



Registrar

# National Electric Power Regulatory Authority

## Islamic Republic of Pakistan

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No. NEPRA/TRF-354/AJPPL-2016/11433-11435

July 8, 2018 2019

Subject: **Decision of National Electric Power Regulatory Authority in the matter of Tariff Adjustment at Commercial Operation Date (COD) of AJ Power (Private) Ltd. (AJPPL) [Case No. NEPRA/TRF-354/AJPPL-2016]**

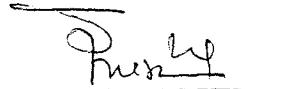
Dear Sir,

Enclosed please find herewith the subject Decision of the Authority (14 pages) in the matter of Tariff Adjustment at Commercial Operation Date (COD) of AJ Power (Private) Ltd. (AJPPL) in Case No. NEPRA/TRF-354/AJPPL-2016.

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 along with Annex-I & II of the Authority's Decision are to be notified in the official Gazette.

Encl: As above

  
08 07 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 NATIONAL ELECTRIC POWER REGULATORY AUTHORITY**  
**IN THE MATTER OF TARIFF ADJUSTMENTS AT COMMERCIAL OPERATIONS DATE**  
**(COD) AJ POWER (PRIVATE) LIMITED (AJPPL)**

1. AJ Power (Pvt.) Limited (AJPPL) was awarded the Upfront Tariff of January 22, 2015 vide Authority's decision dated October 09, 2015 for its proposed 12 MW solar PV power plant at Adhi Kot, Khushab. However AJPPL could not meet the conditions set out for the referred tariff and accordingly granted tariff expired.
2. The Authority issued the new Upfront Tariff on December 16, 2015. AJPPL vide its letter dated February 26, 2016 filed an application for unconditional acceptance of the new Upfront Tariff announced by the Authority dated December 16, 2015 with assumptions and conditions as approved by the Authority. The new Upfront Tariff was notified in the official Gazette vide SRO No. 1243(I)/2015 dated December 17, 2015.
3. The awarded levelized tariff to AJPPL on April 20, 2016 as per the revised upfront tariff determination was Rs. 12.1093/kWh (US Cents 11.5327/kWh).
4. AJPPL attained commercial operations on December 13, 2017. Accordingly it submitted its request for adjustment of relevant components of its tariff at commercial operations date (hereinafter referred to as "COD") through letter no. Ref: 278/AJPPL/2018 dated May 02, 2018 and also submitted documents in support thereof as required time to time during the verification process.
5. The summary of assessed project cost allowed to 1 to 20 MW solar power plants, as per the upfront tariff determination dated December 16, 2015 is as under:

Description	US\$ /MW
EPC Cost	1,114,288
Land Cost	23,810
Project Development Cost	40,320
Insurance during construction	7,429
<b>CAPEX</b>	<b>1,185,846</b>
Financing Fees and Charges	31,128
Interest during construction	10,565
<b>Total Project Cost</b>	<b>1,227,540</b>
<b>Reference Values:</b>	
Rupee-Dollar Parity	= Rs. 105/USD
US CPI (All Urban Consumers)	= 238.654
CPI (General)	= 201.620
Debt: Equity Ratio	= 75:25

6. Summary of the reference tariff as per the approved upfront tariff determination of the Authority dated April 20, 2016 is as follows:

**Specified Reference Tariff**  
**NORTH REGION**

Description	Year 1-10	Year 11-25	Indexations
	Rs./kWh	Rs./kWh	
O&M	1.8714	1.8714	CPI , US CPI, PKR/US\$
Insurance	0.7857	0.7857	Actual on annual basis
ROE	3.8911	3.8911	PKR/US\$
Debt Servicing	8.2154	-	PKR/US\$ & LIBOR/KIBOR
<b>Total Tariff</b>	<b>14.7634</b>	<b>6.5481</b>	

7. One Time Adjustments (Allowed):

7.1 Following one-time adjustments were provided by the Authority in the aforementioned upfront tariff determination dated April 20, 2016;

- i. As the exact timing of payment to EPC contractor was not known at the time of upfront tariff award, therefore, an adjustment for the relevant foreign currency fluctuation for the 90% of the EPC portion of payment in the foreign currency was allowed to be made against the reference exchange rate of Rs. 105/US\$ on the basis of monthly average exchange rates prevailing on 1<sup>st</sup> day of each month during the construction period. The adjustment has to be made only for the currency fluctuation against the reference parity values.
- ii. Interest during construction was allowed be reestablished on the basis of actual project financing and weighted average quarterly LIBOR/KIBOR and applicable premiums 4.5% and 3% respectively. Saving in premium was allowed to be shared in the ratio of 60:40 between power purchaser and power producer.
- iii. In case of Sinasure fee or export credit agency fee on foreign financing, it was provided that the benchmark established in the coal upfront tariff will be applicable subject to maximum of 7% and appropriate adjustment in the project cost shall be made.

