

**Mechanism and Assumptions for Upfront Tariff
adjustments at COD and Indexations applicable during
Operations**

1. The Upfront Tariff covers all costs related to the installation, testing and commissioning of the Project, including but not limited to EPC Cost, Cost of Land, Project Development Costs, Mobilization Charges, Customs Duty @ 5% on import of Plant & Equipment not manufactured in Pakistan, Sindh Infrastructural Cess @ 0.8% value of consignment, Interest During Construction, Evaluation, Commitment, draw down fee and all other financial charges related to debt & equity raising, LC Charges, Processing fee(s), Testing and Commissioning Charges, and any other charges and surcharges etc.
2. Projects to be setup under upfront Tariff shall install new plant, machinery and equipment.
3. The leveled tariff over life of the project provides flexibility to the sponsors to match their annual debt service requirements. The sponsors of private power projects will submit their year-wise tariff profile to NEPRA for the life of the project. The tariff will be acceptable if:
 - (i) the yearly tariff for first ten years is the same or lower than the upfront tariff for first ten years for applicable technology/fuel.
 - (ii) the yearly tariff for first ten years will be constant.

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- (iii) The levelized tariff for the life of the project does not exceed the tariff specified in the relevant technology /fuel.
- (iv) ROE Component should either be constant over the term of tariff or increase in the subsequent years.

4. The break-up of the tariff and its adjustment will be as under:

I. Energy Purchase Price

The Energy Purchase Price comprises the Fuel Cost Component, Variable O&M Local and Variable O&M Foreign. Fuel Cost Component will be paid on the basis of actual energy delivered to Power Purchaser. If as a result of higher thermal efficiencies, the fuel cost component is reduced by the sponsors, an equivalent increase will be allowed in the Variable O&M Component of the tariff so that the overall tariff remains unchanged. However, as a result of lower thermal efficiencies, no adjustment for higher fuel cost component will be allowed.

II. Capacity Purchase Price

- a) The Capacity Purchase Price will be paid monthly on the basis of Rupees/KW/Hour and comprises the following components:
 - i) Fixed O&M (Local)
 - ii) Fixed O&M (Foreign)
 - iii) Insurance
 - iv) Cost of Working Capital
 - v) Return on Equity (ROE) which includes ROE during Construction

- vi) 7.5% Withholding Tax on Dividends
 - vii) Debt Service (Debt Repayment and Interest Charges)
 - b) The Components of Capacity Purchase Price may be adjusted; at the time of tariff finalization if the Debt Servicing Component is reduced, an equivalent increase will be allowed in the ROE Component of the tariff so that the overall tariff remains unchanged and vice versa, in case of any increase in Debt Servicing Component, an equivalent decrease will be made in ROE Component.
5. In case the Project is financed through a combination of Local and Foreign Debt Financing, the Debt Repayment and Interest Charges Component of Upfront Tariff for each year will be adjusted as per actual percentage of Local and Foreign Debt Financing e.g. if a Project has 50% foreign financing and 50% local financing, the half of Debt Repayment and Interest Charges Component of Upfront Tariff for local and foreign financing will be added to arrive at these two tariff Components of Reference Tariff for the Project.
6. The Components of Energy Purchase Price and Capacity Purchase Price will be adjusted at the time of Commercial Operation Date as per applicable indices and rates under the Policy for Power Generation Projects 2002 and these components will be further indexed during the life of the project.
- (a) Indexation applicable to tariff components based on fuel prices, indices, interest rates and exchange rates variations at the time of Commercial Operation Date. During operations, Quarterly adjustments/indexations

for local inflation, foreign inflation, exchange rate variations and interest rate variations will be made on 1st July, 1st October, 1st January and 1st April each year based on latest available date with respect to WPI notified by the Federal Board of Statistics (FBS), USCPI issued by US Bureau of Labor Statistics and revised TT&OD selling rate of four foreign currencies (US\$, British £, Euro € and Japaense ¥) notified by the National Bank of Pakistan. The method of indexation will be as follows:

Tariff Components	Tariff Indexation & Adjustment
Fuel Cost component	Delivered Fuel Price (inclusive of transportation) at the Power Plant
Variable O&M (Foreign Currency Portion)	US\$ to Pak Rupees & US CPI
Variable O&M (Local Currency Portion)	Pakistan WPI
Fixed O&M (Foreign Currency Portion)	US\$ to Pak Rupees & US CPI
Fixed O&M (Local Currency Portion)	Pakistan WPI
Insurance	US\$ to Pak Rupees, in case of foreign currency insurance cost
Cost of Working Capital	Adjustments for relevant KIBOR variations
Return on Equity	US\$ to Pak Rupees
Withholding Tax on Dividend	Nil
Principal Repayment (Foreign Currency Loan)	US\$/Euro/Yen/Pound to Pak Rupees (based on borrowing by the Company)
Principal Repayment (Local Currency Loan)	NIL
Interest//Mark-up Payments* (Foreign Currency Loan)	<ul style="list-style-type: none"> • Adjustments for relevant LIBOR or other applicable Interest Rate benchmark • Adjustment for variation in Rs./Foreign Currency (US\$/Euro/Yen/Pound) rates as applicable

Interest//Mark-up Payments* (Local Currency Loan)	Adjustments for relevant KIBOR variations
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- (b) In addition to the above, the Interest Charges Component of Upfront Tariff will be adjusted once at time of COD with the multiplier factor to be calculated as follows:

Interest Rate Multiplier Factor = $1 + [\sum \text{interest rate variation in each quarter from KIBOR } 13.67\% \text{ or variation in six (6) months LIBOR from } 0.45\% \div \text{ No. of quarters in construction period allowed for a Project}]$

- (c) The Debt Servicing Component of Upfront Tariff will be adjusted once at time of COD with the multiplier factor to be calculated as follows:

Exchange Rate Multiplier = $1 + [\sum \text{exchange rate variation in each quarter from US Dollar TT&OD Selling Rates of NBP PKR } 85.00 \text{ or variation in Euro TT&OD Selling Rates of NBP [...] or Japanese Yen TT&OD Selling Rate of NBP [...] or British Pound TT&OD Selling Rate of NBP [...] \div \text{ No. of quarters in construction period allowed for a Project}]$

7. IPPs are exempt from taxation on profits and gains derived from electric power generation under the Power Purchase Agreement.
8. IPP's, their contractors, sub-contractors and service providers shall be liable to withhold income tax and pay to the Government of Pakistan according to the applicable laws of Pakistan. Upfront Tariff caters for 6% Withholding tax on local and 15% for foreign contractors, sub-contractors, supervisory services and technical services provided by foreign (non-residents) entities.
9. Any variations in the duties and taxes and levy of new duties and taxes will be treated as pass-through items and it will be paid as supplementary Tariff in a 12 months period.
10. No provision for Workers Welfare Fund and Workers Profit Participation Fund has been made in the tariff. If there is any such obligation it shall be treated as Pass-Through under Power Purchase Agreement to be reimbursed in 12 months as Supplementary Tariff.
11. The Standardized Security Documents approved by ECC under 2002 Power Policy are applicable to the Projects to be implemented under this Upfront Tariff mechanism.
12. Upfront Tariff for Coal based Projects will be applicable for Projects achieving Financial Closing before 31st December 2014.
13. The Upfront Tariff for other Technologies/Fuels is valid for the Projects which submit the application for approval of Tariff to NEPRA upto 31st December 2012.

Changes in Upfront Tariff

As advised by NEPRA during the meeting held on 10th October 2011, the following changes have been made in the Upfront Tariff for Coal based power plants based on discussions and recommendations of Coal Expert. The Upfront Tariff has been prepared for three (3) sizes of plants i.e. 200, 600 and 1000MWs as proposed by the aforementioned Expert.

1. 200 MW Local and Imported Coal based Power Plants on Local and Foreign Financing

- EPC Cost has been increased by 26% and 19% for local and imported coal based power plants respectively as compared to the EPC Costs previously sent to NEPRA.
- Variable O&M for local coal has been increased by approximately 20% whereas Variable O&M for imported coal based power plants have been increased by 10% from the previous cost.
- The Fixed O&M has also been increased as compared to earlier costs sent to NEPRA.
- The current 3 months KIBOR rate 11.91% has been used for local financing and 6 months LIBOR rate 0.45% has been used for foreign financing.
- Thermal efficiencies for local coal based power plants have been assumed as 34% and for imported coal 35%.

2. 600 MW Local and Imported Coal based Power Plants on Local and Foreign Financing

- EPC Cost has been increased by 6% and 19% for local and imported coal based power plants respectively as compared to the EPC Costs previously sent to NEPRA.
- Variable O&M for local coal has been increased by approximately 20% whereas Variable O&M for imported coal based power plants have been increased by 10% from the cost previously sent to NEPRA.

- The Fixed O&M has also been increased as compared to earlier costs sent to NEPRA.
- The current 3 months KIBOR rate 11.91% has been used for local financing and 6 months LIBOR rate .45% has been used for foreign financing.
- Thermal efficiencies for local coal based power plants have been assumed as 34.75% and for imported coal 36%.
- Cost of Jetty has not been included in the Upfront Tariff, however if required, NEPRA may allow the cost of Jetty to specific Projects.

3. 1000 MW Local and Imported Coal based Power Plants on Local and Foreign Financing

- EPC Cost has been increased by 10% and 23% for local and imported coal based power plants respectively as compared to the EPC Costs previously sent to NEPRA.
- Variable O&M for local coal has been increased by approximately 20% whereas Variable O&M for imported coal based power plants have been increased by 10% from the cost previously sent to NEPRA.
- The Fixed O&M has also been increased as compared to earlier costs sent to NEPRA.
- The current 3 months KIBOR rate 11.91% has been used for local financing and 6 months LIBOR rate .45% has been used for foreign financing.
- Thermal efficiencies for local coal based power plants have been assumed as 37% and for imported coal 38.5%.
- Cost of Jetty has not been included in the Upfront Tariff, however if required, NEPRA may allow the cost of Jetty for specific Projects.

Additional Points:

- i. If approved by NEPRA, downward adjustment would be allowed in the heat rate (thermal efficiency) and net capacity for the first year of operation in the range of 65-70% of the committed heat rate and net capacity.
- ii. Water Usage Charge has not been built in the Upfront Tariff, however in case it is to be paid separately by the IPPs to Provincial/Federal governments, it may be considered as a Pass through item by NEPRA.
- iii. Coal losses during transportation have not been built up in the Upfront Tariff. These may be included by NEPRA while finalization of Tariff.

LEVELIZED TARIFFS ON COAL TECHNOLOGY BASED ON LOCAL FINANCING:

Particulars	Rs./kWh	US Dollar Cents/kWh
1. 200 MW Local Coal Power Plant <u>Annex-A</u>	11.4038	12.9589
2. 600 MW Local Coal Power Plant <u>Annex-B</u>	11.3512	12.8991
3. 1000 MW Local Coal Power Plant <u>Annex-C</u>	11.2836	12.8223
4. 200 MW Imported Coal Power Plant <u>Annex-D</u>	9.9353	11.2901
5. 600 MW Imported Coal Power Plant <u>Annex-E</u>	9.7732	11.1060
6. 1000 MW Imported Coal Power Plant <u>Annex- F</u>	9.6592	10.9763

LEVELIZED TARIFFS ON COAL TECHNOLOGY BASED ON FOREIGN FINANCING:

Particulars	Rs./kWh	US Dollar Cents/kWh
7. 200 MW Local Coal Power Plant <u>Annex-G</u>	9.5732	10.8786
8. 600 MW Local Coal Power Plant <u>Annex-H</u>	9.4245	10.7096
9. 1000 MW Local Coal Power Plant <u>Annex-I</u>	9.2773	10.5424
10. 200 MW Imported Coal Power Plant <u>Annex-J</u>	8.2609	9.3874
11. 600 MW Imported Coal Power Plant <u>Annex-K</u>	8.0397	9.1360
12. 1000 MW Imported Coal Power Plant <u>Annex-L</u>	7.8636	8.9359

Upfront Tariff for Local Coal based Power Projects for upto 200 MW on Local Financing

Annex - A

Year	Energy Purchase Price (Rs/kWh)			Capacity Purchase Price (PKR/kWh/Hour)						Capacity Charge@ 60%			Total Tariff	Total Tariff		
	Fuel Var.	O&M	Total	Fixed O&M	Local	Foreign	Cost of W/C	Insurance	ROE	Witholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP	Rs./kWh	Cents/kWh	
1	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.7272	2.3868	5.0753	8.4588	13.2109	15.0123
2	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.8459	2.2681	5.0753	8.4588	13.2109	15.0123
3	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.9840	2.1300	5.0753	8.4588	13.2109	15.0123
4	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	1.1446	1.9694	5.0753	8.4588	13.2109	15.0123
5	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	1.3314	1.7825	5.0753	8.4588	13.2109	15.0123
6	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	1.5488	1.5652	5.0753	8.4588	13.2109	15.0123
7	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	1.8016	1.3124	5.0753	8.4588	13.2109	15.0123
8	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	2.0957	1.0183	5.0753	8.4588	13.2109	15.0123
9	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	2.4378	0.6762	5.0753	8.4588	13.2109	15.0123
10	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	2.8357	0.2783	5.0753	8.4588	13.2109	15.0123
11	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
12	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
13	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
14	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
15	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
16	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
17	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
18	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
19	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
20	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
21	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
22	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
23	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
24	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
25	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
26	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
27	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
28	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
29	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
30	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147

Average

1-10	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	1.5753	1.5387	5.0753	8.4588	13.2109	15.0123
11-30	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147
1-30	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.5251	0.5129	2.9993	4.9989	9.7509	11.0806
Levelized																
1-30	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.2754	0.0957	0.0000	0.0000	1.9613	3.2689	8.0209	9.1147

Levelized Tariff = 11.4038 RS./kWh

12.9589 US Cents/kWh

Upfront Tariff - Local Coal 200 MW

Assumptions for the Plant

- Interest Rate % per annum - KIBOR	11.91%
- Spread Over and above KIBOR	3.50%
- Total Interest Rate	15.41%
- Withholding Tax on Dividends	7.50%
- Discount Rate	10%
- Coal Delivered Price	57.00 US\$/M.Ton
- Coal Price	5,016.00 per Ton
Calorific Value	5,000.00 Btu/lb
- Conversion Factor BTUs/KGs	2.2046
Reference Calorific Value LHV	11,023.00 Btu/KGs
- HHV-LHV Factor	1.055
Reference Calorific Value LHV	11,023.00 KGs
- Project Life	30.00 Years

Capital Structure:

- Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%

Equity Draw down

- 1st Year of Construction Period	25%
- 2nd Year of Construction Period	25%
3rd Year of Construction Period	30%
Last 4 Months of Construction	20%

ASSUMPTIONS - Local Coal

		Coal
Basis for Tariff		
Gross Capacity (ISO)		200.000 MWs
Auxiliary Load	10.00%	20.000 MWs
Net Capacity at Site conditions	90.00%	180.000 MWs
Annual Net Generation at 100%		1,576.80 GWh
Project Development Costs		
EPC Cost		250.000 Million US \$
Total EPC Cost		250.000 Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	10.875 Million US \$
Non EPC Construction Cost - % of EPC	11.00%	27.500 Million US \$
CAPEX		288.375 Million US \$
Financial Charges		
Financing Fees & Charges		8.466 Million US \$
Interest During Construction		79.501 Million US \$
Sub total		87.967 Million US \$
Total Project Cost		376.342 Million US \$
Cost per MW - Gross		1.882 US \$
Exchange Rate per US \$		88.00 Rs.
Financing Plan		
Debt Local	75%	282.257 Million US \$
Equity	25%	94.086 Million US \$
Construction Period		40 Months
Grace Period - Years		40 Months
Loan Repayment Period - Years		10
IRR on equity		20.01%
Variable O & M - Local	40.00%	1.3200 US \$ Million
Variable O & M - Foreign	60.00%	1.9800 US \$ Million
Total Variable O&M		3.3000 US \$ Million
Fixed O & M Amount - Foreign	50.00%	2.8670 US \$ Million
Fixed O & M Amount - Local	50.00%	2.8670 US \$ Million
Total Fixed O&M Amount		5.7340 US \$ Million
Insurance Cost - % of EPC Cost	1.35%	3.3750 US \$ Million
Working Capital Amount - Local		1.4671 US\$ Million
Thermal efficiency, LHV Net at Site on Coal		34.00%
Plant Factor		60.00%

