



Registrar

National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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E-mail: office@nepra.org.pk

No.NEPRA/R/TRF-58/HPGCL-2006/6553-55
September 01, 2006

Subject: Intimation of Determination of Tariff of Halmore Power Generation Co. (Pvt.) Ltd. (HPGCL) for sale of electricity to the Central Power Purchasing Agency within NTDC (Case No. NEPRA/TRF-58/HPGCL-2006) 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 determination of the Authority along with Annex-I, II & III (44 pages) in Case No. NEPRA/TRF-58/HPGCL-2006.


2. The determination 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 109 of the determination relating to the Reference Tariff and allowed adjustments & indexation along with Annex-I, II & III needs to be notified in the official gazette. The Order is reproduced for the purpose of clarity and is attached herewith.

DA/As above.

Secretary
Cabinet Division,
Government of Pakistan
Cabinet Secretariat
Islamabad




1.09.06.
(Mahjoob Ahmad Mirza)

CC:

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

ORDER OF THE AUTHORITY
IN CASE NO. NEPA/TRF-58/HPGCL-2006
TO BE NOTIFIED IN THE OFFICIAL GAZETTE

Pursuant to Rule 6 of NEPA Licensing (Generation) Rules 2000, Halmore Power Generation Company Ltd. (HPGCL) 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 tariff 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	11 to 30
Capacity Charge (PKR/kW/Hour)		
O&M Foreign	0.0651	0.0651
O&M Local	0.0434	0.0434
Cost of Working Capital *	0.0163	0.0163
Insurance	0.0637	0.0637
Debt Service	0.7842	-
Return on Equity	0.2266	0.2266
ROE during Construction	0.0207	0.0207
Total Capacity Charge	1.2201	0.4359
* In case of plant operation on HSD, the cost of working capital shall be paid on 15 days inventory level basis, which is Rs. 0.0349/kW/Hr.		
A) Energy Charge on Operation on Gas Rs./kWh		
Fuel Cost Component	1.7787	1.7787
Variable O&M	0.1746	0.1746
B) Energy Charge on Operation on HSD Rs./kWh		
Fuel Cost Component	6.7151	6.7151
Variable O&M	0.2520	0.2520

- 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 30 years commencing from the date of the Commercial Operation.
iv) Component wise tariff for operation on Gas and HSD is indicated at Annex-I & II and Debt Service Schedule at Annex-III.



The following indexations shall be applicable to reference tariff;

I One Time Adjustment

a) Adjustment due to variation in net capacity

The reference tariff has been determined on the basis of net capacity of 209 MW at delivery point at mean site conditions. All the tariff components except fuel cost component shall be adjusted at the time of COD based upon the IDC tests to be carried out for determination of contracted capacity. The adjustments shall be made according to the following formula:

i) Revised O&M Foreign	=	0.0651/tested IDC x 209MW
ii) Revised O&M Local	=	0.0434/tested IDC x 209MW
iii) Insurance	=	0.0637/tested IDC x 209MW
iv) Debt Service	=	0.7842/tested IDC x 209MW
v) Return on Equity	=	0.2266/tested IDC x 209MW
vi) ROE during Construction	=	0.0207/tested IDC x 209MW
vii) Variable O&M (Operation on gas)	=	0.1528/tested IDC x 209MW
viii) Variable O&M (Operation on HSD)	=	0.2205/tested IDC x 209MW

b) Adjustment in Insurance Component

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

$$\text{Insurance (Revised)} = \text{AIC}/\$1.943 \text{ million} \times \text{AP}$$

Where;

AIC = Adjusted Insurance Component as per IDC Test

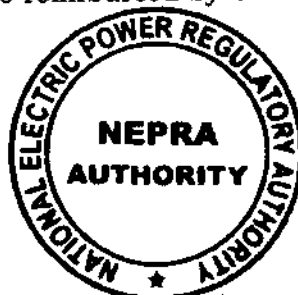
AP = Actual Premium

c) Adjustment due to custom duties and Interest during Construction

Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in customs duties and Interest During Construction with reference to the estimated figures of USD 5.036 million and USD 13.188 million respectively.

II Pass-Through Items

No provision for income tax has been accounted for in the tariff. If HPGCL is obligated to pay any tax on its income, the exact amount paid by the company may be reimbursed by CPPA to HPGCL on production of original



receipts. This payment may be considered as pass-through (as Rs./kW/Hour) monthly payment spread over a 12 months period in addition to the capacity purchase price proposed in the Reference Tariff. Furthermore, in such a scenario, HPGCL may also submit to CPPA details of any tax shield savings and CPPA may deduct the amount of these savings from its payment to HPGCL on account of taxation.

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. Withholding tax shall be allowed @7.5% of the return on equity. 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% equity according to the following formula:

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

Where:

$E_{(REF)}$ = Reference Equity (US\$46.096 million x 60)

$E_{(Red)}$ = Equity Redeemed

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

Note: In case of foreign equity withholding tax calculated according to the above formula shall be adjusted for variation in currency (US\$ to Rupee).

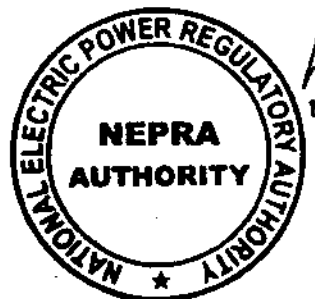
In case Company does not declare a dividend in a particular year or only declares a partial dividend, then the difference in the withholding tax amount (between what is paid in that year and the total entitlement as per the Net Return on Equity) would be carried forward and accumulated so that the Company is able to recover the same as a pass through from the Power Purchaser in future on the basis of the total dividend pay out.

III Indexations:

The reference tariff subject to indexation shall be applicable 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

$$F O\&M_{(LREV)} = \text{Rs. } 0.0434/\text{kW}/\text{Hour} * WPI_{(REV)} / 117.80$$

$$F O\&M_{(FREV)} = \text{Rs.} 0.0651/\text{kW}/\text{Hour} * US CPI_{(REV)}/199.8 * ER_{(REV)}/60$$

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 (All Urban Consumers)

$US CPI_{(REF)}$ = 199.8 US CPI (All Urban Consumers) 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:

$$V O\&M_{(REV)} = \text{Rs. } 0.1746 \text{ per kWh} * US CPI_{(REV)}/199.8 * ER_{(REV)} / 60$$

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 (All Urban Consumers)

$US CPI_{(REF)}$ = 199.8 US CPI (All Urban Consumers) 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.

b) 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;

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 9\%) / 4$$

Where:

ΔI = the variation in interest charges applicable corresponding to variation in KIBOR. ΔI can be positive or negative depending upon whether KIBOR REV > or < 9%. The interest payment obligation will be enhanced or reduced to the extent of ΔI 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.

c) Adjustment in ROE & ROEDC

50% component of ROE & ROEDC will be subject to Exchange Rate Variation as under:

$$ROE_{(PREV)} = Rs. 0.2266 * 50\% * ER_{(REV)} / 60$$

$$ROEDC_{(PREV)} = Rs. 0.0207 * 50\% * ER_{(REV)} / 60$$

Where:

$ROE_{(PREV)}$ = Revised ROE relating to foreign component

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

$ROEDC_{(PREV)}$ = Revised ROEDC relating to foreign component

d) Fuel Price Variation

The Variable Charge part of the tariff relating to fuel cost shall be adjusted on account of fuel price variations as and when notified by the relevant authority, which in the instant case is the Oil & Gas Regulatory Authority. In this regard, the variation in HPGCL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FC_{G(REV)} = Rs.1.7787 \text{ per kWh} * FP_{G(REV)} / Rs. 266.83 \text{ per MMBTU}$$



Where:

$FCg_{(REV)}$ = Revised fuel cost component on gas
 $FPg_{(REV)}$ = the new price of gas as notified by the relevant Authority per MMBTU of fuel adjusted for LHV-HHV factor.

$FCd_{(REV)}$ = Rs.6.7151 per kWh * $FPd_{(REV)}$ /Rs. 954.27 per MMBTU

Where:

$FCd_{(REV)}$ = Revised fuel cost component of Variable Charge on diesel

$FPd_{(REV)}$ = The new Ex-GST price of diesel as notified by the relevant Authority per MMBTU of fuel adjusted for LHV-HHV factor.

Reference values used in the calculations:

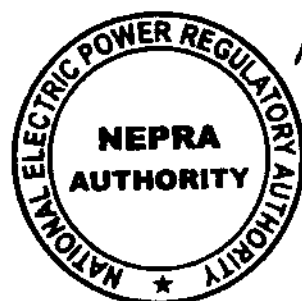
HSD Fuel price with GST (HHV)	Rs. 37.29 per litre
GST	15%
HSD Fuel price without GST (HHV)	Rs. 32.43 per litre
HHV-LHV Adjustment Factor	1.06
HSD Fuel price without GST (LHV)	Rs. 34.37 per litre
HSD Fuel Price without GST	Rs. 954.27 per MMBTU*

* Calculated by using the following:

Reference Specific Gravity	0.84
Reference Calorific Value (Gross)	42,880.7 BTUs/Litre

In case of adjustment in HSD fuel component, HPGCL shall submit request for adjustment, along with supplier's certificate indicating flash point, specific gravity and calorific value duly verified by the power purchaser. The Power Purchaser shall make all necessary arrangements to satisfy itself regarding the authenticity and validity of the information provided by HPGCL. In case of any dispute or discrepancy the power purchaser shall seek third party verification, which for technical issues shall be HDIP, and for price issues shall be OGRA. HPGCL shall be allowed immediate adjustment by the Authority within 7 working days of such request with requisite certificates and verifications.

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 HPGCL's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

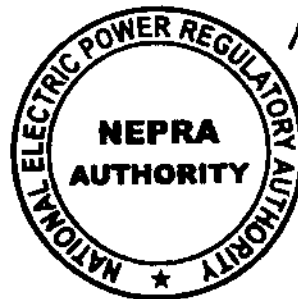
Incentive for Early Commissioning

In case HPGCL achieves Commercial Operation Date (COD) prior to October 31st, 2008, an incentive equivalent to Rs. 0.1795 per kW per hour shall be paid in addition to the normal capacity payment during the period commencing from COD till October 31st, 2008.

Terms and Conditions of Tariff:

- i) Use of Gas will be considered as primary fuel.
- ii) All new equipment will be installed and the plant will be of standard configuration.
- iii) Dispatch criterion will be based on the Energy Charge.
- iv) Diesel oil will be used only for startups and other contingent requirements. Use of Diesel Oil shall be allowed in accordance with the GOP fuel policy announced from time to time.
- v) General assumptions of HPGCL, which are not covered in this determination, may be dealt with in the PPA according to its standard terms.

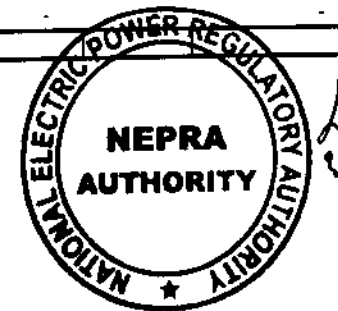
The above tariff and terms and conditions be incorporated as the specified tariff approved by the Authority pursuant to Rule 6 of the Licencing (Generation) Rules, in a Power Purchase Agreement between HPGCL and CPPA.



