



National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/TRF-409/ZPNECL-2017/3453-3455

March 1, 2019

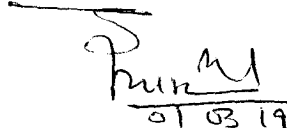
Subject: **Decision of National Electric Power Regulatory Authority in the matter of Review Motion filed M/s. Zhenfa Pakistan New Energy Company (Pvt.) Limited against the Tariff Determination dated August 13, 2018 [Case # NEPRA/TRF-409/ZPNECL-2017]**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I & II (13 pages) in Case No. NEPRA/TRF-409/ZPNECL-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


01 03 19
(Syed Safeer Hussain)

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

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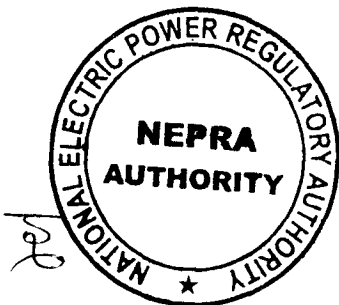
1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

**DECISION OF NATIONAL ELECTRIC POWER REGULATORY AUTHORITY IN THE MATTER OF REVIEW
MOTION FILED BY M/S ZHENFA PAKISTAN NEW ENERGY COMPANY (PVT.) LIMITED AGAINST THE TARIFF
DETERMINATION DATED AUGUST 13, 2018**

1. M/s Zhenfa Pakistan New Energy Company (Pvt.) Ltd. (hereinafter referred to as the "ZPNECPL" or "the petitioner/company") filed motion for leave for review ("review motion") with National Electric Power Regulatory Authority ("NEPRA" or "the Authority") under rule 16(6) of the NEPRA (Tariff Standards and Procedure) Rules, 1998, regulation 3(2) of NEPRA (Review Procedure) Regulations, 2009 and all applicable provisions of other NEPRA laws against the Tariff Determination ("impugned determination") dated August 13, 2018 in respect of its 100 MW_p solar power project ("the project") to be set up at Rakh Chaubara, District Layyah, Punjab.

PROCEEDINGS

2. The Authority considered the review motion on October 10, 2018 and decided to admit the same for further proceedings. The Authority also decided to hold a hearing on this matter. Notices of hearing were sent to the stakeholders, who were considered relevant, vide letters dated December 13, 2018. Hearing was held on December 26, 2018 wherein the petitioner, representative of Punjab Power Development Board and others participated.
3. In the review motion and during the course of hearing, the petitioner has requested for the re-evaluation of the following parameters:
 - i) EPC cost
 - ii) Administration Cost
 - iii) Site, Security and Infrastructure cost
 - iv) Capacity Factor
 - v) Return on Equity
 - vi) Capital Structure
 - vii) Debt Mix
 - viii) Financial Close Period
4. 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 aforesaid parameters:



i. EPC cost

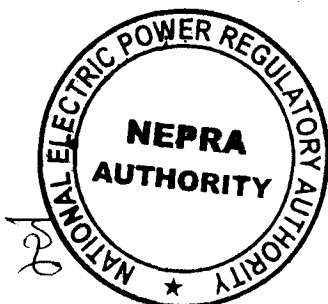
The petitioner submitted that the Authority has allowed EPC cost of USD 0.6174 million per MW in the impugned determination against the claimed EPC cost of USD 0.843 million per MW. The petitioner submitted that the claimed EPC cost was a sum of offshore component of USD 70.1 million and onshore component of USD 14.3 million which was based on duly executed EPC agreements. The petitioner has submitted that it has renegotiated the prices of modules, inverters and mounting structure as allowed by NEPRA with its EPC contractor. The contractor has submitted that the price levels allowed by NEPRA for the aforementioned equipment can be met. However, the petitioner has requested the Authority to reconsider cost of other components of supply contract including substation while keeping in view higher transportation cost due to longer distance between port to the project site compared to other projects and requested to allow USD 0.2 million per MW on this account. Further, the petitioner submitted that costs of civil works in its case shall be relatively higher compared to solar projects being setup in Quaid-e-Azam solar park and requested to allow onshore component USD of 0.143 million per MW in accordance with the executed onshore services contract. Summing up above, the petitioner has requested the Authority to allow EPC cost to the tune of USD 0.731 million per MW (USD 73.10 million) for the project.