8. Head wise discussion on the claimed one-time adjustments claimed:

Below is the component wise detail of allowed one-time adjustments:

## 8.1 EPC Cost:

8.1.1 AJPPL was allowed an EPC cost of US \$ 1,114,288 / MW (US\$ 13.371 million) as per the upfront tariff determination dated Dec 16, 2015. It was referred in the upfront tariff that *"90% of the EPC cost is to be adjusted at COD for currency fluctuation against reference exchange rate of Rs. 105 US\$ on the basis of monthly average exchange rates prevailing on 1st day of each month during the construction period."*

8.1.2 AJPPL submitted that it had achieved financial close on April 14, 2017 as per the letter No. B/3/2/SPV/AJPPL/14 dated April 14, 2017 issued by Alternate Energy Development Board (AEDB) and the project achieved commercial operations on Dec 13, 2017 as per the notification by Central Power Purchasing Agency (Guarantee) Limited vide letter No. DGMT-III/MT-IX/AJPPL/42408-6 dated December 28, 2017.

8.1.3 The average exchange rate based on the exchange rates prevailing on 1<sup>st</sup> day of each month during the construction period as claimed by AJPPL is tabulated below:

Date	May 2017	June 2017	July 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Avg. Ex. Rate
Ex. Rate	104.70	104.70	105.00	105.50	105.40	105.45	105.55	105.6	105.24

8.1.4 The Authority while considering the above, noted that the reference EPC cost is US\$ 1,114,288/MW (Rs. 117,000,240/MW @Rs. 105 US\$). After adjusting 90% of this EPC cost for exchange rate variation, the per MW EPC cost works out to be Rs. 117,238,419 @ Rs. 105.238 US\$. Thus the Authority decided to allow the adjusted EPC cost of Rs. 1,406.861 million (USD 13.371 million) for 12 MW power plant as summarized below:

%	Reference Tariff			Claimed at COD			Allowed at COD		
	EPC Cost in US\$ /MW	Exc. Rate	EPC Cost in Rs. /MW	EPC Cost in US\$ /MW	Exc. Rate	EPC Cost in Rs. /MW	EPC Cost in US\$ /MW	Exc. Rate	EPC Cost in Rs. /MW
90	1,002,859	105	105,300,216	1,005,123	105.24	105,540,902	1,002,859	105.238	105,538,395
10	111,429	105	11,700,024	111,429	105	11,700,024	111,429	105	11,700,024
100	1,114,288		117,000,240	1,116,552		117,240,926	1,114,288		117,238,419

## 8.2 Taxes and Duties:

8.2.1 The solar upfront tariff dated December 16, 2015 awarded to AJPPL by the Authority on February 26, 2016 did not explicitly mention adjustment of taxes and duties on import of plant and machinery, the tax adjustment clause (para xix Terms and Conditions of tariff) stated as under:

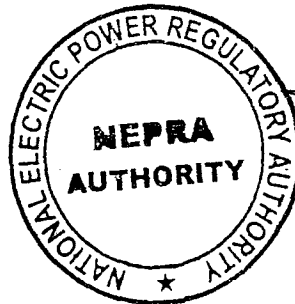
*"In case the company is obligated to pay any tax on its income from generation of electricity, or any duties and/or taxes, not being of refundable nature, are imposed on the company, the exact amount paid by the company on these accounts shall be reimbursed on production of original receipts. This payment*

*shall be considered as a pass-through payment spread over a period of twelve months. However, withholding tax on dividend will not be passed through."*

- 8.2.2 However a Review Motion was filed against the solar upfront tariff determination dated December 16, 2015 and the revised decision issued by the Authority on April 19, 2016 provided as follows:

*"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 spread over a period of twelve months except for the taxes and duties on the import of plant & machinery during the construction period, which shall be included in the project cost at the time of COD adjustment. However, withholding tax on dividend will not be passed through."*

