



# National Electric Power Regulatory Authority

## Islamic Republic of Pakistan

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Ph: 9207200, 9205225 Fax : 9210215  
E-mail: registrar@nepra.org.pk

**Registrar**

No. NEPRA/R/TRF-117/REL-2008/386-88  
October 09, 2008

**Subject: Approval of Generation Tariff for RUBA Energy Pakistan (Pvt.) Limited (REL) for 172 MW (Gross ISO) Power Project at Lahore-Gujranwala Road in accordance with Section 1.10 of the Tariff Guidelines of November 2005 for Determination of Tariff for IPPs.**

Dear Sir,


Please find enclosed the subject decision of the Authority along with Annex-I, II & III (11 pages) in Case No. NEPRA/TRF-117/REL-2008.

2. The decision is being intimated to the Federal Government for the purpose of notification of the approved tariff in the official Gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

**Enclosure/As above**

Secretary  
Cabinet Division  
Government of Pakistan  
Cabinet Secretariat,  
Islamabad



  
(Mahjoob Ahmad Mirza) 09.10.08

CC

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



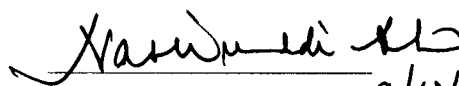
**APPROVAL OF GENERATION TARIFF FOR RUBA ENERGY PAKISTAN (PVT.) LTD. (REPL) FOR  
172 MW (GROSS ISO) POWER PROJECT AT LAHORE GUJRANWALA ROAD IN  
ACCORDANCE WITH SECTION 1.10 OF THE TARIFF GUIDELINES OF NOVEMBER 2005 FOR  
DETERMINATION OF TARIFF FOR IPPS**

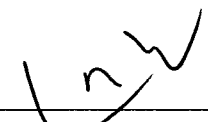
Ruba Energy Limited (REPL) vide letter No. REPL/EXS-31-2008 has applied to NEPRA for approval of tariff for its 172 MW (Gross ISO) and 154.07 MW (Net) Combined Cycle Power Plant at Lahore-Gujranwala Road. The REPL was declared successful bidder consequent to the Competitive Bidding carried out under the Government of Pakistan (GoP) policy on Fast Track Power Generation Projects. Economic Coordination Committee (ECC) vide its decision ECC-146/14/2008 dated September 10, 2008 declared the REPL as a qualified bidder. Accordingly, PPIB vide letter No. 1(102)PPIB-2027-10/08/PRJ dated September 12, 2008 informed Ruba Energy Pakistan (Pvt.) Ltd. (REPL), the qualified bidder to approach NEPRA for approval of tariff. ECC in its decision [para 12(iii)] advised NEPRA to approve the tariff along with assumptions and adjustment in accordance with the GoP guidelines of November 2005 for determination of tariff for IPPs.

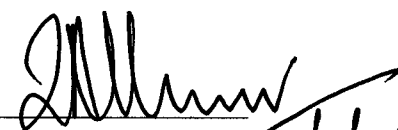
2. The Authority considers that the bidding process has been carried out by PPIB, agency of the GOP, working under the supervision of the Ministry of Water & Power for attracting and facilitating investment in power generation. The rate has been arrived through a competitive bidding and has been approved by the ECC vide its decision ECC-146/14/2008 dated September 10, 2008.

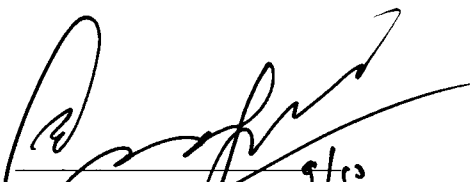
3. In view of the above the Authority hereby allows the applicant to charge the tariff according to Assumptions and Terms and Conditions Annex-I, II & III as approved by the Government of Pakistan read with Sub-para v of Para 12 of the Summary of Fast Track Power Generation Projects Through International Competitive Bidding which is reproduced as under:

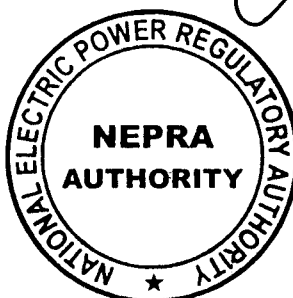
*"In case any of the approved projects under Package A & B fail to achieve crucial milestones as per agreements towards timely project implementation, then the project be immediately cancelled with penalties. The deficit power generation capacity be then expeditiously arranged through addition of IPP/Rental Power Projects both solicited and unsolicited on fast track basis."*

  
Nasiruddin Ahmed 9/10/08  
Member

  
Maqbool Ahmad Khawaja  
Member

  
Zafar Ali Khan 9/10/08  
Member/Vice Chairman

  
Khalid Saeed 9/10  
Chairman



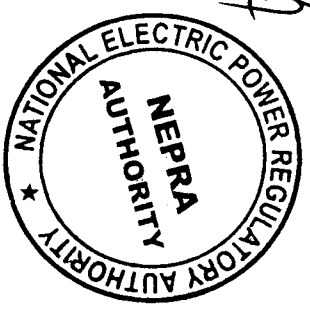
Contract Capacity at 132 kV busbar under Reference Conditions:  
 Units sold at 80% Plant Factor  
 154.07 MW  
 800.8 GWh

ENERGY PAKISTAN (PVT) LTD. - REFERENCE TARIFF FOR COMBINED CYCLE - HSF0  
 (PER UNIT CALCULATED @ 100%)

Agreement Year	ENERGY PURCHASE PRICE Rupees / kWh				CAPACITY PURCHASE PRICE Rupees / MW / hr														
	Fuel Component	Variable O&M Component		Taxes	Fixed O&M				Non-Fixed O&M				Debt Service (Foreign)				Total CIP at Rs./MWh	Total Tariff Rs./MWh	Total Tariff US Cents
		Local	Foreign		Insurance	Plant O&M	Plant O&M	Plant O&M	Plant O&M	ROIC	ROE	Withholding Tax @ 7.5%	Debt Service (Local)	Debt Service (Local)					
															Local	Foreign			
1	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
2	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
3	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
4	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
5	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
6	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
7	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
8	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
9	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
10	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
11	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
12	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
13	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
14	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
15	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
16	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
17	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
18	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
19	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
20	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
21	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
22	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
23	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
24	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
25	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
AVERAGE TARIFF																			
1-10	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
11-20	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
21-25	4.8883	0.0231	0.2480	5.1896	0.1701	0.2872	0.1145	0.0875	0.1178	0.3188	0.1387	0.0238	0.0101	0.5888	1.4115	3.2534	5.4224	10.8420	18.2841
US CENTS																			
1-10	44.8833	0.2301	2.4800	51.8960	1.7001	2.8720	1.1450	0.8750	1.1780	3.1880	1.3870	0.2380	0.0101	5.8880	14.1150	32.5340	54.2240	108.4200	182.8410
11-20	44.8833	0.2301	2.4800	51.8960	1.7001	2.8720	1.1450	0.8750	1.1780	3.1880	1.3870	0.2380	0.0101	5.8880	14.1150	32.5340	54.2240	108.4200	182.8410
21-25	44.8833	0.2301	2.4800	51.8960	1.7001	2.8720	1.1450	0.8750	1.1780	3.1880	1.3870	0.2380	0.0101	5.8880	14.1150	32.5340	54.2240	108.4200	182.8410
US CENTS																			
1-10	44.8833	0.2301	2.4800	51.8960	1.7001	2.8720	1.1450	0.8750	1.1780	3.1880	1.3870	0.2380	0.0101	5.8880	14.1150	32.5340	54.2240	108.4200	182.8410
11-20	44.8833	0.2301	2.4800	51.8960	1.7001	2.8720	1.1450	0.8750	1.1780	3.1880	1.3870	0.2380	0.0101	5.8880	14.1150	32.5340	54.2240	108.4200	182.8410
21-25	44.8833	0.2301	2.4800	51.8960	1.7001	2.8720	1.1450	0.8750	1.1780	3.1880	1.3870	0.2380	0.0101	5.8880	14.1150	32.5340	54.2240	108.4200	182.8410

