



# National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Registrar

No. NEPRA/TRF-72/EPQL-2007/7708-7710

August 26, 2011

Subject: **Decision of the Authority in the Matter of Engro Powergen Qadirpur Ltd. Tariff Adjustments on High Speed Diesel and Mixed Fuel Operations at Commercial Operations Date (Case No. NEPRA/TRF-72/EPQL-2007) - Intimation of Decision of Tariff pursuant to Section 31 (4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997)**

Dear Sir,

Please find enclosed herewith the decision of the Authority along with Annex-I (08 pages) in Case No. NEPRA/TRF-72/EPQL-2007.

2. The decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (XL of 1997) and Rule 16(11) of the National Electric Power Regulatory Authority Tariff (Standards and Procedure) Rules, 1998.


3. Please note that Order of the Authority at para 12 of the Decision relating to the reference tariff, adjustments, indexation and terms & conditions along with Annex-I needs to be notified in the official gazette.

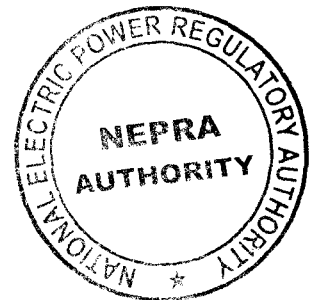
Enclosure: As above

Secretary,  
Ministry of Water & Power,  
Government of Pakistan  
Islamabad.

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad
2. Secretary, Ministry of Finance, Islamabad.

  
( Syed Safeer Hussain )





**DECISION OF THE AUTHORITY IN THE MATTER OF**  
**ENGRO POWERGEN QADIRPUR LIMITED TARIFF ADJUSTMENTS**  
**ON HIGH SPEED DIESEL AND MIXED FUEL OPERATIONS AT**  
**COMMERCIAL OPERATIONS DATE**

1. Engro Powergen Qadirpur Limited - formerly Engro Energy Limited (hereinafter "EPQL") vide letter No. EPQL/HQ/NEPRA/2011/01 dated February 02, 2011 has requested the Authority to adjust the reference tariff at commercial operations date (hereinafter "COD") for high speed diesel (hereinafter "HSD") and mixed fuel (permeate gas and HSD) operations.
2. The Authority has already given its decision in the matter of EPQL tariff adjustments at COD stage for its primary fuel i.e. permeate gas on November 03, 2010 and has decided motion for leave for review filed by EPQL against the said decision on April 01, 2011.
3. With respect to EPQL's request for allowing adjustments in tariff at COD for mixed fuel operations, the Authority has observed that EPQL has not submitted gas supply agreement, workings, documentary evidence for adjustment of reference calorific value of permeate gas, etc. along with its request. The Authority has therefore decided to consider EPQL request for adjustment of tariff on mixed fuel operations when the requisite details/documents are submitted by EPQL.
4. For allowing adjustments in tariff at COD for HSD operations, EPQL has requested the Authority to allow adjustment in its reference tariff on HSD by updating the reference tariff for gas operations by using the following adjustment mechanism:

$$\text{Reference tariff at COD}_{\text{Gas}} \times 217.298/210.90 = \text{Reference tariff at COD}_{\text{HSD}}$$

5. EPQL has also submitted that in order to avoid high cost, National Transmission and Despatch Company Limited (hereinafter "NTDC") did not require EPQL to test capacity on HSD during the pre-commissioning tests. However, the plant was otherwise fully commissioned. The plant generated the required power on HSD, when required so by NTDC, during the annual turnaround of Qadirpur Gas field. EPQL further submitted that based on discussions held with the NTDC, it has been agreed that the capacity of the plant on HSD at COD can be taken as 210.90 MW same as given in schedule 2, section 4 of the PPA.
6. The Authority has observed that in the EPQL proposed adjustment mechanism revised capacity at COD on permeate gas of 217.298 MW has been used, whereas reference capacity of 210.90 on HSD assessed in the original determination of EPQL dated July 2007 has been used.
7. In order to reach an informed decision, the Authority sought NTDC comments on this subject. NTDC comments were received vide letter No. COO/APP/CE-II/2957 dated March 15, 2011. NTDC has submitted that:

*"No doubt, NTDC did not require Engro to test Capacity on HSD during the Pre-Commissioning Tests."*



