National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Registrar

No. NEPRA/R/TRF-64/WARDA-2006/8101-03
December 22, 2006

Subject: **Decision of the Authority w.r.t. Acceptance of Upfront Tariff for Reciprocating Engines Technology by WARDA Power Generation (Pvt.) Ltd. (WARDA) (Case No. NEPRA/TRF-64/WARDA-2006)**
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 the subject decision of the Authority along with Annex-I (12 pages) in Case No. NEPRA/TRF-64/WARDA-2006.

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

3. Please note that only Order of the Authority at para 3 of the decision relating to the Reference Tariff and allowed adjustments & indexation along with Annex-I needs to be notified in the official gazette. The Order is reproduced for the purpose of clarity and is attached herewith.

DA/as above.

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22.12.06
(Mahjoob Ahmad Mirza)

The Secretary
Cabinet Division
Government of Pakistan
Cabinet Secretariat
Islamabad

CC:

1. Secretary, Ministry of Water & Power, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.

ORDER OF THE AUTHORITY
IN CASE NO. NEPRA/TRF-64/WARDA-2006
TO BE NOTIFIED IN THE OFFICIAL GAZETTE

Pursuant to Rule 6 of the NEPRA Licensing (Generation) Rules 2000, WARDA Power Generation (Pvt.) Ltd. (WARDA) is allowed to charge, subject to adjustment of Capacity Purchase Price on account of net dependable capacity as determined by test jointly carried out by Central Power Purchasing Agency (CPPA) and the petitioner, the following is approved as specified tariff for WARDA for delivery of electricity to CPPA of NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

Reference Tariff

Tariff Components	Year 1 to 10	Year 11 to 25	Indexation
Capacity Charge PKR/kW/Hour)			
O&M Foreign	0.0700	0.0700	US$ /PKR
O&M Local	0.0700	0.0700	WPI
Cost of Working Capital	0.0494	0.0494	KIBOR
Insurance	0.0750	0. 0750	US$ /PKR
Debt Service	1.0017	-	KIBOR
Return on Equity	0.2131	0. 2131	NIL
ROE during Construction	0.0235	0.0235	NIL
Total Capacity Charge	**1.5027**	**0.2129**	
Energy Charge on Operation on Furnace Oil Rs./kWh			
Fuel Cost Component	4.7593	4.7593	Fuel Price
Variable O&M	0.4319	0.4319	$ to Rupee

Note: i) Capacity Charge Rs./kW/hour applicable to dependable capacity at the delivery point.

ii) Dispatch criterion will be Energy Charge.

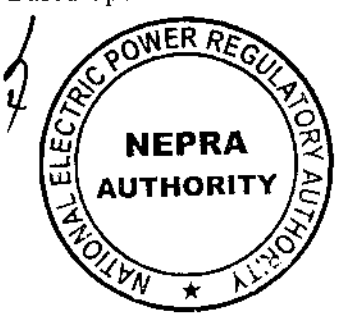
iii) The above tariff is applicable for a period of 25 years commencing from the date of the Commercial Operation.

iv) Component wise tariff for operation on RFO is indicated at Annex-I.

The following adjustments /indexations shall be applicable to reference tariff;

I. Adjustment in EPC Cost (One Time)

The Authority has assessed US$ 927 per kW installed project cost, 81% of which has been assumed as EPC cost. Since the exact proportion and timing of payment to EPC contractor is not known at this point of time therefore an adjustment for relevant foreign currency fluctuation for the portion of payment in the relevant foreign currency will be made. In this regard the sponsor will be required to provide all the necessary relevant details along with documentary evidence. Based upon such information the percentage



share of different EPC cost components in Euro or Dollar shall be established and shall be applied to 81% of US$ 927 per kW installed project cost. The adjustment shall be only for currency fluctuation against the reference rupee parity values according to the following mechanism. The adjustment would be allowed for a period up to 3 months or up to financial close whichever is earlier;

$EPC_{(Adj.)}$=US$ 927/ kW * 81% * $EPC_{(EURO)}$% / 1.20 * $P_{(Rev)}$ + US$ 927/ kW* 81% * $EPC_{(US\$)}$

Where:

$EPC_{(EURO)}$%	=	Percentage share of plant and equipment for which payments are to be made in EURO
$EPC_{(US\$)}$%	=	Percentage share of plant and equipment for which payments are to be made in US$
$P_{(Rev)}$	=	EURO to dollar parity at the time of payment

The tariff components i.e. Insurance, ROE, ROEDC, Principal Repayment and Interest Charges shall be adjusted according to the following formula at COD.

i) <u>Insurance Adjustment Mechanism for EPC Cost Variation</u>

$$Ins_{(Rev)} = Ins_{(Ref)} / EPC_{(Ref)} \times EPC_{(Adj.)} \times P_{(Rev)} / P_{(Ref)}$$

Where:

$Ins_{(Rev)}$	=	Revised reference insurance component of tariff
$Ins_{(Ref)}$	=	Reference insurance component of tariff as per original schedule of tariff
$EPC_{(Ref.)}$	=	Reference EPC in US$
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

ii) <u>Return on Equity Adjustment Mechanism for EPC Cost Variation</u>

$$ROE_{(Rev)} = ROE_{(Ref)} / US\$927 \times (US\$927 \times 19\% + EPC_{(Adj.)}) \times P_{(Rev)} / P_{(Ref)}$$

Where:

$ROE_{(Rev)}$	=	Revised reference Return on Equity component of tariff
$ROE_{(Ref)}$	=	Reference Return on Equity component of tariff as per original schedule of tariff
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

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iii) ROEDC Adjustment Mechanism for EPC Cost Variation

$$ROEDC_{(Rev)} = ROEDC_{(Ref)} / US\$927 \times (US\$927 \times 19\% + EPC_{(Adj.)}) \times P_{(Rev)} / P_{(Ref)}$$

Where:

$ROEDC_{(Rev)}$	=	Revised reference Return on Equity during Construction component of tariff
$ROEDC_{(Ref)}$	=	Reference Return on Equity during Construction component of tariff as per original schedule of tariff
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

iv) Debt Servicing Adjustment Mechanism for EPC Cost Variation

$$DS_{(Rev)} = DS_{(Ref)} / US\$927 \times (US\$927 \times 19\% + EPC_{(Adj.)}) \times P_{(Rev)} / P_{(Ref)}$$

$DS_{ev)}$	=	Revised Debt Servicing component of tariff
$ROEDC_{(Ref)}$	=	Reference Debt Servicing component of tariff as per original schedule of tariff
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

II. Adjustment due to Variation in Net Capacity

All the tariff components except fuel cost component shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) tests to be carried out for determination of contracted capacity. Adjustment shall not be made if IDC is established less than {GC*(1-0.07)}. The adjustments shall be made according to the following formula:

$$CC_{(Adj.)} = CC_{(Ref)} / \{ GC \times (1 - \frac{GC - NC}{GC}) \} \times \{ GC \times (1 - 0.07) \}$$

Where;

$CC_{(Adj.)}$	=	Adjusted Capacity Charge component of tariff
$CC_{(Ref)}$	=	Reference Capacity Charge component of tariff
GC	=	Gross Capacity at ISO
NC	=	Net Capacity at reference site conditions established at the time of IDC test

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Note:- Reference capacity charge components of Upfront Tariff; Revised O&M Foreign, Revised O&M Local, Insurance, Debt Service, Return on Equity and ROEDC to be adjusted as per IDC test.

Reference Conditions: Ambient temperature 30 degree C
Relative humidity 60%
Site altitude 600 ft a.s.l
Charge air coolant temp 40 C

III. Adjustment in Insurance as per actual

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1.35% of the EPC cost will be treated as pass-through. Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon production of authentic documentary evidence by WARDA according to the following formula;

Insurance (Rev) = AIC/1.35 % * AP%

Where;

AIC = Adjusted Insurance Component (Rs. kW/hr) as per IDC Test

AP = Actual Premium

IV. Adjustment Based on Actual Interest During Construction

Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in drawdown and Interest During Construction with reference to the estimated figures of US$ 10.64 million of IDC. Adjustment shall be according to the following mechanism;

i) Debt Servicing:

$$DS_{(Adj)} = DS_{(Ref)} + \{-PMT(\frac{IR}{4}, 40, (IDC_{(Act)} + C\&T_{(Act)}) - (IDC_{(Ref)} + C\&T_{(Ref)})) \times ER \times DP\} / \{PC_{(Net)} \times \frac{8760}{4}\}$$

$DS_{(Adj.)}$ = Adjusted Debt Servicing for Actual IDC

$DS_{(Ref)}$ = Reference Debt Servicing

IR = Interest Rate

$IDC_{(Act)}$ = $\left(\frac{0.927 \times 0.8 \times GC}{10\text{^}3}\right) + \left(1.07734\right) \times WAI_{(Act)}$ in Million $

Where;

$WAI_{(Act)}$ = Weighted Average Interest at actual disbursement in %age to be worked out according to the following formula;

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$$\{ D_{Q1}\% \times (0.1345 / 4) \times Q_5 \} + \{ D_{Q2}\% \times (0.1345 / 4) \times Q_{5-1} \} + \{ D_{Q3}\% \times (0.1345 / 4) \times Q_{5-2} \} + \{ D_{Q4}\% \times (0.1345 / 4) \times Q_{5-3} \} + \{ D_{Q5}\% \times (0.1345 / 4) \times Q_{5-4} \}$$

D_{Q1} to D_{Q5} indicate actual disbursement %age during corresponding quarter of construction period

$C\&T_{(Act)}$	=	Actual Custom Duties and Taxes for the project in million US$
$IDC_{(Ref)}$	=	$\left(\frac{0.927 \times 0.8 \times GC}{10 \wedge 3} \right) + \left(1.07734 \right) \times 0.07734$
$C\&T_{(Ref)}$	=	$\left(\frac{0.927 \times 0.81 \times GC}{10 \wedge 3} \right) \times 0.05$
ER	=	Exchange Rate Rs. 60 per US$
DR	=	Debt Percentage
$PC_{(Net)}$	=	Net Plant Capacity in million kW

ii) Return on Equity

$$ROE_{(Adj.)} = ROE_{(Ref)} + \{-PMT(15\%,25(IDC_{(Act)} + C\&T_{(Act)}) - (IDC_{(Ref)} + C\&T_{(Ref)})) \times ER \times EP \} / \{PC_{(Net)} \times 8760\}$$