ii. Administration Cost

The petitioner submitted that the Authority has allowed administration cost of USD 0.120 million against the claimed cost of USD 0.649 million. The petitioner submitted that it is in process of developing the project since 2015 and administration cost is spread over extended development phase. Salaries of project team & administration staff, accommodation cost for project team staying in Pakistan over the extended development period have resulted in higher cost under the captioned head. Stating above, the petitioner requested the Authority to allow USD 0.649 million in respect of administration cost.

iii. Site, Security and infrastructure cost

The petitioner during the hearing requested to review an additional ground of Site, Security and infrastructure cost. The petitioner apprised the Authority that another solar project namely Zorlu Solar Pakistan (Pvt) Limited ("ZSPL") was allowed Site, Security and Infrastructure cost of USD 0.350 million. Further, it submitted that three solar power projects namely Meridian, Helios and HNDS (50 MW each) were allowed USD 1 million under this head. Whereas, ZPNECPL was allowed a nominal amount of USD 0.206 million. The petitioner submitted that it claimed USD 0.206 million under this head and distributed this cost partly under the heads of project development cost and EPC cost. As NEPRA has assessed its EPC cost while comparing with other solar projects, therefore, it has



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requested to allow captioned cost head in line with what has been approved for other solar power projects

iv. Capacity factor

The petitioner submitted that the Authority has allowed higher capacity factor of 20% against the capacity factor of 19.25% as claimed by ZPNECL. The petitioner submitted that the annual average solar irradiation on horizontal plane (GHI) estimated at project site by Solar GIS corresponds to 1,757.4 kWh/m². It further submitted that as per bifurcation of regions for Upfront Tariffs for solar power projects by NEPRA, the location of the project falls under North region. The company further submitted that the Authority has allowed capacity factor of 20.5% to ZSPL located at South region having annual average solar irradiation on GHI of around 1,930.5 kWh/m². The petitioner also submitted that Alternative Energy Development Board (AEDB) has agreed with ZPNECL's proposed capacity factor of 19.25%. In view of these submissions, the petitioner requested the Authority to approve its tariff on the basis of capacity factor of 19.25%.

v. Return on equity

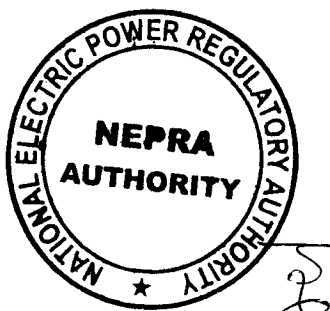
The petitioner submitted that the Authority has allowed its Return on Equity (ROE) of 14%. It submitted that initial solar projects were awarded 17% ROE under upfront tariff regime and 15% was allowed to solar projects in the first quarter of 2018 calendar year. The petitioner submitted that no drastic change in the economic conditions has occurred in the country during the last nine (09) months that could result in reduction of the ROE from 15% to 14%. Also due to Debt Service Reserve Account and circular debt issues, the ROE of 14% is not achievable. Stating above, the petitioner has requested to allow ROE of 15%.

vi. Capital Structure

The petitioner submitted that the Authority has computed the approved tariff on debt to equity ratio of 80 : 20 against its claim of 70 : 30. It submitted that recent solar power projects were allowed tariffs by NEPRA on debt to equity ratio of 75 : 25. Further, it submitted that the Benchmark Guidelines issued by NEPRA on June 19, 2018 are not effective in its case. Hence, it requested to approve its tariff on debt to equity ratio of 75:25.