**HALMORE POWER GENERATION COMPANY (HPGCL)
SPECIFIED TARIFF- PLANT OPERATION ON GAS**

Year	Energy Charge (Rs/kWh)			Capacity Charge Rs/kW per Hour											Total Tariff Rs/kWh		
	Fuel	Variable O&M	Total	Fixed O&M Foreign	Fixed O&M Local	Insurance	W.C	ROE DC	ROE	Withholding tax on div	Sub Total	Debt Servicing Foreign	Debt Servicing Local	Total Debt Servicing		Total Capacity charge	
																Rs/kW/hr	Rs/kWh at 60% PF
1	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
2	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
3	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
4	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
5	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
6	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
7	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
8	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
9	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
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11	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
12	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
13	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
14	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
15	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
16	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
17	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
18	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
19	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
20	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
21	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
22	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
23	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
24	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
25	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
26	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
27	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
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30	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
Levelised	1.7787	0.1746	1.9533												0.9656	1.6093	3.5626

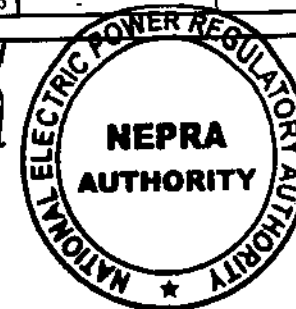
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**HALMORE POWER GENERATION COMPANY (HPGCL)
SPECIFIED TARIFF- PLANT OPERATION ON HSD**

Year	Energy Charge (Rs/kWh)			Capacity Charge Rs/kW per Hour											Total Capacity charge		Total Tariff Rs/kWh
	Fuel	Variable O&M	Total	Fixed O&M Foreign	Fixed O&M Local	Insurance	W.C	ROE DC	ROE	Withholding tax on div	Sub Total	Debt Servicing Foreign	Debt Servicing Foreign	Total Debt Servicing	Rs/kW/Hr	Rs/kWh at 60% PF	
1	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
2	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
3	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
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9	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
10	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
11	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
12	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
13	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
14	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
15	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
16	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
17	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
18	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
19	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
20	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
21	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
22	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
23	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
24	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
25	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
26	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
27	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
28	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
29	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
30	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
Levelised			6.9671												0.9842	1.6403	8.6075

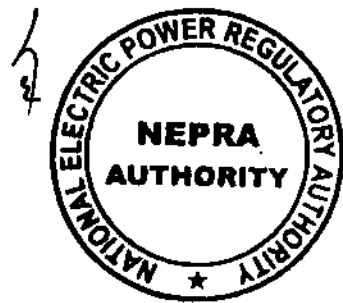
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Annexure III

**HalmorePower Generation Company Limited
Debt Servicing Schedule**

Period	Local Debt					Annual Principal Repayment Rs./Kw/Hr.	Annual Interest Rs./kW/Hr.	Annual Debt Servicing Rs./kW/Hr.
	Principal Million \$	Repayment Million \$	Mark-Up Million \$	Balance Million \$	Debt Service Millin \$			
1st Q	138.29	1.83	4.15	136.45	5.98			
2nd Q	136.45	1.89	4.09	134.56	5.98			
3rd Q	134.56	1.95	4.04	132.62	5.98			
4th Q	132.62	2.00	3.98	130.61	5.98			
1	138.29	7.67	16.26	130.61	23.93	0.251452	0.532792	0.7842
1st Q	130.61	2.06	3.92	128.55	5.98			
2nd Q	128.55	2.13	3.86	126.42	5.98			
3rd Q	126.42	2.19	3.79	124.23	5.98			
4th Q	124.23	2.26	3.73	121.98	5.98			
2	130.61	8.64	15.29	121.98	23.93	0.2830	0.5012	0.7842
1st Q	121.98	2.32	3.66	119.65	5.98			
2nd Q	119.65	2.39	3.59	117.26	5.98			
3rd Q	117.26	2.46	3.52	114.80	5.98			
4th Q	114.80	2.54	3.44	112.26	5.98			
3	121.98	9.72	14.21	112.26	23.93	0.3185	0.4657	0.7842
1st Q	112.26	2.61	3.37	109.64	5.98			
2nd Q	109.64	2.69	3.29	106.95	5.98			
3rd Q	106.95	2.77	3.21	104.18	5.98			
4th Q	104.18	2.86	3.13	101.32	5.98			
4	112.26	10.94	12.99	101.32	23.93	0.3585	0.4257	0.7842
1st Q	101.32	2.94	3.04	98.38	5.98			
2nd Q	98.38	3.03	2.95	95.34	5.98			
3rd Q	95.34	3.12	2.86	92.22	5.98			
4th Q	92.22	3.22	2.77	89.01	5.98			
5	101.32	12.31	11.62	89.01	23.93	0.4035	0.3807	0.7842
1st Q	89.01	3.31	2.67	85.69	5.98			
2nd Q	85.69	3.41	2.57	82.28	5.98			
3rd Q	82.28	3.51	2.47	78.77	5.98			
4th Q	78.77	3.62	2.36	75.15	5.98			
6	89.01	13.86	10.07	75.15	23.93	0.4542	0.3301	0.7842
1st Q	75.15	3.73	2.25	71.42	5.98			
2nd Q	71.42	3.84	2.14	67.58	5.98			
3rd Q	67.58	3.96	2.03	63.62	5.98			
4th Q	63.62	4.07	1.91	59.55	5.98			
7	75.15	15.60	8.33	59.55	23.93	0.5112	0.2731	0.7842
1st Q	59.55	4.20	1.79	55.35	5.98			
2nd Q	55.35	4.32	1.66	51.03	5.98			
3rd Q	51.03	4.45	1.53	46.58	5.98			
4th Q	46.58	4.59	1.40	42.00	5.98			
8	59.55	17.55	6.38	42.00	23.93	0.5753	0.2089	0.7842
1st Q	42.00	4.72	1.26	37.27	5.98			
2nd Q	37.27	4.86	1.12	32.41	5.98			
3rd Q	32.41	5.01	0.97	27.40	5.98			
4th Q	27.40	5.16	0.82	22.24	5.98			
9	42.00	19.76	4.17	22.24	23.93	0.6475	0.1367	0.7842
1st Q	22.24	5.32	0.67	16.92	5.98			
2nd Q	16.92	5.47	0.51	11.45	5.98			
3rd Q	11.45	5.64	0.34	5.81	5.98			
4th Q	5.81	5.81	0.17	(0.00)	5.98			
10	22.24	22.24	1.69	(0.00)	23.93	0.7288	0.0555	0.7842



**NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA**

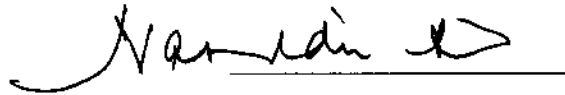
Case No. NEPRA/TRF-58/HPGCL-2006
August 30, 2006

Petitioner

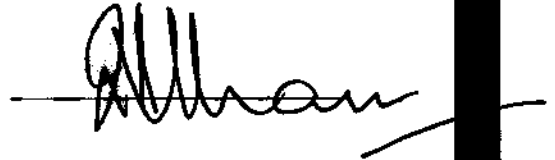
Halmore Power Generation Company (Pvt) Ltd. (HPGCL)

Authority


Nasiruddin Ahmed
Member



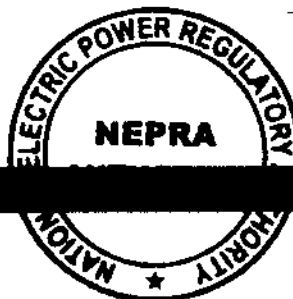
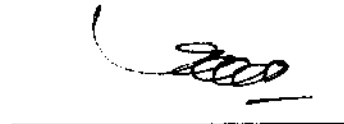
Zafar Ali Khan
Member



Abdul Rahim Khan
Member



Saeed uz Zafar
Chairman



Background

Halmore Power Generation Company (Pvt.) Ltd. (HPGCL) is established for setting up a Combined Cycle Thermal Power Plant based on dual fuel (Gas/HSD) approximately 225 MW at ISO gross conditions 209 MW net at 132 kV Bus Bar at reference conditions at Bhikki Power Project, Bhikki, Shaikhupura-Faisalabad Highway in terms of the Policy for Power Generation Projects 2002 (the "Policy"). The primary source of fuel for the project is pipeline quality gas. The electricity generated will be sold to Central Power Purchasing Agency (CPPA) within NTDC.

2. HPGCL submitted a tariff application on July 7, 2006 for approval of generation tariff. This tariff petition was admitted for consideration by the Authority on July 11, 2006 and was assigned case number NEPA/TRF-58/HPGCL-2006. Salient features of the petition were advertised in the newspapers on July 15, 2006 to inform all the interested persons/stakeholders and to invite participation in the tariff-setting proceedings through their comments or by becoming a party to the proceedings as intervenors. Invitations were also sent to the concerned Federal & Provincial Government ministries, Chambers of Commerce and Industries, Representatives of Professional bodies and Experts, soliciting their views on the petition.
3. A public hearing on the petition was held on July 21, 2006 in NEPA's main office. This hearing was participated by the applicant, stakeholders, commentators as well as members of general public.

SUBMISSIONS OF HPGCL

4. HPGCL submitted that the proposed power plant is based on combined cycle technology with an installed capacity of approximately 225 MW at ISO conditions. The plant configuration consists of 2 gas turbines, two Heat Recovery Steam Generators (HRSG) and one condensing steam turbine driven generator using GE's most economical model MS6111FA (6FA + e). The GTs are designed for dual fuel firing; natural gas is main fuel whereas distillate oil (HSD) is alternate fuel. The Power Plant comprises 2 Gas turbines; GE's MS 6111FA (6FA+e) with following Specifications:

b

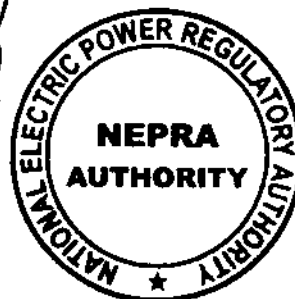
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Feature	Specification
Frame size	PG6111FA
Fuel system	Dual fuel (natural gas + Light diesel oil)
Starting Means	Static Frequency Converter
Air filtration	Self cleaning
Air cooling	Evaporative cooler
Compressor/Turbine Cleaning	On and Off-line Compressor Water Wash
Exhaust System	Axial
Emissions Control	Gas - Dry low NOx Liquid - Water injection
Fire Protection	High pressure CO ₂

5. The Company has purchased approximately 50 acres of land on the western bank of Qadirabad-Balloki Link Canal approximately 3 km from Sheikhpura-Faisalabad highway near Bhikki Town in the hub of industries. This land is flat agricultural land with little or no relief features or any note. The site is currently owned by and in possession of the Project Company, has been fenced off and is ready for mobilization by the contractor. A complete topographical survey has been conducted.
6. The Qadirabad-Balloki link canal has sufficient discharge for a plant size in excess of 1500 MW, but is shut down for about 3-4 weeks during the winter for annual maintenance. Since this period coincides with maximum dispatch of thermal plants by NTDC because of low hydel generation, the plant cannot base its design on use of this water for cooling purposes. Therefore, it is anticipated that the water to be used for the plant will be obtained from wells on the plant property. The water will be discharged into the canal after neutralization and treatment as necessary, meeting all environmental standards of the Environmental Protection Agency.
7. The potable water is also expected to be drawn from water wells and treated before plant use. Sanitary wastewater will be discharged via a septic tank designed to ensure environmental safety.



8. On the basis of load flow analysis carried out by NTDC/WAPDA, the following interconnection option has been proposed for reliable power dispersal from Bhikki CCPP to the national grid system under normal and contingency conditions;

i) Two 132 KV D/C transmission lines for looping in & out of the existing Lahore/Bhikki- Shahkot/ F.Watooan 132 KV D/C transmission line at Bhikki CCPP. The length of D/C transmission lines is 4+4 = 8 km on Lynx conductor.

ii) A 132 KV D/C transmission line for looping in & out of the existing Sheikhpura- Sharqpur at Bhikki CCPP. The length of 132 KV D/C transmission line is 15 KM with Lynx conductor.