$ROE_{(Adj.)}$	=	Adjusted Return on Equity for Actual IDC
$ROE_{(Ref)}$	=	Reference Return on Equity
$IDC_{(Act)}$	=	Same as in i) above
$C\&T_{(Act)}$	=	Same as in i) above
$IDC_{(Ref)}$	=	Same as in i) above
$C\&T_{(Ref)}$	=	Same as in i) above
ER	=	Exchange Rate Rs. 60 per US$
EP	=	Equity Percentage
$PC_{(Net)}$	=	Net Plant Capacity in million kW

iii) ROEDC

$ROEDC_{(Adj)}$	=	$ROEDC_{(Act)}/ROEDC_{(Ref)}$ x Rs. 0.0235/kW/hour
$ROEDC_{(Adj.)}$	=	Adjusted ROEDC component of Tariff in Rs./kW/hour
$ROEDC_{(Act)}$	=	$\left(\frac{0.927 \times 20\% \times GC}{10 \wedge 3} \right) \times WAROEDC_{(Act)}$

Where;

$$ROEDC_{(Act)} = \{ E_{Q1}\% \times 15\% \times 1.25 \} + \{ E_{Q2}\% \times 15\% \} + \{ E_{Q3}\% \times 15\% \times 0.75 \} + \{ E_{Q4}\% \times 15\% \times 0.5 \} + \{ E_{Q5}\% \times 15\% \times 0.25 \}$$

$ROEDC_{(Ref)}$ = Reference ROEDC (4.09 million US$)

WARDA shall submit the relevant documents to NEPRA within 7 days of COD for adjustment of relevant tariff components.

V. Adjustment in project cost due to variation in Dollar/Rupee parity

Any variation in project cost during construction period on account of variation in dollar/Rupee parity shall be allowed through adjustment in the project cost. For the purpose of this adjustment petitioner shall provide payment schedule along with the

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exchange rate prevalent on the date of particular transaction. WARDA's final reference tariff table shall be revised on COD to incorporate all the permissible adjustment during construction period.

VI. Pass-Through Items

i) No provision for income tax has been accounted for in the tariff. If WARDA is obligated to pay any tax on its ROE, the exact amount paid by the company may be reimbursed by CPPA to WARDA on production of original receipts. This payment may be considered as 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, WARDA may also submit to CPPA details of any tax shield savings and CPPA will deduct the amount of these savings from its payment to WARDA on account of taxation.

ii) Withholding tax is also a pass through item just like other taxes as indicated in the government guidelines for determination of tariff for new IPPs. In a reference tariff table withholding tax number is indicated as reference and CPPA (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% reference equity i.e. hourly payment (Rs./kW/hour) spread over a 12 month according to the following formula:

Withholding Tax Payable = [{15% * ($E_{(Ref)} - E_{(Red)}$} +$ROEDC_{(Ref)}$] * 7.5%

Where:

$E_{(Ref)}$ = Ref Equity (Gross Capacity in million kW * 927 USD/kW * Equity Ratio)
Maximum equity component shall be 30%

$E_{(Red)}$ = Equity Redeemed

$ROEDC_{(Ref)}$= Reference Return on Equity During Construction

iii) 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 pay out.

VII. Indexations:

The following indexation shall be applicable to the reference tariff as follows;

a) Indexation applicable to O&M

The Fixed O&M local component of Capacity Charge will be adjusted on account of Inflation (WPI) and Fixed O&M foreign component on account of variation in US CPI and dollar/Rupee exchange rate. Quarterly adjustment for local inflation, foreign inflation

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and exchange rate variation will be made on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics (FBS), 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. The mode of indexation will be as under:

i) **Fixed O&M**

$F\ O\&M_{(LREV)}$ = Rs. 0.0700/kW/Hour * $WPI_{(REV)}$ /117.80

$F\ O\&M_{(FREV)}$ = Rs.0.0700/kW/Hour * US $CPI_{(REV)}$/199.8* $ER_{(REV)}$/60

Where:

$F\ O\&M_{(LREV)}$	=	the revised applicable Fixed O&M Local Component of the Capacity Charge indexed with WPI
$F\ O\&M_{(FREV)}$	=	the revised applicable Fixed O&M Foreign Component of the Capacity Charge indexed with US CPI and Exchange Rate variations
$WPI_{(REV)}$	=	the revised wholesale Price Index (manufactures)
$WPI_{(REF)}$	=	117.80 wholesale price index (manufactures) of April 2006 notified by Federal Bureau of Statistics
US $CPI_{(REV)}$	=	the revised US CPI
US $CPI_{(REF)}$	=	199.8 US CPI for the month of March 2006 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 reference numbers indicated above shall be replaced by the revised numbers after incorporating the required adjustments at COD.

ii) **Variable O&M**

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

$V\ O\&M_{(REV)}$ = Rs. 0.4319 per kWh * US $CPI_{(REV)}$/199.8 * $ER_{(REV)}$/60

Where:

$V\ O\&M_{(REV)}$	=	The revised applicable Variable O&M Component of Energy Charge indexed with US CPI and Exchange Rate variations.
US $CPI_{(REV)}$	=	the revised US CPI
US $CPI_{(REF)}$	=	199.8 US CPI for the month of March 2006 as notified by the US Bureau of Labor Statistics

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$ER_{(REV)}$ = the Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note: The reference Variable O&M indicated above shall be replaced with the revised number at COD after incorporating the required adjustment based upon the IDC Test.

iii) Adjustment for KIBOR 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 KIBOR according to the following formula;

$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 10.45\%) / 4$

Where:

ΔI = the variation in interest charges applicable corresponding to variation in KIBOR. Δ I can be positive or negative depending upon whether KIBOR REV > or < 10.45%. The interest payment obligation will be enhanced or reduced to the extent of Δ I for each quarter under adjustment applicable on quarterly

$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculations date. Period 1 shall commence on the date on which the 1st installment is due after availing the grace period.

iv) Fuel Price Variation

The Variable Charge Part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations according to the mechanism given below:

$FC_{(Rev)}$ = Rs. 4.7593 per kWh * $FP_{(Rev)}$ / Rs. 25,597.07 per ton

Where:

$FC_{(Rev)}$ = Revised fuel cost component of Variable Charge on RFO.