Upfront Tariff - Working Capital Requirement

Total Net Capacity	180.00	MW
Hours per Day	24	Hours
Thermal Efficiency	34.00%	
Coal Calorific Value - LHV	11,023.00	
Coal Price per M. Ton - HHV	5,016.00	
Fuel Cost Component	4.5679	Rs./kWh
Fuel Inventory		
Days	15	
Load	100%	
Daily Production	4,320,000	
Coal Price for 15 days Inventory	295,998,900	PKR
GST	17%	
Fuel Price Incl. GST - Rs	346,318,713	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	3,628,800	
Fuel Cost Receivable for 30 days	497,278,152	
GST	17%	
Fuel Price Incl. GST - Rs	581,815,438	
Total Working Capital Requirement	928,134,152	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	129,103,460	
Annual Off Take @ 100%	1,576,800,000	
Working Capital Component	0.0819	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	200.000 MWs
Project Capacity Net	180.000 MWs
Total Project Cost	376.342 US\$ Million
Equity Investment	94.086 US\$ Million
Equity %	25.00%
XIRR	20.01%
ROE	24.29%
Construction Starts	30-Jun-11
Commissioning Date	31-Oct-14

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(23.52)		
31-Dec-12	(2.00)		(23.52)		
31-Dec-13	(1.00)		(28.23)		
31-Aug-14	0.00		(18.82)		
30-Apr-15	1	94.086	22.853	2,011.10	1.2754
30-Apr-16	2	94.086	22.853	2,011.10	1.2754
30-Apr-17	3	94.086	22.853	2,011.10	1.2754
30-Apr-18	4	94.086	22.853	2,011.10	1.2754
30-Apr-19	5	94.086	22.853	2,011.10	1.2754
30-Apr-20	6	94.086	22.853	2,011.10	1.2754
30-Apr-21	7	94.086	22.853	2,011.10	1.2754
30-Apr-22	8	94.086	22.853	2,011.10	1.2754
30-Apr-23	9	94.086	22.853	2,011.10	1.2754
30-Apr-24	10	94.086	22.853	2,011.10	1.2754
30-Apr-25	11	94.086	22.853	2,011.10	1.2754
30-Apr-26	12	94.086	22.853	2,011.10	1.2754
30-Apr-27	13	94.086	22.853	2,011.10	1.2754
30-Apr-28	14	94.086	22.853	2,011.10	1.2754
30-Apr-29	15	94.086	22.853	2,011.10	1.2754
30-Apr-30	16	94.086	22.853	2,011.10	1.2754
30-Apr-31	17	94.086	22.853	2,011.10	1.2754
30-Apr-32	18	94.086	22.853	2,011.10	1.2754
30-Apr-33	19	94.086	22.853	2,011.10	1.2754
30-Apr-34	20	94.086	22.853	2,011.10	1.2754
30-Apr-35	21	94.086	22.853	2,011.10	1.2754
30-Apr-36	22	94.086	22.853	2,011.10	1.2754
30-Apr-37	23	94.086	22.853	2,011.10	1.2754
30-Apr-38	24	94.086	22.853	2,011.10	1.2754
30-Apr-39	25	94.086	22.853	2,011.10	1.2754
30-Apr-40	26	94.086	22.853	2,011.10	1.2754
30-Apr-41	27	94.086	22.853	2,011.10	1.2754
30-Apr-42	28	94.086	22.853	2,011.10	1.2754
30-Apr-43	29	94.086	22.853	2,011.10	1.2754
30-Apr-44	30	94.086	22.853	2,011.10	1.2754

20.01%

Upfront Tariff - IDC Calculation Local Coal

Debt Amount	282.208	US\$ Million
KIBOR	11.91%	
Spread over KIBOR	3.50%	
Total Interest Rate	15.41%	282.2568

Year	Construction Period			Debt	Fin. Chrg.
	1st Year	2nd Year	3rd Year	4 Months	
Opening Balance	-	76.66	164.45	282.08	
1st Half	15.00%	10%	15%	20%	
Principal Amount	42.33	28.22	42.33	56.44	169.32
Financing Fee 3%	8.47	-	0.00	0.00	8.466
Interest	1.63	6.99	14.30	23.18	46.11
Closing Balance	43.96	111.87	221.09		
Opening Balance	43.96	111.87	221.09		
2nd Half	10.00%	15.00%	15.00%		
Principal Amount	28.22	42.33	42.33	112.88	
Interest	4.47	10.25	18.67		33.39
Closing Balance	76.66	164.45	282.08		
Total Debt Incl. IDC				282.21	79.50
	25%	25%	30%	20%	

Upfront Tariff - Debt Analysis/Repayment Profile (Local Coal)

Gross Capacity		MWs	US\$ / PKR Parity	88.00
Net Capacity	180,000	MWs	Equity	6,209.65 PKR Million
KIBOR	11.91%		Debt	75% 282.26 US\$ Million
Spread over KIBOR	3.50%		Debit in Pak Rupees	24,838.60 PKR Million
Total Interest Rate	15.41%			
Period	Principal Million \$	Principal Repayment Million \$	Interest Million \$	Balaunce Million \$
1	24838.60	270.61	956.91	24567.98
2	24567.98	281.04	946.48	24286.94
3	24286.94	291.87	935.65	23995.07
4	23995.07	303.11	924.41	23691.96
1st Year	1146.53	3763.45		4910.08
5	23691.96	314.79	912.73	23377.17
6	23377.17	326.92	900.61	23050.26
7	23050.26	339.51	888.01	22710.75
8	22710.75	352.59	874.93	22358.16
2nd Year	1333.80	3576.28		4910.08
9	22358.16	366.17	861.35	21991.99
10	21991.99	380.28	847.24	21611.71
11	21611.71	394.93	832.59	21216.78
12	21216.78	410.14	817.38	20806.63
3rd Year	1551.53	3358.56		4910.08
13	20806.63	425.95	801.58	20380.69
14	20380.69	442.36	785.17	19938.33
15	19938.33	459.40	768.12	19478.93
16	19478.93	477.10	750.43	19001.84
4th Year	1804.79	3105.29		4910.08
17	19001.84	495.48	732.05	18506.36
18	18506.36	514.56	712.96	17991.80
19	17991.80	534.39	693.13	17457.41
20	17457.41	554.97	672.55	16902.44
5th Year	2099.40	2810.68		4910.08
21	16902.44	576.35	651.17	16326.08
22	16326.08	598.56	628.96	15727.52
23	15727.52	621.62	605.90	15105.91
24	15105.91	645.57	581.96	14460.34
6th Year	2442.10	2467.99		4910.08
25	14460.34	670.44	557.08	13769.90
26	13769.90	696.27	531.26	13093.64
27	13093.64	723.09	504.43	12370.55
28	12370.55	750.95	476.58	11619.60
7th Year	2840.74	2069.35		4910.08
29	11619.60	779.88	447.65	10839.73
30	10839.73	809.92	417.60	10229.81
31	10029.81	841.12	386.40	9188.68
32	9188.68	873.53	353.99	8315.16
8th Year	3304.45	1605.64		4910.08
33	8335.16	907.18	320.34	7407.98
34	7407.98	942.13	285.39	6485.85
35	6465.85	978.42	249.10	5487.42
36	5487.42	1016.12	211.40	4477.31
9th Year	3843.85	1066.23		4910.08
37	4471.31	1055.26	172.26	3416.04
38	3416.04	1095.92	131.60	2320.12
39	2320.12	1138.14	89.38	1187.99
40	1181.99	1181.99	45.54	0.00
10th Year	4471.31	4387.78		4910.08

Principal Repayment Rs./KWh	Interest Rs./KWh	Debt Servicing Rs./KWh
1 0.7272	2.3868	
2 0.8459	2.2681	
3 0.9840	2.1300	
4 1.1446	1.9694	
5 1.3314	1.7825	
6 1.5488	1.5652	
7 1.8016	1.3124	
8 2.0957	1.0183	
9 2.4378	0.6762	
10 2.8357	0.2783	

Upfront Tariff for Local Coal based Power Projects for upto 600 MW on Local Financing

Annex - B

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kWh/four)								Capacity Charge@ 60% Rs. /kWh	Total Tariff Cents/kWh			
	Fuel	Var. O&M	Total	Fixed O&M		Cost of W/C	Insurance	ROE	Witholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP				
Component	Foreign	Local	EPP	Local	Foreign											
1	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.7200	2.3632	5.0966	8.4944	13.1404	14.9323
2	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.8375	2.2457	5.0966	8.4944	13.1404	14.9323
3	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.9743	2.1090	5.0966	8.4944	13.1404	14.9323
4	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	1.1333	1.9499	5.0966	8.4944	13.1404	14.9323
5	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	1.3183	1.7649	5.0966	8.4944	13.1404	14.9323
6	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	1.5335	1.5497	5.0966	8.4944	13.1404	14.9323
7	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	1.7838	1.2994	5.0966	8.4944	13.1404	14.9323
8	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	2.0750	1.0082	5.0966	8.4944	13.1404	14.9323
9	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	2.4137	0.6695	5.0966	8.4944	13.1404	14.9323
10	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	2.8077	0.2755	5.0966	8.4944	13.1404	14.9323
11	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
12	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
13	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
14	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
15	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
16	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
17	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
18	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
19	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
20	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
21	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
22	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
23	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
24	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
25	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
26	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
27	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
28	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
29	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
30	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
Average																
1-10	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	1.5597	1.5235	5.0966	8.4944	13.1404	14.9323
11-30	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.0000	0.0000	2.0134	3.3557	8.0017	9.0929
Levelized																
1-30	4.4693	0.1060	0.0707	4.6460	0.1550	0.1550	0.0801	0.1808	1.3419	0.1006	0.5199	0.5078	3.0412	5.0686	9.7146	11.0393

Levelized Tariff =

11.3512 RS./kWh

12.8991 US Cents/kWh

Upfront Tariff - Local Coal 600 MW

Assumptions for the Plant

- Interest Rate % per annum - KIBOR	11.91%
- Spread Over and above KIBOR	3.50%
- Total Interest Rate	15.41%
- Withholding Tax on Dividends	7.50%
- Discount Rate	10%
- Coal Delivered Price	57.00 US\$/M.Ton
- Coal Price	5,016.00 per Ton
- Calorific Value	5,000.00 Btu/lb
- Conversion Factor BTUs/KGs	2.2046
- Reference Calorific Value LHV	11,023.00 Btu/KGs
- HHV-LHV Factor	1.055
Reference Calorific Value LHV	11,023.00 KGs
- Project Life	30.00 Years

Capital Structure:

- Debt % of Total Project Cost	75%
- Equity % of Total Project Cost	25%

Equity Draw down

- 1st Year of Construction Period	20%
- 2nd Year of Construction Period	20%
- 3rd Year of Construction Period	25%
- 4th Year of Construction Period	35%

ASSUMPTIONS - Local Coal

		<u>Coal</u>
Basis for Tariff		
Gross Capacity (ISO)		600.000 MWs
Auxiliary Load	10.00%	60.000 MWs
Net Capacity at Site conditions	90.00%	540.000 MWs
Annual Net Generation at 100%		4,730.40 GWh
Project Development Costs		
EPC Cost		720.000 Million US \$
	Total EPC Cost	720.000 Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	31.320 Million US \$
Non EPC Construction Cost - % of EPC	11.00%	79.200 Million US \$
CAPEX		830.520 Million US \$
Financial Charges		
Financing Fees & Charges		25.137 Million US \$
Interest During Construction		262.223 Million US \$
	Sub total	287.360 Million US \$
Total Project Cost		1,117.880 Million US \$
Cost per MW - Gross		1.863 US \$
Exchange Rate per US \$		88.00 Rs.
Financing Plan		
Debt Local	75%	838.410 Million US \$
Equity	25%	279.470 Million US \$
Construction Period		48 Months
Grace Period - Years		48 Months
Loan Repayment Period - Years		10
IRR on equity		20.00%
Variable O & M - Local	40.00%	3.8000 US \$ Million
Variable O & M - Foreign	60.00%	5.7000 US \$ Million
	Total Variable O&M	9.5000 US \$ Million
Fixed O & M Amount - Foreign	50.00%	8.3315 US \$ Million
Fixed O & M Amount - Local	50.00%	8.3315 US \$ Million
	Total Fixed O&M Amount	16.6630 US \$ Million
Insurance Cost - % of EPC Cost	1.35%	9.7200 US \$ Million
Working Capital Amount - Local		4.3063 US\$ Million
Thermal efficiency, LHV Net at Site on Coal		34.75%
Plant Factor		60.00%

Upfront Tariff - Working Capital Requirement

Total Net Capacity	540.00	MW
Hours per Day	24	Hours
Thermal Efficiency	34.75%	
Coal Calorific Value - LHV	11,023.00	
Coal Price per M. Ton - HHV	5,016.00	
Fuel Cost Component	4.4693	Rs./kWh
Fuel Inventory		
Days	15	
Load	100%	
Daily Production	12,960,000	
Coal Price for 15 days Inventory	868,831,304	PKR
GST	17%	
Fuel Price Incl. GST - Rs	1,016,532,626	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	10,886,400	
Fuel Cost Receivable for 30 days	1,459,636,591	
GST	17%	
Fuel Price Incl. GST - Rs	1,707,774,812	
Total Working Capital Requirement	2,724,307,438	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	378,951,165	
Annual Off Take @ 100%	4,730,400,000	
Working Capital Component	0.0801	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	600.000 MWs
Project Capacity Net	540.000 MWs
Total Project Cost	1117.880 US\$ Million
Equity Investment	279.470 US\$ Million
Equity %	25.00%
XIRR	20.00%
ROE	25.81%
Construction Start	30-Jun-11
Commissioning Date	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(55.89)		
31-Dec-12	(2.00)		(55.89)		
31-Dec-13	(1.00)		(69.87)		
31-Dec-14	0.00		(97.81)		
31-Dec-15	1	279.470	72.131	6,347.54	1.3419
31-Dec-16	2	279.470	72.131	6,347.54	1.3419
31-Dec-17	3	279.470	72.131	6,347.54	1.3419
31-Dec-18	4	279.470	72.131	6,347.54	1.3419
31-Dec-19	5	279.470	72.131	6,347.54	1.3419
31-Dec-20	6	279.470	72.131	6,347.54	1.3419
31-Dec-21	7	279.470	72.131	6,347.54	1.3419
31-Dec-22	8	279.470	72.131	6,347.54	1.3419
31-Dec-23	9	279.470	72.131	6,347.54	1.3419
31-Dec-24	10	279.470	72.131	6,347.54	1.3419
31-Dec-25	11	279.470	72.131	6,347.54	1.3419
31-Dec-26	12	279.470	72.131	6,347.54	1.3419
31-Dec-27	13	279.470	72.131	6,347.54	1.3419
31-Dec-28	14	279.470	72.131	6,347.54	1.3419
31-Dec-29	15	279.470	72.131	6,347.54	1.3419
31-Dec-30	16	279.470	72.131	6,347.54	1.3419
31-Dec-31	17	279.470	72.131	6,347.54	1.3419
31-Dec-32	18	279.470	72.131	6,347.54	1.3419
31-Dec-33	19	279.470	72.131	6,347.54	1.3419
31-Dec-34	20	279.470	72.131	6,347.54	1.3419
31-Dec-35	21	279.470	72.131	6,347.54	1.3419
31-Dec-36	22	279.470	72.131	6,347.54	1.3419
31-Dec-37	23	279.470	72.131	6,347.54	1.3419
31-Dec-38	24	279.470	72.131	6,347.54	1.3419
31-Dec-39	25	279.470	72.131	6,347.54	1.3419
31-Dec-40	26	279.470	72.131	6,347.54	1.3419
31-Dec-41	27	279.470	72.131	6,347.54	1.3419
31-Dec-42	28	279.470	72.131	6,347.54	1.3419
31-Dec-43	29	279.470	72.131	6,347.54	1.3419
31-Dec-44	30	279.470	72.131	6,347.54	1.3419

20.00%

Upfront Tariff - IDC Calculation Local Coal

Debt Amount	837.900	US\$ Million
KIBOR	11.91%	
Spread over KIBOR	3.50%	
Total Interest Rate	15.41%	838.4097

Year	Construction			Debt	Fin. Chrg.
	1st Year	2nd Year	3rd Year	4th Year	
Opening Balance	-	180.74	390.41	677.14	
1st Half		10.00%	10%	10%	15%
Principal Amount	83.79	83.79	83.79	125.69	377.06
Financing Fee 3%	25.14	-	0.00	0.00	25.14
Interest	3.23	17.15	33.31	57.02	110.71
Closing Balance	87.02	281.68	507.51	859.84	
Opening Balance	87.02	281.68	507.51	859.84	
2nd Half	10.00%	10.00%	15.00%	20.00%	
Principal Amount	83.79	83.79	125.69	167.58	460.85
Interest	9.93	24.93	43.95	72.71	151.52
Closing Balance	180.74	390.41	677.14	1,100.12	
Total Debt Incl. IDC				837.90	262.22
					25.14

Upfront Tariff - Debt Analysis/Réparation Profile (Local Coal)