9. The benefits associated with the induction of the Bhikki CCPP in the National Grid system via the proposed interconnection system mainly include:

Reduction in the loading of 500/220 KV & 220/ 132 KV Transformers at Lahore 500 KV grid station;

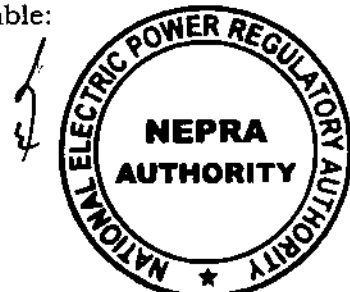
Reduction in transmission line losses;

Better voltage control; and

Improvement in overall system reliability mainly for LESCO load centre and/or FESCO load centre.

10. The estimated total Capital Cost of the project is US\$ 184.382 million Capital Expenditure (CAPEX) US\$ 166.158 million including EPC Cost of US\$ 143.9 million (without custom duties), Interest During Construction (IDC) US\$ 9.613 million (IDC figure is based on the estimated loan draw-down schedules at this stage, however, actual IDC would be calculated at the time of Financial Close when the timings of the loan draw-down would be available). A total of US\$ 5.036 million have been assumed under the head of Custom Duties calculated @ 5% on the 70% of the EPC cost, however, actual amount will be determined at COD and the total project cost would be adjusted accordingly at COD. HPGCL has requested reference tariff as indicated in the following table:

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Tariff	Gas Tariff		HSD Tariff	
	Total Tariff (PKR/kWh)	Total Tariff (Cents/kWh)	Total Tariff (PKR/kWh)	Total Tariff (Cents/kWh)
Average (1-10 Yrs)	4.028	6.714	9.4016	15.6694
Average (11-30 Yrs)	2.711	4.519	8.0846	13.4743
Average (1-30 Yrs)	3.150	5.250	8.5236	14.2060
Levelized (1-30 Yrs)	3.570	5.949	8.9430	14.9051

11. HPGCL has requested a two-part tariff consisting of Capacity Purchase Price (CPP) and Energy Purchase Price (EPP) for 30 years. CPP comprises of i) Escalable Component, ii) Non-escalable Component. Escalable Component of tariff includes Fixed O&M Charges (Foreign & Local), Insurance, Interest on Working Capital and Return on Equity during construction. Non-escalable Component of Tariff consists of principal repayment of loans and interest charges. The average capacity payments for the first ten year period are proposed to be Rs. 908.776 per kW per month and Rs. 331.909 per kW per month for capacity payments during the remaining period of 20 years (from year 11 to 30).
12. The proposed energy component is Rs.1.9533 per kWh consisting of Rs. 1.779 per kWh as fuel component and Rs. 0.1745 per kWh as variable O&M component. Fuel cost has been calculated on the basis of on thermal efficiency of 51.2% reference conditions on natural gas and 47.73% on HSD, which translates into net plant heat rate at bus bar of 6,666 BTU/kWh (LHV) at full load on gas and 7,151 BTU/kWh (LHV) at full load on HSD. The reference gas price is assumed at Rs.240.91 per MMBTU (HHV) delivered at site Rs. 266.86 per MMBTU (LHV) using conversion factor of 1.1077.

Fuel

13. HPGCL submitted that the primary fuel for the facility is intended to be natural gas, with the back-up fuel being HSD. Sui Northern Gas Pipelines Limited (SNGPL) has confirmed gas supply to the Project up to 40 MCFD for a period of nine months (March to November) in a calendar year for a period of seven years from the date of signing a GSA, subject to extension with mutual consent. However, the GOP is aware of this situation and is working on renewing the gas supplies beyond seven years on full year



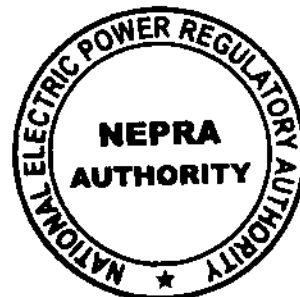
basis by allowing new exploration concessions, and is also discussing an agreement with Iran for import of gas. All these measure will most likely result in extension of the firm gas supply commitment to 15-30 years, However, in order to cater for any extended contingencies, the plant is being designed to allow for running on HSD as a back-up for extended periods of time.

14. According to HPGCL 16 inch Sui Northern Gas Pipeline is passing at a distance of approximately 3.5 KM from the project site. The Project will be tapping off this pipeline through a short lateral of less than 3.5 km length. The pipeline is designed to be high pressure pipe. As such, much of the year, the project will be reducing the pressure of the gas, while in the winter months when the pressure drops down, the plant will utilize gas compressors to increase the pressure to the design levels of the gas turbines.
15. HPGCL submitted that in order for the facility to have back-up fuel system, high speed diesel unloading, storage, and handling facilities will be a part of the design. This design will provide sufficient protections for environmental concerns, like: (a) dikes for spill containment around the storage tanks, (b) unloading bays to have retention capacity to prevent spread of a spill, and (c) fire protection system for unloading and storage facilities. In addition all necessary training and safety procedures that are standard worldwide practice will be employed to ensure environmentally safe operations.
16. Thermal Efficiency of 51.19% at 132 KV bus bar has been determined on pipe line quality specification natural gas and would be guaranteed by the designated EPC and O&M contractors. Fuel consumption (Gas or HSD) at a guaranteed efficiency level for the plant operation on a notional annual plant factor of 60%.
17. According to HPGCL on gas operation, the assumed Thermal Efficiency is on optimum loading on a brand new machine. Accordingly, the following factors need to be applied to the Fuel Component which would need to be incorporated in the PPA as well:

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- A) Degradation Factor for Heat Rate (Recoverable and Non-Recoverable) as per Manufacturer's data table/curves; and
- B) Partial Load Heat Rate Adjustments as per manufacturer's data table.
- I) Heat Rate of 6,666 Btu/kWh (LHV) on 100% plant load at Reference Conditions is assumed.
- II) When the plant will be run on HSD as a secondary/back up fuel, the fuel component provided in the tariff table will change on account of the lesser efficiency on HSD and the base price of HSD by using the following assumptions:
- a) Base price of HSD (LHV) using conversion factor of 1.06 of Rs. 37.53/Litre has been assumed (Reference price)
- b) Heat Rate of 7,151 BTU/kWh (LHV) at full load on HSD has been assumed.
18. Based on above, the base fuel component of Rs. 1.779/KWh on gas operation will change to Rs. 7.045 KWh for the plant operation on HSD.
19. The fuel component would be subject to indexation/adjustment on any changes in fuel price on a pass through basis.

O&M Variable Component (Foreign):

20. This consists of the service fees of the O&M operator on a kWh basis for day to day management of the plant. It also includes replacement of spare parts on completion of service life of such parts as well as replacement on account of premature failure of parts. It also includes cost of unscheduled maintenances which are separate from the major overhauls. Consumption of lubricants, water, chemicals, etc. is also included in this component. This component in US Dollar based as it primarily includes imported spare parts as well as technical services to be procured from abroad. Therefore such costs would be subjected both to US\$/PKR as well as US CPI adjustments.

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Capacity Charges

21. The capacity charges for the Project are payable on the basis of the dependable capacity as tested at COD, and periodically thereafter. This is a fixed monthly payment and is calculated on Rs/KW/Month basis.

22. The Capacity Payment is further divided into two components, which are:

- a) Escalable Capacity Payment; and
- b) Non- Escalable Capacity Payment

a) Escalable Capacity Payment

23. This component represents all the fixed costs of the plant and the return on equity. Since there is no recovery of the original equity capital invested, the plant remains the property of the sponsors after the 30 years contract period. The investment mode therefore is Built, Own and Operate (BOO).

i) Fixed O&M Costs (Local) 40% of the Total

The fixed O&M component of the Escalable capacity payment represents the fixed costs of all the staff for O&M including the remuneration to employees and other administration costs including rents, utilities, and local taxes. It also includes costs such as NEPRA annual fees and bank's yearly commission upon opening of Letter of Guarantee in favour of Wapda/NTDC, audit fees, legal relationship and consultancy fees, environmental monitoring and reporting fees, etc. This component is subject to local CPI indexation/adjustment.

ii) Fixed O&M Costs (Foreign) 60% of the Total

Major Overhauling of the machines is to be conducted after every period of certain running hours as per manufacturer's recommendation. This is to ensure that the Plant remains available for reliable dispatch and for completing its contracted life. This component also includes the Management Fee of the O&M

b v f



Operator. This component would be subjected both to US CPI inflation as well to US\$/PKR adjustment/indexation.

iii) Insurance Cost:

The Insurance component consists of all risk insurance/re-insurance for the Project, as well as business-interruption insurance, which is lender's stipulated requirement. Since the Pakistan Insurance/Reinsurance industry do not have sufficient capacity and expertise to manage such risks entirely on their own, the local industry normally retains only about 5% of the risk while 95% is reinsured outside. As machinery breakdown, natural calamities (like earthquake), sabotage and consequential business interruption are the biggest threat to the life of the Plant and the Company, it is imperative that all aspects of the risk are covered adequately and no compromise is made in this respect. This cost would also be subject both to US CPI inflation as well as to US\$/PKR adjustment/indexation.

iv) Return on Equity:

The Return on Equity (ROE) component includes return on invested equity giving an IRR of 15% net of with-holding tax on the basis of maximum dividends payouts possible to the shareholders during each particular year and for the whole of the 30 year period. The equity investment is equally divided as 50% Local and 50% foreign and it is expected that the following indexations would be allowed:

Return on Foreign Equity:	PKR/US\$ Exchange Rate
Return on Local Equity:	CPI

v) Working Capital

A working capital of Rs.362 Million at present day rate is required for HSD storage of 7 days at 100% Plant Factor along with other expenditures during the nine month period of plant operation on gas, while an amount of Rs, 653 Million would be required as working capital for 15 days inventory of HSD during the three months period of plant operation on HSD. This will be retained



throughout the tenor of the Contract. The interest rate used is 3 months KIBOR +2% per annum. Working capital requirements shall be recalculated at the time of COD based on the prevailing prices at the time of COD.

b) Non Escalable Component:

24. The debt repayment including principal and interest payments would be for a 10 years period and there would no charge under this category for the next 20 years of plant operation.
25. The debt portion is 75% of the total project cost of US\$ 184.382 Million amounting to US\$ 138.287 Million.
26. At present it is assumed that the entire debt financing would be procured through in local currency through local banks, however, serious negotiations are under way with International Finance Corporation (IFC), World Bank Group for US\$ based loans. In case any foreign debt is procured, repayment terms and interest rate benchmarks shall be affected and shall be allowed as pass through.
27. Negotiations were also held with local banks. All the banks and IFC required a debt: equity ratio of 75:25, therefore, the structure has been selected to fulfill lender's requirements.
28. The entire debt is to be paid in 10 years time through quarterly payments. The interest is also to be paid quarterly. This interest rate would be 3 months KIBOR + 3% per annum.
29. Debt repayment schedule is attached as reference.

INDEXATION, ESCALATIONS AND COST ADJUSTMENT ASSUMPTIONS:

30. (a) Inflation factors:

a.1	Variable O&M – Local	Local CPI
a.2	Variable O&M – Foreign	United States CPI
a.3	Escalable Component – Local	Local CPI
a.4	Escalable Component –Foreign	United Sates CPI
a.5	ROE Local	Local CPI
a.6	ROE Foreign	US\$/PKR indexation



(b) Currency Indexation factors:

Variable O&M – Foreign	US\$/PKR indexation
Escalable Component – Foreign	US\$/PKR indexation

(c) Price factor:

Changes in the prices of gas and / or HSD maintaining the guaranteed Heat Rate.