- 8.2.3 AJJPL vide its letter dated February 14, 2019 requested the Authority that the modified para 5 V (xix) of the upfront tariff determination, subsequent to the issuance of determination to the Company, through decision no NEPRA/UTS-2015/5229-5231 dated April 19, 2016 shall also be applied in the instant case.
- 8.2.4 AJPPL claimed duties and taxes amounting to USD 194,531 at the rate of Rs. 105.39/US\$ on import of plant and machinery (USD 161,955) and Federal Excise Duty (USD 32,576) paid on banking services.
- 8.2.5 The Authority considering the above claim of AJPPL observed that the Authority can only allow adjustments in approved and notified tariff which in the instant case of petitioner is decision dated April 20, 2016. The Original Upfront Tariff was determined on December 16, 2015 and later revised as per Authority determination dated April 19, 2016. AJPPL filed its unconditional acceptance of upfront tariff determination dated December 16, 2015 and it never filed any application for acceptance of the revised tariff. In addition, the revision in tariff was made vide a review petition filed by Siachen Energy (SEL) and Harappa Solar (HSPL); AJPPL was neither a petitioner nor party to the review proceedings.
- 8.2.6 In view of above the Authority is constrained to allow adjustments in approved/notified tariff and accordingly cannot consider and allow the claimed Sindh Cess.



### 8.3 Interest During Construction:

8.3.1 The Authority allowed US\$ 10,565/MW i.e. US\$ 0.126 million to AJPPL for interest during construction. In the upfront tariff following mechanism was provided for the adjustment of IDC at the time of COD;

*"Interest during construction will be reestablished on the basis of actual project financing and weighted average quarterly LIBOR/KIBOR and applicable premiums 4.5% and 3% respectively. Saving in premium shall be shared in the ratio of 60:40 between power purchaser and power producer."*

8.3.2 AJPPL claimed that it raised the debt part of the project through a mix of foreign and local financing. AJPPL acquired two loan facilities as below:

Loan Type	Lender Bank:	Loan Amount:	Share	Interest rate:	Location
Foreign Loan: USD 5.750 M	MCB Bank Limited, Bahrain	USD 3.250 M	57%	LIBOR + 4.5%	Bahrain
	MCB Bank Limited, Dubai	USD 2.5 M	43%	LIBOR + 4.5%	Dubai
Local Loan: PKR 673.000 M	Bank of Punjab	PKR 641.25 M	95%	KIBOR + 3% & SBP 6% (Re-finance)	Pakistan
	MCB Bank Limited	PKR 31.75 M	5%	KIBOR + 3% & SBP 6% (Re-finance)	Pakistan

8.3.3 AJPPL in its COD tariff adjustment request has claimed an IDC of Rs. 15.570 million on the above mentioned two financing facilities (tabulated below). AJPPL in support of its claim submitted the confirmation letter dated April 25, 2018 from the inter-creditor agent i.e Bank of Punjab regarding interest during construction amounting to Rs. 15.570 million as summarized hereunder

Sr. #.	Concerned Bank	October	December	Total
-----Rs-----				
1	The Bank of Punjab – Local	2,918,611	6,407,477	9,326,088
2	MCB Bank Limited – Local	144,137	476,725	620,862
3	MCB – Bahrain	905,328	2,148,545	3,053,873
4	MCB – Dubai	917,395	1,652,734	2,570,129
Grand Total				15,570,952

8.3.4 In view of above claim of AJPPL, the IDC paid on the foreign facility loan of USD 3.986 million cumulates to Rs. 5.624 million (USD 51,789) and the IDC paid on the local facility loan of PKR 486 million cumulates to Rs. 9.946 million.

- 8.3.5 AJPPL submitted the financing agreements, interest payment invoices issued by the lender, evidence of interest payment and its calculation of the IDC.
- 8.3.6 AJPPL in its claim has also stated that local financing of PKR 673 million has been negotiated under the SBP refinancing scheme where the applicable interest rate of 6% is applicable on the local loan facility, however the base interest rate KIBOR + 3% would be charged during the period wherein refinance was not available to commercial banks from SBP against loan obtained by AJPPL. AJPPL submitted relevant evidence which reflected this gap in between the refinance available.
- 8.3.7 AJPPL submitted the refinance claim of 6% along with Rs. 3.316 million for the period wherein commercial banks charged KIBOR + 3% on local financing due to the delays involved in refinancing from SBP.
- 8.3.8 After deliberation, the Authority decided to allow foreign IDC of USD 51,789 (Rs. 5.624 million at the rate of Rs. 108.59 US\$). The Authority also decided to allow local IDC of Rs. 6.630 million against the local loan of Rs. 486 million on the applicable spread refinance rate of SBP fixed 6% along with Rs. 3.316 million (KIBOR + 3%) paid by the AJPP to commercial banks during period where SBP refinance was not available.
- 8.3.9 The Authority therefore allowed a cumulative IDC of Rs. 15.570 million.