vii. Debt mix – Local/Foreign Debt

The petitioner submitted that due to decrease in appetite of Chinese banks to lend for non-China Pakistan Economic Corridor ("CPEC") Pakistani projects, the project company is looking forward to have a mix of local and foreign financing or purely local financing for the project. The petitioner



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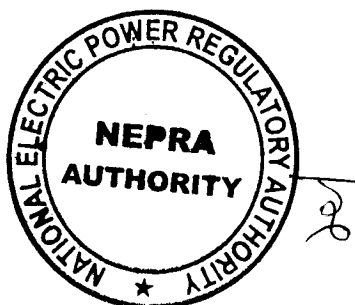
requested the Authority to allow foreign as well as local financing for the project and tariff can be readjusted at Commercial Operations Date stage based on actual financing mix.

viii. **Financial close period**

The petitioner has requested the Authority to allow Financial Close ("FC") period of one year after tariff notification as was allowed in the tariffs of recent solar power projects. The petitioner submitted that NIDCL being as system operator will require substantial time to finalize tripartite arrangement acceptable to lenders. Further, the Lenders also takes 3 to 4 month time for due diligence of project after award of LOS for execution of loan agreement.

Analysis and Decision of the Authority

5. The Authority noted that most of the submissions made with respect to aforesaid parameters were already deliberated upon in the impugned determination. The Authority approved the EPC cost of the project on the basis of data from various sources (regional and international) while considering the differences in market conditions, local manufacturing facilities and other factors. Further, the factors that differentiate solar projects being setup in different locations were also taken into account for the assessment of approved EPC cost. Likewise, all the items under Project Development Cost including the cost of administration as well as site, security & infrastructure costs were approved for the project either on the basis of the claim of the petitioner or on standard basis as being allowed in other comparable projects. Similarly, the tariff of the project was computed and approved on standard capital structure as well as return on equity. For these parameters, the Authority considers that there is no need of review especially keeping in view that the petitioner has not been able to provide any new evidence or sufficient reasons in support thereof.
6. The Authority noted that it allowed capacity factor of 20% in the impugned determination against the petitioner's claimed capacity factor of 19.25%. The Authority has noted that the capacity factor approved in the impugned determination was assessed by NEPRA using the standard tools as well as keeping in view the energy output approved in other solar power projects. It has been observed that NEPRA in the recent tariff determinations of wind power projects earlier approved annual energy levels based on its own assessment using the standard tools, however, lately changed that basis and approved the tariffs on energy yields as given in their respective Energy Reports. This change was made as a number of financiers approached the Authority requesting to approve tariffs on good probability levels for financing purpose. However, with the later arrangement, the sharing mechanism for bonus energy was tightened to ensure the effective tariff remains fairly same as a result of higher generation by those wind power projects. On the same basis, the Authority has decided to review and approve the tariff of ZPNECL at net annual plant capacity factor of 19.25%

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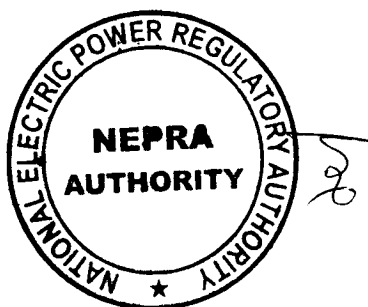
as given in the Energy Report as submitted by the petitioner. However, keeping in view the assessed potential of higher generation, the Authority has decided to approve the following sharing mechanism:

<u>Net annual plant capacity factor</u>	<u>% of prevalent tariff allowed to power producer</u>
Above 19.25% up to 20%	-
Above 20% up to 21%	5%
Above 21% up to 22%	10%
Above 22% up to 23%	20%
Above 23% up to 24%	40%
Above 24% up to 25%	80%
Above 25%	100%

7. The Authority has noted that it approved the tariff of ZPNECPL on its claim of 100% foreign financing. In its review motion, the petitioner has requested to allow the provision of local financing. The Authority has noted that there is no bar on the power projects to secure either foreign or local financing. Therefore, the Authority has decided to allow the provision of local loan or mix of local and foreign loans to ZPNECPL. For local financing, the maximum cost would be KIBOR plus spread of 2.25%.
8. The Authority noted that it approved a time period of six months to achieve financial close to ZPNECPL in the impugned determination. In earlier cases, the Authority had been allowing financial close time of one year but that period was shortened in ZPNECPL's tariff in view of rapid decline in prices of the equipment. The Authority noted that in the recent solar and 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 a 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 ZPNECPL also to achieve financial close. That time of one year shall be reckoned from the date of impugned determination, i.e. August 13, 2018.