Changes in 3 month KIBOR, quarterly (no foreign debt financing assumed at this stage. If availed, would be indexed to US\$/PKR exchange and reference interest rate charges).

This change also applies to working capital requirement.

(d) Fuel Cost Factors:

The fuel cost component will be adjusted with respect to increase in heat rate as per heat rate curves provided by the gas turbine manufacturer to:

- to compensate for the effects of efficiency Degradation between the scheduled maintenance cycles;
- to compensate for efficiency decrease due to partial loading, due to changes in ambient temperature; and
- to compensate for non-recoverable degradation after Commercial Operation Date (COD)

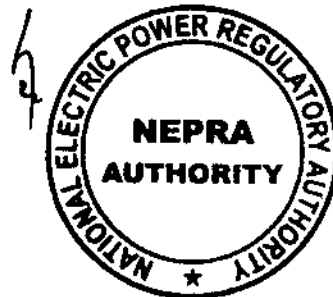
Fuel Cost Factors:

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- compensate for non-recoverable degradation after Commercial Operation Date (COD)

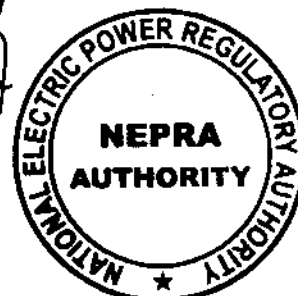
Other General Assumptions:

32. The following has been assumed while calculating the Tariff. Changes to any of these assumptions will result in a change to the Tariff:
- a) Custom Duties amounting to US\$ 5.03 Million have been assumed on the import of plant and equipment. Any variation in the Custom Duties as per actual payment will be adjusted at COD. Similarly, custom duties on import of spare parts after COD will be allowed as pass through.
 - b) No tax on any income of the Company including sales proceeds from NTDC have been assumed. General Sales Tax and all other taxes if imposed shall be treated as pass through items.
 - c) Withholding tax of 5% on local services; no withholding tax for EPC/offshore contractor (in case there is any, the EPC contractor will gross up the amount).
 - d) 100% local debt is assumed. If foreign debt is procured, repayment terms and interest rate benchmarks shall be affected.
 - e) 50% Local and 50% Foreign Equity has been assumed, if more foreign equity is required, the indexation criteria proposed above for the ROE component for local as well as foreign equity would apply in the ratio of the equity injected in local and foreign currency.
 - f) NTDC shall make payments to the Company to cover all Energy Cost Component of the Complex up to COD for all electricity delivered to the Grid including the trial runs which would be billed specifically to NTDC as per the invoicing mechanism under the PPA.
 - g) NTDC shall be solely responsible for the construction of Interconnection and Transmission facilities and all financing cost is to be borne by NTDC in this respect.
 - h) No Debt Service Reserve Account (DSRA), Maintenance Reserve Account or Contingency Reserve Account or any other Reserve Account

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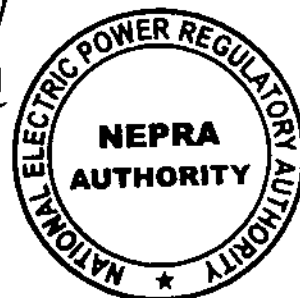
has been considered in the tariff model. In case Company, is required to do so, the financial impact would be allowed as pass through.

- i) No Letter of Credit (L/C) confirmation charges have been assumed in the CAPEX. Any L/C confirmation charges would be allowed as pass through on actual basis.
- j) Maximum diesel storage for 7 days plant operation on gas has been assumed while 15 days storage would be maintained during the three months period of plant operation on HSD. However, any additional carrying cost due to change in the fuel supply patterns would be allowed as pass through.
- k) As the timing of debt drawdown may vary from estimated timings during the construction period, actual Interest During Construction (IDC) will be updated at COD to come up with new base tariff table based on actual benchmark interest rates which may vary due to changes in 3 months KIBOR.
- l) O&M cost is based on 60% Plant Factor. For operation and maintenance of Plant, Equivalent Operating Hours (EOH) will be considered as per Manufacturer's standard practice on different load conditions and fuel.
- m) Tolerance of +/- 3% in Dispatch is assumed.
- n) Thirty days (30) Scheduled Outage for maintenance per year; Forty-five days (45) for Major Overhauling; Five Hundred (500) hours for Forced Outages per year are assumed during which full capacity payment would be received.
- o) Number of Cold, Warm and Hot start ups will be considered as per Manufacturer's recommendation and prudent utility practices. The extra cost of all such start ups shall be pass through to the Power Purchaser.
- p) During the 30 year term of the Agreement, if there is any Gas supply interruption and Plant is required to be dispatched on HSD, the Power Purchaser will pay such Fuel Cost on actual fuel consumption and price of HSD.

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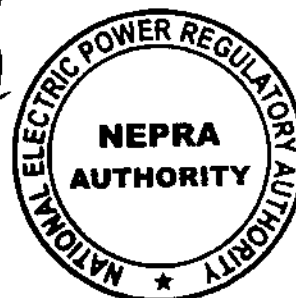


- q) Hedging cost during construction on EPC payment should be made part of the Project cost which is the requirement of the Lenders. Otherwise, subject to Lenders' consent, final local debt amount at COD would be based on actual exchange rates used by the banks to make payments to EPC contractor. Actual hedging cost would be used based on forward rates received from the lead bank immediately after financial close.
- r) In case of 100% HSD use, degradation/adjustment will be different and will be allowed by the Power Purchaser in accordance with the recommendations of the manufacturer. Similarly, additional cost for gas turbine start up, shutdown as well as part load operation with HSD shall be compensated by factors based on the data from the gas turbine manufacturers.
- s) Withholding tax on dividends has been assumed at 7.5% as required under Income Tax Ordinance, 2001. Any change in the rate of withholding tax may be considered as pass through.
- t) Zakat deduction on dividends (currently at 2.5%) as required to be deducted under Zakat Ordinance is considered as pass through.
- u) Required gas pressure shall be maintained by Fuel Supplier at fuel inlet stop valve of gas turbine; gas boosting compressor is therefore excluded.
- v) No Working Capital for bridge financing is accounted for in the Tariff Model; any time gap as per NTDC/Fuel supplier payment terms may result in additional Working Capital Requirement.
- w) All other assumptions not expressly stated herein are taken as per 1994 Standard PPA. In case there are any changes to the 1994 PPA having implications on the operational and financial cost, the tariff components would be revised accordingly.
- x) In case of any unintentional error or omissions, typographical errors, and any genuine assumption overlooked, the same will be corrected / incorporated and advised to NEPRA as soon as the Company becomes aware of it.

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33. All other assumptions not expressly stated herein are taken as per 1994 Standard PPA. In case there are any changes to the 1994 PPA having implications on the operational and financial cost, the tariff component would be revised accordingly.
34. In case of any unintentional error or omission, typographical errors, and any genuine assumption overlooked, the same will be corrected/incorporated and advised to NEPRA as soon as the Company becomes aware of it.

Determination Sought:

35. The National Electric Power Regulatory Authority (NEPRA) is requested to kindly grant the Tariff Determination in respect of the following:
- A) Grant two part Tariff as requested in the Reference Tariff Tables to remain effective for a period of 30 years from the date of Commercial Operations; and
 - B) Approve the proposed escalations in Tariff.

Comments of Central Power Purchasing Agency (CPPA)

Project Configuration

36. The consultant considered three alternatives for the combined cycle power plant and recommended an option comprising two gas turbines (6111 FA) two HRSGs and one steam turbine with the expected gross capacity of 225 MW at Mean Site condition. The consultants assured net efficiency of the plant as 51.689% on gas firing and recommended HSD as backup fuel with efficiency 48.49%. The project cost was taken as US\$ 187.9 million and levized tariff of US cents 5.55/kWh for 30 years on BOO basis. The plant will be operated on nine months on Gas and three months on HSD.

Capital Cost

37. The Capital cost for this project has been taken as US\$ 184.382 million by the sponsors in the Tariff Petition, which is on higher side.

Indexation & Escalation

38. In the application for Tariff Determination Company has requested the local CPI and US CPI for indexation/escalations for the variable O&M



costs. However, Power Policy 2002 allows only wholesale Price Index (WPI) for manufacturing as notified by GOP's Federal Bureau of Statistics (FBS).

Custom/Import Duty on Spare Parts

39. The custom duties on Import of spare parts after COD may not be allowed because the same has been included in fixed O&M costs.

Cost of Electricity before COD

40. NTDC will pay the Company only Fuel Cost component for the energy delivered to NTDC before COD.

Tolerance in Despatch

41. Tolerance of + 1.5% in Dispatched Net Electrical Output is provided in the standard PPA under Power Policy 2002, whereas the Company has asked for \pm 3% tolerance in Despatch level. As such the tolerance proposed by Company shall not be accepted.

Plant Availability

42. The Company has taken the plant availability as 84% in petition for tariff determination whereas; NTDC requires Plant availability more than 90% as per standard Power Purchase Agreement.

Starts Ups

43. All cold, warm and hot starts ups should be free of cost.

Fuel Cost Component during Gas Interruption

44. During gas committed months, if gas is interrupted and plant is made available for dispatch then Power Purchaser will pay the Fuel Cost Component on gas price instead of HSD price. However the Power Purchaser will make the Capacity payments.

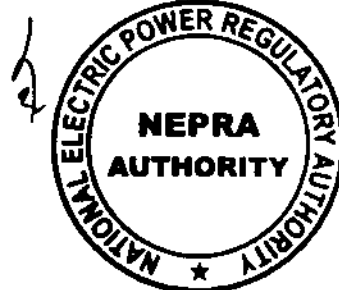
Hedging Cost

45. As exchange rate difference has already been provided, therefore, the hedging cost may not be allowed.

Efficiency

46. In tariff petition the Company has mentioned the plant efficiency as 51.19% on gas operation and 47.73% on HSD whereas in feasibility study

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it has been mentioned 51.689% on gas operation and 48.49% on HSD operation therefore reduction in efficiency will have the significant effect on the tariff.

Capacity Charges

47. According to the standard Power Purchase Agreement under Power Policy 2002 the capacity charges are payable on the basis of hourly plant availability instead of dependable capacity basis as provided in 1994 Power Policy.

Insurance Cost

48. 1.57% of EPC is very high and should be rationalized with other projects.

NTDC Power Expansion Program

49. As per NTDC load forecast there will be power shortage in the country from the year 2005-06 onward and same is expected to increase to 5500 MW in the year 2010. Mainly this shortfall will occur in the area of LESCO, FESCO and GEPCO, which is expected to be about 5250 MW in the year 2007 and by considering the excess generation from south (3579 MW) the net shortage, will be 1664 MW out of which approximately 1000 MW is expected in LESCO. The proposed plant will meet the shortfall of power of LESC area, as such the said plant has been included in Generation Expansion Plan. Being a combined cycle power plant operating on gas, having higher efficiency i.e. about 51.2% as compared to existing thermal plants commissioned under Power Policy 1994 with the efficiency of about 40%, the proposed power plant will be dispatched as base load plant and consequently would help reducing the consumer-end tariff.

Power Acquisition Permission

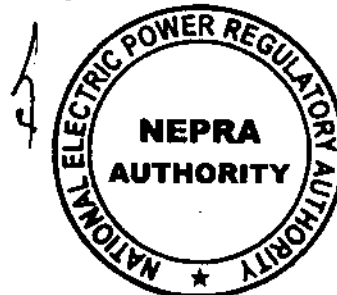
50. In compliance to NEPRA's Interim Power Procurement (Procedure and Standards) Regulations 2005, CPPA has requested NEPRA for grant of permission to procure power from the proposed plant vide this office letter # COO/CPPA/CE-II/7557-58 dated 08.07.2006.