Loan Type	Loan Amount (M)	Allowed (Rs. in M)
Foreign (LIBOR + 4.5%)	USD 3.986	Rs. 5.624 M
Local (SBP 6%)	PKR 486.042	Rs. 6.630 M
KIBOR + 3% claim	PKR 486.042	Rs. 3.316
Total	USD 8.590	Rs. 15.570

#### 8.4 Insurance during construction:

- 8.4.1 The upfront tariff had allowed insurance during construction of USD 7,429/MW. Since this was not an opener item at COD Stage tariff adjustment. Therefore, the Authority did not consider the amount claimed by AJPPL over and above already allowed in upfront tariff.

#### 8.5 Insurance during operation:

- 8.5.1 The Authority allowed insurance during operation component of Rs. 0.7857/kWh in the awarded upfront tariff determination dated April 20, 2016 and provided following mechanism for the adjustment of insurance component;

*"The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1% of the 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	=	$\text{Ins(Ref)} / P_{\text{(Ref)}} \cdot P_{\text{(Act)}}$
Where		
AIC	=	Adjusted Insurance Component of Tariff
Ins(Ref)	=	Reference Insurance Component of Tariff
$P_{\text{(Ref)}}$	=	Reference Premium 1% of the EPC cost at Rs. 105/US\$.
$P_{\text{(Act)}}$	=	Actual Premium or 1% of the EPC cost in Pak Rupees on exchange rate prevailing on the 1st day of the insurance coverage period which ever is lower

8.5.2 The Authority therefore decided to allow the claimed insurance during operation cost as 0.61% of EPC Cost being within allowed threshold and allowed revision in revision in insurance component of tariff at Rs. 0.3467/kWh.

#### 8.6 Debt Servicing component:

8.6.1 In the upfront tariff allowed, debt servicing component has been worked out on the basis of debt equity ratio of 75:25. The debt repayment period of 10 years has been applied with equal quarterly installments and cost of debt of LIBOR + 4.5% premium. In case of local financing SBP 6% fixed debt servicing cost has been allowed.

8.6.2 AJPPL claimed total debt service component of 9.44 Rs./kWh.

8.6.3 The Authority consistent to the upfront tariff adjusted the debt servicing component in ratio of 75:25 debt:equity. The Authority also adjusted the debt component as per the foreign and local financing mix and decided to allow the debt component of Rs. 8.6527/kWh.

#### 8.7 Indexations:

In view of the post COD indexation claimed by AJPPL for O&M and RoE, the Authority decided that this tariff decision is the COD Stage Tariff determination. Any subsequent adjustment can be claimed through separate request (application for quarterly indexation) as allowed in tariff mechanism approved.

### 9. Order

I. Pursuant to section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 read with Rule 6 of the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000, AJPPL (the applicant) is allowed to charge the following specified/approved tariff for delivery of electricity to the power purchaser,;

#### Specified Reference Tariff NORTH REGION

Description	Year 1-10	Year 11-25	Indexations
	Rs./kWh	Rs./kWh	
O&M	1.8714	1.8714	CPI, US CPI, PKR/US\$



Insurance	0.3467	0.3467	Actual on annual basis
ROE	3.9171	3.9171	PKR/US\$
Debt Servicing	8.6527	-	PKR/US\$ & LIBOR/KIBOR
<b>Total Tariff</b>	<b>14.7879</b>	<b>6.1352</b>	

The Tariff Table and Debt Service Schedule are attached as Annex-I and Annex-II.

