow one year time from the date of the tariff determination in order to achieve financial close.

Analysis and Decision of the Authority

4. The Authority noted that most of the grounds made with respect to parameters discussed above were already deliberated upon in the impugned determination. The Authority noted that it approved the EPC and O&M cost of the project on the basis of data from various sources (regional and international) while considering the differences in market conditions, performance targets, local manufacturing facilities, tariff regimes in different countries and other factors. Likewise, PDC, Insurance during construction and operation, financing fee & charges, construction period and rate of return were approved for the project on standard basis as allowed in other comparable projects. The Authority views that the risk of project delays should be borne by the project company and cannot be passed on to the consumers. Importantly, the Authority has noted that a number of wind power projects have submitted their acceptance on discussed above parameters showing the costs/basis approved by NEPRA are justified. Further, the Authority views that differential treatment cannot be adopted for any project being developed under CPEC or otherwise for tariff purposes. In view thereof, the Authority has decided to maintain its decision in respect of EPC Cost, O&M cost, PDC, Insurance during construction and operation, financing fee & charges, construction period and return on equity.

5. The Authority noted that it put the condition for O&M bidding in the tariff determinations of three wind power projects, including WEPL, issued on August 20, 2018. That condition was introduced to bring the best possible results for this particular component. A number of project companies including the petitioner have opposed that condition while stating that lenders

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

require getting O&M done through Original Equipment Manufacturer ("OEM") during the debt servicing period. Also, they submitted that the existing stage of wind industry in Pakistan is not at the level where independent operators can take on the O&M of wind power plants to the satisfaction of the financiers. The Authority deliberated in detail about the submissions with respect to level of wind industry in Pakistan. Further, the Authority analysed the approved benchmark level of O&M and found that the said cost is quite competitive and fairly similar to the cost being allowed in the comparable places. In view thereof, the requirement of bidding for O&M contractor was removed in the later twelve wind tariff determinations issued on November 19, 2018. Accordingly, the Authority has decided to take out this condition of bidding for O&M contractor introduced in the impugned determination. However, it is to be noted that the Authority may consider revising the approved O&M cost after the completion of debt servicing period. For that purpose, the Authority may require the project company to carry out competitive bidding while considering the approved cost as ceiling.

6. Further, the Authority also noted that O&M cost, in the ratio of 25:75 for local and foreign components, was allowed in the impugned determination. Subsequently, the Authority in view of the claims of a number of project companies as well as to put the major portion of local resources break the approved O&M cost in the ratio of 50:50 for local and foreign components. Accordingly, same proportion i.e. 50:50 for local and foreign O& M Cost is hereby allowed to the petitioner.

7. The Authority has noted that the capacity factor approved in the impugned determination was assessed by NEPRA using the standard tools. Afterwards, the Authority has issued tariff determination of another twelve wind power projects wherein the capacity factor was approved based on the results of Energy Reports as submitted by those project companies while maintaining certain thresholds. This premise was changed primarily in light of the submissions of the financiers such as Asian Development Bank and International Finance Corporation. Those financiers approached the Authority stating that it may not be viable for them to finance wind power projects on the basis as adopted by NEPRA to assess capacity factor. They requested the Authority that tariff of wind power projects should be set on a good probability level, preferably as given in their Energy Reports. They further submitted that the tariffs of wind power projects throughout the world are set on energy yield having higher possibility, mainly for financing purpose. Based on those submissions, the Authority approved

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

capacity factors of those projects based on their Energy Reports while maintaining certain limits. However, the sharing mechanism for bonus energy was tightened to ensure the effective tariff remains fairly same as a result of higher generation by these projects. In view thereof, the Authority has decided to review and approve the tariff of WEPL at net annual plant capacity factor of 38%. 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
Above 38% up to 40%	5%
Above 40% up to 42%	10%
Above 42% up to 44%	20%
Above 44% up to 46%	40%
Above 46% up to 48%	80%
Above 48%	100%

8. It is reiterated that differential treatment cannot be adopted for any project being developed under CPEC or otherwise for tariff purposes. The Authority considered that if any project is eligible to secure financing under SBP scheme then its tariff was determined on the terms of that financing. Similarly, the tariff of the project company was computed on the terms of concessionary financing being offered by SBP i.e. at a fixed rate of 6% for a debt servicing period of ten years. Alongside, the Authority approved the provision of adjustment of WEPL's reference tariff at the time of COD on conventional local/foreign financing, subject to the condition that the petitioner shall have to prove through documentary evidence, issued by SBP, that it exhausted the option of availing financing under SBP scheme before taking part/full of conventional local/foreign loan. In the later determinations of twelve wind power projects, the Authority approved their tariffs on SBP financing. However, the requirement for provision of documentary evidence of exhausting the option of availing financing under SBP scheme was modified, i.e. the Authority decided that the documentary evidence, issued either by SBP or commercial bank, can be submitted as a proof. In line with its recent decisions, the Authority has decided to allow WEPL that it can submit the documentary evidence issued by SBP or commercial bank as a proof that it exhausted the option of availing financing under SBP