Power Dispersal Arrangement

51. The Power of the proposed 225 MW CCPP at Bhikki can reliably be dispersed to the system with the following interconnection option at 132 kV voltage level:

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- i) Two 132 kV D/C transmission lines for looping in & out of the existing Lahore/Bhikki – Shahkot/F.Watooan 132 kV transmission line at Bhikki CCPP. The total length of D/C Transmission lines is $4 + 4 = 8$ km on LYNX conductor.
- ii) A new 132 kV D/C transmission line for looping in & out of the existing Sheikupura – Sharqpur 132 kV transmission line at Bhikki CCPP. The length of 132 kV D/C transmission line is 15 km on LYNX conductor.

Power Purchase Agreement

52. The standardized PPA under Power Policy 2002 is available therefore any reference of 1994 power policy is irrelevant.

Response of the Petitioner:

Project Configuration:

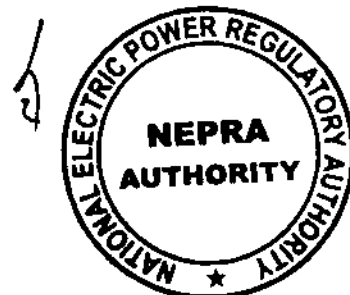
53. CPPA has correctly mentioned the configuration proposed in the feasibility study by the consultants, however, the following clarifications are provided;

- i) The efficiency numbers proposed in the feasibility study were consultant estimates. The guaranteed efficiency numbers are proposed in the Tariff Petition based on the discussions with the EPC and O&M contractors
- ii) The project cost as per feasibility study was US\$ 187.9 million while the levelized tariff was US Cents 5.55/kWh based on the gas price of Rs. 208.56/MMBTU. The levelized tariff proposed in the feasibility study would be US Cents 5.95/kWh on the basis of gas price of Rs. 240.91/MMBTU, which has been used in the tariff petition.

Capital Cost

54. The CPPA commented that the proposed Project Cost of US\$ 184.382 million is on the higher side. In this regard, NEPRA's attention is drawn on the following facts:

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- i) The Capital Cost of the Project proposed in the approved feasibility study was US\$ 187.9 million.
 - ii) The Capital cost allowed by NEPRA in its determination of Sapphire Power Project of exactly the same capacity and configuration of 225 MW was US\$ 185.552 million.
55. From the above facts it can be concluded that the Capital Cost of US\$ 184.382 million proposed for Bhikki Power Project of 225 MW is the lower side rather than on the higher side.

Indexation and Escalation

56. We feel that the CPI is the correct index for escalation regarding variable O&M cost for the power plants. However, we understand that this issue is under active consideration of the GOP and a decision is expected soon. We request that same index may be allowed to us as allowed to other IPPs.

Custom/Import Duty on Spare Parts

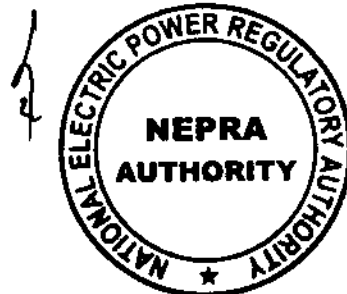
57. The Company has not accounted for any custom/import duties in the fixed O&M component. It is, therefore, requested that NEPRA may kindly allow any custom/import duty on the import of spare parts as a pass through item on actual basis.

Cost of Electricity before COD

58. CPPA has proposed to pay to the Company only the fuel cost component for the energy delivered to NTDC before COD. It may kindly be noted that during plant operation, it is not only the fuel that is consumed, it also consume greases, lubricants and additives as well as operational spares. In addition, operational staff would also be employed during the plant operation before COD.
59. It is therefore, requested that NTDC may kindly pay to the Company the fuel energy component of the tariff for the energy delivered to it before COD.

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Tolerance in Despatch

- 60. CPPA has proposed tolerance of + 1.5% in Dispatched Net Electrical Output and has relied on the certain provision of the Standard PPA.
- 61. The Company was informed by PPIB on 10th July 2006 after submission of the tariff petition to NEPRA that the standard PPA can be down loaded from their Website.
- 62. It may kindly be appreciated that the standard has been drafted by one side only and has not been studied in details by the Project Company. The PPA needs to be negotiated thoroughly and require in-depth review by the potential lenders before its credibility is established.
- 63. The Project Company feels that one-sided tolerance in Despatch is not an equitable proposition. There should be a mirror image in the tolerance. Therefore we request NEPRA to allow an equitable tolerance level to be decided during the negotiation stage of the PPA.

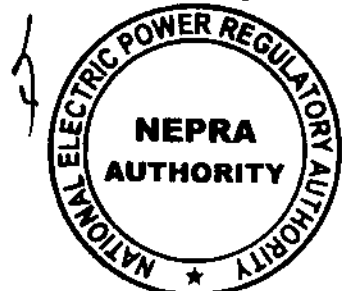
Plant Availability

- 64. The Project Company would be pleased to discuss this issue with NTDC/CPPA during the negotiation stage of the PPA. However, we would like to point it out again that standard PPA was made available to us on 10th July 2006 after submission of our tariff petition to NEPRA on 7th July 2006, therefore, any reference to the standard PPA under 2002 Policy is not relevant to our tariff petition.

Start Ups

- 65. CPPA has desired that all cold, warm and hot start ups should be free of cost. The Company feels that it is an open ended condition on part of CPPA without any limits to the number of stops and start ups in a given day that can be ordered by CPPA on a daily basis for the 30 year plant operation.
- 66. This condition is not sustainable as every shutdown and start up would cost a lot of money that is not accounted for in the tariff petition.
- 67. The Company has proposed in the tariff petition that the number of cold, warm and hot start ups will be considered as per manufacturer's

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recommendation and prudent utility practices. The extra cost of all such start ups shall be pass through to the Power Purchaser.

68. However, the Company would be negotiating this point in good faith with CPPA during the finalization of the PPA in light of the recommendation of the Plant manufacturer.

Fuel Cost Component during Gas Interruption

69. CPPA comments are reproduced hereunder:

“During gas committed months, if gas is interrupted and plant is made available for dispatch then Power purchaser will pay the Fuel Cost Component on gas price instead of HSD price. However, the Power Purchaser will make the Capacity Payments.”

70. The Project Company cannot afford the difference of Rs. 5.3442/kWh between the energy component of Rs. 7.2978/kWh under HSD operation and Rs. 1.953 under gas operation even for one day wherein the loss per day would be Rs. 16.08 million at 60% Plant Factor with no fault on part of the Company.
71. The Company feels that this is an unrealistic demand on part of the CPPA as the Company cannot be held responsible for the fault on the part of the gas supplier. This risk needs to be covered under the provisions of the Implementation Agreement and Fuel Supply Agreements (Gas and HSD).
72. We understand through newspapers that GOP has decided that the risk for short or no supply of gas would be borne by the gas supplier. However, the Company cannot comment in the absence of the complete Security Package including GSA and FSA.
73. In the absence of adequate gas supply risk mitigation measures under the security package, the Company would not be able to proceed further in achieving financial close for the project.

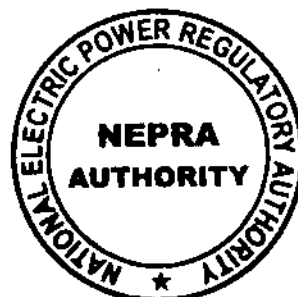
Hedging Cost

74. In case of the provision of exchange rate difference, we feel that no hedging cost would be required.

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Efficiency

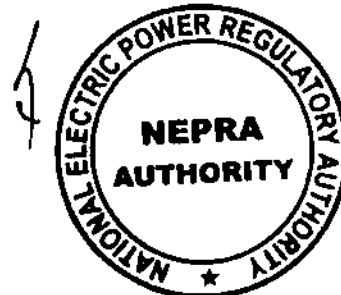
75. The efficiency of 51.689% proposed in the feasibility study was based on the consultant estimates. The guaranteed efficiency of 51.19% is proposed in the tariff petition, which is based on the discussion with the EPC and O&M contractors. NEPRA has approved the efficiency of other similar IPPs as 51.19%.
76. Furthermore, the variable O&M component assumed in the Feasibility Study coupled with the higher efficiency of 51.689% was Rs. 0.224/KWh or US Cents 0.3727/KWh. While reducing the efficiency by 0.5%, the variable component was also reduced from Rs. 0.224/KWh or US Cents 0.3727/KWh to Rs. 0.1745/KWh or US Cents 0.2908/KWh, a reduction of 22.1%. In absolute terms it translates to a net reduction of US \$ 0.435 Million per Year for 30 Years period for the power purchaser. The Net Present Value of the savings to the Power Purchaser would be US\$ 4.098 Million. While the increase in fuel cost due to lower efficiency on net present value (NPV) basis for 30 years period would be US\$ 2.263 Million, the corresponding savings due to reduction in variable O&M cost by 22.1% would be US\$ 6.361 Million, resulting in net savings of US\$ 4.098 Million for the Power Purchaser. It is, therefore, submitted that NEPRA may kindly take the total view of the impact of the reduction in O&M costs coupled with the reduction in the efficiency by 0.5% with the net savings to the Power Purchaser amounting to US\$ 4.098 Million, while announcing the Tariff Determination for the Project. The reduction in variable cost by 22.1% was possible after in-depth discussions with the proposed EPC and O&M Contractors, who have agreed to guarantee the efficiency of 51.199% with corresponding reduction in their variable costs. The resulting benefit has been passed on to the Power Purchaser.

Capacity Charges

77. As stated above, the Company received the standard PPA on 10th July 2006 and is reviewing its provisions relating to the capacity payments. However, the Company would like to discuss this issue in light of the

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methodology to be adopted by CPPA to accurately measure the hourly plant availability during negotiations of the PPA.

Insurance Cost

78. CPPA has pointed out that 1.57% of EPC cost is very high and should be rationalized with other projects.
79. We feel that CPPA may have confused the insurance during construction phase with the insurance during operation phase. We would like to clarify here that the insurance during operation phase is only 1.35% of the EPC which is exactly the same as assumed by other projects. Similarly we would like to clarify here that the insurance during construction phase is US\$ 2.6 million as against US\$ 2.16 million assumed by Saif Power as per NEpra's tariff determination. Therefore, the insurance costs are comparable with other power projects.

NTDC Power Expansion Program

80. We appreciate CPPA's honest evaluation of country's power shortage scenario and would be trying our best to commission the Bhikki Power Project as soon as possible.

Power Acquisition Permission

81. We are thankful to CPPA for requesting NEpra for grant of permission to procure power from the proposed Bhikki Power Plant.

Power Dispersal Arrangement

82. The Company would comply with the power dispersal arrangement suggested by CPPA/NTDC.

Power Purchase Agreement

83. As stated repeatedly at above paragraphs that the Company received the standardized PPA after the submission of its tariff petition to NEpra therefore, the reference to 1994 power policy is not irrelevant. Moreover, it may be appreciated that in absence of complete security package i.e. GSA

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and FSA, it would be difficult to understand the risk allocation and linkages between the key agreements i.e. IA, PPA and GSA/FSA.