RUBA ENERGY PAKISTAN (PVT) LIMITED  
 Reference Tariff Table for Combined Cycle Operation on RFO upon COD

approved by NEPRA for incorporation in the PPA



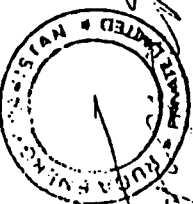
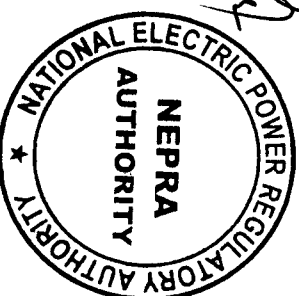
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RUBA ENERGY PAKISTAN (PVT) LTD. - REFERENCE TARIFF FOR OPEN CYCLE - HSFO  
(PER UNIT CALCULATED @ 100%)

Contract Capacity at 132 kV busbar under Reference Conditions: 106.63 MW  
Units sold at 50% Plant Factor: 560.47 GWh

Agreement Year	ENERGY PURCHASE PRICE Rupees / kWh				CAPACITY PURCHASE PRICE Rupees / kWh / hr										Total CPs as Rs / kWh	Total Tariff Rs / kWh	Total Tariff US C/kWh	
	Fuel Component	Variable O&M Component:		Total	Escalable Component					Non-Escalable Component								Total CPs
					Fixed O&M		Insurance	Financing Cost on Working Capital	ROE		Winding Tax @ 7.5%							
					Local	Foreign			Foreign	Local	Foreign	Local						
1	6.7217	3.0331	0.2483	7.0028	0.2458	0.4149	0.1655	0.1408	0.2303	0.0987	0.0171	0.0073	1.3235	2.2008	9.2037	14.2473		

RUBA ENERGY PAKISTAN (PVT) LIMITED  
Reference Tariff Table for Open Cycle Operation on RFO  
approved by NEPRA for incorporation in the PPA



Contract Capacity at 132 kV Durbur under Reference Conditions:  
Units sold at 80% Plant Factor:

16.131 MW  
847.8 GWh

RL ENERGY PAKISTAN (PVT) LTD. REFERENCE TARIFF FOR COMBINED CYCLE - GAS  
(PER UNIT CALCULATED @ 100%)

ENERGY PURCHASE PRICE			CAPACITY PURCHASE PRICE																	
Rupees / MWh			Rupees / MW / %																	
Agreement Year	Fuel Component	Variable O&M Component		Total	Fixed O&M Component										Total CFP	Total CFP Guaranteed Rs./MW	Total Tariff Rs./MWh	Total Tariff US Cents/ KWh		
		Local	Foreign		Fixed O&M		Insurance	Financing Cost on Borrowing	ROIC	RDE		Non-Equity Component								
					Local	Foreign				Minimum Toll @ 7.5%	Local	Principal	Interest	Principal					Interest	
1	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.5404	1.3432	3.1105	5.1841	7.2389	11.2688	
2	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.6164	1.2742	3.1105	5.1841	7.2389	11.2688	
3	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.6946	1.1982	3.1105	5.1841	7.2389	11.2688	
4	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.7843	1.0943	3.1105	5.1841	7.2389	11.2688	
5	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.8861	0.9685	3.1105	5.1841	7.2389	11.2688	
6	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	1.0280	0.8617	3.1105	5.1841	7.2389	11.2688	
7	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	1.2075	0.7211	3.1105	5.1841	7.2389	11.2688	
8	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	1.3275	0.5611	3.1105	5.1841	7.2389	11.2688	
9	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	1.5003	0.3783	3.1105	5.1841	7.2389	11.2688	
10	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	1.7191	0.1735	3.1105	5.1841	7.2389	11.2688	
11	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
12	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
13	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
14	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
15	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
16	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
17	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
18	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
19	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
20	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
21	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
22	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
23	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
24	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
25	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
AVERAGE TARIFF					0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097			3.1105	5.1841	7.2389	11.2688	
				1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	1.2718	2.0265	4.1862	6.4324
					</															