$FP_{(Rev)}$ = The new price of RFO per Metric Ton adjusted for NHV/GHV factor as per the following table.

The reference fuel price is as indicated in Upfront Tariff for Reciprocating Engines Technology. Since RFO pricing is not notified by any Agency and it is deregulated therefore the following mechanism has been provided for adjusted in fuel cost component for variation in fuel price for WARDA:

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Description	US$/Ton	Rs./Ton
HSFO Arab Gulf Average Price for applicable Fortnight (From Platts Oilgram Report)	309.50	19679.96
Black Premium (From OGRA)	19.20	1158.82
C & F Price – A	328.70	19838.78
Crude Handling and Incidental charges (7.282% of C&F Price)*		1444.63
Sub-Total – B		**1444.63**
EX Refinery Price – (C=A+B)		21283.41
GST (15% of EX Refinery Price		3192.51
Selling Price – D		24475.92
OMC Margin (3.5% of Selling Price)		856.66
GST (15% on OMC Margin)		128.50
Sub Total – E		985.16
Market Price – (F=D+E)		25461.08
Cost of RFO excluding GST (GHV)		**22140.07**

US$ Pak Rupee Exchange Rate-NBP Selling TT/OD = 60

* This charge shall vary with market supply/demand position but shall not exceed 8% of C&F price, to be uniformly charged to all customers including WARDA.

Taking in to account the price for RFO as Rs. 25597.07/ton and net efficiency of 45% (Heat rate of 7584.4 Btu/kWh) the fuel cost component works out as Rs. 4.7593 per kWh. The fuel cost component will be adjusted after the commercial operation date, according to revision in RFO price on fortnightly basis as per above mechanism.

Adjustment on account of local inflation, foreign inflation, foreign exchange rate variation, KIBOR variation and fuel price variation will be approved and announced by the Authority for immediate application within seven working days after receipt of WARDA's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

VIII. Terms and Conditions of Tariff:

i) For Combined Cycle Reciprocating Engines Technology plant availability shall be as agreed by the power purchaser in the PPA.

ii) Use of RFO will be considered as primary fuel.

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iii) All new equipment will be installed and the plant will be of standard configuration.

iv) Dispatch criterion will be based on the Energy Charge.

v) In case NEPRA allowed any additional indexation/benefits to Attock Gen. or Leading Business Houses which are not covered under existing assumptions for determining Upfront Tariff for Reciprocating Engines Technology, WARDA shall also be entitled to such additional indexation/benefits. WARDA however shall not be entitled to any such indexation/benefits as a result of new Upfront Tariff or new GOP Policy

vi) General assumptions of WARDA which are not covered in this determination may be dealt with in the PPA according to its standard terms.

The above tariff and terms and conditions be incorporated as the specified tariff approved by the Authority pursuant to Rule 6 of the Licencing (Generation) Rules, in a Power Purchase Agreement between WARDA and CPPA.

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WARDA Power Generation (Pvt.) Ltd. (WARDA)
Tariff for Reciprocating Engines Technology

Year	Variable Charge (Rs./kWh)			Capacity Charge (Rs./kW/Hour)									Capacity	Total	
	Fuel	Variable O&M	Total	Fixed O&M	Cost of Working Capital	Insurance	ROE	ROEDC	Withholding Tax * @7.5%	Loan Repayment	Interest Charges	Total	Rs. per kWh	Rs. per kWh	¢ per kWh
1	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.2806	0.7211	1.5185	2.5309	7.7221	12.8702
2	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.3203	0.6814	1.5185	2.5309	7.7221	12.8702
3	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.3655	0.6361	1.5185	2.5309	7.7221	12.8702
4	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.4173	0.5844	1.5185	2.5309	7.7221	12.8702
5	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.4763	0.5254	1.5185	2.5309	7.7221	12.8702
6	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.5436	0.4580	1.5185	2.5309	7.7221	12.8702
7	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.6205	0.3811	1.5185	2.5309	7.7221	12.8702
8	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.7083	0.2934	1.5185	2.5309	7.7221	12.8702
9	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.8085	0.1932	1.5185	2.5309	7.7221	12.8702
10	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.9228	0.0789	1.5185	2.5309	7.7221	12.8702
11	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
12	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
13	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
14	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
15	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
16	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
17	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
18	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
19	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
20	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
21	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
22	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
23	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
24	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
25	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
Levelized Tariff (1-25Years)			5.1912	0.1400	0.0494	0.0750	0.2131		0.0160	0.3337	0.3443	1.1949	1.9916	7.1828	11.9713

* Withholding Tax shall be paid as per the actual at the time of actual payment

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(NEPRA)

Case # NEPRA/TRF-64/WARDA-2006
December 21, 2006

DECISION OF THE AUTHORITY
w.r.t ACCEPTANCE OF UPFRONT TARIFF FOR RECIPROCATING ENGINES TECHNOLOGY BY WARDA POWER GENERATION (Pvt.) LTD. (WARDA)

Petitioner:

WARDA Power Generation (Pvt.) Ltd. (WARDA)

Authority

Nasiruddin Ahmed
Member

Zafar Ali Khan
Member

21/12/06

Abdul Rahim Khan
Member

Lt. General (R) Saeed uz Zafar
Chairman

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AUTHORITY

Decision of the Authority Regulatory Meeting (RM) 06-376 dated December 21, 2006 w.r.t Acceptance of Upfront Tariff by WARDA Power Generation (Pvt.) Ltd. for Power Generation Plant of Approximately 200MW Capacity Based on Reciprocating Engine Technology near Muridke in the Punjab Province

The Authority considered the application filed by WARDA for acceptance of Upfront Tariff for Reciprocating Engines Technology along with assumptions and conditions approved by the Authority on September 14, 2006. According to WARDA its Gross Capacity (ISO) of Power Generation Plant is approximately 200 MW and the plant will be operated on RFO near Muridke in the Punjab Province.

2. Having considered applicant's request for acceptance of Revised Upfront Tariff for Reciprocating Engines Technology subject to certain qualifications attached to the application, the Authority is of the opinion that the qualifications have already been addressed in the assumptions attached to the Upfront Tariff. However, for the purpose of clarity detailed adjustment mechanism is given. Accordingly the tariff for WARDA along with adjustment mechanism is specified in the following order:

ORDER

3. Pursuant to Rule 6 of the NEPRA Licensing (Generation) Rules 2000, WARDA Power Generation (Pvt.) Ltd. (WARDA) is allowed to charge, subject to adjustment of Capacity Purchase Price on account of net dependable capacity as determined by test jointly carried out by Central Power Purchasing Agency (CPPA) and the petitioner, the following is approved as specified tariff for WARDA for delivery of electricity to CPPA of NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

Reference Tariff

Tariff Components	Year 1 to 10	Year 11 to 25	Indexation
Capacity Charge PKR/kW/Hour)			
O&M Foreign	0.0700	0.0700	US$ /PKR
O&M Local	0.0700	0.0700	WPI
Cost of Working Capital	0.0494	0.0494	KIBOR
Insurance	0.0750	0. 0750	US$ /PKR
Debt Service	1.0017	-	KIBOR
Return on Equity	0.2131	0. 2131	NIL
ROE during Construction	0.0235	0.0235	NIL
Total Capacity Charge	**1.5027**	**0.2129**	
Energy Charge on Operation on Furnace Oil Rs./kWh			
Fuel Cost Component	4.7593	4.7593	Fuel Price
Variable O&M	0.4319	0.4319	$ to Rupee

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Note: i) Capacity Charge Rs./kW/hour applicable to dependable capacity at the delivery point.

ii) Dispatch criterion will be Energy Charge.

iii) The above tariff is applicable for a period of 25 years commencing from the date of the Commercial Operation.

iv) Component wise tariff for operation on RFO is indicated at Annex-I.

The following adjustments /indexations shall be applicable to reference tariff;

I. Adjustment in EPC Cost (One Time)

The Authority has assessed US$ 927 per kW installed project cost, 81% of which has been assumed as EPC cost. Since the exact proportion and timing of payment to EPC contractor is not known at this point of time therefore an adjustment for relevant foreign currency fluctuation for the portion of payment in the relevant foreign currency will be made. In this regard the sponsor will be required to provide all the necessary relevant details along with documentary evidence. Based upon such information the percentage share of different EPC cost components in Euro or Dollar shall be established and shall be applied to 81% of US$ 927 per kW installed project cost. The adjustment shall be only for currency fluctuation against the reference rupee parity values according to the following mechanism. The adjustment would be allowed for a period up to 3 months or up to financial close whichever is earlier;

$$EPC_{(Adj.)} = US\$\ 927/\ kW * 81\% * EPC_{(EURO)}\% \ /\ 1.20 * P_{(Rev)} + US\$\ 927/\ kW * 81\% * EPC_{(US\$\%)}$$

Where:

$EPC_{(EURO)}\%$	=	Percentage share of plant and equipment for which payments are to be made in EURO
$EPC_{(US\$)}\%$	=	Percentage share of plant and equipment for which payments are to be made in US$
$P_{(Rev)}$	=	EURO to dollar parity at the time of payment

The tariff components i.e. Insurance, ROE, ROEDC, Principal Repayment and Interest Charges shall be adjusted according to the following formula at COD.

i) Insurance Adjustment Mechanism for EPC Cost Variation

$$Ins_{(Rev)} = Ins_{(Ref)} / EPC_{(Ref)} \times EPC_{(Adj.)} \times P_{(Rev)} / P_{(Ref)}$$

Where:

$Ins_{(Rev)}$ = Revised reference insurance component of tariff

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$Ins_{(Ref)}$	=	Reference insurance component of tariff as per original schedule of tariff
$EPC_{(Ref.)}$	=	Reference EPC in US$
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

ii) Return on Equity Adjustment Mechanism for EPC Cost Variation

$$ROE_{(Rev)} = ROE_{(Ref)} / US\$927 \times (US\$927 \times 19\% + EPC_{(Adj.)}) \times P_{(Rev)} / P_{(Ref)}$$

Where:

$ROE_{(Rev)}$	=	Revised reference Return on Equity component of tariff
$ROE_{(Ref)}$	=	Reference Return on Equity component of tariff as per original schedule of tariff
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

iii) ROEDC Adjustment Mechanism for EPC Cost Variation

$$ROEDC_{(Rev)} = ROEDC_{(Ref)} / US\$927 \times (US\$927 \times 19\% + EPC_{(Adj.)}) \times P_{(Rev)} / P_{(Ref)}$$