84. As the above agreements are yet to be negotiated between the parties and required to be reviewed and approved by the lenders before execution, it is pre-mature to rely on the provisions of these draft agreements.
85. The following main issues have emerged from the tariff application, submissions of the commentators and proceedings in the case:

ISSUES

- a. Net Contracted Capacity
- b. Tariff control period
- c. Availability of gas
- d. Project cost
- e. Cost of Capital
- f. Insurance Cost
- g. Working Capital
- h. O & M Costs
- i. Fuel Cost
- j. Hedging Cost During Construction

The Authority's determination is set out in following paragraphs:

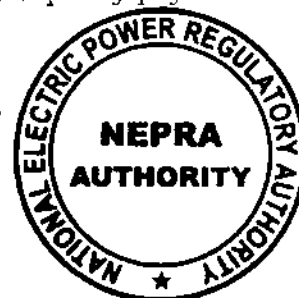
a. NET CONTRACTED CAPACITY

86. HPGCL has stated that its gross ISO capacity would be about 225 MW and net site capacity would be 209 MW. HPGCL has based its capacity charge calculation on the same. HPGCL intends to install 6111FA machines, which are manufactured by GE. The information sought from different sources does not support HPGCL's indicated Gross ISO capacity of the plant. According to the manufacturer's information available at its website Gross ISO Capacity is about 239 MW. If this information is relied upon the net capacity at site should be higher than the figure of 209 MW adopted for capacity charge calculations; the tariff per kW as requested by the petitioner should accordingly reduce. According to the petitioner this is a prototype machine and its gross ISO capacity may vary and there is little possibility of any variation in net output capacity of 209 MW indicated by it. The Authority considers that the capacity payments would

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be made on the basis of contracted capacity, which would be determined after IDC test at site. The Authority has therefore decided that for the purpose of capacity charge calculations the figure 209 MW net at site capacity may be adopted with the condition that capacity charge shall be adjusted based upon the net contracted capacity established subsequent to the IDC test at site.

b. TARIFF CONTROL PERIOD

87. Tariff Control period proposed by HPGCL is 30 years. HPGCL has requested for two tariffs, one for the first ten years and another for next twenty years. The request is in line with the tariff determined by the Authority for IPPs in the recent past. It is therefore decided to accept the HPGCL's request for a tariff for first 10 years and another tariff for next 20 years.

c. AVAILABILITY OF GAS

88. HPGCL has based its petition on the assumption that the main fuel will be natural gas for 9 months and High Speed Diesel (HSD) for remaining 3 months. HPGCL has further stated that backup fuel would also be HSD in case of gas supply interruptions. Sui Northern Gas Pipelines Limited stated vide its letter No. GMS 905 (Halmore/IPP) dated 1st August 2006 that gas allocation to HPGCL on nine months basis (March to November) May only be for a period of one or two years. Assumption being reasonable therefore is accepted for determination of fuel component of energy charge.

d. Project Cost

89. The project cost has been requested at \$ 184.382 million comprising of the following:-

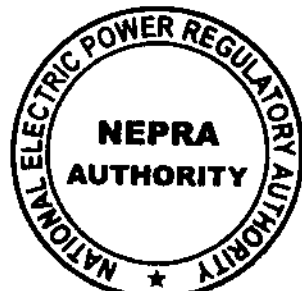
	<u>\$ Million</u>	
EPC	143.900	FX adjustment on 70% for imported equipment on cost
Custom Duty	5.036	subject to adjustment on actual
Others	22.258	
IDC	<u>13.188</u>	subject to adjustment on actual
	<u>184.382</u>	

In a similar project of Sapphire Electric Company Limited (SECL), the Authority allowed a project cost of \$ 185.552 million. Therefore

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the project cost proposed by HPGCL is accepted and allowed as such.

e. Cost of Capital

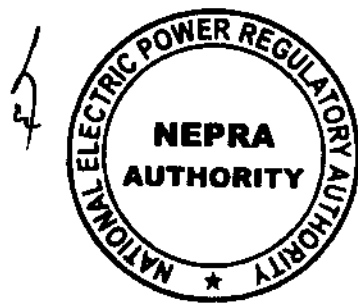
90. Debt service cost has been requested on 3 months KIBOR (9%) plus 300 basis points with variations in KIBOR to be pass through which is allowed.

91. Return on Equity has been computed to allow 15% IRR on equity investment by including a component of ROE during construction of Rs. 0.0207/kW/hr. based on equity draw down assumption of 50:50 during the first and second year of construction. The ROE DC will be adjusted for actual draw down on COD along side IDC. Withholding tax on dividend @7.5% of the return (Rs. 0.0185/kW/hr.) has been included in pursuance of Guidelines for determination of Tariff for IPP's issued by the Federal Government in November 2005. As regards the payment of withholding tax it is a pass-through item just like other taxes as indicated in the Government Guidelines for Determination of Tariff for New IPP's subject to maximum of Rs. 0.0185/kW/hr. on cumulative basis. In case the dividend is declared for an accumulated period, withholding tax shall be worked out for the same period for which the dividend is declared.

f. Insurance

92. HPGCL has requested insurance cost of Rs. 46.475 per kW per month based upon US\$1.9426 million, which is 1.35% of EPC. In Cases of Sapphire Electric Company Limited and Saif Power Limited the Authority decided to allow insurance as per actual on production of evidence subject to maximum of 1.35% of EPC. The Authority adopts similar principle in case of HPGCL as well. For the purpose of tariff calculations the maximum of the amount is being taken. Accordingly, the insurance component of capacity charge has

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been assessed as Rs. 46.4749/kW/month as per 1994 policy and Rs. 0.0637 per kW per hour as per new PPAs.

g. Cost of Working Capital

93. Working capital cost has been requested for keeping HSD stock for 7 days plant operation on gas and 15 days plant operation on HSD plus other monthly expenditure. The request is in line with the Authority's decision in cases of SECL and SPL except the cost of working capital for other monthly expenditure. Assuming price of HSD Rs.39.53/litre (LHV) and interest rate of 11%, the Authority has assessed cost of working capital as under:

During plant operation on gas Rs. 0.0163/kW/hr.

During plant operation on HSD Rs. 0.0349/kW/hr.

h. O&M Costs

i) Fixed O&M Cost

94. A total of US\$ 3.313 million per year has been requested as fixed O&M cost comprising foreign component (60% of total) as US\$ 1.9878 million and local component (40% of total) as US\$ 1.3252 million. The component of tariff works out to be 47.5550 Rs./kW/month or 0.0651 Rs./kW/hr. as foreign component and 31.7033 Rs./kW/month or 0.0434 Rs./kW/hr. as local component. The total would be 79.2584 Rs./kW/month or 0.1086 Rs./kW/hr. The request is in line with the Authority's decisions in similar cases of SECL and SPL. The Authority allows HPGCL's requested amount of fixed O&M cost.

ii) Variable O&M Cost

95. HPGCL has requested variable O&M cost of 0.1745 Rs./kWh for operation on gas and 0.2520 Rs./kWh for operation on HSD. Based upon the net capacity of 209 MW and 48000 operating hours, the Authority, in similar cases of SECL and SPL, has allowed Rs. 0.1745 on gas operation and Rs. 0.2520 on HSD operation. The Authority allows the same for HPGCL. Variable O&M other than consumables, 0.1528 per kWh on gas operation and Rs. 0.2205 on HSD operation, shall be adjusted at the time of IDC test at COD.



i. Fuel Cost

96. The fuel cost of HPGCL is calculated on the basis of following reference values:

Natural Gas

Efficiency of Combined Cycle Plant (Full Load)	51.2%	
Reference Price (LHV)	266.83	Rs./MMBTU
Heat Rate	6,666	BTU/kWh
Fuel component on Gas	1.7787	Rs./kWh

Diesel

Efficiency of Combined Cycle Plant (Full Load)	48.5%	
Reference Price Ex GST (LHV)	34.37	Rs./Litre
Heat Rate	7037	BTU./kWh
Fuel component on Diesel	6.7151	Rs./kWh

As regards degradation of plant for efficiency and output over time, the same should be addressed in the PPA with the power purchaser.

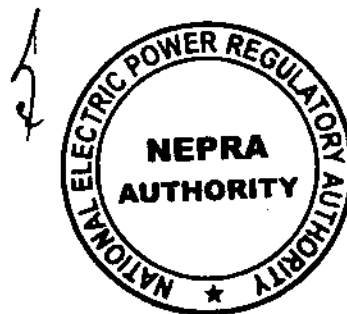
j. Hedging Cost During Construction

97. The Authority has considered the petitioner's concerns and is of the view that any variation in project cost during construction period on account of variation in dollar/Rupee parity should 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. HPGCL's final reference tariff table shall be revised on COD to incorporate all the permissible adjustment during construction period.

Reference Tariff

98. After reviewing the evidence submitted during the proceedings and from information gained through other sources, the Authority has determined the reference tariff for HPGCL as indicated in the following table:

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Reference Tariff

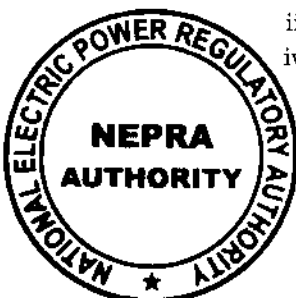
Tariff Components	Year 1 to 10	Year 11 to 30
Capacity Charge (PKR/kW/Hour)		
O&M Foreign	0.0651	0.0651
O&M Local	0.0434	0.0434
Cost of Working Capital *	0.0163	0.0163
Insurance	0.0637	0.0637
Debt Service	0.7842	-
Return on Equity	0.2266	0.2266
ROE during Construction	0.0207	0.0207
Total Capacity Charge	1.2201	0.4359
* In case of plant operation on HSD, the cost of working capital shall be paid on 15 days inventory level basis, which is Rs. 0.0349/kW/Hr.		
A) Energy Charge on Operation on Gas Rs./kWh		
Fuel Cost Component	1.7787	1.7787
Variable O&M	0.1746	0.1746
B) Energy Charge on Operation on HSD Rs./kWh		
Fuel Cost Component	6.7151	6.7151
Variable O&M	0.2520	0.2520

- 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 30 years commencing from the date of the Commercial Operation.
- iv) Component wise tariff for operation on Gas and HSD is indicated at Annex-I & II and Debt Service Schedule at Annex-III.

One Time Adjustment**Adjustment due to variation in net capacity**

99. The reference tariff has been determined on the basis of net capacity of 209 MW at delivery point at mean site conditions. All the tariff components except fuel cost component shall be adjusted at the time of COD based upon the IDC tests to be carried out for determination of contracted capacity. The adjustments shall be made according to the following formula:

- | | | |
|------------------------|---|---------------------------|
| i) Revised O&M Foreign | = | 0.0651/tested IDC x 209MW |
| ii) Revised O&M Local | = | 0.0434/tested IDC x 209MW |
| iii) Insurance | = | 0.0637/tested IDC x 209MW |
| iv) Debt Service | = | 0.7842/tested IDC x 209MW |



v) Return on Equity	=	0.2266/tested IDC x 209MW
vi) ROE during Construction	=	0.0207/tested IDC x 209MW
vii) Variable O&M (Operation on gas)	=	0.1528/tested IDC x 209MW
viii) Variable O&M (Operation on HSD)	=	0.2205/tested IDC x 209MW

Adjustment in Insurance Component

100. Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon production of authentic documentary evidence by HPGCL according to the following formula;

$$\text{Insurance (Revised)} = \text{AIC}/\$1.943 \text{ million} \times \text{AP}$$

Where;

AIC = Adjusted Insurance Component as per IDC Test

AP = Actual Premium

Adjustment due to customs duties and Interest during Construction

101. Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in customs duties and Interest During Construction with reference to the estimated figures of USD 5.036 million and USD 13.188 million respectively.