9. **ORDER**

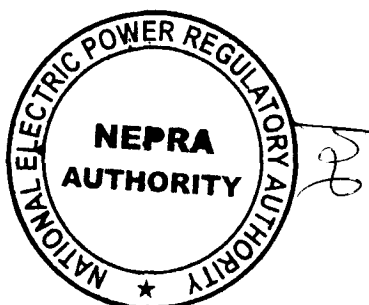
In pursuance of section 7(3)(a) read with section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the Authority hereby determines and approves the following generation tariff along with terms and conditions for Zhenfa Pakistan New Energy Company (Pvt.) Limited (ZPNECPL) for its 100 MWp power project for delivery of electricity to the power purchaser as per **Annex-I**:




- Levelized tariff works out to be US Cents 4.9549/kWh.
- The aforementioned tariff is applicable for twenty five (25) years.
- Foreign Debt Service shall be paid in the first 14 years of commercial operation of the plant.
- Debt Servicing has been worked out using 6 months LIBOR (2.50125) + Spread (3.5%).
- Debt to Equity of 80:20 has been used.
- Return on Equity during construction and operation of 14% has been allowed.
- Construction period of ten (10) months has been allowed for the workings of ROEDC and IDC.
- Insurance during Operation has been calculated as 0.40% of the allowed EPC Cost.
- Reference Exchange Rates of 120 PKR/USD has been used.
- 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

- Applicable foreign portion, if any, of the allowed 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.
- For cost items other than EPC cost, the amounts allowed 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.
- 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.
- 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), applicable LIBOR/KIBOR and premium during the project construction period of ten months.
- ROI-IDC 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 ten months allowed by the Authority.



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

B. Indexations

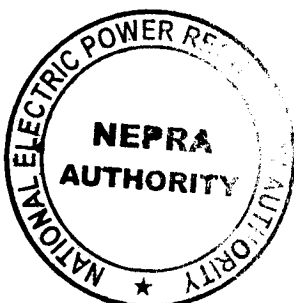
Adjustment of O&M, return on equity, return on equity during construction shall be made on quarterly basis for the quarters starting from 1st July, 1st October, 1st January and 1st April based on latest available information. Adjustment of Debt Servicing Component shall be made either quarterly or bi-annually depending upon the final terms approved at COD. 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:

i) Operation and Maintenance Costs

O&M components of tariff shall be adjusted on account of change in local Inflation (CPI) as notified by the Pakistan Bureau of Statistics, foreign inflation (US CPI) as notified by US Bureau of Labor Statistics and revised TT & OD selling rate as notified by the National Bank of Pakistan accordingly to the following mechanism:

$F. O\&M_{(REV)}$	=	$F. O\&M_{(REF)} * US CPI_{(REV)} / US CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$
$L. O\&M_{(REV)}$	=	$L. O\&M_{(REF)} * CPI_{(REV)} / CPI_{(REF)}$
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 251.588 for the month of May, 2018
$CPI_{(REV)}$	=	The revised CPI (General)
$CPI_{(REF)}$	=	The reference CPI (General) of 225.40 for the month of May, 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.