	Gross Capacity Net Capacity KIBOR	MWS	MWS	US\$ /PKR Party Equity Debt Debt in Pak Rupees	88.00 25% 75% 73,780.05	PKR Million US\$ Million PKR Million		
Period	Principal Million \$	Principal Repayment Million \$	Interest Million \$	Balance Million \$	Debt Service Million PKR	Principal Repayment Rs./kW/hour	Interest Rs./kW/Hour	Debt Servicing Rs./kW/h
1st Year	3405.93	1178.88						
1	7380.05	803.83	2842.38	72976.22	3646.20			
2	72976.22	834.79	2811.41	72141.43	3646.20			
3	72141.43	866.96	2779.25	71274.47	3646.20			
4	71274.47	900.35	2745.85	70374.12	3646.20	0.7200	2.3632	3.0832
2nd Year	3405.93	10622.91				14584.81		
5	70374.12	935.04	2711.16	69439.08	3646.20			
6	69439.08	971.06	2675.14	68468.02	3646.20			
7	68468.02	1008.47	2637.73	67459.54	3646.20			
8	67459.54	1047.32	2598.88	66412.22	3646.20	0.8375	2.2457	3.0832
3rd Year	4608.63	9976.19				14584.81		
13	61803.59	1265.22	2380.98	60538.37	3646.20			
14	60538.37	1313.96	2332.24	59224.41	3646.20			
15	59224.41	1364.58	2281.62	57859.82	3646.20			
16	57859.82	1417.15	2229.05	56442.67	3646.20	1.1333	1.9499	3.0832
4th Year	5360.92	9223.89				14584.81		
17	58442.67	1471.75	2174.45	54970.92	3646.20			
18	54970.92	1528.45	2117.75	53442.47	3646.20			
19	53442.47	1587.33	2058.87	51855.14	3646.20			
20	51855.14	1646.48	1997.72	50206.65	3646.20	1.3183	1.7649	3.0832
5th Year	6236.02	8348.80				14584.81		
21	50206.65	1711.99	1934.21	48494.66	3646.20			
22	48494.66	1777.95	1868.26	46716.71	3646.20			
23	46716.71	1846.44	1799.76	44870.27	3646.20			
24	44870.27	1917.58	1728.63	42952.70	3646.20	1.5335	1.5497	3.0832
6th Year	7253.96	7330.86				14584.81		
25	42952.70	1997.45	1654.75	40961.25	3646.20			
26	40961.25	2068.17	1578.03	38893.07	3646.20			
27	38893.07	2147.55	1498.36	36775.23	3646.20			
28	36775.23	2230.59	1415.61	34514.63	3646.20	1.7838	1.2994	3.0832
7th Year	8438.06	6146.75				14584.81		
29	34514.63	2316.53	1329.68	32198.10	3646.20			
30	32198.10	2405.77	1240.43	29792.33	3646.20			
31	29792.33	2498.45	1147.75	27293.88	3646.20			
32	27293.88	2594.71	1051.50	24698.17	3646.20	2.0750	1.0082	3.0832
8th Year	9815.46	4769.35				14584.81		
33	24699.17	2684.67	951.54	22004.50	3646.20			
34	22004.50	2658.48	847.72	19206.02	3646.20			
35	19206.02	2606.29	739.91	16269.73	3646.20			
36	16269.73	3018.26	627.95	13281.48	3646.20	2.4137	0.6695	3.0832
9th Year	11417.70	3167.12				14584.81		
37	13281.48	3134.53	511.67	10146.94	3646.20			
38	10146.94	3255.29	390.91	6891.65	3646.20			
39	6891.65	3380.70	265.50	3510.94	3646.20			
40	3510.94	3510.94	135.26	0.00	3646.20	2.8077	0.2755	3.0832
10th Year	13281.48	1303.34				14584.81		

Upfront Tariff for Local Coal based Power Projects for upto 1000 MW on Local Financing

Annex - C

Optimal Tariff for Local Coal-based Power Projects for upto 1000 MW on Local Financing												Annex - C		
Energy Purchase Price (Rs./kWh)				Capacity Purchase Price (PKR/kW/Hour)										
Year	Fuel	Var. O&M	Total	Fixed O&M		Cost of W/C	Insurance	ROE	Withholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP	Capacity Charge@ 60% Tariff	Total Tariff
Component	Foreign	Local	EPP	Local	Foreign								Rs. /kWh	Cents/kWh
1	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	0.7501	2.4618	5.2675	8.7792
2	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	0.8725	2.3394	5.2675	8.7792
3	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	1.0149	2.1969	5.2675	8.7792
4	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	1.1806	2.0313	5.2675	8.7792
5	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	1.3733	1.8386	5.2675	8.7792
6	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	1.5975	1.6144	5.2675	8.7792
7	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	1.8582	1.3536	5.2675	8.7792
8	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	2.1616	1.0503	5.2675	8.7792
9	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	2.5144	0.6975	5.2675	8.7792
10	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	2.9248	0.2870	5.2675	8.7792
11	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
12	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
13	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
14	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
15	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
16	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
17	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
18	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
19	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
20	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
21	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
22	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
23	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
24	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
25	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
26	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
27	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
28	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
29	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
30	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	3.1616	0.0000	2.0557	3.4261
Average														8.8573
1-10	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	1.6248	1.5871	5.2675	8.7792
11-30	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	0.0000	0.0000	2.0557	3.4261
Levelized														9.5788
1-30	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.3973	0.1048	0.5416	0.5290	3.1263	5.2105

Upfront Tariff - Local Coal 1000 MW

Assumptions for the Plant

Interest Rate % per annum - KIBOR	11.91%
Spread Over and above KIBOR	3.50%
Total Interest Rate	15.41%
Withholding Tax on Dividends	7.50%
Discount Rate	10%
Coal Delivered Price	57.00 US\$/M.Ton
Coal Price	5,016.00 per Ton
Calorific Value	5,000.00 Btu/lb
Conversion Factor BTUs/KGs	2.2046
Reference Calorific Value LHV	11,023.00 Btu/KGs
HHV-LHV Factor	1.055
Reference Calorific Value LHV	11,023.00 KGs
Project Life	30.00 Years
Capital Structure:	
Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%
Equity Draw down	
1st Year of Construction Period	20%
2nd Year of Construction Period	20%
3rd Year of Construction Period	25%
4th Year of Construction Period	35%

ASSUMPTIONS - Local Coal

Basis for Tariff		Coal	
Gross Capacity (ISO)		1,000.000	MWs
Auxiliary Load	10.00%	100.000	MWs
Net Capacity at Site conditions	90.00%	900.000	MWs
Annual Net Generation at 100%		7,884.00	GWh
Project Development Costs			
EPC Cost		1,250.000	Million US \$
	Total EPC Cost	1,250.000	Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	54.375	Million US \$
Non EPC Construction Cost - % of EPC	11.00%	137.500	Million US \$
CAPEX		1,441.875	Million US \$
Financial Charges			
Financing Fees & Charges		43.650	Million US \$
Interest During Construction		455.345	Million US \$
	Sub total	498.995	Million US \$
Total Project Cost		1,940.870	Million US \$
Cost per MW - Gross			
Exchange Rate per US \$		1.941	US \$
		88.00	Rs.
Financing Plan			
Debt Local	75%	1,455.653	Million US \$
Equity	25%	485.218	Million US \$
Construction Period		48	Months
Grace Period - Years		48	Months
Loan Repayment Period - Years		10	
IRR on equity		20.00%	
Variable O & M - Local	40.00%	6.1200	US \$ Million
Variable O & M - Foreign	60.00%	9.1800	US \$ Million
	Total Variable O&M	15.3000	US \$ Million
Fixed O & M Amount - Foreign	50.00%	12.9900	US \$ Million
Fixed O & M Amount - Local	50.00%	12.9900	US \$ Million
	Total Fixed O&M Amount	25.9800	US \$ Million
Insurance Cost - % of EPC Cost	1.35%	16.8750	US \$ Million
Working Capital Amount - Local		6.7407	US\$ Million
Thermal efficiency, LHV Net at Site on Coal		37.00%	
Plant Factor		60.00%	

Upfront Tariff - Working Capital Requirement

Total Net Capacity	900.00	MW
Hours per Day	24	Hours
Thermal Efficiency	37.00%	
Coal Calorific Value - LHV	11,023.00	
Coal Price per M. Ton - HHV	5,016.00	
Fuel Cost Component	4.1975	Rs./kWh
Fuel Inventory		
Days	15	
Load	100%	
Daily Production	21,600,000	
Coal Price for 15 days Inventory	1,359,994,947	PKR
GST	17%	
Fuel Price Incl. GST - Rs	1,591,194,088	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	18,144,000	
Fuel Cost Receivable for 30 days	2,284,791,511	
GST	17%	
Fuel Price Incl. GST - Rs	2,673,206,068	
Total Working Capital Requirement	4,264,400,156	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	593,178,062	
Annual Off Take @ 100%	7,884,000,000	
Working Capital Component	0.0752	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	1000.000 MWs
Project Capacity Net	900.000 MWs
Total Project Cost	1940.870 US\$ Million
Equity Investment	485.218 US\$ Million
Equity %	25.00%
XIRR	20.00%
ROE	25.80%
Construction Start	30-Jun-11
Commissioning Date	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(97.04)		
31-Dec-12	(2.00)		(97.04)		
31-Dec-13	(1.00)		(121.30)		
31-Dec-14	0.00		(169.83)		
31-Dec-15	1	485.218	125.186	11,016.38	1.3973
31-Dec-16	2	485.218	125.186	11,016.38	1.3973
31-Dec-17	3	485.218	125.186	11,016.38	1.3973
31-Dec-18	4	485.218	125.186	11,016.38	1.3973
31-Dec-19	5	485.218	125.186	11,016.38	1.3973
31-Dec-20	6	485.218	125.186	11,016.38	1.3973
31-Dec-21	7	485.218	125.186	11,016.38	1.3973
31-Dec-22	8	485.218	125.186	11,016.38	1.3973
31-Dec-23	9	485.218	125.186	11,016.38	1.3973
31-Dec-24	10	485.218	125.186	11,016.38	1.3973
31-Dec-25	11	485.218	125.186	11,016.38	1.3973
31-Dec-26	12	485.218	125.186	11,016.38	1.3973
31-Dec-27	13	485.218	125.186	11,016.38	1.3973
31-Dec-28	14	485.218	125.186	11,016.38	1.3973
31-Dec-29	15	485.218	125.186	11,016.38	1.3973
31-Dec-30	16	485.218	125.186	11,016.38	1.3973
31-Dec-31	17	485.218	125.186	11,016.38	1.3973
30-Dec-32	18	485.218	125.186	11,016.38	1.3973
31-Dec-33	19	485.218	125.186	11,016.38	1.3973
31-Dec-34	20	485.218	125.186	11,016.38	1.3973
31-Dec-35	21	485.218	125.186	11,016.38	1.3973
31-Dec-36	22	485.218	125.186	11,016.38	1.3973
31-Dec-37	23	485.218	125.186	11,016.38	1.3973
31-Dec-38	24	485.218	125.186	11,016.38	1.3973
31-Dec-39	25	485.218	125.186	11,016.38	1.3973
31-Dec-40	26	485.218	125.186	11,016.38	1.3973
31-Dec-41	27	485.218	125.186	11,016.38	1.3973
31-Dec-42	28	485.218	125.186	11,016.38	1.3973
31-Dec-43	29	485.218	125.186	11,016.38	1.3973
31-Dec-44	30	485.218	125.186	11,016.38	1.3973

20.00%

Upfront Tariff - IDC Calculation Local Coal

Debt Amount	1,455.000	US\$ Million
KIBOR	11.91%	
Spread over KIBOR	3.50%	
Total Interest Rate	15.41%	

Year	Construction			Principal	IDC	Fin. Chrg.
	1st Year	2nd Year	3rd Year			
Opening Balance	-	313.85	677.93	1,175.84		
1st Half	10.00%	10%	10%	15%		
Principal Amount	145.50	145.50	145.50	218.25	654.75	
Financing Fee 3%	43.65	-	0.00	0.00		43.65
Interest	5.61	29.79	57.84	99.01		192.24
Closing Balance	151.11	489.14	881.28	1,493.09		
Opening Balance	151.11	489.14	881.28	1,493.09		
2nd Half	10.00%	10.00%	15.00%	20.00%		
Principal Amount	145.50	145.50	218.25	291.00	800.25	
Interest	17.25	43.29	76.31	126.25		263.11
Closing Balance	313.85	677.93	1,175.84	1,910.35		
Total Debt Incl. IDC				1455.00	455.35	4365

Upfront Tariff - Debt Analysis/Repayment Profile (Local Coal)

Gross Capacity		MWs	US\$/PKR Parity	88.00
Net Capacity	900.00	MWs	Equity	32,024.36 PKR Million
KIBOR	11.91%		Debt	1,455.65 US\$ Million
Spread over KIBOR	3.50%		Debt in Pak Rupees	128,097.44 PKR Million
Total Interest Rate	15.41%			
1st Year	5913.40	19408.85	25322.26	
5	122184.04	1623.42	4707.14	120560.61
6	120560.61	1683.97	4644.60	118874.65
7	118874.65	1750.92	4579.65	117123.73
8	117123.73	1818.37	4512.19	115305.35
2nd Year	6878.58	18443.57	25322.26	
9	115305.35	1888.43	4442.14	113416.93
10	113416.93	1961.18	4389.39	111455.75
11	111455.75	2036.73	4293.83	109419.02
12	109419.02	2115.20	4215.37	107303.82
3rd Year	8007.53	17320.73	25322.26	
13	107303.82	2198.68	4133.88	105107.14
14	105107.14	2281.31	4049.25	102825.83
15	102825.83	2365.20	3961.63	100456.63
16	100456.63	2460.47	3870.09	97996.16
4th Year	9307.67	16014.59	25322.26	
17	97996.16	2555.26	3775.30	95440.89
18	95440.89	2653.70	3676.86	92787.19
19	92787.19	2755.94	3574.63	90031.25
20	90031.25	2862.11	3488.45	87169.14
5th Year	10827.01	14495.24	25322.26	
21	87169.14	2923.7	3358.19	84196.77
22	84196.77	3036.38	3243.68	81109.89
23	81109.89	3205.81	3124.76	77904.08
24	77904.08	3329.31	3012.25	74574.77
6th Year	12594.37	12727.88	25322.26	
25	74574.77	3457.57	2872.99	7117.20
26	7117.20	3590.77	2759.79	67526.43
27	67526.43	3729.11	2601.46	63797.32
28	63797.32	3872.77	2457.79	59924.54
7th Year	14650.23	10672.03	25322.26	
29	59924.54	4021.97	2308.59	55902.57
30	55902.57	4176.92	2153.65	51722.66
31	51722.66	4337.83	1992.73	47387.82
32	47387.82	4504.95	1825.62	42882.87
8th Year	17041.67	8280.59	25322.26	
33	42882.87	4678.50	1652.06	38204.37
34	38204.37	4898.74	1471.82	33345.63
35	33345.63	5045.92	1284.64	28299.71
36	28299.71	5220.32	1090.25	23059.39
9th Year	19123.48	5498.77	25322.26	
37	23059.39	5442.20	888.36	17617.19
38	17617.19	5651.96	678.70	11965.33
39	11965.33	5869.60	460.96	6095.73
40	6095.73	6055.73	0.00	6330.56
10th Year	23059.39	2262.87	25322.26	

Principal Repayment	Interest
1 0.7501	2.4618
2 0.8725	2.3394
3 1.0149	2.1969
4 1.1806	2.0313
5 1.3733	1.8386
6 1.5975	1.6144
7 1.8582	1.3536
8 2.1616	1.0503
9 2.5144	0.6975
10 2.9248	0.2870

Upfront Tariff for Imported Coal based Power Projects for upto 200 MW on Local Financing

Annex - D

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kWHour)								Capacity Charge@ 60%	Total Tariff Rs. /kWh	Total Tariff Cents/kWh		
	Fuel Var.	O&M	Total	Fixed O&M	Cost of W/C	Insurance	ROE	Witholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP					
Component	Foreign	Local	EPP	Local	Foreign											
1	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.6865	2.2532	4.6483	7.7471	11.6413	13.2287
2	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.7986	2.1411	4.6483	7.7471	11.6413	13.2287
3	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.9289	2.0108	4.6483	7.7471	11.6413	13.2287
4	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	1.0805	1.8592	4.6483	7.7471	11.6413	13.2287
5	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	1.2569	1.6828	4.6483	7.7471	11.6413	13.2287
6	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	1.4621	1.4776	4.6483	7.7471	11.6413	13.2287
7	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	1.7008	1.2389	4.6483	7.7471	11.6413	13.2287
8	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	1.9784	0.9613	4.6483	7.7471	11.6413	13.2287
9	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	2.3013	0.6384	4.6483	7.7471	11.6413	13.2287
10	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	2.6770	0.2627	4.6483	7.7471	11.6413	13.2287
11	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
12	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
13	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
14	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
15	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
16	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
17	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
18	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
19	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
20	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
21	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
22	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
23	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
24	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
25	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
26	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
27	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
28	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
29	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
30	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
Average																
1-10	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	1.4871	1.4526	4.6483	7.7471	11.6413	13.2287
11-30	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.0000	0.0000	1.7086	2.8477	6.7418	7.6611
Leverized																
1-30	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.9988	0.0749	0.4957	0.4842	2.6885	4.4808	8.3749	9.5170