Pass-Through Items

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

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. Withholding tax shall be allowed @7.5% of the return on equity. 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% equity according to the following formula:

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$$\text{Withholding Tax Payable} = \{15\% * (E_{(\text{REF})} - E_{(\text{Red})}) + \text{ROEDC}_{(\text{Ref})}\} * 7.5\%$$

Where:

$E_{(\text{REF})}$ = Reference Equity (US\$46.096 million x 60)

$E_{(\text{Red})}$ = Equity Redeemed

$\text{ROEDC}_{(\text{REF})}$ = Reference Return on Equity During Construction

Note: In case of foreign equity withholding tax calculated according to the above formula shall be adjusted for variation in currency (US\$ to Rupee).

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 as a pass through from the Power Purchaser in future on the basis of the total dividend pay out.

Indexations:

The reference tariff subject to indexation shall be applicable as follows:

Indexation applicable to O&M

103. 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:

(a) Fixed O&M

$$F O\&M_{(\text{LREV})} = \text{Rs. } 0.0434 / \text{kW} / \text{Hour} * \text{WPI}_{(\text{REV})} / 117.80$$

$$F O\&M_{(\text{PREV})} = \text{Rs. } 0.0651 / \text{kW} / \text{Hour} * \text{US CPI}_{(\text{REV})} / 199.8 * \text{ER}_{(\text{REV})} / 60$$

Where:

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

$F O\&M_{(\text{PREV})}$ = 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 (All Urban Consumers)
 $US\ CPI_{(REF)}$ = 199.8 US CPI (All Urban Consumers) 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.

(b) Variable O&M

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

$$V\ O\&M_{(REV)} = \text{Rs. } 0.1746 \text{ per kWh} * US\ CPI_{(REV)} / 199.8 * ER_{(REV)} / 60$$

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 (All Urban Consumers)
 $US\ CPI_{(REF)}$ = 199.8 US CPI (All Urban Consumers) 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.

Adjustment for KIBOR variation

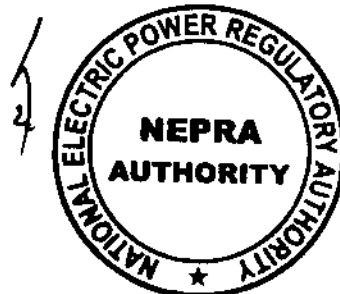
104. The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variations in interest rate as a result of variation in quarterly KIBOR according to the following formula;

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 9\%) / 4$$

Where:

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ΔI = the variation in interest charges applicable corresponding to variation in KIBOR. ΔI can be positive or negative depending upon whether KIBOR REV > or < 9%. The interest payment obligation will be enhanced or reduced to the extent of ΔI 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.

Adjustment in ROE & ROEDC

105. 50% component of ROE & ROEDC will be subject to Exchange Rate Variation as under:

$$ROE_{(FREV)} = \text{Rs. } 0.2266 * 50\% * ER_{(REV)} / 60$$

$$ROEDC_{(FREV)} = \text{Rs. } 0.0207 * 50\% * ER_{(REV)} / 60$$

Where:

$ROE_{(FREV)}$ = Revised ROE relating to foreign component

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

$ROEDC_{(FREV)}$ = Revised ROEDC relating to foreign component

Fuel Price Variation

106. The Variable Charge part of the tariff relating to fuel cost shall be adjusted on account of fuel price variations as and when notified by the relevant authority, which in the instant case is the Oil & Gas Regulatory Authority. In this regard, the variation in HPGCL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FCg_{(REV)} = \text{Rs. } 1.7787 \text{ per kWh} * FPg_{(REV)} / \text{Rs. } 266.83 \text{ per MMBTU}$$

Where:

$FCg_{(REV)}$ = Revised fuel cost component on gas

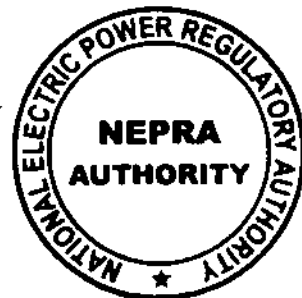
$FPg_{(REV)}$ = the new price of gas as notified by the relevant Authority per MMBTU of fuel adjusted for LHV-HHV factor.

$FCd_{(REV)}$ = Rs.6.7151 per kWh * $FPd_{(REV)}$ / Rs. 954.27 per MMBTU

Where:

$FCd_{(REV)}$ = Revised fuel cost component of Variable Charge on diesel

$FPd_{(REV)}$ = The new Ex-GST price of diesel as notified by the relevant Authority per MMBTU of fuel adjusted for LHV-HHV factor.



Reference values used in the calculations are:

HSD Fuel price with GST (HHV)	Rs. 37.29 per litre
GST	15%
HSD Fuel price without GST (HHV)	Rs. 32.43 per litre
HHV-LHV Adjustment Factor	1.06
HSD Fuel price without GST (LHV)	Rs. 34.37 per litre
HSD Fuel Price without GST	Rs. 954.27 per MMBTU*

* Calculated by using the following:

Reference Specific Gravity	0.84
Reference Calorific Value (Gross)	42,880.7 BTUs/Litre

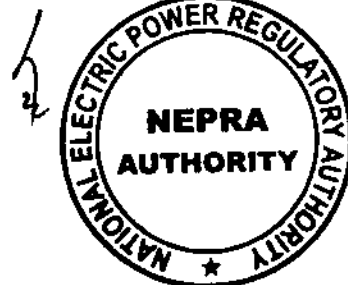
107. In case of adjustment in HSD fuel component, HPGCL shall submit request for adjustment, along with supplier's certificate indicating flash point, specific gravity and calorific value duly verified by the power purchaser. The Power Purchaser shall make all necessary arrangements to satisfy itself regarding the authenticity and validity of the information provided by HPGCL. In case of any dispute or discrepancy the power purchaser shall seek third party verification which for technical issues shall be HDIP and for price issues shall be OGRA. HPGCL shall be allowed immediate adjustment by the Authority within 7 working days of such request with requisite certificates and verifications.
108. 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 within seven working days after receipt of HPGCL's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

ORDER

109. Pursuant to Rule 6 of NEPA Licensing (Generation) Rules 2000, Halmore Power Generation Company Ltd. (HPGCL) 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 tariff for delivery of electricity to CPPA of NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

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Reference Tariff

Tariff Components	Year	
	1 to 10	11 to 30
Capacity Charge (PKR/kW/Hour)		
O&M Foreign	0.0651	0.0651
O&M Local	0.0434	0.0434
Cost of Working Capital *	0.0163	0.0163
Insurance	0.0637	0.0637
Debt Service	0.7842	-
Return on Equity	0.2266	0.2266
ROE during Construction	0.0207	0.0207
Total Capacity Charge	1.2201	0.4359
* In case of plant operation on HSD, the cost of working capital shall be paid on 15 days inventory level basis, which is Rs. 0.0349/kW/Hr.		
A) Energy Charge on Operation on Gas Rs./kWh		
Fuel Cost Component	1.7787	1.7787
Variable O&M	0.1746	0.1746
B) Energy Charge on Operation on HSD Rs./kWh		
Fuel Cost Component	6.7151	6.7151
Variable O&M	0.2520	0.2520

- 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 30 years commencing from the date of the Commercial Operation.
- iv) Component wise tariff for operation on Gas and HSD is indicated at Annex-I & II and Debt Service Schedule at Annex-III.

The following indexations shall be applicable to reference tariff;

I One Time Adjustment

a) Adjustment due to variation in net capacity

The reference tariff has been determined on the basis of net capacity of 209 MW at delivery point at mean site conditions. All the tariff components except fuel cost component shall be adjusted at the time of COD based upon the IDC tests to be carried out for determination of contracted capacity. The adjustments shall be made according to the following formula:

- i) Revised O&M Foreign = $0.0651/\text{tested IDC} \times 209\text{MW}$
- ii) Revised O&M Local = $0.0434/\text{tested IDC} \times 209\text{MW}$



iii) Insurance	=	0.0637/tested IDC x 209MW
iv) Debt Service	=	0.7842/tested IDC x 209MW
v) Return on Equity	=	0.2266/tested IDC x 209MW
vi) ROE during Construction	=	0.0207/tested IDC x 209MW
vii) Variable O&M (Operation on gas)	=	0.1528/tested IDC x 209MW
viii) Variable O&M (Operation on HSD)	=	0.2205/tested IDC x 209MW

b) Adjustment in Insurance Component

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

$$\text{Insurance (Revised)} = \text{AIC}/\$1.943 \text{ million} \times \text{AP}$$

Where;

AIC = Adjusted Insurance Component as per IDC Test

AP = Actual Premium

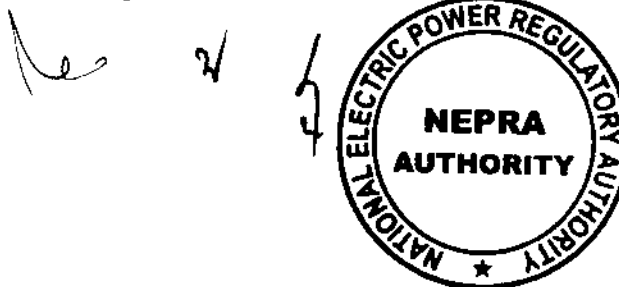
c) Adjustment due to custom duties and Interest during Construction

Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in customs duties and Interest During Construction with reference to the estimated figures of USD 5.036 million and USD 13.188 million respectively.

II Pass-Through Items

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

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. Withholding tax shall be allowed @7.5% of the return on equity. 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% equity according to the following formula:

$$\text{Withholding Tax Payable} = \{15\% * (E_{(\text{REF})} - E_{(\text{Red})}) + \text{ROEDC}_{(\text{Ref})}\} * 7.5\%$$

Where:

$E_{(\text{REF})}$ = Reference Equity (US\$46.096 million x 60)

$E_{(\text{Red})}$ = Equity Redeemed

$\text{ROEDC}_{(\text{REF})}$ = Reference Return on Equity During Construction

Note: In case of foreign equity withholding tax calculated according to the above formula shall be adjusted for variation in currency (US\$ to Rupee).

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 as a pass through from the Power Purchaser in future on the basis of the total dividend pay out.