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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. 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**

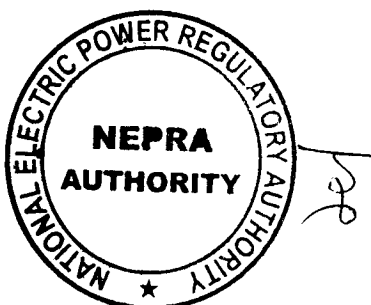
The ROE (ROE + ROEDC) component of the tariff will be adjusted on quarterly basis on account of change in USD/PKR parity. The variation relating to these components shall be worked out according to the following formula;

$ROE_{(Rev)}$	=	$ROE_{(Ref)} * ER_{(Rev)} / ER_{(Ref)}$
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.

iv) **Indexations applicable to debt**

For foreign debt, 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 period, over the applicable reference exchange rate.

v) **Variations in LIBOR**

The interest part of tariff component for the loan shall remain unchanged throughout the term except for the adjustment due to variation in interest rate as a result of variation in LIBOR according to the following formula:

ΔI	=	$P_{(REV)} * (LIBOR_{(REV)} - 2.50125\%) / 2$
Where;		
ΔI	=	The variation in interest charges applicable corresponding to variation in 6 month LIBOR. ΔI can be positive or negative depending upon whether 6 month LIBOR _(REV) per annum > or < 2.50125%. 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 commercial operations date (i.e. the first figure will be used for the purposes of calculation of interest for the first quarter after commercial operations date).
$LIBOR_{(REV)}$	=	Revised 6 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.

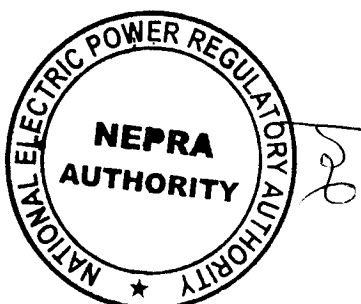
vi) **Indexation of Sinosure Component**

Sinosure fee component will be adjusted based on the revised principal and interest components.

C. **Terms and Conditions**

The following terms and conditions shall apply to the determined reference 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 19.25% net annual plant capacity factor. Net annual energy generation



supplied to the power purchaser in a year, in excess of 19.25% net annual plant capacity factor, will be charged at the following tariffs:

<u>Net annual plant capacity factor</u>	<u>% of prevalent tariff</u>
Above 19.25% up to 20%	-
Above 20% up to 21%	5%
Above 21% up to 22%	10%
Above 22% up to 23%	20%
Above 23% up to 24%	40%
Above 24% up to 25%	80%
Above 25%	100%

- The risk of solar 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.
- In case the company secures full or certain portion of debt under any concessionary financing including one introduced by State Bank of Pakistan, the tariff of the company shall be adjusted at COD on the terms of the said financing.
- 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.
- Allowed limit of degradation has been made part of the approved project cost. No extra financial compensation shall be provided in the EPA.
- The company will have to achieve financial close within one year from the date of issuance of tariff determination dated August 13, 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 ten 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 ten months will not invalidate the tariff granted to it.

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- Pre COD sale of electricity is allowed to the power producer, 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 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 passed through.
 - 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.
10. 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


