



GOVERNMENT OF PAKISTAN
MINISTRY OF WATER AND POWER
(PRIVATE POWER & INFRASTRUCTURE BOARD)

No. 1(102) PPIB-2027-19/08/PRJ

12th September 2008

Mr. Waseem Pasha Tajammal
Chairman of the Group
Cavalier Energy & Defence Systems Group
Plot 101-103, Industrial Estate
Sihala Road
Islamabad

SUBJECT: PACKAGE-A: INDEPENDENT PRIVATE POWER PROJECTS OF 1,000 MW CUMULATIVE CAPACITY: NOTIFICATION OF "QUALIFIED BIDDER"

Reference: Bid submitted by you to PPIB on 15th July 2008, under Package-A for 486 MW (Gross ISO) Power Project at Port Qasim, and subsequent information/clarification provided by you.

Dear Sir,

Pursuant to evaluation of your above-referred Bid (the "Bid"), we feel immense pleasure in informing you that the Bid has been approved by the competent authority for setting up a 486 MW (Gross ISO) Power Project at Port Qasim (the Project) as per following details:

<i>Net Capacity (in Combined Cycle Operation)</i>	<i>Fuel</i>	<i>Site</i>	<i>Levelized Tariff at COD</i>	<i>Commercial Operation Date from issuance of LOS (Open Cycle) Combined Cycle</i>
470 MW	LPG	Port Qasim	14.4923 US Cents/kWh	(12) 20 months

2. The final tariff tables and tariff assumptions & adjustments, as approved by the competent authority, are enclosed herewith for your reference. **You are advised to apply to NEPRA for tariff approval, within one week of issuance of this Notification.** Subsequent to approval of the tariff by NEPRA, the Letter of Support (the "LOS") will be issued to you upon fulfillment of all the requirements of the RFP including but not limited to the following:

- (i) formation of a Project Company;
- (ii) furnishing of:
 - (a) Performance Guarantee (PG), issued by a scheduled bank operating in Pakistan acceptable to PPIB with credit rating of 'A' or higher, @ US\$ 5000 per megawatt of Gross (ISO) capacity - valid for four months beyond the proposed Commercial Operations Date of the Complex - as per the format specified in the RFP, and
 - (b) US\$ 80,000 non-refundable Processing Fee.

3. Kindly be apprised that you will be required to submit PG and Processing Fee, acceptable only in US\$, with in **three (03)** days of tariff approval by NEPRA. In the mean time, you are advised to initiate processing of the same to save time. You are also advised to apply to NEPRA for grant of a Generation License.

Best regards,

Yours sincerely,



(Fayyaz Elahi)
Managing Director

Encl: As above

CC:

1. Mr. Ismail Qureshi, Secretary Water & Power, Ministry of Water & Power, Islamabad
2. Mr. Khalid Saeed, Chairman NEPRA, Islamabad
3. Mr. Fazal Ahmed Khan, Managing Director, PEPCO, WAPDA House, Lahore
4. PS to Minister for Water & Power, Islamabad

Proforma X:

Adjusted Reference Tariff Table for Operation on LPG

Year	Energy Purchase Price - EPP (Rs./kWh)				Capacity Purchase Price - CPP (Rs./kWh/Hour)										Capacity Charge at 60% PF		Total Tariff	
	Fuel	Variable O&M (Foreign)	Variable O&M (Local)	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Cost of Working Capital	Insurance	ROEDC	ROE	Withholding Tax @ 7.5%	*Adjusted Loan Re-payment	*Adjusted Interest Charges	Total	Rs. Per kWh	Rs. Per kWh	US \$ per kWh	
1	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.5154	0.6395	1.8928	3.1547	9.8086	15.1836	
2	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.5154	0.6137	1.9308	3.2181	9.8720	15.2817	
3	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.6510	0.5814	1.9703	3.2838	9.9377	15.3835	
4	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.7316	0.5417	2.0112	3.3520	10.0059	15.4861	
5	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.8222	0.4935	2.0537	3.4228	10.0767	15.5885	
6	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.9241	0.4357	2.0977	3.4962	10.1501	15.7122	
7	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	1.0366	0.3669	2.1434	3.5723	10.2262	15.8301	
8	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	1.1673	0.2856	2.1908	3.6513	10.3052	15.9524	
9	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	1.3120	0.1901	2.2400	3.7335	10.3872	16.0793	
10	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	1.4746	0.0785	2.2910	3.8183	10.4722	16.2109	
11	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
12	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
13	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
14	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
15	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
16	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
17	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
18	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
19	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
20	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
21	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
22	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
23	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
24	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
25	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
Average Tariff																		
1-10 Years	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.9216	0.4226	2.0822	3.4703	10.1242	15.6721	
11-20 Years	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
21-25 Years	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8838	12.2040	
1-25 Years	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.3686	0.1691	1.2756	2.1260	8.7900	13.5813	
Adjusted Levelized Tariff																		
1-25 Years	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	0.0000	0.4877	0.0366	0.5696	0.3173	1.6249	2.7081	9.3620	14.4923	