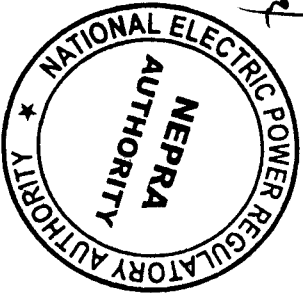
AVERAGE TARIFF

LEVELIZED TARIFF

1 - 10	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	1.0298	0.8266	3.1102	5.1841	7.2359	11.2558
11 - 20	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.4119	0.3435	1.8773	2.0265	4.1882	6.4524
21 - 25	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.7288	0.8775	22.8857	37.6282	57.2641	88.7887
US Cents	1.9168	0.0200	0.2050	2.1318	0.1653	0.2743	0.1094	0.0831	0.1132	0.3046	0.1306	0.0226	0.0097	0.8266	0.8475	2.5002	4.1882	6.4524	11.2558
	2.8617	0.0464	0.3173	3.3310	0.2359	0.4266	0.1884	0.1441	0.1729	0.4715	0.2007	0.0550	0.0150	0.8787	1.0023	3.8705	6.4508	9.7818	15.7818

RUBA ENERGY PAKISTAN (PVT) LIMITED  
Reference Tariff Table for Combined Cycle Operation on Gas upon COD  
Approved by NEPRA for incorporation in the PPA

Signature of Representative  
RUBA ENERGY PAKISTAN (PVT) LIMITED



**RUBA ENERGY PAKISTAN (PVT) LTD. - REFERENCE TARIFF FOR OPEN CYCLE - GAS**  
(PER UNIT CALCULATED @ 100%)

Contract Capacity at 132 kV busbar under Reference Conditions:

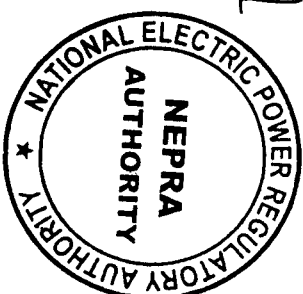
110.96 MW

Units sold at 60% Plant Factor:

583.20 GWh

Agreement Year	ENERGY PURCHASE PRICE Rupees / kWh				CAPACITY PURCHASE PRICE Rupees / kW / hr										Total CPP as Estimated	Total Tariff Rs./kWh	Total Tariff US C./kWh
	Fuel Component	Variable O&M Component		Total	Escalable Component				Non-Escalable Component:								
		Local	Foreign		Fixed O&M		Insurance	Financing Cost on Working Capital	ROE		Withholding Tax @ 7.5%						
					Local	Foreign			Foreign	Local	Foreign	Local					
1	2 6778	0 0300	0 2050	2 9128	0 2403	0 3928	0 1591	0 1354	0 2214	0 0345	0 0164	0 0070	1 0723	2 2222	40350	7.7941	

*[Signature]*  
RUBA ENERGY PAKISTAN (PVT) LTD.



**RUBA ENERGY PAKISTAN (PVT) LIMITED**  
Reference Tariff Table for Open Cycle Operation on Gas  
approved by NEPRA for incorporation in the PPA

**TARIFF ASSUMPTIONS AND ADJUSTMENTS FOR IPPS**

**A. One Time Adjustments at COD**

**1. Adjustment in EPC Cost:**

The tariff tables as provided by the bidders are quoted in Pak Rupees based on Exchange Rates provided in the RFP issued by PPIB, which are given below for reference:

1.0 US\$ =	PKR 64.60
1.0 EURO =	PKR 100.57
1.0 Pound Sterling =	PKR 127.15
1.0 Japanese Yen =	PKR 0.6206

The bidders have quoted EPC Prices in specific currencies in their bids. As the exact timing of payments to EPC contractor is not known at the time of bidding, and both the disbursement schedule and exchange rates may vary during the project implementation period, an adjustment for relevant foreign currency fluctuation for the portion of payment in the relevant foreign currency will be made. The sponsors will be required to provide all relevant details along with documentary evidences to NEPRA for the adjustments.