## II. ADJUSTMENT IN INSURANCE AS PER ACTUAL

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1% of the 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 1% of the EPC cost at Rs. 105/US\$.
$P_{(Act)}$	=	Actual Premium or 1% of the EPC cost in Pak Rupees on exchange rate prevailing on the 1st day of the insurance coverage period whichever is lower

## III. INDEXATIONS:

The following indexations shall be applicable to the reference tariff;

### i) INDEXATION OF RETURN ON EQUITY (ROE)

After COD, ROE component of tariff will be quarterly indexed on account of variation in PKR/US\$ parity according to the following formula:

$ROE_{(Rev)}$	=	$ROE_{(Ref)} * ER_{(Rev)} / ER_{(Ref)}$
Where;		
$ROE_{(Rev)}$	=	Revised ROE Component of Tariff
$ROE_{(Ref)}$	=	ROE Component of Tariff established at the time of COD
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan
$ER_{(Ref)}$	=	Reference Exchange Rate at the time of COD

### ii) INDEXATION APPLICABLE TO O&M

The O&M component of tariff will be adjusted on account of local Inflation (CPI) and foreign inflation (US CPI) and exchange rate quarterly on 1<sup>st</sup> July, 1<sup>st</sup> October, 1<sup>st</sup> January and 1<sup>st</sup> April based on the latest available information with respect to CPI notified by the Pakistan Bureau of Statistics (PBS), US CPI issued by US Bureau of Labor Statistics and

revised TT & OD selling rate of US Dollar notified by the National Bank of Pakistan as per the following mechanism:

$L O\&M_{(REV)}$	=	$70\% \text{ of } O\&M_{(REF)} * CPI_{(REV)} / CPI_{(REF)}$
$F O\&M_{(REV)}$	=	$30\% \text{ of } O\&M_{(REF)} * US CPI_{(REV)} / US CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$
Where:		
$L O\&M_{(REV)}$	=	the revised applicable Local O&M Component of tariff
$F O\&M_{(REV)}$	=	the revised applicable Foreign O&M Component of tariff
$O\&M_{(REF)}$	=	the reference O&M component of tariff for North Region Rs. 1.8714/kWh.
$CPI_{(REV)}$	=	the revised Consumer Price Index (General) published by Pakistan Bureau of Statistics.
$CPI_{(REF)}$	=	the reference Consumer Price Index (General) of 201.620 for the month of July 2015
$US CPI_{(REV)}$	=	the revised US CPI (All Urban Consumers) published by US Bureau of Labor Statistics
$US CPI_{(REF)}$	=	the reference US CPI (All Urban Consumers) of 238.654 for the month of July 2015
$ER_{(REV)}$	=	the revised TT & OD selling rate of US dollar published by National Bank of Pakistan
$ER_{(REF)}$	=	the reference TT & OD selling rate of RS. 105/US dollar

### iii) INDEXATION FOR LIBOR VARIATION

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variation in interest rate as a result of variation in 3 months LIBOR according to the following formula;

$\Delta I$	=	$P_{(REV)} * (LIBOR_{(REV)} - 1.2906\%) / 4$
Where:		
$\Delta I$	=	the variation in interest charges applicable corresponding to variation in 3 months LIBOR. $\Delta I$ can be positive or negative depending upon whether $LIBOR_{(REV)}$ is > or < 1.2906%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta I$ for each quarter under adjustment applicable on quarterly basis.

$P_{(REV)}$	=	The outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculation date. Period 1 shall commence on the date on which the 1 <sup>st</sup> installment is due after availing the grace period.
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#### IV. TERMS AND CONDITIONS OF TARIFF

The above tariff and terms and conditions, stipulated hereunder, shall be incorporated in the Energy Purchase Agreement between the Power Purchaser and the Power Producer:

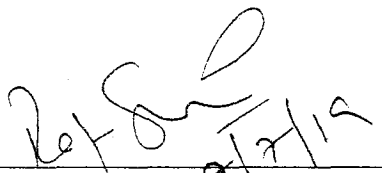
- All plant and equipment shall be new and shall be designed, manufactured tested and certified against quality and safety in accordance with the applicable IEC or other relevant standards.
- The verification of the new machinery will be done by the independent engineer at the time of the commissioning of the plant duly verified by the power purchaser
- Being located in Northern Region, Capacity Utilization Factors for project will be 17%.
- In case the actual output exceeds the required minimum output, the excess energy shall be charged in accordance with the following mechanism:

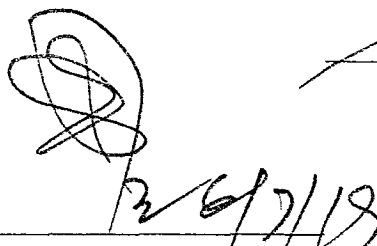
Net Annual Plant Capacity Factors	% of the prevalent tariff
Above 17% to 18%	80%
Above 18% to 19%	90%
Above 19%	100%


