



# CAVALIER

ENERGY & DEFENCE SYSTEMS GROUP



Ministry of Defence Production Regn No. 1566/10520

5<sup>th</sup> Aug 2008.

Private Power & Infrastructure Board,  
Ministry of Water & Power,  
Government of Pakistan,  
50, Nazimuddin Road, F-7/4,  
Islamabad, Pakistan

Attn: Mr. N.A. Zuberi- Executive Director

Subject: **Package-A: Independent Private Power Projects of 1000 MW Cumulative Capacity**

Dear Sir,

Thank you very much for your letter ref No. 1(102) PPIB-2027-19/08/PRJ, dated August 4, 2008, regarding subject above.

We are pleased to clarify the queries raised by you as follows;

**i. BASIC PARAMETERS & FUEL CALCULATIONS**

The detail of basic parameters and calculations used for determining fuel component of tariff are as follows:

Operations on LPG		
Description	Operation on Open Cycle	Operation on Combined Cycle
Btu/KWh @ 100% Efficiency	3,413	3,413
Guaranteed Heat Rate	11,005 KJ/KWh	7,542 KJ/KWh
Efficiency of Plant	32.69%	47.70%
Btu/KWh @ Actual Efficiency	10,441	7,155
LPG Rate/Metric Ton	29,643	29,643
LHV Calorific Value of LPG	43,606	43,606
Tariff – PKR/KWh	7.0973	4.8640
Tariff – US ¢ /KWh	10.9866	7.5294

Operations on Gas		
Description	Operation on Open Cycle	Operation on Combined Cycle
Btu/KWh @ 100% Efficiency	3,413	3,413
Guaranteed Heat Rate	10,685 KJ/KWh	7,433 KJ/KWh
Efficiency of Plant	33.67%	48.40%
Btu/KWh @ Actual Efficiency	10,137	7,052
Gas Rate/MM Btu	240.92	240.92
Tariff – PKR/KWh	2.4422	1.6989
Tariff – US ¢ /KWh	3.7805	2.6299

The reference fuel price for LPG, as informed by PPIB on 14<sup>th</sup> July 2008 to us was Rs 34,571 per tonne without freight and handling charges. However, we have already represented against this decision vide our letter no. 2/Tariff/08 dated 18<sup>th</sup> July 2008. Our contention is that the reference price of Rs 22,140 for HFO against a reference price of Rs 34,571 for LPG in an environment **when the International price for LPG is equal to or even lower than that of HFO puts LPG at a severe disadvantage when the fuel tariff is to be compared against that proposed by HFO based plants.**

The current price for HFO, as at 1<sup>st</sup> August 2008, for locally produced ex PRL/NRL or Bosicor is Rs 61,700 or US \$ 860. And the current price of LPG is also US \$ 860. **So the reference prices for comparison of both fuels should be same.**

Hence we have used a reference fuel price of Rs 24,152 as more elaborately explained in Para ii, below.

#### ii. MECHANISM FOR ADJUSTMENT OF LPG PRICES

The LPG price per ton is composed of following components;

S. No	Description	Amount (US\$)	Amount (PKR)*
1.	Base Price	373.86	24,152
2.	Freight & Carriage	40	2,584
3.	Port Charges	4	258
4.	OMC Commission	21	1,357
5.	Others	20	1,292
6.	<b>Total</b>	<b>458.86</b>	<b>29,643</b>

\* 1US\$= 64.60 PKR

The price of LPG would be adjusted at period "n" as follows;

LPG price at period n= (X\*Y<sub>n</sub>)/Y;

Where;

X	=	Reference LPG Price (US\$ 458.86/Ton)
Y	=	LPG Price at Reference Date, as determined by OGRA
Y <sub>n</sub>	=	LPG Price at "n" date, as determined by OGRA

#### iii. BENCHMARK INTEREST RATES & SPREAD

The benchmark interest rates are being used as provided by PPIB, through RFP as mentioned underneath. However, Foreign Currency Liquidity in the Local Market is very poor and as such it is not possible to achieve financial close in the required time for a fast track project as mandated by the RFP. Hence we have to resort to Foreign Financing for our project to achieve the time lines demanded by PPIB. Due to the Political Uncertainty prevalent in the Country, No Foreign bank is willing to finance a project in Pakistan without Political Risk Insurance. However we have only used a spread of 500 bps on LIBOR provided by PPIB and we are taking at risk our portion of equity to sacrifice for any additional costs associated with loans. Details are as follows;

LIBOR	=	2.9650 %
Spread	=	5.000 %
<b>Total</b>	=	<b>7.9650 %</b>

KIBOR	=	10.26 %
Spread	=	3.00%
<b>Total</b>	=	<b>13.26%</b>

#### iv. RTT WITH RESPECT TO CHANGE IN PLANT CAPACITY

The revised tariff table after adjusting the capacity changes is attached herewith (Proforma XVII, XVIII, XIX & XX). **There is no change in levelized tariff of the Project.**

#### v. ADJUSTED TARIFF TABLES

The adjusted tariff tables are attached herewith.

**vi. WITHHOLDING TAX CALCULATIONS**

Withholding tax is charged as 7.5% of the ROE component as shown in Proforma XVII, XVIII, XIX & XX, attached herewith.

**vii. INSURANCE DURING CONSTRUCTION & OPERATIONS**

The Insurance cost during construction as taken as 1% of the EPC Cost, while Insurance during operation is taken as 2.42% of the EPC Cost.

We hope that above explanations would serve your purpose, however if you need any further explanations/ clarifications, please feel free to contact us.

Thank you and regards.



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WASEEM PASHA TAJAMMAL  
CHAIRMAN