III Indexations:

The reference tariff subject to indexation shall be applicable 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

$$F O\&M_{(\text{LREV})} = \text{Rs. } 0.0434/\text{kW}/\text{Hour} * \text{WPI}_{(\text{REV})} / 117.80$$

$$F O\&M_{(\text{PREV})} = \text{Rs. } 0.0651/\text{kW}/\text{Hour} * \text{US CPI}_{(\text{REV})} / 199.8 * \text{ER}_{(\text{REV})} / 60$$

Where:



- F O&M_(REV) = 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 (All Urban Consumers)
- US CPI_(REF) = 199.8 US CPI (All Urban Consumers) 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:

$$V O\&M_{(REV)} = \text{Rs. } 0.1746 \text{ per kWh} * US CPI_{(REV)} / 199.8 * ER_{(REV)} / 60$$

Where:

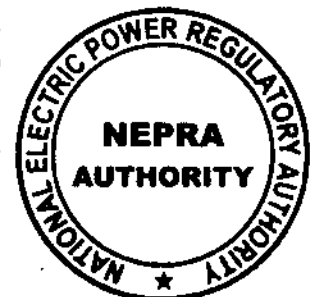
- V O&M_(REV) = The revised applicable Variable O&M Component of Energy Charge indexed with US CPI and Exchange Rate variations.
- US CPI_(REV) = the revised US CPI (All Urban Consumers)
- US CPI_(REF) = 199.8 US CPI (All Urban Consumers) for the month of March 2006 as notified by the US Bureau of Labor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

b) 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;

$$\Delta I = P_{(REV)} * (KIBOR_{(REV)} - 9\%) / 4$$



Where:

ΔI = the variation in interest charges applicable corresponding to variation in KIBOR. ΔI can be positive or negative depending upon whether KIBOR $REV >$ or $< 9\%$. The interest payment obligation will be enhanced or reduced to the extent of ΔI 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.

c) Adjustment in ROE & ROEDC

50% component of ROE & ROEDC will be subject to Exchange Rate Variation as under:

$$ROE_{(REV)} = Rs. 0.2266 * 50\% * ER_{(REV)} / 60$$

$$ROEDC_{(REV)} = Rs. 0.0207 * 50\% * ER_{(REV)} / 60$$

Where:

$ROE_{(REV)}$ = Revised ROE relating to foreign component

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

$ROEDC_{(REV)}$ = Revised ROEDC relating to foreign component

d) Fuel Price Variation

The Variable Charge part of the tariff relating to fuel cost shall be adjusted on account of fuel price variations as and when notified by the relevant authority, which in the instant case is the Oil & Gas Regulatory Authority. In this regard, the variation in HPGCL's allowed rate relating to fuel cost shall be revised according to the following formula:

$$FCg_{(REV)} = Rs. 1.7787 \text{ per kWh} * FPg_{(REV)} / Rs. 266.83 \text{ per MMBTU}$$

Where:

$FCg_{(REV)}$ = Revised fuel cost component on gas

$FPg_{(REV)}$ = the new price of gas as notified by the relevant Authority per MMBTU of fuel adjusted for LHV-HHV factor.

$$FCd_{(REV)} = Rs. 6.7151 \text{ per kWh} * FPd_{(REV)} / Rs. 954.27 \text{ per MMBTU}$$

Where:

$FCd_{(REV)}$ = Revised fuel cost component of Variable Charge on diesel

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$FPd_{(REV)}$ = The new Ex-GST price of diesel as notified by the relevant Authority per MMBTU of fuel adjusted for LHV-HHV factor.

Reference values used in the calculations:

HSD Fuel price with GST (HHV)	Rs. 37.29 per litre
GST	15%
HSD Fuel price without GST (HHV)	Rs. 32.43 per litre
HHV-LHV Adjustment Factor	1.06
HSD Fuel price without GST (LHV)	Rs. 34.37 per litre
HSD Fuel Price without GST	Rs. 954.27 per MMBTU*

* Calculated by using the following:

Reference Specific Gravity	0.84
Reference Calorific Value (Gross)	42,880.7 BTUs/Litre

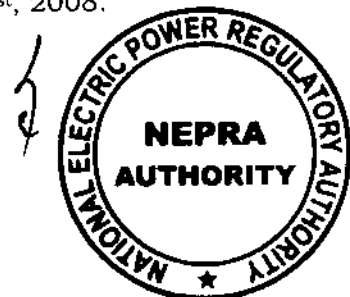
In case of adjustment in HSD fuel component, HPGCL shall submit request for adjustment, along with supplier's certificate indicating flash point, specific gravity and calorific value duly verified by the power purchaser. The Power Purchaser shall make all necessary arrangements to satisfy itself regarding the authenticity and validity of the information provided by HPGCL. In case of any dispute or discrepancy the power purchaser shall seek third party verification, which for technical issues shall be HDIP, and for price issues shall be OGRA. HPGCL shall be allowed immediate adjustment by the Authority within 7 working days of such request with requisite certificates and verifications.

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 HPGCL's request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

Incentive for Early Commissioning

In case HPGCL achieves Commercial Operation Date (COD) prior to October 31st, 2008, an incentive equivalent to Rs. 0.1795 per kW per hour shall be paid in addition to the normal capacity payment during the period commencing from COD till October 31st, 2008.

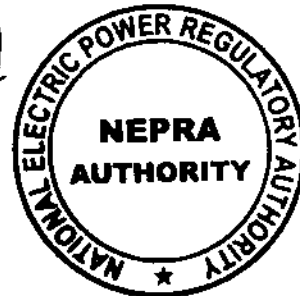
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Terms and Conditions of Tariff:

- i) Use of Gas will be considered as primary fuel.
- ii) All new equipment will be installed and the plant will be of standard configuration.
- iii) Dispatch criterion will be based on the Energy Charge.
- iv) Diesel oil will be used only for startups and other contingent requirements. Use of Diesel Oil shall be allowed in accordance with the GOP fuel policy announced from time to time.
- v) General assumptions of HPGCL, 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 HPGCL and CPPA.

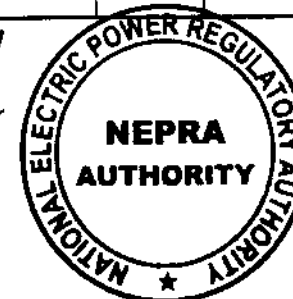


**HALMORE POWER GENERATION COMPANY (HPGCL)
SPECIFIED TARIFF- PLANT OPERATION ON GAS**

Year	Energy Charge (Rs/kWh)			Capacity Charge Rs/kW per Hour													Total Tariff Rs/kWh
	Fuel	Variable O&M	Total	Fixed O&M Foreign	Fixed O&M Local	Insurance	W.C	ROE DC	ROE	Withholding tax on div	Sub Total	Debt Servicing Foreign	Debt Servicing Local	Total Debt Servicing	Total Capacity charge		
															Rs/kW/hr	Rs/kWh at 60% PF	
1	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
2	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
3	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
4	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
5	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
6	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
7	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
8	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
9	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
10	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	0.7842	0.7842	1.2386	2.0644	4.0177
11	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
12	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
13	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
14	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
15	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
16	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
17	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
18	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
19	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
20	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
21	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
22	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
23	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
24	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
25	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
26	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
27	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
28	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
29	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
30	1.7787	0.1746	1.9533	0.0651	0.0434	0.0637	0.0163	0.0207	0.2266	0.0185	0.4544	-	-	-	0.4544	0.7573	2.7106
Levelised	1.7787	0.1746	1.9533												0.9656	1.6093	3.5626

Cents

5.938

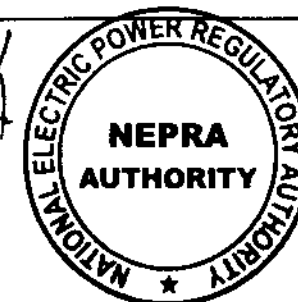


**HALMORE POWER GENERATION COMPANY (HPGCL)
SPECIFIED TARIFF- PLANT OPERATION ON HSD**

Year	Energy Charge (Rs/kWh)			Capacity Charge Rs/kw per Hour													Total Tariff Rs/kWh
	Fuel	Variable O&M	Total	Fixed O&M Foreign	Fixed O&M Local	Insurance	W.C	ROE DC	ROE	Withholding tax on div	Sub Total	Debt Servicing Foreign	Debt Servicing Foreign	Total Debt Servicing	Total Capacity charge		
																Rs/kW/Hr	Rs/kWh at 60% PF
1	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
2	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
3	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
4	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
5	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
6	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
7	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
8	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
9	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
10	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	0.7842	0.7842	1.2573	2.0954	9.0626
11	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
12	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
13	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
14	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
15	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
16	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
17	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
18	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
19	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
20	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
21	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
22	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
23	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
24	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
25	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
26	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
27	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
28	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
29	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
30	6.7151	0.2520	6.9671	0.0651	0.0434	0.0637	0.0349	0.0207	0.2266	0.0185	0.4730	-	-	-	0.4730	0.7884	7.7555
Levelised			6.9671												0.9842	1.6403	8.6075

Cents

14.3458

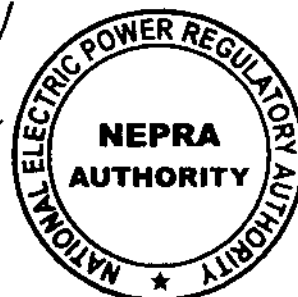


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Annexure III

**HalmorePower Generation Company Limited
Debt Servicing Schedule**

Period	Local Debt					Annual Principal Repayment Rs./Kw/Hr.	Annual Interest Rs./kW/Hr.	Annual Debt Servicing Rs./kW/Hr.
	Principal Million \$	Repayment Million \$	Mark-Up Million \$	Balance Million \$	Debt Service Millin \$			
1st Q	138.29	1.83	4.15	136.45	5.98			
2nd Q	136.45	1.89	4.09	134.56	5.98			
3rd Q	134.56	1.95	4.04	132.62	5.98			
4th Q	132.62	2.00	3.98	130.61	5.98			
1	138.29	7.67	16.26	130.61	23.93	0.251452	0.532792	0.7842
1st Q	130.61	2.06	3.92	128.55	5.98			
2nd Q	128.55	2.13	3.86	126.42	5.98			
3rd Q	126.42	2.19	3.79	124.23	5.98			
4th Q	124.23	2.26	3.73	121.98	5.98			
2	130.61	8.64	15.29	121.98	23.93	0.2830	0.5012	0.7842
1st Q	121.98	2.32	3.66	119.65	5.98			
2nd Q	119.65	2.39	3.59	117.26	5.98			
3rd Q	117.26	2.46	3.52	114.80	5.98			
4th Q	114.80	2.54	3.44	112.26	5.98			
3	121.98	9.72	14.21	112.26	23.93	0.3185	0.4657	0.7842
1st Q	112.26	2.61	3.37	109.64	5.98			
2nd Q	109.64	2.69	3.29	106.95	5.98			
3rd Q	106.95	2.77	3.21	104.18	5.98			
4th Q	104.18	2.86	3.13	101.32	5.98			
4	112.26	10.94	12.99	101.32	23.93	0.3585	0.4257	0.7842
1st Q	101.32	2.94	3.04	98.38	5.98			
2nd Q	98.38	3.03	2.95	95.34	5.98			
3rd Q	95.34	3.12	2.86	92.22	5.98			
4th Q	92.22	3.22	2.77	89.01	5.98			
5	101.32	12.31	11.62	89.01	23.93	0.4035	0.3807	0.7842
1st Q	89.01	3.31	2.67	85.69	5.98			
2nd Q	85.69	3.41	2.57	82.28	5.98			
3rd Q	82.28	3.51	2.47	78.77	5.98			
4th Q	78.77	3.62	2.36	75.15	5.98			
6	89.01	13.86	10.07	75.15	23.93	0.4542	0.3301	0.7842
1st Q	75.15	3.73	2.25	71.42	5.98			
2nd Q	71.42	3.84	2.14	67.58	5.98			
3rd Q	67.58	3.96	2.03	63.62	5.98			
4th Q	63.62	4.07	1.91	59.55	5.98			
7	75.15	15.60	8.33	59.55	23.93	0.5112	0.2731	0.7842
1st Q	59.55	4.20	1.79	55.35	5.98			
2nd Q	55.35	4.32	1.66	51.03	5.98			
3rd Q	51.03	4.45	1.53	46.58	5.98			
4th Q	46.58	4.59	1.40	42.00	5.98			
8	59.55	17.55	6.38	42.00	23.93	0.5753	0.2089	0.7842
1st Q	42.00	4.72	1.26	37.27	5.98			
2nd Q	37.27	4.86	1.12	32.41	5.98			
3rd Q	32.41	5.01	0.97	27.40	5.98			
4th Q	27.40	5.16	0.82	22.24	5.98			
9	42.00	19.76	4.17	22.24	23.93	0.6475	0.1367	0.7842
1st Q	22.24	5.32	0.67	16.92	5.98			
2nd Q	16.92	5.47	0.51	11.45	5.98			
3rd Q	11.45	5.64	0.34	5.81	5.98			
4th Q	5.81	5.81	0.17	(0.00)	5.98			
10	22.24	22.24	1.69	(0.00)	23.93	0.7288	0.0555	0.7842



Handwritten signature/initials

Handwritten mark

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