- The risk of lower solar irradiation will be on the AJPPL.
- The tariff control period will be 25 years from the date of commercial operation.
- The dispatch will be at appropriate voltage level from 11kV to 220kV mutually agreed between the power purchaser and the AJPPL.
- The eligibility criteria for opting upfront solar tariff will be as under:
  - The projects whose proposed plant & machinery is confirmed to be new as per undertaking/affidavit to be provided by the project sponsors along with their applications to the Authority for acceptance of upfront tariff.
  - The projects having obtained the approval of NTDC/DISCO for Grid connectivity and simulation studies to the effect that solar based power will be evacuated in accordance with the project timeline and further that the power injected through the project will not have any adverse effect on the national grid as required under the Grid Code.

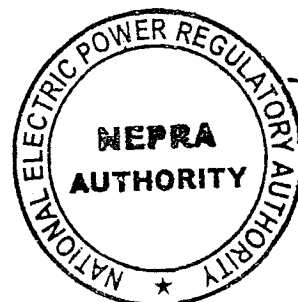
- ix. The impact of degradation has been accounted for in the tariff and there shall be no separate payment on account of degradation during the entire term of the tariff control period.
- x. Pre COD sale of electricity to the power purchaser, if any, is allowed subject to the terms and conditions of EPA, at the applicable tariff excluding principal repayment of debt component and interest component.
- xi. 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 Policy for Development of Renewable Energy for Power Generation 2006, as amended from time to time.
- xii. The debt part of the project has been financed through mix of local and foreign financing and the debt servicing component will be adjusted accordingly.
- xiii. The adjustment/indexation of this tariff will be made on the basis of benchmarks allowed by the Authority for this Upfront Tariff in accordance with the indexation mechanism stipulated therein. No project specific adjustments shall be taken into account.
- xiv. In case the AJPPL is obligated to pay any tax on its income from generation of electricity, or any duties and/or taxes, not being of adjustable nature, are imposed on AJPPL, the exact amount paid on these accounts shall be reimbursed on production of original receipts. This payment shall be considered as a pass-through payment spread over a period of twelve months. However, withholding tax on dividend will not be passed through.
- xv. General assumptions, which are not covered in this determination and National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011, may be dealt with as per the standard terms of the Energy Purchase Agreement.
- V. The above Order of the Authority along with Annex-I and Annex-II shall be notified in the Official Gazette in terms of Section 31(7) of the Regulations of Generation, Transmission and Distribution of Electric Power Act, 1997.

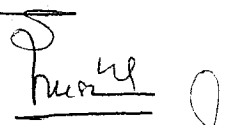
**AUTHORITY**

  
(Rafique Ahmed Shaikh)  
Member

  
(Rehmatullah)  
Member

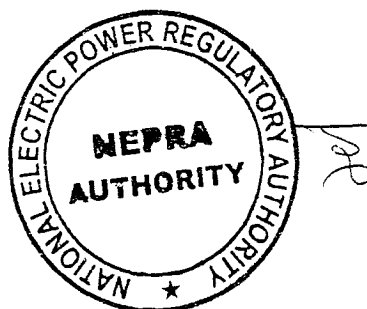
  
(Saif Ullah Chattha)  
Member 24.6.2019



  
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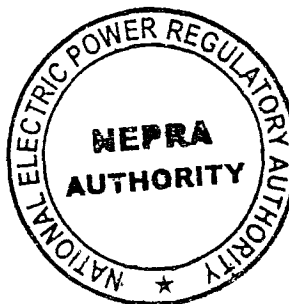
**AJ Power (Private) Limited**  
**Reference Tariff Table (North)**