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

scheme before going for full/part of conventional local/foreign financing. Further, the Authority noted that NEPRA (Benchmarks for Tariff Determination) Guidelines, 2018 provides local financing for wind power projects at KIBOR plus spread of 2.25%. Therefore, the Authority hereby modifies the provision of local financing for WEPL and allows the provision of local financing on the basis of KIBOR + spread of 2.25%. Regarding the argument of the petitioner with respect to debt drawdowns, the Authority has noted that the drawdowns taken for the reference tariff of WEPL are notional. The tariff of WEPL has been allowed adjustment of interest during construction at the time of COD on the basis of actual timings of the debt drawdowns for the allowed project construction period of fifteen months.

9. With regard to the petitioner's claim regarding the costs and fees associated with Sinosure, it is informed that the Authority has already allowed the provision of the said insurance on foreign loan. Sinosure has been allowed as a tariff component rather upfront amount in the total project cost keeping in view its favourable impact on tariff. Relevant section of the tariff determination of the project company provides that; "In case the company shall secure foreign loan under any credit insurance (Sinosure etc.) then the cost of that insurance shall be allowed to the maximum limit of 0.6% of the yearly outstanding principal and interest amounts. For that purpose, the spread over that full/part of loan shall be considered as 3.5% as the maximum limit."

10. The Authority noted that it approved a time period of six months to achieve financial close to WEPL in the impugned determination. In earlier cases, the Authority had been allowing financial close time of one year but that period was shortened in WEPL's tariff in view of rapid decline in prices of the wind technology. The Authority noted that in the recent twelve wind tariff determinations issued on November 19, 2018, the Authority extended financial close time to one year from the date of determination. This change was made as number of both solar and wind project companies submitted that several milestones need to be completed post award of tariff till financial close for which time of six months is not sufficient. In line with its recent decisions, the Authority hereby allows one year time to WEPL also to achieve financial close. That time of one year shall be reckoned from the date of impugned determination, i.e. August 20, 2018.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

11. **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 Western Energy (Pvt.) Limited for its 50 MW wind power project for delivery of electricity to the power purchaser:

Rs./kWh

Tariff Component	Year 1-10	Year 11-25
Operations and Maintenance Cost	0.8291	0.8291
Insurance during Operation	0.1651	0.1651
Return on Equity	1.3903	1.3903
Debt Servicing	4.8723	-
Total	**7.2568**	**2.3846**

- Levelized tariff works out to be US Cents 4.7357/kWh.
- EPC cost of USD 57.251 million has been considered.
- PDC cost of USD 2.500 million has been taken into account.
- Insurance during construction at the rate of 0.5% of the EPC cost has been approved.
- Financing charges at the rate of 2.5% of the debt portion of the capital cost has been approved.
- Net Annual Plant Capacity Factor of 38% has been approved.
- O&M Cost of USD 23,000 per MW per year has been approved.
- Debt to Equity of 80:20 has been used.
- Debt Repayment period of 10 years has been taken into account.
- The cost of financing of 6% for construction and operation has been used.
- Return on Equity of 14% has been allowed.
- Construction period of fifteen (15) months has been used for the workings of ROEDC and IDC.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

- Insurance during Operation has been calculated as 0.4% of the allowed EPC Cost.
- Reference Exchange Rates of 120 PKR/USD has been used.
- The aforementioned tariff is applicable for twenty five (25) years from COD
- Detailed component wise tariff is attached as **Annex-I** of this decision.
- Debt Servicing Schedule is attached as **Annex-II** of this decision.

A. One Time Adjustments at COD

- The EPC cost shall be 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, on production of authentic documentary evidence to the satisfaction of the Authority. The adjustment in approved EPC cost shall be made only for the currency fluctuation against the reference parity values.
- The petitioner has submitted M/s CCS certification No. CCSC16TA0026R0 dated June 12, 2016 about the design, specification and country of origin of various component of the wind turbine to be installed for this 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 by the petitioner.
- PDC, Insurance during construction and Financing Fee and 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 120 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.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

- IDC will be recomputed at COD on the basis of actual timing and amount of debt draw downs (for the overall debt allowed by the Authority at COD) for the project construction period of fifteen months allowed by the Authority.

- For full/part of conventional local or foreign loans or a mix of both, if availed by the company, the IDC shall also be allowed adjustment for change in applicable KIBOR/LIBOR.

- 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 IRR shall be neutralized for the additional cost of debt: equity ratio.