*(Signature)*



*Further this office has never made any commitment with the Company that Capacity of the plant on HSD may be taken as 210.90 MW at COD stage. This office understands that the Capacity of the Plant on Gas at COD was determined/ declared as 217.298 MW against minimum Contract Capacity of 216.8 MW. So Capacity of plant on HSD at COD stage could be adjusted by enhancing reference Capacity, as per Schedule-2, Section 4 of the PPA, proportionately. So it could be enhanced accordingly and be used for Tariff adjustment on HSD, that could be considered at COD stage."*

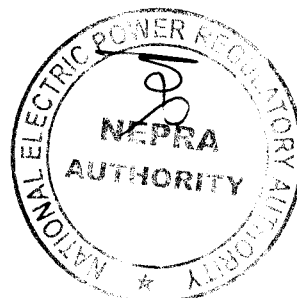
8. Having considered comments of NTDC, the Authority constituted a committee of the Authority professionals for discussing the subject matter with the representatives of EPQL. Subsequent to the meeting of committee with EPQL representatives, EPQL vide letter No. nil dated June 09, 2011 submitted that they agree with the suggestion that their capacity on HSD, may be assessed by enhancing it in the same proportion as the COD tested capacity on permeate gas. EPQL submitted the following computation of capacity on HSD:

$$(210.9 \text{ MW} \times (1 + (217.298 - 216.8) / 216.8)) = 211.38 \text{ MW}$$

9. EPQL through the above mentioned letter further submitted that it was NTDC's decision for not carrying capacity test on HSD during the commissioning tests. However, as per Section 8.4 'Testing of Tested Capacity after Commercial Operation Date' of PPA, capacity test on HSD could also be undertaken. According to EPQL the additional fuel cost required during such a test has to be taken up by the power purchaser as per Section 8.7 of the PPA.
10. The Authority considering the circumstances of the case, has decided to provisionally allow net capacity for operation on HSD of 211.384 MW worked out in accordance with the option proposed by NTDC and accepted by EPQL. Further, in order to establish the net capacity for operation on HSD, EPQL is hereby directed to carryout dependable capacity test for operation on HSD, during non-gas period but not later than six months from the issuance of this decision.
11. Based on the provisionally allowed net capacity for operation on HSD of 211.384 MW, all the relevant tariff components of EPQL on HSD operation have been accordingly revised.

12. **ORDER**

Engro Powergen Qadirpur Limited (formerly Engro Energy Limited) [EPQL] is allowed to charge the following tariff from COD, for operation on high speed diesel (HSD), for delivery of electricity to the CPPA of the NTDC on provisional basis:





**REFERENCE TARIFF**

Tariff Components	Year 1 to 10	Year 11 to 25	Indexation
<b>Capacity Charge (PKR/kW/Hour)</b>			
Fixed O&M - Foreign	0.0099	0.0099	US\$/PKR & US CPI
- Local	0.1404	0.1404	WPI
Insurance	0.0648	0.0648	Nil
Cost of working capital	0.0553	0.0553	KIBOR
Debt service	0.7629	-	LIBOR
Return on equity	0.3534	0.3534	US\$/PKR
Return on equity during construction	0.1300	0.1300	US\$/PKR
<b>Total Capacity Charge</b>	<b>1.5167</b>	<b>0.7538</b>	
<b>Energy Charge Rs./kWh</b>			
Fuel cost component (HSD)	14.2314	14.2314	Fuel price
Variable O&M – Foreign	0.1971	0.1971	US\$/PKR & US CPI
– Local	0.0392	0.0392	WPI

Note:

- Capacity Charge Rs./kW/hour is applicable to dependable capacity at the delivery point.
- Dispatch criterion will be the Energy Charge.
- The above tariff is provisionally applicable from the date of the Commercial Operations till test for the net dependable capacity for operation on HSD. EQPL has to carryout IDC test for operation on HSD during non-gas period but not later than six months from the issuance of this decision. In case of establishment of higher dependable capacity for operation on HSD, as a result of IDC test, the Authority may adjust this tariff retrospectively w.e.f. COD.
- Component wise tariff for operation on HSD is indicated at **Annex-I**.