Year	O&M	Insurance	Return on Equity	Debt Servicing	Total Tariff	
	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	c per kWh
1	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
2	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
3	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
4	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
5	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
6	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
7	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
8	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
9	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
10	1.8714	0.3467	3.9171	8.6527	14.7879	14.0838
11	1.8714	0.3467	3.9171	-	6.1352	5.8431
12	1.8714	0.3467	3.9171	-	6.1352	5.8431
13	1.8714	0.3467	3.9171	-	6.1352	5.8431
14	1.8714	0.3467	3.9171	-	6.1352	5.8431
15	1.8714	0.3467	3.9171	-	6.1352	5.8431
16	1.8714	0.3467	3.9171	-	6.1352	5.8431
17	1.8714	0.3467	3.9171	-	6.1352	5.8431
18	1.8714	0.3467	3.9171	-	6.1352	5.8431
19	1.8714	0.3467	3.9171	-	6.1352	5.8431
20	1.8714	0.3467	3.9171	-	6.1352	5.8431
21	1.8714	0.3467	3.9171	-	6.1352	5.8431
22	1.8714	0.3467	3.9171	-	6.1352	5.8431
23	1.8714	0.3467	3.9171	-	6.1352	5.8431
24	1.8714	0.3467	3.9171	-	6.1352	5.8431
25	1.8714	0.3467	3.9171	-	6.1352	5.8431
Levelized	1.8714	0.3467	3.9171	5.8573	11.9926	11.4215



**AJ Power (Private) Limited**  
**Debt Servicing Schedule (Foreign)**

Period	Foreign Debt					Annual Principal Repayment	Annual Interest	Annual Debt Servicing
	Principal	Repayment	Mark-up	Balance	Debt Service			
	US\$/MW	US\$/MW	US\$/MW	US\$/MW	US\$/MW	Rs./kWh	Rs./kWh	Rs./kWh
1	437,113	8,144	6,328	428,969	14,472	2.35	1.73	4.0816
	428,969	8,262	6,210	420,707	14,472			
	420,707	8,382	6,090	412,325	14,472			
	412,325	8,503	5,969	403,822	14,472			
	437,113	33,291	24,597	403,822	57,889			
	403,822	8,626	5,846	395,196	14,472			
	395,196	8,751	5,721	386,445	14,472			
2	386,445	8,878	5,594	377,567	14,472	2.49	1.60	4.0816
	377,567	9,006	5,466	368,560	14,472			
	403,822	35,262	22,627	368,560	57,889			
	368,560	9,137	5,335	359,424	14,472			
	359,424	9,269	5,203	350,155	14,472			
	350,155	9,403	5,069	340,752	14,472			
	340,752	9,539	4,933	331,212	14,472			
3	368,560	37,348	20,541	331,212	57,889	2.63	1.45	4.0816
	331,212	9,677	4,795	321,535	14,472			
	321,535	9,817	4,655	311,717	14,472			
	311,717	9,960	4,513	301,758	14,472			
	301,758	10,104	4,368	291,654	14,472			
	331,212	39,558	18,331	291,654	57,889			
	291,654	10,250	4,222	281,404	14,472			
4	281,404	10,398	4,074	271,005	14,472	2.79	1.29	4.0816
	271,005	10,549	3,923	260,457	14,472			
	260,457	10,702	3,771	249,755	14,472			
	291,654	41,899	15,990	249,755	57,889			
	249,755	10,857	3,616	238,898	14,472			
	238,898	11,014	3,458	227,884	14,472			
	227,884	11,173	3,299	216,711	14,472			
5	216,711	11,335	3,137	205,376	14,472	2.95	1.13	4.0816
	249,755	44,379	13,510	205,376	57,889			
	205,376	11,499	2,973	193,877	14,472			
	193,877	11,666	2,807	182,212	14,472			
	182,212	11,834	2,638	170,377	14,472			
	170,377	12,006	2,466	158,372	14,472			
	205,376	47,005	10,884	158,372	57,889			
6	158,372	12,180	2,293	146,192	14,472	3.13	0.95	4.0816
	146,192	12,356	2,116	133,836	14,472			
	133,836	12,535	1,937	121,301	14,472			
	121,301	12,716	1,756	108,585	14,472			
	158,372	49,786	8,103	108,585	57,889			
	108,585	12,900	1,572	95,685	14,472			
	95,685	13,087	1,385	82,598	14,472			
7	82,598	13,276	1,196	69,322	14,472	3.31	0.77	4.0816
	69,322	13,469	1,004	55,853	14,472			
	108,585	52,732	5,156	55,853	57,889			
	55,853	13,664	809	42,189	14,472			
	42,189	13,861	611	28,328	14,472			
	28,328	14,062	410	14,266	14,472			
	14,266	14,266	207	(0)	14,472			
8	55,853	55,853	2,036	(0)	57,889	3.72	0.36	4.0816
9								
10						3.94	0.14	4.0816