(Saif Ullah Chattha)
Member
25.2.2019


(Rafique Ahmed Shaikh)
Member
25/2/19


(Rehmatullah Baloch)
Vice Chairman
25/2/19




01/03/19



Zhenfa Pakistan New Energy Company (Pvt.) Limited Reference Tariff Table

Year	O&M Local	O&M Foreign	Insurance	Return on Equity	ROEDC	Loan Repayment	Interest Charges	Sinosure	Tariff
	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh	Rs. / kWh
1	0.4149	0.4149	0.1757	1.3621	0.0770	1.8401	2.3084	0.2377	6.8308
2	0.4149	0.4149	0.1757	1.3621	0.0770	1.9522	2.1963	0.2262	6.8192
3	0.4149	0.4149	0.1757	1.3621	0.0770	2.0711	2.0774	0.2139	6.8070
4	0.4149	0.4149	0.1757	1.3621	0.0770	2.1972	1.9512	0.2009	6.7940
5	0.4149	0.4149	0.1757	1.3621	0.0770	2.3311	1.8174	0.1872	6.7802
6	0.4149	0.4149	0.1757	1.3621	0.0770	2.4731	1.6754	0.1725	6.7656
7	0.4149	0.4149	0.1757	1.3621	0.0770	2.6237	1.5247	0.1570	6.7501
8	0.4149	0.4149	0.1757	1.3621	0.0770	2.7835	1.3649	0.1406	6.7336
9	0.4149	0.4149	0.1757	1.3621	0.0770	2.9531	1.1954	0.1231	6.7161
10	0.4149	0.4149	0.1757	1.3621	0.0770	3.1329	1.0155	0.1046	6.6976
11	0.4149	0.4149	0.1757	1.3621	0.0770	3.3238	0.8246	0.0849	6.6780
12	0.4149	0.4149	0.1757	1.3621	0.0770	3.5262	0.6222	0.0641	6.6571
13	0.4149	0.4149	0.1757	1.3621	0.0770	3.7410	0.4074	0.0420	6.6350
14	0.4149	0.4149	0.1757	1.3621	0.0770	3.9689	0.1795	0.0185	6.6115
15	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
16	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
17	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
18	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
19	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
20	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
21	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
22	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
23	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
24	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
25	0.4149	0.4149	0.1757	1.3621	0.0770	-	-	-	2.4446
Levelized Tariff	0.4149	0.4149	0.1757	1.3621	0.0770	2.0611	1.3056	0.1345	5.9458

Zhenfa Pakistan New Energy Company (Pvt.) Limited
Reference Debt Service Schedule

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	54,689,233	1,273,770	1,641,019	53,415,463	2,914,789	1.8401	2.3084
2	53,415,463	1,311,991	1,602,798	52,103,472	2,914,789		
3	52,103,472	1,351,359	1,563,430	50,752,113	2,914,789	1.9522	2.1963
4	50,752,113	1,391,908	1,522,881	49,360,205	2,914,789		
5	49,360,205	1,433,674	1,481,115	47,926,531	2,914,789	2.0711	2.0774
6	47,926,531	1,476,693	1,438,095	46,449,837	2,914,789		
7	46,449,837	1,521,003	1,393,785	44,928,834	2,914,789	2.1972	1.9512
8	44,928,834	1,566,643	1,348,146	43,362,191	2,914,789		
9	43,362,191	1,613,652	1,301,137	41,748,539	2,914,789	2.3311	1.8174
10	41,748,539	1,662,072	1,252,717	40,086,467	2,914,789		
11	40,086,467	1,711,944	1,202,845	38,374,523	2,914,789	2.4731	1.6754
12	38,374,523	1,763,313	1,151,476	36,611,210	2,914,789		
13	36,611,210	1,816,224	1,098,565	34,794,986	2,914,789	2.6237	1.5247
14	34,794,986	1,870,722	1,044,067	32,924,265	2,914,789		
15	32,924,265	1,926,855	987,934	30,997,410	2,914,789	2.7835	1.3649
16	30,997,410	1,984,673	930,116	29,012,737	2,914,789		
17	29,012,737	2,044,225	870,563	26,968,511	2,914,789	2.9531	1.1954
18	26,968,511	2,105,565	809,224	24,862,947	2,914,789		
19	24,862,947	2,168,745	746,044	22,694,202	2,914,789	3.1329	1.0155
20	22,694,202	2,233,821	680,968	20,460,381	2,914,789		
21	20,460,381	2,300,849	613,939	18,159,531	2,914,789	3.3238	0.8246
22	18,159,531	2,369,889	544,899	15,789,642	2,914,789		
23	15,789,642	2,441,001	473,788	13,348,641	2,914,789	3.5262	0.6222
24	13,348,641	2,514,246	400,543	10,834,395	2,914,789		
25	10,834,395	2,589,689	325,100	8,244,706	2,914,789	3.7410	0.4074
26	8,244,706	2,667,396	247,393	5,577,309	2,914,789		
27	5,577,309	2,747,435	167,354	2,829,875	2,914,789	3.9689	0.1795
28	2,829,875	2,829,875	84,914	0	2,914,789		