Levelized Tariff = 9.9353 Rs./kWh

11.2901 US Cents/kWh

Upfront Tariff - Imported Coal 200 MW

Assumptions for the Plant

-	Interest Rate % per annum - KIBOR	11.91%
-	Spread Over and above KIBOR	3.50%
-	Total Interest Rate	15.41%
-	Withholding Tax on Dividends	7.50%
-	Discount Rate	10%
-	Coal Delivered Price	88.35 US\$/M.Ton
-	Freight Charges	12.00 US\$/M.Ton
-	Total Coal Price	100.35 US\$/M.Ton
-	Coal Price - HHV	8,830.80 per Ton
-	Calorific Value	10,450.00 Btu/lb
-	Conversion Factor BTUs/KGs	2.2046
-	Reference Calorific Value LHV	23,038.07 Btu/KGs
-	HHV-LHV Factor	1.055
-	Reference Calorific Value LHV	23,038.07 KGs
-	Project Life	30.00 Years

Capital Structure:

-	Debt % of Total Project Cost	75%
-	Equity % of Total Project Cost	25%

Equity Draw down

-	1st Year of Construction Period	25%
-	2nd Year of Construction Period	25%
-	3rd Year of Construction Period	30%
-	Last 4 Months of Construction	20%

ASSUMPTIONS - Imported Coal

		<u>Coal</u>
Basis for Tariff		
Gross Capacity (ISO)		200.000 MWs
Auxiliary Load	10.00%	20.000 MWs
Net Capacity at Site conditions	90.00%	180.000 MWs
Annual Net Generation at 100%		1,576.80 GWh
Project Development Costs		
EPC Cost		236.000 Million US \$
	Total EPC Cost	236.000 Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	10.266 Million US \$
Non EPC Construction Cost - % of EPC	11.00%	25.960 Million US \$
CAPEX		272.226 Million US \$
Financial Charges		
Financing Fees & Charges		7.994 Million US \$
Interest During Construction		75.062 Million US \$
	Sub total	83.055 Million US \$
Total Project Cost		355.281 Million US \$
Cost per MW - Gross		1.776 US \$
Exchange Rate per US \$		88.00 Rs.
Financing Plan		
Debt Local	75%	266.461 Million US \$
Equity	25%	88.820 Million US \$
Construction Period		40 Months
Grace Period - Years		40 Months
Loan Repayment Period - Years		10
IRR on equity		17.00%
	Variable O & M - Local	40.00%
	Variable O & M - Foreign	60.00%
	Total Variable O&M	2.8000 US \$ Million
Fixed O & M Amount - Foreign	50.00%	2.8225 US \$ Million
Fixed O & M Amount - Local	50.00%	2.8225 US \$ Million
	Total Fixed O&M Amount	5.6450 US \$ Million
Insurance Cost - % of EPC Cost	1.35%	3.1860 US \$ Million
Working Capital Amount - Local		2.5443 US\$ Million
Thermal efficiency, LHV Net at Site on Coal		35.00%
Plant Factor		60.00%

<u>Upfront Tariff - Working Capital Requirement</u>		
Total Net Capacity	180.00	MW
Hours per Day	24	Hours
Thermal Efficiency	35.00%	
Coal Calorific Value - LHV	23,038.07	
Coal Price per M. Ton - HHV	8,830.80	
Fuel Cost Component	3.7379	Rs./kWh
Fuel Inventory		
Days	60	
Load	100%	
Daily Production	4,320,000	
Coal Price for 15 days Inventory	968,851,457	PKR
GST	17%	
Fuel Price Incl. GST - Rs	1,133,556,204	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	3,628,800	
Fuel Cost Receivable for 30 days	406,917,612	
GST	17%	
Fuel Price Incl. GST - Rs	476,093,606	
Total Working Capital Requirement	1,609,649,810	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	223,902,289	
Annual Off Take @ 100%	1,576,800,000	
Working Capital Component	0.1420	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	200.000 MWs
Project Capacity Net	180.000 MWs
Total Project Cost	355.281 US\$ Million
Equity Investment	88.820 US\$ Million
Equity %	25.00%
XIRR	17.00%
ROE	20.15%
Construction Start	30-Jun-11
Commissioning Date	31-Oct-14

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(22.21)		
31-Dec-12	(2.00)		(22.21)		
31-Dec-13	(1.00)		(26.65)		
31-Aug-14	0.00		(17.76)		
30-Apr-15	1	88.820	17.897	1,574.96	0.9988
30-Apr-16	2	88.820	17.897	1,574.96	0.9988
30-Apr-17	3	88.820	17.897	1,574.96	0.9988
30-Apr-18	4	88.820	17.897	1,574.96	0.9988
30-Apr-19	5	88.820	17.897	1,574.96	0.9988
30-Apr-20	6	88.820	17.897	1,574.96	0.9988
30-Apr-21	7	88.820	17.897	1,574.96	0.9988
30-Apr-22	8	88.820	17.897	1,574.96	0.9988
30-Apr-23	9	88.820	17.897	1,574.96	0.9988
30-Apr-24	10	88.820	17.897	1,574.96	0.9988
30-Apr-25	11	88.820	17.897	1,574.96	0.9988
30-Apr-26	12	88.820	17.897	1,574.96	0.9988
30-Apr-27	13	88.820	17.897	1,574.96	0.9988
30-Apr-28	14	88.820	17.897	1,574.96	0.9988
30-Apr-29	15	88.820	17.897	1,574.96	0.9988
30-Apr-30	16	88.820	17.897	1,574.96	0.9988
30-Apr-31	17	88.820	17.897	1,574.96	0.9988
29-Apr-32	18	88.820	17.897	1,574.96	0.9988
30-Apr-33	19	88.820	17.897	1,574.96	0.9988
30-Apr-34	20	88.820	17.897	1,574.96	0.9988
30-Apr-35	21	88.820	17.897	1,574.96	0.9988
30-Apr-36	22	88.820	17.897	1,574.96	0.9988
30-Apr-37	23	88.820	17.897	1,574.96	0.9988
30-Apr-38	24	88.820	17.897	1,574.96	0.9988
30-Apr-39	25	88.820	17.897	1,574.96	0.9988
30-Apr-40	26	88.820	17.897	1,574.96	0.9988
30-Apr-41	27	88.820	17.897	1,574.96	0.9988
30-Apr-42	28	88.820	17.897	1,574.96	0.9988
30-Apr-43	29	88.820	17.897	1,574.96	0.9988
30-Apr-44	30	88.820	17.897	1,574.96	0.9988

17.00%

Upfront Tariff - IDC Calculation Imported Coal

Debt Amount	266.450	US\$ Million
KIBOR	11.91%	
Spread over KIBOR	3.50%	
Total Interest Rate	15.41%	

		Construction		Debt		
Year		1st Year	2nd Year	3rd Year	4 Months	Period
Opening Balance	-	72.38	155.27	266.33		
1st Half		15.00%	10%	15%	20%	
Principal Amount	39.97	26.65	39.97	53.29	159.87	
Financing Fee 3%	7.99	-	0.00	0.00		7.99
Interest	1.54	6.60	13.50	21.89		43.54
Closing Balance	41.51	105.63	208.74	341.51		
Opening Balance	41.51	105.63	208.74			
2nd Half		10.00%	15.00%	15.00%		
Principal Amount	26.65	39.97	39.97		106.58	
Interest	4.22	9.68	17.62			31.53
Closing Balance	72.38	155.27	266.33			
Total Debt Incl. IDC				266.45	75.06	7.99

Upfront Tariff - Debt Analysis/Repayment Profile (Imported Coal)

Gross Capacity		200,000	MWS	US\$/PKR Parity	88.00			
Net Capacity	180,000	MWS	Equity	25%	5,862.14	PKR Million		
KIBOR	11.91%	Debt	75%	266.46	US\$ Million			
Spread over KIBOR	3.50%	Total Interest Rate	15.41%	23,448.57	PKR Million			
Period	Principal Million \$	Principal Repayment Million \$	Interest Million \$	Balance Million \$	Debt Service Million PKR	Principal Repayment Rs./kW/hour	Interest Rs./kW/Hour	Debt Sourcing Rs./kWh
1	23448.57	255.47	903.36	23193.10	1158.83			
2	23193.10	265.31	893.51	22927.79	1158.83			
3	22927.79	275.53	883.29	22652.26	1158.83			
4	22652.26	286.15	872.68	22366.11	1158.83	0.6865	2.2532	2.8397
1st Year	1082.46	3552.84		4635.31				
5	22366.11	297.77	861.65	22068.94	1158.83			
6	22068.94	308.62	850.21	21760.31	1158.83			
7	21760.31	320.51	838.32	21439.80	1158.83			
8	21439.80	332.86	825.97	21106.95	1158.83	0.7986	2.1411	2.9397
2nd Year	1259.16	3367.14		4635.31				
9	21106.95	345.68	813.15	20761.27	1158.83			
10	20761.27	359.00	799.83	20402.27	1158.83			
11	20402.27	372.83	786.00	20029.44	1158.83			
12	20029.44	387.79	771.63	19642.25	1158.83	0.9289	2.0108	2.9397
3rd Year	1464.70	310.60		4635.31				
13	19642.25	402.11	756.72	19240.14	1158.83			
14	19240.14	417.60	741.23	18822.54	1158.83			
15	18822.54	433.69	725.14	18388.85	1158.83			
16	18388.85	450.40	708.43	17930.45	1158.83	1.0805	1.8592	2.9397
4th Year	1703.79	2811.51		4635.31				
17	17930.45	467.75	691.08	17407.71	1158.83			
18	17407.71	485.77	673.06	16984.94	1158.83			
19	16984.94	504.48	654.34	16480.46	1158.83			
20	16480.46	523.92	634.91	15966.54	1158.83	1.2569	1.6828	2.9397
5th Year	1981.91	2653.39		4635.31				
21	15956.54	544.10	614.73	15412.44	1158.83			
22	15412.44	565.06	593.76	14847.38	1158.83			
23	14847.38	586.83	572.00	14260.55	1158.83			
24	14260.55	609.44	549.39	13651.11	1158.83	1.4621	1.4776	2.9397
6th Year	2305.43	2329.87		4635.31				
25	13651.11	632.92	525.91	13018.19	1158.83			
26	13018.19	657.30	501.53	12360.89	1158.83			
27	12360.89	682.62	476.20	11618.27	1158.83			
28	11618.27	708.92	449.91	10569.34	1158.83	1.7008	1.2389	2.9397
7th Year	2681.76	1953.54		4635.31				
29	10569.34	736.23	422.59	10233.11	1158.83			
30	10233.11	764.60	394.23	9468.52	1158.83			
31	9468.52	794.05	364.77	8674.46	1158.83			
32	8674.46	824.64	334.18	7849.82	1158.83	1.9784	0.9613	2.9397
8th Year	3119.52	1515.78		4635.31				
33	7849.82	856.41	302.41	6993.41	1158.83			
34	6993.41	889.41	269.42	6104.00	1158.83			
35	6104.00	923.67	235.16	5180.34	1158.83			
36	5180.34	959.25	199.57	4221.08	1158.83	2.3013	0.6384	2.9397
9th Year	3628.14	1006.56		4635.31				
37	4221.08	996.27	162.62	3224.87	1158.83			
38	3224.87	1034.59	124.24	2190.28	1158.83			
39	2190.28	1074.45	84.38	1115.84	1158.83			
40	1115.84	1115.84	42.99	0.00	1158.83	2.6770	0.2627	2.9397
10th Year	4221.08	414.22		4635.31				

Principal
Repayment
Interest
Rs./kWh

Upfront Tariff for Imported Coal based Power Projects for upto 600 MW on Local Financing

Annex - E

Upfront Tariff for Imported Coal based Power Projects for upto 600 MW on Local Financing												Annex - E				
Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kW/Hour)									Capacity Total	Total Tariff	Total Tariff	
	Fuel Var	O&M	Total	Fixed O&M		Cost of W/C	Insurance	ROE	Withholding Tax@7.5%	Debt Repayment	Interest Charges	Total CPP				
1	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	1.4560	1.4222	4.5926	7.6543	11.4435	13.0040
2	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.6721	2.2061	4.5926	7.6543	11.4435	13.0040
3	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.9095	1.9687	4.5926	7.6543	11.4435	13.0040
4	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	1.0579	1.8203	4.5926	7.6543	11.4435	13.0040
5	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	1.2306	1.6476	4.5926	7.6543	11.4435	13.0040
6	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	1.4315	1.4467	4.5926	7.6543	11.4435	13.0040
7	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	1.6652	1.2130	4.5926	7.6543	11.4435	13.0040
8	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	1.9370	0.9412	4.5926	7.6543	11.4435	13.0040
9	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	2.2532	0.6250	4.5926	7.6543	11.4435	13.0040
10	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	2.6210	0.2572	4.5926	7.6543	11.4435	13.0040
11	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
12	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
13	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
14	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
15	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
16	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
17	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
18	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
19	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
20	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
21	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
22	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
23	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
24	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
25	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
26	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
27	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
28	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
29	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
30	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
Average		3.6340	0.0931	0.0621	3.7892	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
1-10	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	1.4560	1.4222	4.5926	7.6543	11.4435	13.0040
11-30	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.0000	0.0000	1.7144	2.8573	6.6465	7.5529
Levelized																
1-30	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	1.0304	0.0773	0.8443	1.0317	3.5904	5.9841	9.7732	11.1060

Upfront Tariff - Imported Coal 600 MW

Assumptions for the Plant

-	Interest Rate % per annum - KIBOR	11.91%
-	Spread Over and above KIBOR	3.50%
-	Total Interest Rate	15.41%
-	Withholding Tax on Dividends	7.50%
-	Discount Rate	10%
-	Coal Delivered Price	88.35 US\$/M.Ton
-	Freight Charges	12.00 US\$/M.Ton
-	Total Coal Price	100.35 US\$/M.Ton
-	Coal Price	8,830.80 per Ton
-	Calorific Value	10,450.00 Btu/lb
-	Conversion Factor BTUs/KGs	2.2046
-	Reference Calorific Value LHV	23,038.07 Btu/KGs
-	HHV-LHV Factor	1.055
-	Reference Calorific Value LHV	23,038.07 KGs
-	Project Life	30.00 Years
-	Capital Structure:	
-	Debt % of Total Project Cost	75%
-	Equity % of Total Project Cost	25%
-	Equity Draw down	
-	1st Year of Construction Period	20%
-	2nd Year of Construction Period	20%
-	3rd Year of Construction Period	25%
-	4th Year of Construction Period	35%

ASSUMPTIONS - Imported Coal

Basis for Tariff		Coal	
Gross Capacity (ISO)		600.000	MWs
Auxiliary Load	10.00%	60.000	MWs
Net Capacity at Site conditions	90.00%	540.000	MWs
Annual Net Generation at 100%		4,730.40	GWh
Project Development Costs			
EPC Cost		672.000	Million US \$
	Total EPC Cost	672.000	Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	29.232	Million US \$
Non EPC Construction Cost - % of EPC	11.00%	73.920	Million US \$
CAPEX		775.152	Million US \$
Financial Charges			
Financing Fees & Charges		23.478	Million US \$
Interest During Construction		244.916	Million US \$
	Sub total	268.394	Million US \$
Total Project Cost		1,043.546	Million US \$
Cost per MW - Gross			
Exchange Rate per US \$		1.739	US \$
		88.00	Rs.
Financing Plan			
Debt Local	75%	782.660	Million US \$
Equity	25%	260.887	Million US \$
Construction Period		48	Months
Grace Period - Years		48	Months
Loan Repayment Period - Years		10	
IRR on equity		17.00%	
Variable O & M - Local	40.00%	3.3360	US \$ Million
Variable O & M - Foreign	60.00%	5.0040	US \$ Million
	Total Variable O&M	8.3400	US \$ Million
Fixed O & M Amount - Foreign	50.00%	8.0620	US \$ Million
Fixed O & M Amount - Local	50.00%	8.0620	US \$ Million
	Total Fixed O&M Amount	16.1240	US \$ Million
Insurance Cost - % of EPC Cost	1.35%	9.0720	US \$ Million
Working Capital Amount - Local		7.4210	US\$ Million
Thermal efficiency, LHV Net at Site on Coal		36.00%	
Plant Factor		60.00%	