11/11/2011

Proforma XVII

Plant Capacity 156 MW
 Plant Factor 50%

**Reference Tariff Table for Open Cycle Operation on LPG
 for Maximum Initial Period of Twelve (12) Months**

Year	Energy Purchase Price-EPP (Rs./kWh)			Capacity Purchase Price - CPP (Rs./kW/Hour)							Capacity Charge at 60% PF		Total Tariff	
	Fuel	Variable O&M (Foreign)	Variable O&M (Local)	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Cost of Working Capital	Insurance	ROE	Withholding Tax @ 7.5%	Total	Rs. Per kWh	US ¢ per kWh	
	I	9.5924	0.0909	0.0909	9.7742	0.1090	0.1090	0.0549	0.1798	0.2438	0.0183	0.7149	1.1914	10.9556

Wangam

Proforma XVIII

Plant Capacity: 154 MW
 Plant Factor: 50%

Reference Tariff Table for Open Cycle Operation on Gas
 for Maximum Initial Period of Twelve (12) Months

Year	Energy Purchase Price-EPP (Rs./kWh)				Capacity Purchase Price - CPP (Rs./kW/Hour)							Capacity Charge at 60% PF		Total Tariff	
	Fuel	Variable O&M (Foreign)	Variable O&M (Local)	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Cost of Working Capital	Insurance	ROE	Withholding Tax @ 7.5%	Total	Rs. Per kWh	Rs. Per kWh	US ¢ per kWh	
1	27045	00920	00920	28890	01105	01105	00549	01821	02547	00191	07317	12195	41085	63599	

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CAVALIER ENERGY & DEFENCE SYSTEMS GROUP
Reference Tariff Table for Combined Cycle Operation on LPG upon COD
(Before application of Foreign Currency Exchange Rate Multipliers)
To be approved by NEPRA for incorporation in the PPA

Revised Proforma XIX

Reference Tariff Table Upon COD for Operation on LPG

Year	Energy Purchase Price - EPP (Rs./kWh)					Capacity Purchase Price - CPP (Rs./kW/Hour)										Capacity Charge at 60% PF		Total Tariff						
	Fuel	Variable O&M (Foreign)	Variable O&M (Local)	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Cost of Working Capital	Insurance	ROEDC	ROE	Withholding Tax @ 7.5%	Loan Re-payment	Interest Charges	Total	Rs Per kWh	US c per kWh								
																	1		2	3	4	5	6	7
1	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.4823	0.6018	1.8221	3.0358	9.6907	15.0010							
2	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.5241	0.5600	1.8221	3.0358	9.6907	15.0010							
3	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.5697	0.5144	1.8221	3.0358	9.6907	15.0010							
4	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.6194	0.4647	1.8221	3.0358	9.6907	15.0010							
5	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.6736	0.4106	1.8221	3.0358	9.6907	15.0010							
6	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.7276	0.3515	1.8221	3.0358	9.6907	15.0010							
7	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.7971	0.2870	1.8221	3.0358	9.6907	15.0010							
8	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.8674	0.2167	1.8221	3.0358	9.6907	15.0010							
9	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.9442	0.1399	1.8221	3.0358	9.6907	15.0010							
10	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	1.0281	0.0560	1.8221	3.0358	9.6907	15.0010							
11	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
12	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
13	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
14	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
15	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
16	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
17	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
18	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
19	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
20	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
21	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
22	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
23	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
24	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
25	6.5735	0.0402	0.0402	6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
Average Tariff																								
1-10 Years				6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.7239	0.3603	1.8221	3.0366	9.6907	15.0010							
11-20 Years				6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
21-25 Years				6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	-	-	0.7379	1.2299	7.8638	12.2040							
1-25 Years				6.6539	0.0483	0.0483	0.0376	0.0795	-	0.4877	0.0366	0.2695	0.1441	1.1716	1.9526	8.6065	13.3278							
Levelized Tariff																								
1-25 Years				6.6539	0.0483	0.0483	0.0376	0.0795	0.0000	0.4877	0.0366	0.4588	0.2750	1.4778	2.4530	9.1069	14.0974							