The following tariff components will be adjusted at COD due to the aforementioned EPC Cost variations;

**i. Insurance Adjustment Mechanism for EPC Cost Variation:**

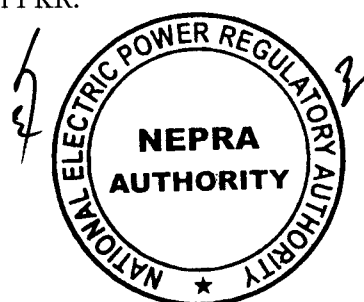
One time adjustment at time of COD will be made in the Insurance Component of the tariff due to EPC Cost variation. The Insurance Component of tariff as per original tariff bid will be divided with the original EPC Cost in PKR and multiplied by adjusted EPC Cost in PKR.

**ii. Return on Equity Adjustment Mechanism for EPC Cost Variation:**

One time adjustment at time of COD will be made in the Return on Equity (ROE) Component of the tariff due to EPC Cost Variation. The ROE Component (in PKR) of tariff as per original tariff bid will be divided with the original Equity amount in PKR and multiplied by revised amount of Equity in PKR.

**iii. ROEDC Adjustment Mechanism for EPC Cost Variation:**

One time adjustment at time of COD will be made in the ROEDC Component of the tariff due to EPC Cost Variation. The ROEDC Component (in PKR) of tariff as per original tariff bid will be divided with the original amount of Equity During Construction in PKR and multiplied by revised amount of Equity During Construction in PKR.



#### **iv. Debt Servicing Adjustment Mechanism for EPC Cost Variation**

One time adjustment at time of COD will be made in the Debt Servicing Component of the tariff due to EPC Cost variation. The Debt Servicing Component of tariff as per original tariff bid will be divided with the original amount of Debt in PKR given in the disbursement schedule by the bidders and multiplied by revised amount of Debt in PKR i.e. (Revised amount of Debt in the Project Cost after incorporating the adjustments of currency fluctuations).

#### **2. Adjustment Based on Actual Interest During Construction:**

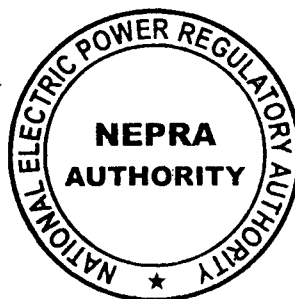
Debt Service, Return on Equity and ROE During Construction component of the tariff will be adjusted on account of variation in actual draw down and Interest During Construction due to variations in KIBOR/LIBOR/Other Interest Rates Benchmarks (as applicable) with reference to the estimated figures provided in the bids.

#### **3. Adjustment due to Custom Duties and Taxes:**

The RFP permits Bidders to include custom duties and taxes on import of plant and equipment not manufactured in Pakistan at the rate of 5% in the Project Cost. In case custom duties & taxes change from 5% as specified in the RFP, the Debt Service, Return on Equity and ROE During Construction will be adjusted on a prorata basis on account of any variation in custom duties & taxes with reference to the estimated figures as provided in the respective bids, on provision of documentary evidence to NEPRA at COD.

#### **B. Pass-through Items**

1. No provision for income tax has been accounted for in the tariff at the time of bidding. If Bidders are obligated to pay any tax on its profits, the exact amount paid by the Bidders may be reimbursed by Power Purchaser to Bidders on production of original receipts. This payment may be considered as pass-through (as Rs./kW/hour) hourly payment spread over a 12 months period in addition to the capacity purchase price proposed in Reference Tariff. Furthermore, in such a scenario, Bidders may also submit to Power Purchaser details of any tax shield savings and Power Purchaser will deduct the amount of these savings from its payment to Bidders on account of taxation.
2. Withholding tax on dividend is also a pass through item just like other taxes as indicated in the government guidelines for determination of tariff for new IPPs. In reference tariff table withholding tax number is indicated as reference and Power Purchaser shall make payment on account of withholding tax at time of actual payment of dividend subject to maximum 7.5 of 15% reference equity as approved by NEPRA at COD i.e. hourly payment (Rs./kW/hour) spread over 12 month.