Upfront Tariff - Working Capital Requirement

Total Net Capacity	540.00	MW
Hours per Day	24	Hours
Thermal Efficiency	36.00%	
Coal Calorific Value - LHV	23,038.07	
Coal Price per M. Ton - HHV	8,830.80	
Fuel Cost Component	3.6340	Rs./kWh
Fuel Inventory		
Days	60	
Load	100%	
Daily Production	12,960,000	
Coal Price for 15 days Inventory	2,825,816,749	PKR
GST	17%	
Fuel Price Incl. GST - Rs	3,306,205,596	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	10,886,400	
Fuel Cost Receivable for 30 days	1,186,843,034	
GST	17%	
Fuel Price Incl. GST - Rs	1,388,606,350	
Total Working Capital Requirement	4,694,811,946	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	653,048,342	
Annual Off Take @ 100%	4,730,400,000	
Working Capital Component	0.1381	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	600.000 MWs
Project Capacity Net	540.000 MWs
Total Project Cost	1043.546 US\$ Million
Equity Investment	260.887 US\$ Million
Equity %	25.00%
XIRR	17.00%
ROE	21.23%
Construction Start	30-Jun-11
Commissioning	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(52.18)		
31-Dec-12	(2.00)		(52.18)		
31-Dec-13	(1.00)		(65.22)		
31-Dec-14	0.00		(91.31)		
31-Dec-15	1	260.887	55.386	4,873.99	1.0304
31-Dec-16	2	260.887	55.386	4,873.99	1.0304
31-Dec-17	3	260.887	55.386	4,873.99	1.0304
31-Dec-18	4	260.887	55.386	4,873.99	1.0304
31-Dec-19	5	260.887	55.386	4,873.99	1.0304
31-Dec-20	6	260.887	55.386	4,873.99	1.0304
31-Dec-21	7	260.887	55.386	4,873.99	1.0304
31-Dec-22	8	260.887	55.386	4,873.99	1.0304
31-Dec-23	9	260.887	55.386	4,873.99	1.0304
31-Dec-24	10	260.887	55.386	4,873.99	1.0304
31-Dec-25	11	260.887	55.386	4,873.99	1.0304
31-Dec-26	12	260.887	55.386	4,873.99	1.0304
31-Dec-27	13	260.887	55.386	4,873.99	1.0304
31-Dec-28	14	260.887	55.386	4,873.99	1.0304
31-Dec-29	15	260.887	55.386	4,873.99	1.0304
31-Dec-30	16	260.887	55.386	4,873.99	1.0304
31-Dec-31	17	260.887	55.386	4,873.99	1.0304
31-Dec-32	18	260.887	55.386	4,873.99	1.0304
31-Dec-33	19	260.887	55.386	4,873.99	1.0304
31-Dec-34	20	260.887	55.386	4,873.99	1.0304
31-Dec-35	21	260.887	55.386	4,873.99	1.0304
31-Dec-36	22	260.887	55.386	4,873.99	1.0304
31-Dec-37	23	260.887	55.386	4,873.99	1.0304
31-Dec-38	24	260.887	55.386	4,873.99	1.0304
31-Dec-39	25	260.887	55.386	4,873.99	1.0304
31-Dec-40	26	260.887	55.386	4,873.99	1.0304
31-Dec-41	27	260.887	55.386	4,873.99	1.0304
31-Dec-42	28	260.887	55.386	4,873.99	1.0304
31-Dec-43	29	260.887	55.386	4,873.99	1.0304
31-Dec-44	30	260.887	55.386	4,873.99	1.0304

17.00%

Upfront Tariff - IDC Calculation Imported Coal

Debt Amount **782.600** US\$ Million
 KIBOR **11.91%**
 Spread over KIBOR **3.50%**
 Total Interest Rate **15.41%**

Year	Construction				Debt	Principal	IDC	Fin. Chrg.
	1st Year	2nd Year	3rd Year	4th Year				
Opening Balance	-	168.81	364.64	632.45				
1st Half	10.00%	10%	10%	15%				
Principal Amount	78.26	78.26	78.26	117.39				
Financing Fee 3%	23.48	-	0.00	0.00				23.48
Interest	3.01	16.02	31.11	53.25				103.40
Closing Balance	81.27	263.09	474.01	803.09				
Opening Balance	81.27	263.09	474.01	803.09				
2nd Half	10.00%	10.00%	15.00%	20.00%				
Principal Amount	78.26	78.26	117.39	156.52				430.43
Interest	9.28	23.29	41.04	67.91				141.52
Closing Balance	168.81	364.64	632.45	1,027.52				
Total Debt Incl. IDC					782.60	244.92	23.48	

Gross Capacity 600,000 MWs US\$ /PKR Parity 88.00
 Net Capacity 540,000 MWs 25%
 KIBOR 11.91%
 Spread over KIBOR 3.50%
 Total Interest Rate 15.41%

Debt in Pak Rupees

68,874.06 PKR Million

Equity 75%

Debt 75%

Debt in Pak Rupees

68,874.06 PKR Million

Period	Principal Million \$	Principal Repayment Million \$	Interest Million \$	Balance Million \$	Debt Service Million PKR	Principal Repayment Rs./KWhour	Interest Rs./KWhour	Debt Servicing Rs./KWh	Principal Repayment	Interest
1	68874.06	750.38	2653.37	68122.68	3403.75				1	0.6721
2	68723.68	779.29	2624.46	67344.39	3403.75				2	2.2061
3	67344.39	809.31	2594.44	66535.09	3403.75				3	2.0963
4	66535.09	840.49	2563.26	65694.60	3403.75	0.6721	2.2061	2.8782	4	1.9687
1st Year	3179.45	10435.54		13615.00					5	1.8203
5	65694.60	872.87	2530.88	64821.74	3403.75				6	1.7306
6	64821.74	906.49	2497.26	63975.24	3403.75				7	1.6467
7	63975.24	941.42	2462.33	62973.83	3403.75				8	1.5652
8	62973.83	977.68	2426.07	61986.15	3403.75	0.7818	2.0963	2.8782	9	0.9412
2nd Year	3698.46	9916.54		13615.00					10	0.6250
9	61986.15	1015.35	2388.40	60980.80	3403.75					0.2572
10	60980.80	1054.46	2349.29	59926.33	3403.75					
11	59926.33	1095.09	2308.66	58831.24	3403.75					
12	58831.24	1137.23	2266.47	57893.97	3403.75	0.9055	1.9687	2.8782		
3rd Year	4302.18	9312.82		13615.00						
13	57693.97	1181.09	2222.66	56512.88	3403.75					
14	56512.88	1226.59	2177.16	55286.29	3403.75					
15	55286.29	1273.85	2129.90	54012.44	3403.75					
16	54012.44	1322.92	2080.83	52289.52	3403.75	1.0579	1.8203	2.8782		
4th Year	5004.45	8810.55		13615.00						
17	52689.52	1373.89	2029.86	51315.64	3403.75					
18	51315.64	1426.81	1976.93	49888.82	3403.75					
19	49888.82	1481.78	1921.97	48407.04	3403.75					
20	48407.04	1538.87	1864.88	46668.17	3403.75	1.2306	1.8203	2.8782		
5th Year	5821.35	7793.65		13615.00						
21	46668.17	1598.15	1805.60	45270.02	3403.75					
22	45270.02	1659.72	1744.03	43610.29	3403.75					
23	43610.29	1723.66	1680.09	41886.63	3403.75					
24	41886.63	1790.07	1613.68	40096.56	3403.75	1.4315	1.6467	2.8782		
6th Year	6771.61	6843.39		13615.00						
25	40096.56	1859.03	1544.72	38237.53	3403.75					
26	38237.53	1930.65	1473.10	36306.88	3403.75					
27	36306.88	2005.03	1388.72	34301.86	3403.75					
28	34301.86	2082.27	1321.48	32219.59	3403.75	1.6652	1.2130	2.8782		
7th Year	7876.98	5738.02		13615.00						
29	32219.59	2162.49	1241.26	30057.10	3403.75					
30	30057.10	2245.80	1157.95	27811.30	3403.75					
31	27811.30	2332.32	1071.43	25478.98	3403.75					
32	25478.98	2422.17	981.58	23056.80	3403.75	1.9370	0.9412	2.8782		
8th Year	9162.78	4452.22		13615.00						
33	23056.80	2515.49	888.26	20541.32	3403.75					
34	20541.32	2612.40	791.35	17928.92	3403.75					
35	17928.92	2713.04	690.71	15215.88	3403.75					
36	15215.88	2817.56	586.19	12398.33	3403.75	2.2532	0.6250	2.8782		
9th Year	10658.48	2956.52		13615.00						
37	12398.33	2926.10	477.65	947.22	3403.75					
38	9472.22	3038.83	364.92	6433.39	3403.75					
39	6433.39	3155.90	247.85	3277.48	3403.75					
40	3277.48	3277.48	0.00	3403.75	2.6210	0.2572	2.8782			
10th Year	12398.33	1216.67		13615.00						

Upfront Tariff - Imported Coal 1000 MW

Assumptions for the Plant

Interest Rate % per annum - KIBOR	11.91%
Spread Over and above KIBOR	3.50%
Total Interest Rate	15.41%
Withholding Tax on Dividends	7.50%
Discount Rate	10%
Coal Delivered Price	88.35 US\$/M.Ton
Freight Charges	12.00 US\$/M.Ton
Total Coal Price	100.35 US\$/M.Ton
Coal Price	8,830.80 per Ton
Calorific Value	10,450.00 Btu/lb
Conversion Factor BTUs/KGs	2.2046
Reference Calorific Value LHV	23,038.07 Btu/KGs
HHV-LHV Factor	1.055
Reference Calorific Value LHV	23,038.07 KGs
Project Life	30.00 Years

Capital Structure:

Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%

Equity Draw down

1st Year of Construction Period	20%
2nd Year of Construction Period	20%
3rd Year of Construction Period	25%
4th Year of Construction Period	35%

ASSUMPTIONS - Imported Coal

Basis for Tariff		Coal	
Gross Capacity (ISO)		1,000.000	MWs
Auxiliary Load	10.00%	100.000	MWs
Net Capacity at Site conditions	90.00%	900.000	MWs
Annual Net Generation at 100%		7,884.00	GWh
Project Development Costs			
EPC Cost		1,160.000	Million US \$
	Total EPC Cost	1,160.000	Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	50.460	Million US \$
Non EPC Construction Cost - % of EPC	11.00%	127.600	Million US \$
CAPEX		1,338.060	Million US \$
Financial Charges			
Financing Fees & Charges		40.532	Million US \$
Interest During Construction		422.814	Million US \$
	Sub total	463.345	Million US \$
Total Project Cost		1,801.405	Million US \$
Cost per MW - Gross		1.801	US \$
Exchange Rate per US \$		88.00	Rs.
Financing Plan			
Debt Local	75%	1,351.054	Million US \$
Equity	25%	450.351	Million US \$
Construction Period		48	Months
Grace Period - Years		48	Months
Loan Repayment Period - Years		10	
IRR on equity		17.00%	
Variable O & M - Local	40.00%	5.5240	US \$ Million
Variable O & M - Foreign	60.00%	8.2860	US \$ Million
	Total Variable O&M	13.8100	US \$ Million
Fixed O & M Amount - Foreign	50.00%	12.0950	US \$ Million
Fixed O & M Amount - Local	50.00%	12.0950	US \$ Million
	Total Fixed O&M Amount	24.1900	US \$ Million
Insurance Cost - % of EPC Cost	1.35%	15.6600	US \$ Million
Working Capital Amount - Local		11.5652	US\$ Million
Thermal efficiency, LHV Net at Site on Coal		38.50%	
Plant Factor		60.00%	

<u>Upfront Tariff - Working Capital Requirement</u>		
Total Net Capacity	900.00	MW
Hours per Day	24	Hours
Thermal Efficiency	38.50%	
Coal Calorific Value - LHV	23,038.07	
Coal Price per M. Ton - HHV	8,830.80	
Fuel Cost Component	3.3980	Rs./kWh
Fuel Inventory		
Days	60	
Load	100%	
Daily Production	21,600,000	
Coal Price for 15 days Inventory	4,403,870,258	PKR
GST	17%	
Fuel Price Incl. GST - Rs	5,152,528,202	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	18,144,000	
Fuel Cost Receivable for 30 days	1,849,625,508	
GST	17%	
Fuel Price Incl. GST - Rs	2,164,061,845	
Total Working Capital Requirement	7,316,590,046	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	1,017,737,675	
Annual Off Take @ 100%	7,884,000,000	
Working Capital Component	0.1291	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	1000.000 MWs
Project Capacity Net	900.000 MWs
Total Project Cost	1801.405 US\$ Million
Equity Investment	450.351 US\$ Million
Equity %	25.00%
XIRR	17.00%
ROE	21.23%
Construction Starts	30-Jun-11
Commissioning Date	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(90.07)		
31-Dec-12	(2.00)		(90.07)		
31-Dec-13	(1.00)		(112.59)		
31-Dec-14	0.00		(157.62)		
31-Dec-15	1	450.351	95.610	8,413.64	1.0672
31-Dec-16	2	450.351	95.610	8,413.64	1.0672
31-Dec-17	3	450.351	95.610	8,413.64	1.0672
31-Dec-18	4	450.351	95.610	8,413.64	1.0672
31-Dec-19	5	450.351	95.610	8,413.64	1.0672
31-Dec-20	6	450.351	95.610	8,413.64	1.0672
31-Dec-21	7	450.351	95.610	8,413.64	1.0672
31-Dec-22	8	450.351	95.610	8,413.64	1.0672
31-Dec-23	9	450.351	95.610	8,413.64	1.0672
31-Dec-24	10	450.351	95.610	8,413.64	1.0672
31-Dec-25	11	450.351	95.610	8,413.64	1.0672
31-Dec-26	12	450.351	95.610	8,413.64	1.0672
31-Dec-27	13	450.351	95.610	8,413.64	1.0672
31-Dec-28	14	450.351	95.610	8,413.64	1.0672
31-Dec-29	15	450.351	95.610	8,413.64	1.0672
31-Dec-30	16	450.351	95.610	8,413.64	1.0672
31-Dec-31	17	450.351	95.610	8,413.64	1.0672
31-Dec-32	18	450.351	95.610	8,413.64	1.0672
31-Dec-33	19	450.351	95.610	8,413.64	1.0672
31-Dec-34	20	450.351	95.610	8,413.64	1.0672
31-Dec-35	21	450.351	95.610	8,413.64	1.0672
31-Dec-36	22	450.351	95.610	8,413.64	1.0672
31-Dec-37	23	450.351	95.610	8,413.64	1.0672
31-Dec-38	24	450.351	95.610	8,413.64	1.0672
31-Dec-39	25	450.351	95.610	8,413.64	1.0672
31-Dec-40	26	450.351	95.610	8,413.64	1.0672
31-Dec-41	27	450.351	95.610	8,413.64	1.0672
31-Dec-42	28	450.351	95.610	8,413.64	1.0672
31-Dec-43	29	450.351	95.610	8,413.64	1.0672
31-Dec-44	30	450.351	95.610	8,413.64	1.0672

17.00%

Upfront Tariff - IDC Calculation Imported Coal

Debt Amount	1,351.050	US\$ Million		
KIBOR	11.91%			
Spread over KIBOR	3.50%			
Total Interest Rate	15.41%			
	Construction		Debt	
Year		Period		
1st Year	2nd Year	3rd Year	4th Year	
Opening Balance	-	291.43	629.50	1,091.83
1st Half	10.00%	10%	10%	15%
Principal Amount	135.11	135.11	135.11	202.66
Financing Fee 3%	40.53	-	0.00	0.00
Interest	5.20	27.66	53.71	91.93
Closing Balance	140.31	454.20	818.31	1,386.42
Opening Balance	140.31	454.20	818.31	1,386.42
2nd Half	10.00%	10.00%	15.00%	20.00%
Principal Amount	135.11	135.11	202.66	270.21
Interest	16.02	40.20	70.86	117.23
Closing Balance	291.43	629.50	1,091.83	1,773.86
Total Debt Incl. IDC			1351.05	422.81
				40.53

Upfront Tariff - Debt Analysis/Repayment Profile (Imported Coal)