Where:

$ROEDC_{(Rev)}$	=	Revised reference Return on Equity during Construction component of tariff
$ROEDC_{(Ref)}$	=	Reference Return on Equity during Construction component of tariff as per original schedule of tariff
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

iv) Debt Servicing Adjustment Mechanism for EPC Cost Variation

$$DS_{(Rev)} = DS_{(Ref)} / US\$927 \times (US\$927 \times 19\% + EPC_{(Adj.)}) \times P_{(Rev)} / P_{(Ref)}$$

$DS_{ev)}$	=	Revised Debt Servicing component of tariff
$ROEDC_{(Ref)}$	=	Reference Debt Servicing component of tariff as per original schedule of tariff
$EPC_{(Adj.)}$	=	Adjusted EPC in US$
$P_{(Rev)}$	=	Rupee to Dollar parity at COD
$P_{(Ref)}$	=	Reference Rupee to Dollar parity

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II. Adjustment due to Variation in Net Capacity

All the tariff components except fuel cost component shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) tests to be carried out for determination of contracted capacity. Adjustment shall not be made if IDC is established less than {GC*(1-0.07)}. The adjustments shall be made according to the following formula:

$$CC_{(Adj.)} = CC_{(Ref)} / \{ GC \times (1 - \frac{GC - NC}{GC}) \} \times \{ GC \times (1 - 0.07) \}$$

Where;

$CC_{(Adj.)}$	=	Adjusted Capacity Charge component of tariff
$CC_{(Ref)}$	=	Reference Capacity Charge component of tariff
GC	=	Gross Capacity at ISO
NC	=	Net Capacity at reference site conditions established at the time of IDC test

Note:- Reference capacity charge components of Upfront Tariff; Revised O&M Foreign, Revised O&M Local, Insurance, Debt Service, Return on Equity and ROEDC to be adjusted as per IDC test.

Reference Conditions:
Ambient temperature 30 degree C
Relative humidity 60%
Site altitude 600 ft a.s.l
Charge air coolant temp 40 C

III. Adjustment in Insurance as per actual

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1.35% of the EPC cost will be treated as pass-through. Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon production of authentic documentary evidence by WARDA according to the following formula;

Insurance $_{(Rev)}$ = AIC/1.35 % * AP%

Where;

AIC = Adjusted Insurance Component (Rs. kW/hr) as per IDC Test

AP = Actual Premium

IV. Adjustment Based on Actual Interest During Construction

Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in drawdown and Interest During Construction with reference

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to the estimated figures of US$ 10.64 million of IDC. Adjustment shall be according to the following mechanism;

i) **Debt Servicing:**

$$DS_{(Adj)} = DS_{(Ref)} + \{-PMT(\frac{IR}{4}, 40, (IDC_{(Act)} + C\&T_{(Act)}) - (IDC_{(Ref)} + C\&T_{(Ref)})) \times ER \times DP\} / \{PC_{(Net)} \times \frac{8760}{4}\}$$

$DS_{(Adj.)}$	=	Adjusted Debt Servicing for Actual IDC
$DS_{(Ref)}$	=	Reference Debt Servicing
IR	=	Interest Rate
$IDC_{(Act)}$	=	$\left(\frac{0.927 \times 0.8 \times GC}{10\text{^}3}\right) \div \left(1.07734\right) \times WAI_{(Act)}$ in Million $

Where;

$WAI_{(Act)}$ = Weighted Average Interest at actual disbursement in %age to be worked out according to the following formula;

$$\{D_{Q1}\% \times (0.1345 / 4) \times Q_5)\} + \{D_{Q2}\% \times (0.1345 / 4) \times Q_{5-1})\} +$$
$$\{D_{Q3}\% \times (0.1345 / 4) \times Q_{5-2})\} + \{D_{Q4}\% \times (0.1345 / 4) \times Q_{5-3})\} +$$
$$\{D_{Q5}\% \times (0.1345 / 4) \times Q_{5-4})\}$$

D_{Q1} to D_{Q5} indicate actual disbursement %age during corresponding quarter of construction period

$C\&T_{(Act)}$	=	Actual Custom Duties and Taxes for the project in million US$
$IDC_{(Ref)}$	=	$\left(\frac{0.927 \times 0.8 \times GC}{10\text{^}3}\right) \div \left(1.07734\right) \times 0.07734$
$C\&T_{(Ref)}$	=	$\left(\frac{0.927 \times 0.81 \times GC}{10\text{^}3}\right) \times 0.05$
ER	=	Exchange Rate Rs. 60 per US$
DR	=	Debt Percentage
$PC_{(Net)}$	=	Net Plant Capacity in million kW

ii) **Return on Equity**

$$ROE_{(Adj.)} = ROE_{(Ref)} + \{-PMT(15\%, 25, (IDC_{(Act)} + C\&T_{(Act)}) - (IDC_{(Ref)} + C\&T_{(Ref)})) \times ER \times EP\} / \{PC_{(Net)} \times 8760\}$$