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CAVALIER ENERGY & DEFENCE SYSTEMS GROUP
Reference Tariff Table for Combined Cycle Operation on Gas upon COD
(Before application of Foreign Currency Exchange Rate Multipliers)
To be approved by NEPRA for incorporation in the PPA

Revised Proforma XX

Reference Tariff Table Upon COD for Operation on Gas

Year	Energy Purchase Price - EPP (Rs./kWh)				Capacity Purchase Price - CPP (Rs./kWh/Hour)										Capacity Charge at 80% PF		Total Tariff	
	Fuel	Variable O&M (Foreign)	Variable O&M (Local)	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Cost of Working Capital	Insurance	ROEDC	ROE	Withholding Tax @ 7.5%	Loan Re-payment	Interest Charges	Total	Rs. Per kWh	US ¢ per kWh		
1	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.5037	0.6286	1.9014	3.1690	7.9484		
2	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.5474	0.5849	1.9014	3.1690	7.9484		
3	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.5950	0.5373	1.9014	3.1690	7.9484		
4	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.6469	0.4854	1.9014	3.1690	7.9484		
5	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.7035	0.4288	1.9014	3.1690	7.9484		
6	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.7652	0.3671	1.9014	3.1690	7.9484		
7	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.8325	0.2998	1.9014	3.1690	7.9484		
8	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.9060	0.2263	1.9014	3.1690	7.9484		
9	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.9862	0.1461	1.9014	3.1690	7.9484		
10	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	1.0735	0.0585	1.9014	3.1690	7.9484		
11	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
12	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
13	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
14	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
15	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
16	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
17	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
18	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
19	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
20	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
21	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
22	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
23	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
24	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
25	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
Average Tariff																		
1-10 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.7560	0.3763	1.9014	3.1690	7.9484		
11-20 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
21-25 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475		
Levelized Tariff												0.5024	0.1505	1.2220	2.0367	5.0271		
1-25 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	0.0000	0.5094	0.0382	0.4792	0.2873	1.5356	2.5593	7.0047		

✓ - 10/25/11

Adjusted Reference Tariff Table for Combined Cycle Operation on Gas up to COD
(After application of Foreign Currency Exchange Rate Multipliers)

Proforma X

Used for Evaluation/Ranking of Bids

Adjusted Reference Tariff Table for Operation on Gas

Year	Energy Purchase Price - EPP (Rs./kWh)				Capacity Purchase Price - CPP (Rs./kWh/Hour)										Capacity Charge at 60% PF		Total Tariff	
	Fuel	Variable O&M (Foreign)	Variable O&M (Local)	Total	Fixed O&M (Foreign)	Fixed O&M (Local)	Cost of Working Capital	Insurance	ROEDC	ROE	Withholding Tax @ 7.5%	*Adjusted Loan Re-payment	*Adjusted Interest Charges	Total	Rs. Per kWh	US ¢ per kWh		
1	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.5383	0.6675	1.9753	3.2922	5.2579	3.1391	
2	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.6050	0.6409	2.0150	3.3584	5.3241	3.2416	
3	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.6799	0.6072	2.0562	3.4270	5.3927	3.3479	
4	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.7641	0.5658	2.0990	3.4983	5.4640	3.4562	
5	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.8588	0.5155	2.1433	3.5722	5.5379	3.5726	
6	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.9532	0.4551	2.1893	3.6489	5.6145	3.6912	
7	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	1.0477	0.3832	2.2370	3.7254	5.6941	3.8144	
8	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	1.1422	0.2983	2.2855	3.8109	5.7766	3.9421	
9	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	1.2367	0.1985	2.3379	3.8965	5.8622	4.0746	
10	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	1.3312	0.0819	2.3912	3.9853	5.9510	4.2120	
11	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
12	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
13	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
14	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
15	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
16	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
17	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
18	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
19	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
20	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
21	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
22	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
23	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
24	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
25	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
Average Tariff																		
1-10 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	0.9626	0.4414	2.1731	3.6216	5.5875	6.6484	
11-20 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
21-25 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	-	0.5094	0.0382	-	-	0.7691	1.2818	3.2475	5.0271	
Adjusted Levelized Tariff												0.3650	0.1766	1.3307	2.2178	4.1626	6.4769	
1-25 Years	1.8817	0.0420	0.0420	1.9657	0.0504	0.0504	0.0376	0.0831	0.0000	0.5094	0.0382	0.5950	0.3314	1.6954	2.8257	4.7914	7.4171	

1.11.2020

Tariff Assumptions and Adjustments for IPP's

A. One Time Adjustments at COD

I. 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 FPC Cost Variation

One time adjustment at time of COD will be made in the Debt Servicing Component of the tariff due to FPC 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

committed 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 return on the basis of the total dividend pay out.