- The reference tariff has been worked out on the basis of cost of 6% offered under SBP financing scheme. In case cost negotiated by the company under SBP scheme is less than the said limit of 6%, the savings in that cost shall be shared between the power purchaser and the power producer in the ratio of 60:40 respectively.

- For full or part of local or foreign loan, if any, the savings in the approved spreads shall be shared between the power purchaser and power producer in the ratio of 60:40.

- ROEDC will be adjusted at COD on the basis of actual equity injections (within the overall equity allowed by the Authority at COD) for the project construction period of fifteen months allowed by the Authority.

B. <u>Indexations</u>

Adjustment of O&M, return on equity, return on equity during construction shall be made on quarterly basis for the quarters starting from 1st July, 1st October, 1st January and 1st April based on latest available information. Adjustment of Debt Servicing Component (if any) shall be made either quarterly or bi-annually depending upon the final terms approved by the Authority. For bi-annual adjustments, the periods shall start from 1st July and 1st January. Insurance component shall be adjusted on annual basis starting from either 1st January or 1st July. The indexation mechanisms are given hereunder:

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

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 Labor 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 252.146 of August, 2018
$CPI_{(REV)}$	=	The revised CPI (General)
$CPI_{(REF)}$	=	The reference CPI (General) of 229.27 for the month of August, 2018
$ER_{(REV)}$	=	The revised TT & OD selling rate of US dollar
$ER_{(REF)}$	=	The reference TT & OD selling rate of RS. 120/USD

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

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

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. 120
P $_{(Act)}$	=	Actual premium or 0.4% of the approved EPC Cost converted into Pak Rupees on exchange rate prevailing at the time of insurance premium payment of the insurance coverage period whichever is lower

iii) **Return on Equity**

The total ROE (ROE + ROEDC) component of the tariff will be adjusted on quarterly basis on account of change in USD/PKR 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. 120/USD

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

iv) **Indexations applicable to debt**

For full or part of conventional foreign debt, if any, respective principal and interest components will be adjusted on quarterly/bi-annual basis, on account of revised TT & OD selling rate of US Dollar, as notified by the National Bank of Pakistan as at the last day of the preceding quarter, over the applicable reference exchange rate. The interest part of the foreign loan shall be allowed adjustment with respect to change in the applicable LIBOR. For full or part of conventional local loan, if any, the interest component shall be allowed adjustment with respect to change in applicable KIBOR.

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.

- The Authority may consider revising approved O&M cost after the completion of debt servicing period. For that purpose, the Authority may require the project company to carry out competitive bidding while considering the approved cost as ceiling.

- This tariff will be limited to the extent of net annual energy generation supplied to the power purchaser up to 38% net annual plant capacity factor. Net annual energy generation supplied to the power purchaser in a year, in excess of 38% net annual plant capacity factor will be charged at the following tariffs:

Net annual plant capacity factor	% of prevalent tariff allowed to power producer
Above 38% up to 40%	5%
Above 40% up to 42%	10%
Above 42% up to 44%	20%
Above 44% up to 46%	40%
Above 46% up to 48%	80%
Above 48%	100%

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

- The petitioner is required to ensure that all the equipment is installed as per the details/specifications provided in the 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 savings in the cost under SBP scheme during the loan tenor shall be shared between the power purchaser and power producer in the ratio of 60:40.

- 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 full or part of foreign conventional loan then the tariff of company shall be adjusted at the time of COD at applicable LIBOR + spread of 4.25%. 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.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

- In case the company shall secure foreign loan under any credit insurance (Sinosure etc.) then the cost of that insurance shall be allowed to the maximum limit of 0.6% of the yearly outstanding principal and interest amounts. For that purpose, the spread over that full/part of loan shall be considered as 3.5% as the maximum limit. The savings in the spread during the loan tenor shall be shared between the power purchaser and power producer in the ratio of 60:40.

- The company will have to achieve financial close within one year from the date of issuance of original tariff determination dated August 20, 2018. The tariff granted to the company will no longer remain applicable/valid, if financial close is not achieved by the company in the abovementioned timeline or its generation license is declined/revoked by NEPRA.

- The targeted maximum construction period after financial close is fifteen 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 company to complete construction within fifteen 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 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.

- 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.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

- 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.