**I) Adjustment in Insurance Component**

Insurance component of reference tariff on HSD operations shall be adjusted as per actual on yearly basis upon production of authentic documentary evidence by EPQL according to the following formula:

$$\text{Insurance Component (d) (Revised)} = \text{Rs.0.0648 per kW per hour/ (1.35\% x US\$ 154.413 million) x AP}$$

Where:

$$\text{AP} = \text{Actual Premium subject to maximum of 1.35\% of the adjusted EPC}$$



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**II) Pass-Through Items**

No provision for income tax has been accounted for in the tariff. If EPQL is obligated to pay any tax on its income, the exact amount paid by the company shall be reimbursed by NTDC to EPQL on production of original receipts. This payment will be considered as a pass-through (as Rs./kW/hour) hourly payment spread over a 12 months period in addition to the capacity purchase price proposed in the reference tariff. Furthermore, in such a scenario, EPQL shall also submit to NTDC details of any tax shield savings and NTDC shall deduct the amount of these savings from its payment to EPQL on account of taxation.

Withholding tax on dividend is also a pass-through item just like other taxes as indicated in the government guidelines for the determination of tariff for new IPPs. In revised tariff table withholding tax number is indicated as reference and NTDC shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 15% of reference equity i.e. hourly payment (Rs./kW/hour) spread over 12 months.

In case company does not declare a dividend in a particular year or only declares a partial dividend, then the difference in the withholding tax amount (between what is paid in that year and the total entitlement as per the net return on equity) would be carried forward and accumulated so that the company is able to recover the same in hourly payments spread over 12 months period as a pass-through from the power purchaser in future on the basis of the total dividend payout.

**III) Indexations**

The following indexations shall be applicable to reference tariff:

**a) Indexation applicable to O&M**

In future fixed O&M part of capacity charge on HSD operations shall be adjusted on account of local inflation as per wholesale price index (WPI) and variation in US CPI and dollar/rupee exchange rate parity. Quarterly adjustment for local inflation, foreign inflation and exchange rate variation shall be made 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 WPI notified by the Federal Bureau of Statistics, US CPI notified by the US Bureau of Labor Statistics and revised TT & OD selling rate of US dollar notified by the National Bank of Pakistan. The mode of indexation will be as under:

**i) Fixed O&M**

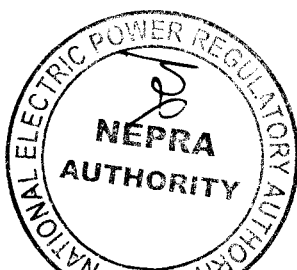
$$F O\&M(d)_{(LREV)} = \text{Rs. } 0.1404 \text{ per kW per hour} * WPI_{(REV)} / 159.31$$

$$F O\&M(d)_{(FREV)} = \text{Rs. } 0.0099 \text{ per kW per hour} * US CPI_{(REV)} / 216.741 * ER_{(REV)} / 84.20$$

Where:

$F O\&M(d)_{(LREV)}$  = The revised applicable fixed O&M local component on HSD operations of the capacity charge indexed with WPI

$F O\&M(d)_{(FREV)}$  = The revised applicable fixed O&M foreign component on HSD operations of the capacity charge indexed with US CPI and



(3)



		exchange rate variations
$WPI_{(REV)}$	=	The revised wholesale price index (manufacturers)
$WPI_{(REF)}$	=	159.31 wholesale price index (manufacturers) of February 2010 notified by the Federal Bureau of Statistics
$US\ CPI_{(REV)}$	=	The revised US CPI (all urban consumers)
$US\ CPI_{(REF)}$	=	216.741 US CPI (all urban consumers) for the month of February 2010 as notified by the US Bureau of Labor Statistics
$ER_{(REV)}$	=	The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note:- The above revised reference O&M cost components of tariff shall be adjusted on quarterly basis for variations in WPI, US CPI and US\$/Rs. exchange rate variation.

ii) **Variable O&M**

The formula of indexation for variable O & M component on HSD operations will be as under:

$$V\ O\&M(d)_{(LREV)} = \text{Rs. } 0.0392 \text{ per kW per hour} * WPI_{(REV)} / 159.31$$

$$V\ O\&M(d)_{(FRE)} = \text{Rs. } 0.1971 \text{ per kW per hour} * US\ CPI_{(REV)} / 216.741 * ER_{(REV)} / 84.20$$