**AJ Power (Private) Limited**  
**Debt Servicing Schedule (Local)**

Period	Local Debt					Annual Principal Repayment	Annual Interest	Annual Debt Servicing
	Principal	Repayment	Mark-up	Balance	Debt Service			
	Rs./MW	Rs./MW	Rs./MW	Rs./MW	Rs./MW	Rs./kWh	Rs./kWh	Rs./kWh
1	50,911,594	938,153	763,674	49,973,441	1,701,827	2.58	1.99	4.5711
	49,973,441	952,225	749,602	49,021,216	1,701,827			
	49,021,216	966,509	735,318	48,054,707	1,701,827			
	48,054,707	981,006	720,821	47,073,701	1,701,827			
	50,911,594	3,837,894	2,969,414	47,073,701	6,807,308			
	47,073,701	995,722	706,106	46,077,979	1,701,827			
	46,077,979	1,010,657	691,170	45,067,322	1,701,827			
	45,067,322	1,025,817	676,010	44,041,505	1,701,827			
2	44,041,505	1,041,204	660,623	43,000,300	1,701,827	2.74	1.84	4.5711
	47,073,701	4,073,401	2,733,908	43,000,300	6,807,308			
	43,000,300	1,056,823	645,005	41,943,478	1,701,827			
	41,943,478	1,072,675	629,152	40,870,803	1,701,827			
	40,870,803	1,088,765	613,062	39,782,038	1,701,827			
3	39,782,038	1,105,096	596,731	38,676,941	1,701,827	2.90	1.67	4.5711
	43,000,300	4,323,359	2,483,949	38,676,941	6,807,308			
	38,676,941	1,121,673	580,154	37,555,268	1,701,827			
	37,555,268	1,138,498	563,329	36,416,770	1,701,827			
	36,416,770	1,155,575	546,252	35,261,195	1,701,827			
4	35,261,195	1,172,909	528,918	34,088,286	1,701,827	3.08	1.49	4.5711
	38,676,941	4,588,656	2,218,653	34,088,286	6,807,308			
	34,088,286	1,190,503	511,324	32,897,783	1,701,827			
	32,897,783	1,208,360	493,467	31,689,423	1,701,827			
	31,689,423	1,226,486	475,341	30,462,937	1,701,827			
5	30,462,937	1,244,883	456,944	29,218,054	1,701,827	3.27	1.30	4.5711
	34,088,286	4,870,232	1,937,076	29,218,054	6,807,308			
	29,218,054	1,263,556	438,271	27,954,498	1,701,827			
	27,954,498	1,282,510	419,317	26,671,988	1,701,827			
	26,671,988	1,301,747	400,080	25,370,241	1,701,827			
6	25,370,241	1,321,273	380,554	24,048,967	1,701,827	3.47	1.10	4.5711
	29,218,054	5,169,086	1,638,222	24,048,967	6,807,308			
	24,048,967	1,341,093	360,735	22,707,875	1,701,827			
	22,707,875	1,361,209	340,618	21,346,666	1,701,827			
	21,346,666	1,381,627	320,200	19,965,039	1,701,827			
7	19,965,039	1,402,351	299,476	18,562,687	1,701,827	3.68	0.89	4.5711
	24,048,967	5,486,280	1,321,028	18,562,687	6,807,308			
	18,562,687	1,423,387	278,440	17,139,301	1,701,827			
	17,139,301	1,444,738	257,090	15,694,563	1,701,827			
	15,694,563	1,466,409	235,418	14,228,154	1,701,827			
8	14,228,154	1,488,405	213,422	12,739,750	1,701,827	3.91	0.66	4.5711
	18,562,687	5,822,938	984,371	12,739,750	6,807,308			
	12,739,750	1,510,731	191,096	11,229,019	1,701,827			
	11,229,019	1,533,392	168,435	9,695,627	1,701,827			
	9,695,627	1,556,393	145,434	8,139,235	1,701,827			
9	8,139,235	1,579,739	122,089	6,559,496	1,701,827	4.15	0.42	4.5711
	12,739,750	6,180,254	627,054	6,559,496	6,807,308			
	6,559,496	1,603,435	98,392	4,956,061	1,701,827			
	4,956,061	1,627,486	74,341	3,328,575	1,701,827			
	3,328,575	1,651,898	49,929	1,676,677	1,701,827			
10	1,676,677	1,676,677	25,150	(0)	1,701,827	4.40	0.17	4.5711
	6,559,496	6,559,496	247,812	(0)	6,807,308			