12. The Order part along with two 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

7.2.2019
(Saif Ullah Chattha)
Member

31/1/19
(Rafique Ahmed Shaikh)
Member

8/2/2019
(Rehmatullah Baloch)
Vice Chairman

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

12.02.19

WESTERN ENERGY (PVT.) LIMITED
REFERENCE TARIFF TABLE

Year	Foreign O&M	Local O&M	Insurance	Return on Equity	ROEDC	Loan Repayment	Interest Charges	Tariff
	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh
1	0.4146	0.4146	0.1651	1.2754	0.1149	2.7469	2.1253	7.2568
2	0.4146	0.4146	0.1651	1.2754	0.1149	2.9155	1.9568	7.2568
3	0.4146	0.4146	0.1651	1.2754	0.1149	3.0944	1.7779	7.2568
4	0.4146	0.4146	0.1651	1.2754	0.1149	3.2843	1.5880	7.2568
5	0.4146	0.4146	0.1651	1.2754	0.1149	3.4858	1.3864	7.2568
6	0.4146	0.4146	0.1651	1.2754	0.1149	3.6997	1.1725	7.2568
7	0.4146	0.4146	0.1651	1.2754	0.1149	3.9268	0.9455	7.2568
8	0.4146	0.4146	0.1651	1.2754	0.1149	4.1677	0.7046	7.2568
9	0.4146	0.4146	0.1651	1.2754	0.1149	4.4235	0.4488	7.2568
10	0.4146	0.4146	0.1651	1.2754	0.1149	4.6949	0.1774	7.2568
11	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
12	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
13	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
14	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
15	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
16	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
17	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
18	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
19	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
20	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
21	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
22	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
23	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
24	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
25	0.4146	0.4146	0.1651	1.2754	0.1149	-	-	2.3846
Levelized Tariff	**0.4146**	**0.4146**	**0.1651**	**1.2754**	**0.1149**	2.3546	**0.9436**	**5.6828**

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

WESTERN ENERGY (PVT.) LIMITED
DEBT SERVCING SCHEDULE

Relevant Quarter	[illegible]	[illegible]	[illegible] (USD)	[illegible]	[illegible]	[illegible]	[illegible]
1	50,541,751	931,338	758,126	49,610,413	1,689,464	2.7469	2.1253
2	49,610,413	945,308	744,156	48,665,105	1,689,464		
3	48,665,105	959,488	729,977	47,705,617	1,689,464		
4	47,705,617	973,880	715,584	46,731,737	1,689,464		
5	46,731,737	988,488	700,976	45,743,249	1,689,464	2.9155	1.9568
6	45,743,249	1,003,316	686,149	44,739,934	1,689,464		
7	44,739,934	1,018,365	671,099	43,721,569	1,689,464		
8	43,721,569	1,033,641	655,824	42,687,928	1,689,464		
9	42,687,928	1,049,145	640,319	41,638,782	1,689,464	3.0944	1.7779
10	41,638,782	1,064,883	624,582	40,573,900	1,689,464		
11	40,573,900	1,080,856	608,608	39,493,044	1,689,464		
12	39,493,044	1,097,069	592,396	38,395,976	1,689,464		
13	38,395,976	1,113,525	575,940	37,282,451	1,689,464	3.2843	1.5880
14	37,282,451	1,130,227	559,237	36,152,223	1,689,464		
15	36,152,223	1,147,181	542,283	35,005,043	1,689,464		
16	35,005,043	1,164,389	525,076	33,840,654	1,689,464		
17	33,840,654	1,181,854	507,610	32,658,799	1,689,464	3.4858	1.3864
18	32,658,799	1,199,582	489,882	31,459,217	1,689,464		
19	31,459,217	1,217,576	471,888	30,241,641	1,689,464		
20	30,241,641	1,235,840	453,625	29,005,802	1,689,464		
21	29,005,802	1,254,377	435,087	27,751,424	1,689,464	3.6997	1.1725
22	27,751,424	1,273,193	416,271	26,478,231	1,689,464		
23	26,478,231	1,292,291	397,173	25,185,941	1,689,464		
24	25,185,941	1,311,675	377,789	23,874,266	1,689,464		
25	23,874,266	1,331,350	358,114	22,542,915	1,689,464	3.9268	0.9455
26	22,542,915	1,351,321	338,144	21,191,595	1,689,464		
27	21,191,595	1,371,590	317,874	19,820,004	1,689,464		
28	19,820,004	1,392,164	297,300	18,427,840	1,689,464		
29	18,427,840	1,413,047	276,418	17,014,794	1,689,464	4.1677	0.7046
30	17,014,794	1,434,242	255,222	15,580,551	1,689,464		
31	15,580,551	1,455,756	233,708	14,124,795	1,689,464		
32	14,124,795	1,477,592	211,872	12,647,203	1,689,464		
33	12,647,203	1,499,756	189,708	11,147,447	1,689,464	4.4235	0.4488
34	11,147,447	1,522,253	167,212	9,625,194	1,689,464		
35	9,625,194	1,545,086	144,378	8,080,108	1,689,464		
36	8,080,108	1,568,263	121,202	6,511,845	1,689,464		
37	6,511,845	1,591,787	97,678	4,920,059	1,689,464	4.6949	0.1774
38	4,920,059	1,615,663	73,801	3,304,395	1,689,464		
39	3,304,395	1,639,898	49,566	1,664,497	1,689,464		
40	1,664,497	1,664,497	24,967	(0)	1,689,464		

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

24