Where:

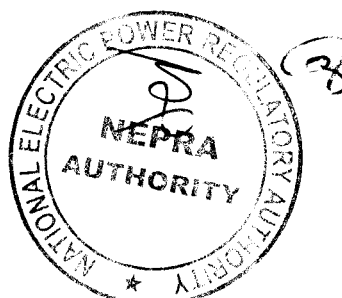
$V\ O\&M(d)_{(LREV)}$	=	The revised applicable variable O&M local component on HSD operations of the energy charge indexed with WPI
$V\ O\&M(d)_{(FRE)}$	=	The revised applicable variable O&M foreign component on HSD operations of the energy charge indexed with US CPI and exchange rate variations
$WPI_{(REV)}$	=	The revised wholesale price index (manufacturers)
$WPI_{(REF)}$	=	159.31 wholesale price index (manufacturers) of February 2010 notified by the Federal Bureau of Statistics
$US\ CPI_{(REV)}$	=	The revised US CPI (all urban consumers)
$US\ CPI_{(REF)}$	=	216.741 US CPI (all urban consumers) for the month of February 2010 as notified by the US Bureau of Labor Statistics
$ER_{(REV)}$	=	The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note:- The above revised reference O&M cost components of tariff shall be adjusted on quarterly basis for variations in WPI, US CPI and US\$/Rs. exchange rate variation.

b) **Adjustment for LIBOR variation**

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

$$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 1.16\%) / 4$$





Where:

$\Delta I$  = The variation in interest charges applicable corresponding to variation in LIBOR.  $\Delta I$  can be positive or negative depending upon whether LIBOR<sub>(REV)</sub> is > or < 1.16%. The interest payment obligation will be enhanced or reduced to the extent of  $\Delta I$  for each quarter under adjustment on quarterly basis.

$P_{(REV)}$  = The outstanding principal (as indicated in the debt service schedule) on a quarterly basis on the relevant quarterly calculations date.

Cost of working capital component will be adjusted on the basis of quarterly variation in reference KIBOR (12.36%) with spread (200 basis points) remaining the same.

c) **Fuel Price Variation**

The variable charge part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations. In this regard, the variation in EPQL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FC(d)_{(REV)} = (Rs. 14.2314 \text{ per kWh} * FP(d)_{(REV)}) / Rs. 63.84 \text{ per Liter}$$

Where:

$FC(d)_{(REV)}$  = Revised fuel cost component of variable charge on HSD operations  
 $FP(d)_{(REV)}$  = Revised fuel price (HSD)

d) **Adjustment in Return on Equity (ROE)**

ROE component of tariff on HSD operations shall be adjusted on account of exchange rate variation according to the following formula:

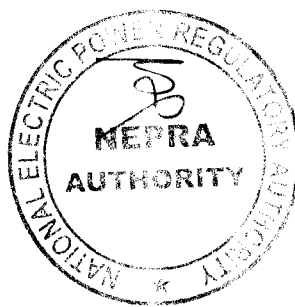
$$ROE(d)_{(REV)} = Rs.0.3534 \text{ per kW per hour} * ER_{(REV)} / ER_{(REF)}$$

Where:

$ROE(d)_{(REV)}$  = The revised ROE component of the capacity purchase price on HSD operations  
 $ER_{(REV)}$  = The revised TT & OD selling rate of US\$ as notified by the National Bank of Pakistan  
 $ER_{(REF)}$  = The reference exchange rate of PKR 84.20 = 1 US\$.

e) **Adjustment in Return on Equity during Construction (ROEDC)**

ROEDC component of tariff on HSD operations shall be adjusted on account of exchange rate variation according to the following formula:



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$$ROEDC(d)_{(Rev)} = Rs.0.1300 \text{ per kW per hour} * ER_{(Rev)} / ER_{(Ref)}$$

Where:

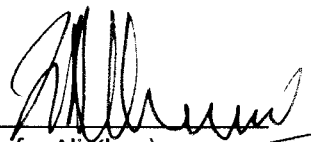
- ROEDC(d)<sub>(Rev)</sub> = The revised ROEDC component of the capacity purchase price on HSD operations
- ER<sub>(Rev)</sub> = The revised TT & OD selling rate of US\$ as notified by the National Bank of Pakistan
- ER<sub>(Ref)</sub> = The reference exchange rate of PKR 84.20= 1 US\$.