Gross Capacity		1000.000	MWs	US\$ / PKR Parity	88.00	PKR Million	29,723.19	US\$ Million	1,351.05
Net Capacity	900.000	MWs	Equity	25%	Debt	75%			
KIBOR	11.91%								
Spread over KIBOR	3.50%								
Total Interest Rate	15.41%								
Period	Principal Million \$	Principal Repayment Million \$	Interest Million \$	Balaance Million \$	Debt Service Rs./kW/hour	Principal Repayment Rs./kW/hour	Interest Rs./kWh / Hour	Debt Servicing Rs./kWh	Principal Repayment Interest
1	118892.76	1295.33	4580.34	117597.43	5875.67				1 0.6962 2.2849
2	117597.43	1345.23	4530.44	116252.20	5875.67				2 0.8098 2.1713
3	116252.20	1397.05	4478.62	114855.15	5875.67				3 0.9420 2.0391
4	114855.15	1450.88	4424.79	113404.27	5875.67	0.6962	2.2849	2.9811	4 1.0557 1.8853
1st Year	5488.48	18014.20	23502.68						5 1.2746 1.7065
5	113404.27	1506.77	4368.90	111897.50	5875.67				6 1.4827 1.4984
6	111897.50	1564.82	4310.85	110332.69	5875.67				7 1.7247 1.2564
7	110332.69	1625.10	4250.57	108707.58	5875.67				8 2.0062 0.9748
8	108707.58	1687.71	4187.96	107019.87	5875.67	0.8098	2.1713	2.9811	9 2.3337 0.6473
2nd Year	6384.40	17118.28	23502.68						10 2.7147 0.2664
9	107019.87	1752.73	4122.94	105267.14	5875.67				
10	105267.14	1820.25	4055.42	103446.89	5875.67				
11	103446.89	1890.38	3985.29	101556.51	5875.67				
12	101556.51	1963.21	3912.46	99593.31	5875.67	0.9420	2.0391	2.9811	
3rd Year	7426.57	16076.11	23502.68						
13	99593.31	2038.84	3636.83	97554.47	5875.67				
14	97554.47	2117.38	3758.29	95437.09	5875.67				
15	95437.09	2198.96	3676.71	93238.13	5875.67				
16	93238.13	2283.67	3592.00	90954.46	5875.67	1.0957	1.8853	2.9811	
4th Year	8638.85	14863.83	23502.68						
17	90954.46	2371.65	3504.02	88552.81	5875.67				
18	88552.81	2463.02	3412.65	86119.79	5875.67				
19	86119.79	2557.90	3317.77	83561.89	5875.67				
20	83561.89	2656.45	3219.22	80905.44	5875.67	1.2746	1.7065	2.9811	
5th Year	10049.02	13453.66	23502.68						
21	80905.44	2758.79	3116.88	78146.65	5875.67				
22	78146.65	2865.07	3010.60	75281.58	5875.67				
23	75281.58	2975.45	2900.22	72306.14	5875.67				
24	72306.14	3090.08	2785.59	69216.06	5875.67	1.4827	1.4984	2.9811	
6th Year	11639.38	11813.30	23502.68						
25	69216.06	3209.12	2666.55	66006.94	5875.67				
26	66006.94	3332.75	2542.92	62674.19	5875.67				
27	62674.19	3461.15	2414.52	59273.04	5875.67				
28	59273.04	3594.19	2281.18	55618.55	5875.67	1.7247	1.2564	2.9811	
7th Year	13597.51	9805.17	23502.68						
29	55618.55	3732.36	2142.70	51885.59	5875.67				
30	51885.59	3867.78	1988.89	48008.81	5875.67				
31	48008.81	4026.13	1849.54	43362.68	5875.67				
32	43362.68	4187.24	1694.43	39801.44	5875.67	2.0062	0.9748	2.9811	
8th Year	15877.11	7685.57	23502.68						
33	39801.44	4342.32	1533.35	35459.13	5875.67				
34	35459.13	4509.61	1366.06	30949.52	5875.67				
35	30949.52	4683.34	1192.33	26266.18	5875.67				
36	26266.18	4883.77	1011.90	21402.41	5875.67	2.3337	0.6473	2.9811	
9th Year	18399.03	5103.65	23502.68						
37	21402.41	5051.14	824.53	16351.27	5875.67				
38	16351.27	5245.74	629.93	11105.54	5875.67				
39	11105.54	5447.83	427.84	5657.71	5875.67				
40	5657.71	5657.71	0.00	5875.67	2.7147		0.2664	2.9811	
10th Year	21402.41	2100.26	23502.68						

Upfront Tariff for Local Coal based Power Projects for upto 200 MW on Foreign Financing

Annex - G

Year	Energy Purchase Price (Rs./kWh)					Capacity Purchase Price (PKR/kW/Hour)								Capacity Charge@ 60% Total Tariff			Total Tariff	
	Fuel	Vat. O&M	Total	Fixed O&M	Cost of W/C	Insurance	ROE	Withholding Tax@7.5%	Debt Repayment	Interest Charges	Total CPP	Charge@ 60% Rs./kWh	Charge@ 60% Cents/kWh					
1	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.3510	0.3782	3.4947	5.8246	10.5766	12.0189		
2	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.1273	0.6018	3.4947	5.8246	10.5766	12.0189		
3	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.1838	0.5453	3.4947	5.8246	10.5766	12.0189		
4	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.2431	0.4860	3.4947	5.8246	10.5766	12.0189		
5	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.3054	0.4237	3.4947	5.8246	10.5766	12.0189		
6	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.3708	0.3583	3.4947	5.8246	10.5766	12.0189		
7	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.4395	0.2896	3.4947	5.8246	10.5766	12.0189		
8	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.5117	0.2174	3.4947	5.8246	10.5766	12.0189		
9	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.5874	0.1417	3.4947	5.8246	10.5766	12.0189		
10	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.6670	0.0621	3.4947	5.8246	10.5766	12.0189		
11	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.7390	0.0000	3.4947	5.8246	10.5766	12.0189		
12	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.7656	0.0000	3.4947	5.8246	10.5766	12.0189		
13	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.7960	0.0000	3.4947	5.8246	10.5766	12.0189		
14	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.8274	0.0000	3.4947	5.8246	10.5766	12.0189		
15	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.8588	0.0000	3.4947	5.8246	10.5766	12.0189		
16	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.8902	0.0000	3.4947	5.8246	10.5766	12.0189		
17	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.9216	0.0000	3.4947	5.8246	10.5766	12.0189		
18	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.9530	0.0000	3.4947	5.8246	10.5766	12.0189		
19	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.9844	0.0000	3.4947	5.8246	10.5766	12.0189		
20	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.0158	0.0000	3.4947	5.8246	10.5766	12.0189		
21	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.0472	0.0000	3.4947	5.8246	10.5766	12.0189		
22	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.0786	0.0000	3.4947	5.8246	10.5766	12.0189		
23	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.1000	0.0000	3.4947	5.8246	10.5766	12.0189		
24	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.1314	0.0000	3.4947	5.8246	10.5766	12.0189		
25	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.1628	0.0000	3.4947	5.8246	10.5766	12.0189		
26	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.1942	0.0000	3.4947	5.8246	10.5766	12.0189		
27	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.2256	0.0000	3.4947	5.8246	10.5766	12.0189		
28	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.2570	0.0000	3.4947	5.8246	10.5766	12.0189		
29	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.2884	0.0000	3.4947	5.8246	10.5766	12.0189		
30	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	2.3200	0.0000	3.4947	5.8246	10.5766	12.0189		
Average																		
1-10	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	1.3510	0.3782	3.4947	5.8246	10.5766	12.0189		
11-30	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	0.0000	0.0000	1.7656	2.9427	7.6948	8.7440		
Levelized																		
1-30	4.5679	0.1105	0.0737	4.7521	0.1600	0.1600	0.0819	0.1884	1.0934	0.0820	0.4503	0.1261	2.3420	3.9033	8.6554	9.8357		

Upfront Tariff =

9.5732 Rs./kWh

10.8786 US Cents/kWh

Upfront Tariff - Local Coal 200 MW

Assumptions for the Plant

Interest Rate % per annum - LIBOR	0.45%
Spread Over and above LIBOR	4.50%
Total Interest Rate	4.95%
Withholding Tax on Dividends	7.50%
Discount Rate	10%

Coal Delivered Price

57.00 US\$/M.Ton

Coal Price

Calorific Value

5,016.00 per Ton

Conversion Factor BTUs/KGs

5,000.00 Btu/lb

Reference Calorific Value LHV

2.2046

HHV-LHV Factor

11,023.00 Btu/KGs

1.055

Reference Calorific Value LHV

11,023.00 KGs

Project Life

30.00 Years

Capital Structure:

Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%

Equity Draw down

1st Year of Construction Period	25%
2nd Year of Construction Period	25%
3rd Year of Construction Period	30%
Last 4 Months of Construction	20%

ASSUMPTIONS - Local Coal

Basis for Tariff		Coal	
Gross Capacity (ISO)		200.000	MWs
Auxiliary Load	10.00%	20.000	MWs
Net Capacity at Site conditions	90.00%	180.000	MWs
Annual Net Generation at 100%		1,576.80	GWh
Project Development Costs			
EPC Cost		250.000	Million US \$
	Total EPC Cost	250.000	Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	10.875	Million US \$
Non EPC Construction Cost - % of EPC	11.00%	27.500	Million US \$
CAPEX		288.375	Million US \$
Financial Charges			
Financing Fees & Charges		14.524	Million US \$
Interest During Construction		19.858	Million US \$
	Sub total	34.382	Million US \$
Total Project Cost		322.757	Million US \$
Cost per MW - Gross		1.614	US \$
Exchange Rate per US \$		88.00	Rs.
Financing Plan			
Debt	75%	242.068	Million US \$
Equity	25%	80.689	Million US \$
Construction Period		40	Months
Grace Period - Years		40	Months
Loan Repayment Period - Years		10	
IRR on equity		20.01%	
Variable O & M - Local	40.00%	1.3200	US \$ Million
Variable O & M - Foreign	60.00%	1.9800	US \$ Million
	Total Variable O&M	3.3000	US \$ Million
Fixed O & M Amount - Foreign	50.00%	2.8670	US \$ Million
Fixed O & M Amount - Local	50.00%	2.8670	US \$ Million
	Total Fixed O&M Amount	5.7340	US \$ Million
Insurance Cost - % of EPC Cost	1.35%	3.3750	US \$ Million
Working Capital Amount - Local		1.4671	US\$ Million
Thermal efficiency, LHV Net at Site on Coal		34.00%	
Plant Factor		60.00%	

Upfront Tariff - Working Capital Requirement

Total Net Capacity	180.00	MW
Hours per Day	24	Hours
Thermal Efficiency	34.00%	
Coal Calorific Value - LHV	11,023.00	
Coal Price per M. Ton - HHV	5,016.00	
Fuel Cost Component	4.5679	Rs./kWh
Fuel Inventory		
Days	15	
Load	100%	
Daily Production	4,320,000	
Coal Price for 15 days Inventory	295,998,900	PKR
GST	17%	
Fuel Price Incl. GST - Rs	346,318,713	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	3,628,800	
Fuel Cost Receivable for 30 days	497,278,152	
GST	17%	
Fuel Price Incl. GST - Rs	581,815,438	
Total Working Capital Requirement	928,134,152	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	129,103,460	
Annual Off Take @ 100%	1,576,800,000	
Working Capital Component	0.0819	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	200.000 MWs
Project Capacity Net	180.000 MWs
Total Project Cost	322.757 US\$ Million
Equity Investment	80.689 US\$ Million
Equity %	25.00%
XIRR	20.01%
ROE	24.28%
Construction Starts	30-Jun-11
Commissioning Date	31-Oct-14

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(20.17)		
31-Dec-12	(2.00)		(20.17)		
31-Dec-13	(1.00)		(24.21)		
31-Aug-14	0.00		(16.14)		
30-Apr-15	1	80.689	19.591	1,724.04	1.0934
30-Apr-16	2	80.689	19.591	1,724.04	1.0934
30-Apr-17	3	80.689	19.591	1,724.04	1.0934
30-Apr-18	4	80.689	19.591	1,724.04	1.0934
30-Apr-19	5	80.689	19.591	1,724.04	1.0934
30-Apr-20	6	80.689	19.591	1,724.04	1.0934
30-Apr-21	7	80.689	19.591	1,724.04	1.0934
30-Apr-22	8	80.689	19.591	1,724.04	1.0934
30-Apr-23	9	80.689	19.591	1,724.04	1.0934
30-Apr-24	10	80.689	19.591	1,724.04	1.0934
30-Apr-25	11	80.689	19.591	1,724.04	1.0934
30-Apr-26	12	80.689	19.591	1,724.04	1.0934
30-Apr-27	13	80.689	19.591	1,724.04	1.0934
30-Apr-28	14	80.689	19.591	1,724.04	1.0934
30-Apr-29	15	80.689	19.591	1,724.04	1.0934
30-Apr-30	16	80.689	19.591	1,724.04	1.0934
30-Apr-31	17	80.689	19.591	1,724.04	1.0934
30-Apr-32	18	80.689	19.591	1,724.04	1.0934
30-Apr-33	19	80.689	19.591	1,724.04	1.0934
30-Apr-34	20	80.689	19.591	1,724.04	1.0934
30-Apr-35	21	80.689	19.591	1,724.04	1.0934
30-Apr-36	22	80.689	19.591	1,724.04	1.0934
30-Apr-37	23	80.689	19.591	1,724.04	1.0934
30-Apr-38	24	80.689	19.591	1,724.04	1.0934
30-Apr-39	25	80.689	19.591	1,724.04	1.0934
30-Apr-40	26	80.689	19.591	1,724.04	1.0934
30-Apr-41	27	80.689	19.591	1,724.04	1.0934
30-Apr-42	28	80.689	19.591	1,724.04	1.0934
30-Apr-43	29	80.689	19.591	1,724.04	1.0934
30-Apr-44	30	80.689	19.591	1,724.04	1.0934

20.01%

Upfront Tariff - IDC Calculation Local Coal

Debt Amount **242.070** US\$ Million

LIBOR **0.45%**

Spread over LIBOR **4.50%**

Total Interest Rate **4.95%**

242.0676

		Construction			Debt	IDC	Fin. Chrg.
Year		1st Year	2nd Year	3rd Year	4 Months		
Opening Balance		-	62.18	127.16	207.97		
1st Half		15.00%	10%	15%	20%		
Principal Amount		36.31	24.21	36.31	48.41	145.24	
Financing Fee 6%		14.52	-	0.00	0.00		14.52
Interest		0.45	1.84	3.60	5.55		11.43
Closing Balance		36.76	88.22	167.07	261.93		
Opening Balance		36.76	88.22	167.07			
2nd Half		10.00%	15.00%	15.00%			
Principal Amount		24.21	36.31	36.31		96.83	
Interest		1.21	2.63	4.58			8.43
Closing Balance		62.18	127.16	207.97			
Total Debt Incl. IDC					242.07	19.86	14.52

Upfront Tariff - Debt Servicing on Foreign Financing

Net Capacity	180.00	MWs
Total Project Cost	322.757	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	
Total Interest Rate	4.95%	
Debt	75.00%	242.07 US\$ Million

Debt Repayment Profile (Annuity Based)

Period	Principal Million \$	Principal Repayme nt Million \$	Interest Million \$	Balaance Million \$	Debt Service Million \$	Principal Rep'ment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h
1	242.068	\$9.50	5.9912	\$232.57	\$15.49			
2	232.567	\$9.74	5.7560	\$222.83	\$15.49	1.0735	0.6556	1.7291
3	222.832	\$9.98	5.5151	\$212.86	\$15.49			
4	212.856	\$10.22	5.2682	\$202.63	\$15.49	1.1273	0.6018	1.7291
5	202.633	\$10.48	5.0152	\$192.16	\$15.49			
6	192.157	\$10.74	4.7559	\$181.42	\$15.49	1.1838	0.5453	1.7291
7	181.421	\$11.00	4.4902	\$170.42	\$15.49			
8	170.420	\$11.27	4.2179	\$159.15	\$15.49	1.2431	0.4860	1.7291
9	159.147	\$11.55	3.9389	\$147.59	\$15.49			
10	147.594	\$11.84	3.6530	\$135.76	\$15.49	1.3054	0.4237	1.7291
11	135.756	\$12.13	3.3600	\$123.62	\$15.49			
12	123.625	\$12.43	3.0597	\$111.19	\$15.49	1.3708	0.3583	1.7291
13	111.193	\$12.74	2.7520	\$98.45	\$15.49			
14	98.454	\$13.05	2.4367	\$85.40	\$15.49	1.4395	0.2896	1.7291
15	85.399	\$13.38	2.1136	\$72.02	\$15.49			
16	72.022	\$13.71	1.7825	\$58.31	\$15.49	1.5117	0.2174	1.7291
17	58.313	\$14.05	1.4432	\$44.26	\$15.49			
18	44.265	\$14.40	1.0956	\$29.87	\$15.49	1.5874	0.1417	1.7291
19	29.869	\$14.75	0.7393	\$15.12	\$15.49			
20	15.117	\$15.12	0.3741	\$0.00	\$15.49	1.6670	0.0621	1.7291

Upfront Tariff for Local Coal based Power Projects for upto 600 MW on Foreign Financing

Annex - H

Upfront Tariff - Local Coal 600 MW

Assumptions for the Plant

-	Interest Rate % per annum - LIBOR	0.45%
-	Spread Over and above LIBOR	4.50%
-	Total Interest Rate	4.95%
-	Withholding Tax on Dividends	7.50%
-	Discount Rate	10%
-	Coal Delivered Price	57.00 US\$/M.Ton
-	Coal Price	5,016.00 per Ton
-	Calorific Value	5,000.00 Btu/lb
-	Conversion Factor BTUs/KGs	2.2046
-	Reference Calorific Value LHV	11,023.00 Btu/KGs
-	HHV-LHV Factor	1.055
-	Reference Calorific Value LHV	11,023.00 KGs
-	Project Life	30.00 Years

Capital Structure:

-	Debt % of Total Project Cost	75%
-	Equity % of Total Project Cost	25%

Equity Draw down

-	1st Year of Construction Period	20%
-	2nd Year of Construction Period	20%
-	3rd Year of Construction Period	25%
-	4th Year of Construction Period	35%

ASSUMPTIONS - Local Coal

Basis for Tariff		Coal	
Gross Capacity (ISO)		600.000	MWs
Auxiliary Load	10.00%	60.000	MWs
Net Capacity at Site conditions	90.00%	540.000	MWs
Annual Net Generation at 100%		4,730.40	GWh
Project Development Costs			
EPC Cost		720.000	Million US \$
	Total EPC Cost	720.000	Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	31.320	Million US \$
Non EPC Construction Cost - % of EPC	11.00%	79.200	Million US \$
CAPEX		830.520	Million US \$
Financial Charges			
Financing Fees & Charges		42.108	Million US \$
Interest During Construction		63.095	Million US \$
	Sub total	105.203	Million US \$
Total Project Cost		935.723	Million US \$
Cost per MW - Gross			
Exchange Rate per US \$		1.560	US \$
		88.00	Rs.
Financing Plan			
Debt	75%	701.792	Million US \$
Equity	25%	233.931	Million US \$
Construction Period		48	Months
Grace Period - Years		48	Months
Loan Repayment Period - Years		10	
IRR on equity		20.00%	
Variable O & M - Local	40.00%	3.8000	US \$ Million
Variable O & M - Foreign	60.00%	5.7000	US \$ Million
	Total Variable O&M	9.5000	US \$ Million
Fixed O & M Amount - Foreign	50.00%	8.3315	US \$ Million
Fixed O & M Amount - Local	50.00%	8.3315	US \$ Million
	Total Fixed O&M Amount	16.6630	US \$ Million
Insurance Cost - % of EPC Cost	1.35%	9.7200	US \$ Million
Working Capital Amount - Local		4.3063	US\$ Million
Thermal efficiency, LHV Net at Site on Coal		34.75%	
Plant Factor		60.00%	

<u>Upfront Tariff - Working Capital Requirement</u>		
Total Net Capacity	540.00	MW
Hours per Day	24	Hours
Thermal Efficiency	34.75%	
Coal Calorific Value - LHV	11,023.00	
Coal Price per M. Ton - HHV	5,016.00	
Fuel Cost Component	4.4693	Rs./kWh
Fuel Inventory		
Days	15	
Load	100%	
Daily Production	12,960,000	
Coal Price for 15 days Inventory	868,831,304	PKR
GST	17%	
Fuel Price Incl. GST - Rs	1,016,532,626	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	10,886,400	
Fuel Cost Receivable for 30 days	1,459,636,591	
GST	17%	
Fuel Price Incl. GST - Rs	1,707,774,812	
Total Working Capital Requirement	2,724,307,438	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	378,951,165	
Annual Off Take @ 100%	4,730,400,000	
Working Capital Component	0.0801	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	600.000 MWs
Project Capacity Net	540.000 MWs
Total Project Cost	935.723 US\$ Million
Equity Investment	233.931 US\$ Million
Equity %	25.00%
XIRR	20.00%
ROE	25.80%
Construction Starts	30-Jun-11
Commissioning Date	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(46.79)		
31-Dec-12	(2.00)		(46.79)		
31-Dec-13	(1.00)		(58.48)		
31-Dec-14	0.00		(81.88)		
31-Dec-15	1	233.931	60.354	5,311.16	1.1228
31-Dec-16	2	233.931	60.354	5,311.16	1.1228
31-Dec-17	3	233.931	60.354	5,311.16	1.1228
31-Dec-18	4	233.931	60.354	5,311.16	1.1228
31-Dec-19	5	233.931	60.354	5,311.16	1.1228
31-Dec-20	6	233.931	60.354	5,311.16	1.1228
31-Dec-21	7	233.931	60.354	5,311.16	1.1228
31-Dec-22	8	233.931	60.354	5,311.16	1.1228
31-Dec-23	9	233.931	60.354	5,311.16	1.1228
31-Dec-24	10	233.931	60.354	5,311.16	1.1228
31-Dec-25	11	233.931	60.354	5,311.16	1.1228
31-Dec-26	12	233.931	60.354	5,311.16	1.1228
31-Dec-27	13	233.931	60.354	5,311.16	1.1228
31-Dec-28	14	233.931	60.354	5,311.16	1.1228
31-Dec-29	15	233.931	60.354	5,311.16	1.1228
31-Dec-30	16	233.931	60.354	5,311.16	1.1228
31-Dec-31	17	233.931	60.354	5,311.16	1.1228
31-Dec-32	18	233.931	60.354	5,311.16	1.1228
31-Dec-33	19	233.931	60.354	5,311.16	1.1228
31-Dec-34	20	233.931	60.354	5,311.16	1.1228
31-Dec-35	21	233.931	60.354	5,311.16	1.1228
31-Dec-36	22	233.931	60.354	5,311.16	1.1228
31-Dec-37	23	233.931	60.354	5,311.16	1.1228
31-Dec-38	24	233.931	60.354	5,311.16	1.1228
31-Dec-39	25	233.931	60.354	5,311.16	1.1228
31-Dec-40	26	233.931	60.354	5,311.16	1.1228
31-Dec-41	27	233.931	60.354	5,311.16	1.1228
31-Dec-42	28	233.931	60.354	5,311.16	1.1228
31-Dec-43	29	233.931	60.354	5,311.16	1.1228
31-Dec-44	30	233.931	60.354	5,311.16	1.1228

20.00%

Upfront Tariff - IDC Calculation Local Coal

	Debt Amount	701.800	US\$ Million
KIBOR	0.45%		
Spread over KIBOR	4.50%		
Total Interest Rate	4.95%		
	Construction	Debt	
Year	Period	Principal	IDC
1st Year	2nd Year	3rd Year	4th Year
Opening Balance	-	143.86	294.92
1st Half	10.00%	10%	10%
Principal Amount	70.18	70.18	105.27
Financing Fee 6%	42.11	-	0.00
Interest	0.87	4.43	8.17
Closing Balance	71.05	218.46	373.27
			607.76
Opening Balance	71.05	218.46	373.27
2nd Half	10.00%	10.00%	15.00%
Principal Amount	70.18	70.18	105.27
Interest	2.63	6.28	10.54
Closing Balance	143.86	294.92	489.08
Total Debt Incl. IDC			701.80
			63.09
			42.11

Upfront Tariff - Debt Servicing on Foreign Financing

Net Capacity 540.00 MWs
 Total Project Cost 935.723 US\$ Million
 LIBOR 0.45%
 Spread over LIBOR 4.50%
 Total Interest Rate 4.95%
 Debt 75.00% 701.79 US\$ Million

Debt Repayment Profile (Annuity Based)

Period	Principal Million \$	Principal Repayme nt Million \$	Interest Million \$	Balaance Million \$	Debt Service Million \$	Principal Rep'ment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h	Debt	Interest
1	701.792	\$27.54	17.3694	\$674.25	\$44.91				1.0374	0.6336
2	674.250	\$28.22	16.6877	\$646.03	\$44.91	1.0374	0.6336	1.6710	1.0894	0.5816
3	646.026	\$28.92	15.9891	\$617.10	\$44.91				1.1440	0.5270
4	617.103	\$29.64	15.2733	\$587.46	\$44.91	1.0894	0.5816	1.6710	1.2013	0.4697
5	587.465	\$30.37	14.5398	\$557.09	\$44.91				1.2615	0.4095
6	557.093	\$31.12	13.7880	\$525.97	\$44.91	1.1440	0.5270	1.6710	1.3248	0.3462
7	525.969	\$31.89	13.0177	\$494.08	\$44.91				1.3911	0.2798
8	494.075	\$32.68	12.2284	\$461.39	\$44.91	1.2013	0.4697	1.6710	1.4609	0.2101
9	461.392	\$33.49	11.4194	\$427.90	\$44.91				1.5341	0.1369
10	427.900	\$34.32	10.5905	\$393.58	\$44.91	1.2615	0.4095	1.6710	1.6109	0.0600
11	393.578	\$35.17	9.7411	\$358.41	\$44.91					
12	358.408	\$36.04	8.8706	\$322.37	\$44.91	1.3248	0.3462	1.6710		
13	322.367	\$36.93	7.9786	\$285.43	\$44.91					
14	285.434	\$37.85	7.0645	\$247.59	\$44.91	1.3911	0.2798	1.6710		
15	247.586	\$38.78	6.1278	\$208.80	\$44.91					
16	208.802	\$39.74	5.1679	\$169.06	\$44.91	1.4609	0.2101	1.6710		
17	169.059	\$40.73	4.1842	\$128.33	\$44.91					
18	128.331	\$41.74	3.1762	\$86.60	\$44.91	1.5341	0.1369	1.6710		
19	86.595	\$42.77	2.1432	\$43.83	\$44.91					
20	43.827	\$43.83	1.0847	\$0.00	\$44.91	1.6109	0.0600	1.6710		

Upfront Tariff for Local Coal based Power Projects for upto 1000 MW on Foreign Financing

Annex -

Upfront Tariff for Local Coal based Power Projects for upto 1000 MW on Foreign Financing												Annex - I				
Year	Energy Purchase Price (Rs./kWh)				Capacity Purchase Price (PKR/kW/Hour)							Capacity Charge@ 60%	Total Tariff	Total Tariff		
	Fuel	Var. O&M	Total	EPP	Fixed O&M	Cost of W/C	Insurance	ROE	Witholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP				
1	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.0807	0.6600	3.5515	5.9191	10.2874	11.6902
2	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.1348	0.6058	3.5515	5.9191	10.2874	11.6902
3	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.1917	0.5489	3.5515	5.9191	10.2874	11.6902
4	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.2514	0.4892	3.5515	5.9191	10.2874	11.6902
5	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.3141	0.4265	3.5515	5.9191	10.2874	11.6902
6	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.3800	0.3607	3.5515	5.9191	10.2874	11.6902
7	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.4491	0.2915	3.5515	5.9191	10.2874	11.6902
8	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.5217	0.2189	3.5515	5.9191	10.2874	11.6902
9	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.5980	0.1426	3.5515	5.9191	10.2874	11.6902
10	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.6781	0.0626	3.5515	5.9191	10.2874	11.6902
11	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
12	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
13	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
14	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
15	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
16	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
17	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
18	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
19	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
20	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
21	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
22	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
23	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
24	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
25	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
26	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
27	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
28	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
29	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936
30	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000	1.8109	3.0181	7.3864	8.3936

Average

1-10	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	1.3599	0.3807
11-30	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.0000	0.0000
1-30	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.4533	0.1269
Levelized												
1-30	4.1975	0.1025	0.0683	4.3683	0.1450	0.1450	0.0752	0.1884	1.1696	0.0877	0.8532	0.2813
											2.9454	4.9090
											9.2773	10.5424

Upfront Tariff - Local Coal 1000 MW

Assumptions for the Plant

Interest Rate % per annum - LIBOR	0.45%
Spread Over and above LIBOR	4.50%
Total Interest Rate	4.95%
Withholding Tax on Dividends	7.50%
Discount Rate	10%
Coal Delivered Price	57.00 US\$/M.Ton
Coal Price	5,016.00 per Ton
Calorific Value	5,000.00 Btu/lb
Conversion Factor BTUs/KGs	2.2046
Reference Calorific Value LHV	11,023.00 Btu/KGs
HHV-LHV Factor	1.055
Reference Calorific Value LHV	11,023.00 KGs
Project Life	30.00 Years

Capital Structure:

Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%

Equity Draw down

1st Year of Construction Period	20%
2nd Year of Construction Period	20%
3rd Year of Construction Period	25%
4th Year of Construction Period	35%

ASSUMPTIONS - Local Coal

Basis for Tariff		Coal
Gross Capacity (ISO)		1,000.000 MWs
Auxiliary Load	10.00%	100.000 MWs
Net Capacity at Site conditions	90.00%	900.000 MWs
Annual Net Generation at 100%		7,884.00 GWh
Project Development Costs		
EPC Cost		1,250.000 Million US \$
	Total EPC Cost	1,250.000 Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	54.375 Million US \$
Non EPC Construction Cost - % of EPC	11.00%	137.500 Million US \$
CAPEX		1,441.875 Million US \$
Financial Charges		
Financing Fees & Charges		73.104 Million US \$
Interest During Construction		109.540 Million US \$
	Sub total	182.644 Million US \$
Total Project Cost		1,624.519 Million US \$
Cost per MW - Gross		1.625 US \$
Exchange Rate per US \$		88.00 Rs.
Financing Plan		
Debt	75%	1,218.389 Million US \$
Equity	25%	406.130 Million US \$
Construction Period		48 Months
Grace Period - Years		48 Months
Loan Repayment Period - Years		10
IRR on equity		20.00%
Variable O & M - Local	40.00%	6.1200 US \$ Million
Variable O & M - Foreign	60.00%	9.1800 US \$ Million
	Total Variable O&M	15.3000 US \$ Million
Fixed O & M Amount - Foreign	50.00%	12.9900 US \$ Million
Fixed O & M Amount - Local	50.00%	12.9900 US \$ Million
	Total Fixed O&M Amount	25.9800 US \$ Million
Insurance Cost - % of EPC Cost	1.35%	16.8750 US \$ Million
Working Capital Amount - Local		6.7407 US\$ Million
Thermal efficiency, LHV Net at Site on Coal		37.00%
Plant Factor		60.00%

<u>Upfront Tariff - Working Capital Requirement</u>		
Total Net Capacity	900.00	MW
Hours per Day	24	Hours
Thermal Efficiency	37.00%	
Coal Calorific Value - LHV	11,023.00	
Coal Price per M. Ton - HHV	5,016.00	
Fuel Cost Component	4.1975	Rs./kWh
Fuel Inventory		
Days	15	
Load	100%	
Daily Production	21,600,000	
Coal Price for 15 days Inventory	1,359,994,947	PKR
GST	17%	
Fuel Price Incl. GST - Rs	1,591,194,088	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	18,144,000	
Fuel Cost Receivable for 30 days	2,284,791,511	
GST	17%	
Fuel Price Incl. GST - Rs	2,673,206,068	
Total Working Capital Requirement	4,264,400,156	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	593,178,062	
Annual Off Take @ 100%	7,884,000,000	
Working Capital Component	0.0752	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	1000.000 MWs
Project Capacity Net	900.000 MWs
Total Project Cost	1624.519 US\$ Million
Equity Investment	406.130 US\$ Million
Equity %	25.00%
XIRR	20.00%
ROE	25.80%
Construction Starts	30-Jun-11
Commissioning Date	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(81.23)		
31-Dec-12	(2.00)		(81.23)		
31-Dec-13	(1.00)		(101.53)		
31-Dec-14	0.00		(142.15)		
31-Dec-15	1	406.130	104.781	9,220.77	1.1696
31-Dec-16	2	406.130	104.781	9,220.77	1.1696
31-Dec-17	3	406.130	104.781	9,220.77	1.1696
31-Dec-18	4	406.130	104.781	9,220.77	1.1696
31-Dec-19	5	406.130	104.781	9,220.77	1.1696
31-Dec-20	6	406.130	104.781	9,220.77	1.1696
31-Dec-21	7	406.130	104.781	9,220.77	1.1696
31-Dec-22	8	406.130	104.781	9,220.77	1.1696
31-Dec-23	9	406.130	104.781	9,220.77	1.1696
31-Dec-24	10	406.130	104.781	9,220.77	1.1696
31-Dec-25	11	406.130	104.781	9,220.77	1.1696
31-Dec-26	12	406.130	104.781	9,220.77	1.1696
31-Dec-27	13	406.130	104.781	9,220.77	1.1696
31-Dec-28	14	406.130	104.781	9,220.77	1.1696
31-Dec-29	15	406.130	104.781	9,220.77	1.1696
31-Dec-30	16	406.130	104.781	9,220.77	1.1696
31-Dec-31	17	406.130	104.781	9,220.77	1.1696
31-Dec-32	18	406.130	104.781	9,220.77	1.1696
31-Dec-33	19	406.130	104.781	9,220.77	1.1696
31-Dec-34	20	406.130	104.781	9,220.77	1.1696
31-Dec-35	21	406.130	104.781	9,220.77	1.1696
31-Dec-36	22	406.130	104.781	9,220.77	1.1696
31-Dec-37	23	406.130	104.781	9,220.77	1.1696
31-Dec-38	24	406.130	104.781	9,220.77	1.1696
31-Dec-39	25	406.130	104.781	9,220.77	1.1696
31-Dec-40	26	406.130	104.781	9,220.77	1.1696
31-Dec-41	27	406.130	104.781	9,220.77	1.1696
31-Dec-42	28	406.130	104.781	9,220.77	1.1696
31-Dec-43	29	406.130	104.781	9,220.77	1.1696
31-Dec-44	30	406.130	104.781	9,220.77	1.1696