C. Indexations:

1. 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 (Copy of OGRA Notification attached as Appendix – A).
- 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 30th April 2008 as the base date.

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

The 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.

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 30th April 2008 as the base date.

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

The 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.

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 KIBOR 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.

D. Other Terms, Conditions and 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 a 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 net heat rates are as committed by the Bidders at the delivery point and are net of internal consumption.
9. Scheduled Outage periods 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 modifications will be shared between the Power Purchaser/GoP and the Bidder in the ratio of 60:40.
14. No corporate income tax and no minimum turnover tax have been assumed.
15. Working capital has been financed by a separate Working Capital facility, and is not included in the project cost.



OIL AND GAS REGULATORY AUTHORITY

Tariq Chambers, Civic Centre, G-6
Tel: 051-9221715-21, Fax: 051-9221714

No: OGRA-10-11(3)/2007
June 02, 2007

1. Chief Executive,
Oil & Gas Development Company Limited,
OGDCL House, Jinnah Avenue, Blue Area,
Islamabad.
2. Chief Executive,
Pakistan Petroleum Ltd
PIDC House,
Dr. Ziauddin Ahmed Road, P.O. Box 3942, **Karachi**
3. Chief Executive,
Pakistan Oilfields Ltd
POL House, Morgah, **Rawalpindi**
4. Chief Executive,
Orient Petroleum Int'l Inc.
Hayat Hall, Block No. 2,
Diplomatic Enclave No. 1, **Islamabad**
5. Chief Executive,
Pak-Arab Refinery Ltd.
Corporate Headquarters,
Korangi Creek Road, P.O. Box 12241,
Karachi.
6. Chief Executive,
Pakistan Refinery Ltd.
P.O. Box 4612,
Karachi
7. Chief Executive,
National Refinery Ltd.
7-B, Korangi Industrial Zone,
Korangi, P.O. Box 8228, **Karachi.**
8. Chief Executive,
Attock Refinery Ltd.
Refinery P.O. Morgah,
Rawalpindi
9. Chief Executive,
Jamshoro Joint Venture Ltd
Corporate Head Office, Associated House,
7-Egerton Road, **Lahore.**

Subject: LIQUEFIED PETROLEUM GAS (LPG) MAXIMUM BASE-STOCK PRICE, EFFECTIVE JUNE 03, 2007.

Dear Sir,

This is to advise that, in pursuance of the decision of Economic Coordination Committee (ECC) of Cabinet dated December 06, 2006, OGRA has determined the maximum base-stock Price of LPG, effective June 03, 2007 as Rs. 34,571 / M.Ton, per attached computation sheet.

Yours truly,

-sd-
(M.H. Asif)
Member Finance

Copy to:

1. The Secretary,
Cabinet Division,
Government of Pakistan, **Islamabad.**
2. Secretary,
Ministry of Petroleum & Natural Resources,
"A" Block, Pak Secretariat, **Islamabad.**

OIL AND GAS REGULATORY AUTHORITY

Maximum Base-Stock Price of LPG

effective June 03, 2007

		FOB Saudi ARAMCO Contract Price	
		Propane (US \$/ M. ton)	Butane (US \$/ M. ton)
May, 2007	A	560.00	575.00
Ratio	B	40.00	60.00
LPG price calculation = A x B		22,400.00	34,500.00
Wt. Avg. price US \$ /M. TON			569.00
Avg. US \$ exchange rate for May- 07 Rs per US\$ *			60.7570
Maximum Base-Stock price of LPG Rs. /M. TON effective May 03, 2007			34,571

* Monthly average of Weighted Average Selling Exchange Rate quoted by the State Bank of Pakistan for May 2007, has been adopted per advice of Federal Government vide letter No. LPG-6(5)/07-P.Price-Pt dated May 03, 2005.