$ROE_{(Adj.)}$	=	Adjusted Return on Equity for Actual IDC
$ROE_{(Ref)}$	=	Reference Return on Equity
$IDC_{(Act)}$	=	Same as in i) above
$C\&T_{(Act)}$	=	Same as in i) above
$IDC_{(Ref)}$	=	Same as in i) above
$C\&T_{(Ref)}$	=	Same as in i) above
ER	=	Exchange Rate Rs. 60 per US$
EP	=	Equity Percentage
$PC_{(Net)}$	=	Net Plant Capacity in million kW

iii) **ROEDC**

$ROEDC_{(Adj)}$ = $ROEDC_{(Act)}/ROEDC_{(Ref)}$ x Rs. 0.0235/kW/hour

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$ROEDC_{(Adj.)}$ = Adjusted ROEDC component of Tariff in Rs./kW/hour

$ROEDC_{(Act)} = \left(\frac{0.927 \times 20\% \times GC}{10^{\wedge}3} \right) \times WAROEDC_{(Act)}$

Where;

$$ROEDC_{(Act)} = \begin{Bmatrix} E_{Q1}\% \times 15\% \times 1.25) \end{Bmatrix} + \begin{Bmatrix} E_{Q2}\% \times 15\%) \end{Bmatrix} + \begin{Bmatrix} E_{Q3}\% \times 15\% \times 0.75) \end{Bmatrix} + \begin{Bmatrix} E_{Q4}\% \times 15\% \times 0.5) \end{Bmatrix} + \begin{Bmatrix} E_{Q5}\% \times 15\% \times 0.25 \end{Bmatrix}$$

$ROEDC_{(Ref)}$ = Reference ROEDC (4.09 million US$)

WARDA shall submit the relevant documents to NEPRA within 7 days of COD for adjustment of relevant tariff components.

V. Adjustment in project cost due to variation in Dollar/Rupee parity

Any variation in project cost during construction period on account of variation in dollar/Rupee parity shall be allowed through adjustment in the project cost. For the purpose of this adjustment petitioner shall provide payment schedule along with the exchange rate prevalent on the date of particular transaction. WARDA's final reference tariff table shall be revised on COD to incorporate all the permissible adjustment during construction period.

VI. Pass-Through Items

i) No provision for income tax has been accounted for in the tariff. If WARDA is obligated to pay any tax on its ROE, the exact amount paid by the company may be reimbursed by CPPA to WARDA on production of original receipts. This payment may be considered as 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, WARDA may also submit to CPPA details of any tax shield savings and CPPA will deduct the amount of these savings from its payment to WARDA on account of taxation.

ii) Withholding tax is also a pass through item just like other taxes as indicated in the government guidelines for determination of tariff for new IPPs. In a reference tariff table withholding tax number is indicated as reference and CPPA (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% reference equity i.e. hourly payment (Rs./kW/hour) spread over a 12 month according to the following formula:

Withholding Tax Payable = [{15% * ($E_{(Ref)} - E_{(Red)}$} +$ROEDC_{(Ref)}$] * 7.5%

Where:

$E_{(Ref)}$ = Ref Equity (Gross Capacity in million kW * 927 USD/kW * Equity Ratio)
Maximum equity component shall be 30%

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$E_{(Red)}$ = Equity Redeemed

$ROEDC_{(Ref)}$= Reference Return on Equity During Construction

iii) 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 pay out.

VII. Indexations:

The following indexation shall be applicable to the reference tariff as follows;

a) Indexation applicable to O&M

The Fixed O&M local component of Capacity Charge will be adjusted on account of Inflation (WPI) and Fixed O&M foreign component on account of variation in US CPI and dollar/Rupee exchange rate. Quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics (FBS), 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. The mode of indexation will be as under:

i) Fixed O&M

$F\ O\&M_{(LREV)}$ = Rs. 0.0700/kW/Hour * $WPI_{(REV)}$ /117.80

$F\ O\&M_{(FREV)}$ = Rs.0.0700/kW/Hour * US $CPI_{(REV)}$/199.8* $ER_{(REV)}$/60

Where:

$F\ O\&M_{(LREV)}$ = the revised applicable Fixed O&M Local Component of the Capacity Charge indexed with WPI

$F\ O\&M_{(FREV)}$ = the revised applicable Fixed O&M Foreign Component of the Capacity Charge indexed with US CPI and Exchange Rate variations

$WPI_{(REV)}$ = the revised wholesale Price Index (manufactures)

$WPI_{(REF)}$ = 117.80 wholesale price index (manufactures) of April 2006 notified by Federal Bureau of Statistics

US $CPI_{(REV))}$ = the revised US CPI

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$US\ CPI_{(REF)}$ = 199.8 US CPI for the month of March 2006 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 reference numbers indicated above shall be replaced by the revised numbers after incorporating the required adjustments at COD.

ii) Variable O&M

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

$V\ O\&M_{(REV)}$ = Rs. 0.4319 per kWh * $US\ CPI_{(REV)}/199.8$ * $ER_{(REV)}/60$

Where:

$V\ O\&M_{(REV)}$ = The revised applicable Variable O&M Component of Energy Charge indexed with US CPI and Exchange Rate variations.

$US\ CPI_{(REV)}$ = the revised US CPI

$US\ CPI_{(REF)}$ = 199.8 US CPI for the month of March 2006 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 reference Variable O&M indicated above shall be replaced with the revised number at COD after incorporating the required adjustment based upon the IDC Test.

iii) Adjustment for KIBOR 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 KIBOR according to the following formula;

ΔI = $P_{(REV)}$ * ($KIBOR_{(REV)}$ - 10.45%) / 4

Where:

ΔI = the variation in interest charges applicable corresponding to variation in KIBOR. Δ I can be positive or negative depending upon whether KIBOR REV > or < 10.45%. The interest payment obligation will be enhanced or reduced to the extent of Δ I for each quarter under adjustment applicable on quarterly

$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculations date. Period 1 shall commence on the date on which the 1st installment is due after availing the grace period.