3. In case bidders do 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 entitlements as per the 15%, Return on Equity,) would be carried forward and accumulated so that the bidders are able to recover the same in hourly payments spread over 12 months period as a pass through from the Power Purchaser in future on the basis of the total dividend pay out.

### **C. Indexations:**

#### **I. Fuel Cost Component:**

The Fuel Cost Component for RFO/Gas based projects will be adjusted according to the mechanism already approved by NEPRA for RFO/Gas based Power Plants. The tariffs are based on following assumptions;

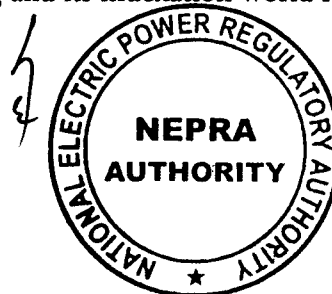
- i. Reference Fuel Price for RFO = Rs. 22,140 per metric ton ex-Karachi without transportation charges and sales tax.
- ii. Reference Freight Charges for RFO = Rs. 2,350 per metric ton
- iii. Reference LHV Calorific Value of RFO=38,849.5 Btu per kg
- iv. Reference HHV-LHV conversion factor for RFO = 1.05
- v. Reference Fuel Price for Gas on HHV basis = Rs. 240.9185 per MMBTU.
- vi. Reference HHV-LHV conversion factor for gas = 1.107553

For LPG based Projects, the tariffs are based on following assumptions;

- i. Reference Fuel Price for LPG = Rs. 34,571 per metric ton without transportation charges and sales tax, which is based on the Maximum Base-Stock Price of LPG notified by OGRA on June 02, 2007 using FOB Saudi ARAMCO Contract Price for 40% Propane at US\$ 560 per metric ton and 60% Butane at US\$ 575 per metric ton converted to Pak Rs. at exchange rate of 1 US\$ = Rs. 60.7570.
- ii. Reference Freight and Carriage, Port Charges, Royalty, OMC Commission, Terminal Charges, others, etc. for LPG = Rs. 5,491 per metric ton (US\$ 85 per Metric Ton converted at exchange rate of 1US\$=Rs. 64.6)
- iii. Reference LHV Calorific Value of LPG for Cavalier Energy = 43,606 Btu per kg
- iv. Reference LHV Calorific Value of LPG for Progas Energy = 44,500 Btu per kg

*Note: For LPG, Cavalier in their bid quoted CV (LHV) of 43,606 Btu/kg and Progas quoted 44,500 Btu/kg. For the purposes of evaluation and ranking a common CV (LHV) of 43,606 Btu/kg (which is in line with international standards) has been used. However the tariff tables are based on the CV values as committed by the bidder for approval by NEPRA.*

As there is no LPG based Power Plant operating in Pakistan and the price of imported LPG is not regulated by GOP, the mechanism for LPG pricing and its indexation would require to be



developed in consultation with Ministry of Petroleum and Natural Resources, while finalizing the Power Purchase Agreement.

## **2. Variable O&M:**

The Foreign Currency Portion of Variable O&M Component will be indexed for the followings.

- i. Exchange Rates variation of US\$ to Pak Rupees using Rs. 64.60 as reference rate.
- ii. Changes in US CPI using 30<sup>th</sup> April 2008 as the base date.

The Local Currency Portion of Variable O&M Component will be indexed for Pakistan WPI using 30<sup>th</sup> April 2008 as the base date.

The quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1<sup>st</sup> July, 1<sup>st</sup> October, 1<sup>st</sup> January and 1<sup>st</sup> April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics (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.

## **3. Fixed O&M:**

The Foreign Currency Portion of Fixed O&M Component will be indexed for the followings.