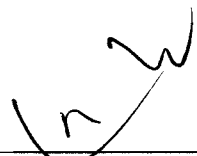
Adjustments on account of local inflation, foreign inflation, exchange rate variation, KIBOR/LIBOR variation and fuel price variation will be approved and announced by the Authority for immediate application in accordance with the requisite indexation mechanism stipulated herein.

**IV) Terms and Conditions of Tariff:**

- Use of permeate gas will be considered as a primary fuel.
- The terms and conditions stipulated in the earlier determinations of the Authority, for operation on HSD, need to be adhered to by EPQL.
- In order to establish the net dependable capacity for operation on HSD, EPQL has to carryout IDC test for operation on HSD during non-gas period but not later than six months from issuance of this decision.
- Dispatch criterion will be based on the energy charge.
- General assumptions of EPQL, which are not covered in this and earlier determinations, may be dealt with according to standard terms of PPA.

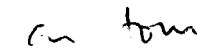
**AUTHORITY**

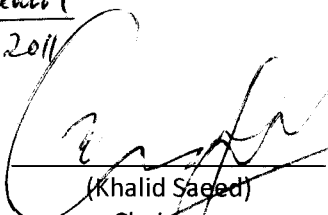
  
(Zafar Ali Khan)  
Member

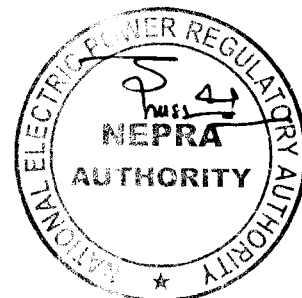
  
(Maqbool Ahmad Khawaja)  
Member

*i dissented on the admission  
of Revised Motion of EPQL dated 10.12.2010  
Shaukat Ali Kundi*  
(Shaukat Ali Kundi)  
Vice Chairman /Member

25.08.2011

  
(Ghiasuddin Ahmed)  
Member

  
(Khalid Saeed)  
Chairman





## ENGRO POWERGEN QADIRPUR LIMITED

## Tariff Table at COD (Based on HSD)

Year	Variable Charge (PKR/kWh)				Capacity Charge (PKR/kW/Hour)									Total
	Fuel	Variable O&M Local	Variable O&M Foreign	Total	Fixed O&M Local	Fixed O&M Foreign	Insurance	Financing Cost on Working Capital	Return on Equity	Return on Equity for Construction Period	Withholding Tax @7.5%	Loan Repayment	Interest Charges	
1	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.5125	0.2504	1.5530
2	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.5342	0.2288	1.5530
3	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.5567	0.2062	1.5530
4	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.5802	0.1827	1.5530
5	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.6047	0.1582	1.5530
6	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.6302	0.1327	1.5530
7	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.6568	0.1061	1.5530
8	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.6845	0.0784	1.5530
9	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.7134	0.0495	1.5530
10	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363	0.7435	0.0194	1.5530
11	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
12	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
13	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
14	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
15	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
16	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
17	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
18	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
19	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
20	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
21	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
22	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
23	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
24	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
25	14.2314	0.0392	0.1971	14.4676	0.1404	0.0099	0.0648	0.0553	0.3534	0.1300	0.0363			0.7900
<b>Levelized Tariff (1-25 Years)</b>				<b>14.4676</b>	<b>0.1404</b>	<b>0.0099</b>	<b>0.0648</b>	<b>0.0553</b>	<b>0.3534</b>	<b>0.1300</b>	<b>0.0363</b>	<b>0.4075</b>	<b>0.1090</b>	<b>1.3065</b>

Net capacity at COD

211.384

MW (net capacity allowed is provisional and is adjustable on the basis of actual dependable capacity test to be carried out)

Exchange rate at COD

84.20

Rs./US \$

Fuel price

63.84

Rs./Litre (excluding sales tax)

US CPI

216.74

WPI (Manufacturers)

159.31

Levelized tariff at 60% plant factor

Rs.16.6451 per kWh (or US Cent 19.7685)