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iv) Fuel Price Variation

The Variable Charge Part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations according to the mechanism given below:

$FC_{(Rev)}$ = Rs. 4.7593 per kWh * $FP_{(Rev)}$ / Rs. 25,597.07 per ton

Where:

$FC_{(Rev)}$ = Revised fuel cost component of Variable Charge on RFO.

$FP_{(Rev)}$ = The new price of RFO per Metric Ton adjusted for NHV/GHV factor as per the following table.

The reference fuel price is as indicated in Upfront Tariff for Reciprocating Engines Technology. Since RFO pricing is not notified by any Agency and it is deregulated therefore the following mechanism has been provided for adjusted in fuel cost component for variation in fuel price for WARDA:

Description	**US$/Ton**	**Rs./Ton**
HSFO Arab Gulf Average Price for applicable Fortnight (From Platts Oilgram Report)	309.50	19679.96
Black Premium (From OGRA)	19.20	1158.82
C & F Price – A	328.70	19838.78
Crude Handling and Incidental charges (7.282% of C&F Price)*		1444.63
Sub-Total – B		**1444.63**
EX Refinery Price – (C=A+B)		21283.41
GST (15% of EX Refinery Price		3192.51
Selling Price – D		24475.92
OMC Margin (3.5% of Selling Price)		856.66
GST (15% on OMC Margin)		128.50
Sub Total – E		985.16
Market Price – (F=D+E)		25461.08
Cost of RFO excluding GST (GHV)		**22140.07**

US$ Pak Rupee Exchange Rate-NBP Selling TT/OD = 60

* This charge shall vary with market supply/demand position but shall not exceed 8% of C&F price, to be uniformly charged to all customers including WARDA.

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Taking in to account the price for RFO as Rs. 25597.07/ton and net efficiency of 45% (Heat rate of 7584.4 Btu/kWh) the fuel cost component works out as Rs. 4.7593 per kWh. The fuel cost component will be adjusted after the commercial operation date, according to revision in RFO price on fortnightly basis as per above mechanism.

Adjustment on account of local inflation, foreign inflation, foreign exchange rate variation, KIBOR variation and fuel price variation will be approved and announced by the Authority for immediate application within seven working days after receipt of WARDA's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

VIII. Terms and Conditions of Tariff:

i) For Combined Cycle Reciprocating Engines Technology plant availability shall be as agreed by the power purchaser in the PPA.

ii) Use of RFO will be considered as primary fuel.

iii) All new equipment will be installed and the plant will be of standard configuration.

iv) Dispatch criterion will be based on the Energy Charge.

v) In case NEPRA allowed any additional indexation/benefits to Attock Gen. or Leading Business Houses which are not covered under existing assumptions for determining Upfront Tariff for Reciprocating Engines Technology, WARDA shall also be entitled to such additional indexation/benefits. WARDA however shall not be entitled to any such indexation/benefits as a result of new Upfront Tariff or new GOP Policy

vi) General assumptions of WARDA which are not covered in this determination may be dealt with in the PPA according to its standard terms.

The above tariff and terms and conditions be incorporated as the specified tariff approved by the Authority pursuant to Rule 6 of the Licencing (Generation) Rules, in a Power Purchase Agreement between WARDA and CPPA.

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WARDA Power Generation (Pvt.) Ltd. (WARDA)
Tariff for Reciprocating Engines Technology

Year	Variable Charge (Rs./kWh)			Capacity Charge (Rs./kW/Hour)									Capacity	Total	
	Fuel	Variable O&M	Total	Fixed O&M	Cost of Working Capital	Insurance	ROE	ROEDC	Withholding Tax * @7.5%	Loan Repayment	Interest Charges	Total	Rs. per kWh	Rs. per kWh	¢ per kWh
1	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.2806	0.7211	1.5185	2.5309	7.7221	12.8702
2	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.3203	0.6814	1.5185	2.5309	7.7221	12.8702
3	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.3655	0.6361	1.5185	2.5309	7.7221	12.8702
4	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.4173	0.5844	1.5185	2.5309	7.7221	12.8702
5	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.4763	0.5254	1.5185	2.5309	7.7221	12.8702
6	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.5436	0.4580	1.5185	2.5309	7.7221	12.8702
7	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.6205	0.3811	1.5185	2.5309	7.7221	12.8702
8	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.7083	0.2934	1.5185	2.5309	7.7221	12.8702
9	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.8085	0.1932	1.5185	2.5309	7.7221	12.8702
10	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	0.9228	0.0789	1.5185	2.5309	7.7221	12.8702
11	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
12	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
13	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
14	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
15	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
16	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
17	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
18	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
19	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
20	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
21	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
22	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
23	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
24	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
25	4.7593	0.4319	5.1912	0.1400	0.0494	0.0750	0.2131	0.0235	0.0160	-	-	0.5169	0.8615	6.0527	10.0878
Levellized Tariff (1-25Years)			**5.1912**	**0.1400**	**0.0494**	**0.0750**	**0.2131**		**0.0160**	**0.3337**	**0.3443**	**1.1949**	**1.9916**	**7.1828**	**11.9713**

* Withholding Tax shall be paid as per the actual at the time of actual payment

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