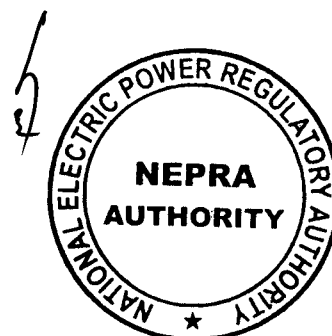
- iii. Exchange Rates variation of US\$ to Pak Rupees using Rs. 64.60 as reference rate.
- iv. Changes in US CPI using 30<sup>th</sup> April 2008 as the base date.

The Local Currency Portion of Fixed O&M Component will be indexed for Pakistan WPI using 30<sup>th</sup> April 2008 as the base date.

The quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1<sup>st</sup> July, 1<sup>st</sup> October, 1<sup>st</sup> January and 1<sup>st</sup> April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics (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.

## **4. Principal Repayment:**

Principal Repayment (only for Foreign Currency Loan) will be adjusted on account of exchange rate variations of Pak Rupee to one of the relevant foreign currencies i.e. US\$, Euro, £, ¥.



## 5. Adjustment for KIBOR and LIBOR Variation

### a. Local Currency Loan:

Interest /Mark-up Payments for Local Currency loans will be adjusted for relevant KfBOR variations.

### b. Foreign Currency Loan:

Interest /Mark-up Payments of Foreign Currency loans will be adjusted for variations in relevant LIBOR or other applicable Interest Rate benchmark and on account of exchange rate variations of Pak Rupee to one of the relevant foreign currencies i.e. US\$, Euro, £, ¥.

## 6. Cost of Working Capital:

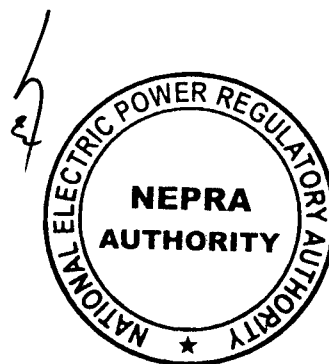
Cost of Working Capital will be adjusted only due to relevant KIBOR rate variations.

## 7. Insurance:

In case of foreign currency insurance cost, the insurance component of the tariff will be adjusted on account of US\$ to Pak Rupees variations.

## 8. Return on Equity and Return on Equity During Construction:

Return on Equity and Return on Equity During Construction will be quarterly adjusted on account of variation in PKR/US\$ parity.



TERMS AND CONDITIONS & ASSUMPTIONS OF TARIFF

1. Capacity Charge Rs. /kW/hour will be applicable to net capacity delivered at the delivery point.
2. The Contract capacity is the net electrical output as committed by the bidders at the reference ambient temperature (dry bulb) of 30°C
3. The net heat rates at 100% load will remain constant and applicable throughout the project life of 25 years and no adjustment/variation will be permissible due to deterioration/degradation or on any other account.
4. The plant availability will be as committed by the Bidders in their bids.
5. The Open Cycle Tariffs will be applicable for an initial period of maximum of 12 months.
6. The Combined Cycle Tariffs will be applicable for a period of 25 years commencing from the date of the Commercial Operation.
7. Dispatch criterion will be based on the Energy Charge with due consideration of transmission system constraints (if any) and reliability and stability criterion.
8. The net output and the net heat rates are as committed by the Bidders at the delivery point and are net of internal consumption.
9. Scheduled Outage period per annum shall be in accordance with the 2006 standardized PPA.
10. NTDC will be responsible for constructing the interconnection to the grid unless agreed otherwise between the parties.
11. All invoicing and payment terms are assumed to be in accordance with the standardized PPA attached with the Request for Proposal (RFP).
12. Tolerance in Dispatch shall be in accordance with standardized PPA attached with RFP.
13. The tariffs are based on indicative financing plans proposed by the Bidders. The Bidders may change their lenders and financing plans with the prior written approval of PPIB, without any adverse change in the financing terms, tariff, GoP/Power purchaser obligation and project implementation schedule. Any advantage of the above modification will be shared between the Power Purchaser/GoP and the Bidders in the ratio of 60:40.
14. No corporate income tax and no minimum turnover tax has been assumed.
15. Working capital has been financed by a separate Working Capital Facility, and is not included in the project cost.