20.00%

Upfront Tariff - IDC Calculation Local Coal

Debt Amount	1,218.400	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	
Total Interest Rate	4.95%	

Year	Construction			Debt	IDC	Fin. Chrg.
	1st Year	2nd Year	3rd Year	4th Year		
Opening Balance	-	249.75	512.01	849.09		
1st Half	10.00%	10%	10%	15%		
Principal Amount	121.84	121.84	121.84	182.76	548.28	
Financing Fee 6%	73.10	-	0.00	0.00		73.10
Interest	1.51	7.69	14.18	23.28		46.65
Closing Balance	123.35	379.28	648.03	1,055.13		
Opening Balance	123.35	379.28	648.03	1,055.13		
2nd Half	10.00%	10.00%	15.00%	20.00%		
Principal Amount	121.84	121.84	182.76	243.68	670.12	
Interest	4.56	10.89	18.30	29.13		62.89
Closing Balance	249.75	512.01	849.09	1,327.94		
Total Debt Incl. IDC				1218.40	109.54	73.10

Upfront Tariff - Debt Servicing on Foreign Financing

Net Capacity	900.00	MWs
Total Project Cost	1441.875	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	
Total Interest Rate	4.95%	
Debt	75.00%	1218.39 US\$ Million

Debt Repayment Profile (Annuity Based)

Period	Principal Million \$	Principal Repayme nt Million \$	Interest Million \$	Balance Million \$	Debt Service Million \$	Principal Rep'ment Rs./kWh	Interest Rs./kWh	Debt Servicing Rs./kWh
1	1218.389	\$47.82	30.1551	\$1,170.57	\$77.97	1.0807	0.6600	1.7406
2	1170.572	\$49.00	28.9717	\$1,121.57	\$77.97	1.0807	0.6600	1.0807
3	1121.572	\$50.21	27.7589	\$1,071.36	\$77.97			1.1348
4	1071.360	\$51.46	26.5161	\$1,019.90	\$77.97	1.1348	0.6058	1.7406
5	1019.904	\$52.73	25.2426	\$967.17	\$77.97			1.1917
6	967.175	\$54.03	23.9376	\$913.14	\$77.97	1.1917	0.5489	1.2514
7	913.141	\$55.37	22.6002	\$857.77	\$77.97			0.4892
8	857.769	\$56.74	21.2298	\$801.03	\$77.97	1.2514	0.4892	1.3141
9	801.027	\$58.15	19.8254	\$742.88	\$77.97			0.4265
10	742.881	\$59.59	18.3863	\$683.30	\$77.97	1.3141	0.4265	1.5980
11	683.296	\$61.06	16.9116	\$622.24	\$77.97			0.3607
12	622.236	\$62.57	15.4003	\$559.66	\$77.97	1.3800	0.3607	1.7406
13	559.664	\$64.12	13.8517	\$495.54	\$77.97			1.6781
14	495.544	\$65.71	12.2647	\$429.84	\$77.97	1.4491	0.2915	1.7406
15	429.837	\$67.33	10.6385	\$362.50	\$77.97			
16	362.504	\$69.00	8.9720	\$293.50	\$77.97	1.5217	0.2189	1.7406
17	293.504	\$70.71	7.2642	\$222.80	\$77.97			
18	222.797	\$72.46	5.5142	\$150.34	\$77.97	1.5980	0.1426	1.7406
19	150.339	\$74.25	3.7209	\$76.09	\$77.97			
20	76.089	\$76.09	1.8832	\$0.00	\$77.97	1.6781	0.0626	1.7406

Debt

Interest

Debt

Upfront Tariff for Imported Coal based Power Projects for upto 200 MW on Foreign Financinco

Annex - J

Capacity Purchase Price (PKR/KWH)

Upfront Tariff for Imported Coal based Power Projects for upto 200 MW on Foreign Financing												Annex - J				
Year	Energy Purchase Price (Rs./kWh)				Capacity Purchase Price (PKR/kWh/Hour)								Capacity Charge@ 60% Total Tariff	Total Tariff Rs./kWh	Cents/kWh	
	Fuel Var.	O&M	Total	EPP	Fixed O&M	Local	Cost of W/C	Insurance	ROE	Witholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP			
1	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.0134	0.6189	3.1884	5.3140	9.2081	10.4638
2	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.0642	0.5681	3.1884	5.3140	9.2081	10.4638
3	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.1175	0.5148	3.1884	5.3140	9.2081	10.4638
4	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.1735	0.4588	3.1884	5.3140	9.2081	10.4638
5	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.2323	0.4000	3.1884	5.3140	9.2081	10.4638
6	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.2941	0.3382	3.1884	5.3140	9.2081	10.4638
7	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.3589	0.2734	3.1884	5.3140	9.2081	10.4638
8	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.4270	0.2053	3.1884	5.3140	9.2081	10.4638
9	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.4985	0.1338	3.1884	5.3140	9.2081	10.4638
10	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.5736	0.0587	3.1884	5.3140	9.2081	10.4638
11	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.6430	0.0000	3.1884	5.3140	9.2081	10.4638
12	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.7134	0.0000	3.1884	5.3140	9.2081	10.4638
13	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.7838	0.0000	3.1884	5.3140	9.2081	10.4638
14	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.8542	0.0000	3.1884	5.3140	9.2081	10.4638
15	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.9246	0.0000	3.1884	5.3140	9.2081	10.4638
16	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	1.9950	0.0000	3.1884	5.3140	9.2081	10.4638
17	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.0654	0.0000	3.1884	5.3140	9.2081	10.4638
18	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.1358	0.0000	3.1884	5.3140	9.2081	10.4638
19	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.2062	0.0000	3.1884	5.3140	9.2081	10.4638
20	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.2766	0.0000	3.1884	5.3140	9.2081	10.4638
21	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.3470	0.0000	3.1884	5.3140	9.2081	10.4638
22	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.4174	0.0000	3.1884	5.3140	9.2081	10.4638
23	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.4878	0.0000	3.1884	5.3140	9.2081	10.4638
24	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.5582	0.0000	3.1884	5.3140	9.2081	10.4638
25	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.6286	0.0000	3.1884	5.3140	9.2081	10.4638
26	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.6990	0.0000	3.1884	5.3140	9.2081	10.4638
27	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.7694	0.0000	3.1884	5.3140	9.2081	10.4638
28	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.8398	0.0000	3.1884	5.3140	9.2081	10.4638
29	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.9102	0.0000	3.1884	5.3140	9.2081	10.4638
30	3.7379	0.0938	0.0625	3.8941	0.1575	0.1575	0.1420	0.1778	0.8570	0.0643	2.9806	0.0000	3.1884	5.3140	9.2081	10.4638

Average

Levelized Tariff = 8.2609 Rs./kWh

9.3874 US Cents/kWh

Upfront Tariff - Imported Coal 200 MW

Assumptions for the Plant

Interest Rate % per annum - LIBOR	0.45%
Spread Over and above LIBOR	4.50%
Total Interest Rate	4.95%
Withholding Tax on Dividends	7.50%
Discount Rate	10%
Coal Delivered Price	88.35 US\$/M.Ton
Freight Charges	12.00 US\$/M.Ton
Total Coal Price	100.35 US\$/M.Ton
Coal Price - HHV	8,830.80 per Ton
Calorific Value	10,450.00 Btu/lb
Conversion Factor BTUs/KGs	2.2046
Reference Calorific Value LHV	23,038.07 Btu/KGs
HHV-LHV Factor	1.055
Reference Calorific Value LHV	23,038.07 KGs
Project Life	30.00 Years

Capital Structure:

Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%

Equity Draw down

1st Year of Construction Period	25%
2nd Year of Construction Period	25%
3rd Year of Construction Period	30%
Last 4 Months of Construction	20%

ASSUMPTIONS - Imported Coal

Basis for Tariff		Coal	
Gross Capacity (ISO)		200.000	MWs
Auxiliary Load	10.00%	20.000	MWs
Net Capacity at Site conditions	90.00%	180.000	MWs
Annual Net Generation at 100%		1,576.80	GWh
Project Development Costs			
EPC Cost		236.000	Million US \$
	Total EPC Cost	236.000	Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	10.266	Million US \$
Non EPC Construction Cost - % of EPC	11.00%	25.960	Million US \$
CAPEX		272.226	Million US \$
Financial Charges			
Financing Fees & Charges		13.710	Million US \$
Interest During Construction		18.744	Million US \$
	Sub total	32.454	Million US \$
Total Project Cost		304.680	Million US \$
Cost per MW - Gross		1.523	US \$
Exchange Rate per US \$		88.00	Rs.
Financing Plan			
Debt	75%	228.510	Million US \$
Equity	25%	76.170	Million US \$
Construction Period		40	Months
Grace Period - Years		40	Months
Loan Repayment Period - Years		10	
IRR on equity		17.00%	
Variable O & M - Local	40.00%	1.1200	US \$ Million
Variable O & M - Foreign	60.00%	1.6800	US \$ Million
	Total Variable O&M	2.8000	US \$ Million
Fixed O & M Amount - Foreign	50.00%	2.8225	US \$ Million
Fixed O & M Amount - Local	50.00%	2.8225	US \$ Million
	Total Fixed O&M Amount	5.6450	US \$ Million
Insurance Cost - % of EPC Cost	1.35%	3.1860	US \$ Million
Working Capital Amount - Local		2.5443	US\$ Million
Thermal efficiency, LHV Net at Site on Coal		35.00%	
Plant Factor		60.00%	

<u>Upfront Tariff - Working Capital Requirement</u>		
Total Net Capacity	180.00	MW
Hours per Day	24	Hours
Thermal Efficiency	35.00%	
Coal Calorific Value - LHV	23,038.07	
Coal Price per M. Ton - HHV	8,830.80	
Fuel Cost Component	3.7379	Rs./kWh
Fuel Inventory		
Days	60	
Load	100%	
Daily Production	4,320,000	
Coal Price for 15 days Inventory	968,851,457	PKR
GST	17%	
Fuel Price Incl. GST - Rs	1,133,556,204	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	3,628,800	
Fuel Cost Receivable for 30 days	406,917,612	
GST	17%	
Fuel Price Incl. GST - Rs	476,093,606	
Total Working Capital Requirement	1,609,649,810	PKR
Base Interest Rate - KIBOR	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	223,902,289	
Annual Off Take @ 100%	1,576,800,000	
Working Capital Component	0.1420	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	200.000 MWs
Project Capacity Net	180.000 MWs
Total Project Cost	304.680 US\$ Million
Equity Investment	76.170 US\$ Million
Equity %	25.00%
XIRR	17.00%
ROE	20.16%
Construction Start	30-Jun-11
Commissioning Date	31-Oct-14

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(19.04)		
31-Dec-12	(2.00)		(19.04)		
31-Dec-13	(1.00)		(22.85)		
31-Aug-14	0.00		(15.23)		
30-Apr-15	1	76.170	15.356	1,351.32	0.8570
30-Apr-16	2	76.170	15.356	1,351.32	0.8570
30-Apr-17	3	76.170	15.356	1,351.32	0.8570
30-Apr-18	4	76.170	15.356	1,351.32	0.8570
30-Apr-19	5	76.170	15.356	1,351.32	0.8570
30-Apr-20	6	76.170	15.356	1,351.32	0.8570
30-Apr-21	7	76.170	15.356	1,351.32	0.8570
30-Apr-22	8	76.170	15.356	1,351.32	0.8570
30-Apr-23	9	76.170	15.356	1,351.32	0.8570
30-Apr-24	10	76.170	15.356	1,351.32	0.8570
30-Apr-25	11	76.170	15.356	1,351.32	0.8570
30-Apr-26	12	76.170	15.356	1,351.32	0.8570
30-Apr-27	13	76.170	15.356	1,351.32	0.8570
30-Apr-28	14	76.170	15.356	1,351.32	0.8570
30-Apr-29	15	76.170	15.356	1,351.32	0.8570
30-Apr-30	16	76.170	15.356	1,351.32	0.8570
30-Apr-31	17	76.170	15.356	1,351.32	0.8570
30-Apr-32	18	76.170	15.356	1,351.32	0.8570
30-Apr-33	19	76.170	15.356	1,351.32	0.8570
30-Apr-34	20	76.170	15.356	1,351.32	0.8570
30-Apr-35	21	76.170	15.356	1,351.32	0.8570
30-Apr-36	22	76.170	15.356	1,351.32	0.8570
30-Apr-37	23	76.170	15.356	1,351.32	0.8570
30-Apr-38	24	76.170	15.356	1,351.32	0.8570
30-Apr-39	25	76.170	15.356	1,351.32	0.8570
30-Apr-40	26	76.170	15.356	1,351.32	0.8570
30-Apr-41	27	76.170	15.356	1,351.32	0.8570
30-Apr-42	28	76.170	15.356	1,351.32	0.8570
30-Apr-43	29	76.170	15.356	1,351.32	0.8570
30-Apr-44	30	76.170	15.356	1,351.32	0.8570

17.00%

Upfront Tariff - IDC Calculation Imported Coal

Debt Amount	228.500	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	
Total Interest Rate	4.95%	228.5103

Year	Construction			Debt	IDC	Fin. Chrg.
	1st Year	2nd Year	3rd Year			
Opening Balance	-	58.69	120.04	196.31		
1st Half						
Principal Amount	15.00%	10%	15%	20%		
Financing Fee 6%	34.28	22.85	34.28	45.70	137.10	13.71
Interest	13.71	-	0.00	0.00		
Closing Balance	0.42	1.74	3.40	5.24	10.79	
	34.70	83.28	157.71	247.24		
Opening Balance	34.70	83.28	157.71			
2nd Half						
Principal Amount	10.00%	15.00%	15.00%			
Interest	22.85	34.28	34.28	91.40		
Closing Balance	1.14	2.49	4.33	7.95		
Total Debt Incl. IDC	58.69	120.04	196.31	228.50	18.74	13.71

Upfront Tariff - Debt Servicing on Foreign Financing

Net Capacity	180.00	MW/s
Total Project Cost	304.680	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	

Total Interest Rate 4.95%

US\$

Debt 75.00% 228.51

Million

Debt Repayment Profile (Annuity Based)

Period	Principal Million \$	Principal Repayment Million \$	Interest Million \$	Balaance Million \$	Debt Service Million \$	Principal Repayment Rs./kWh	Interest Rs./kWh	Debt Servicing Rs./kWh
1	228.510	\$8.97	5.6556	\$219.54	\$14.62	1.0134	0.6189	1.6323
2	219.542	\$9.19	5.4337	\$210.35	\$14.62	1.0134	0.6189	1.0134
3	210.352	\$9.42	5.2062	\$200.93	\$14.62			1.0642
4	200.935	\$9.65	4.9731	\$191.28	\$14.62	1.0642	0.5681	0.5681
5	191.284	\$9.89	4.7343	\$181.39	\$14.62			1.1175
6	181.395	\$10.13	4.4895	\$171.26	\$14.62	1.1175	0.5148	1.6323
7	171.261	\$10.38	4.2387	\$160.88	\$14.62			1.2941
8	160.876	\$10.64	3.9817	\$150.23	\$14.62	1.1735	0.4588	0.3382
9	150.234	\$10.91	3.7183	\$139.33	\$14.62			1.3589
10	139.328	\$11.18	3.4484	\$128.15	\$14.62	1.2323	0.4000	1.2323
11	128.153	\$11.45	3.1718	\$116.70	\$14.62			0.4000
12	116.701	\$11.74	2.8884	\$104.97	\$14.62	1.2941	0.3382	1.6323
13	104.966	\$12.03	2.5979	\$92.94	\$14.62			1.4270
14	92.940	\$12.32	2.3003	\$80.62	\$14.62	1.3589	0.2734	1.4985
15	80.616	\$12.63	1.9953	\$67.99	\$14.62			0.1338
16	67.988	\$12.94	1.6827	\$55.05	\$14.62	1.4270	0.2053	1.6323
17	55.047	\$13.26	1.3624	\$41.79	\$14.62			0.5148
18	41.786	\$13.59	1.0342	\$28.20	\$14.62	1.4985	0.1338	1.6323
19	28.196	\$13.93	0.6979	\$14.27	\$14.62			
20	14.270	\$14.27	0.3532	\$0.00	\$14.62	1.5736	0.0587	1.6323

Upfront Tariff for Imported Coal based Power Projects for upto 600 MW on Foreign Financing

Annex - K

Year	Energy Purchase Price (Rs./kWh)				Capacity Purchase Price (PKR/kWh/hour)								Capacity Charge@ 60%	
	Fuel Var.	O&M	Total	Fixed O&M	Cost of WIC	Insurance	ROE	Witholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP		Total Tariff	Total Tariff
Component	Foreign	Local	EPP	Local	Foreign								Rs. /kWh	Cents/kWh
1	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.9683	0.5913	3.0933	5.1556
2	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.0163	0.5423	3.0933	5.1556
3	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.0677	0.4919	3.0933	5.1556
4	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.1212	0.4383	3.0933	5.1556
5	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.1774	0.3822	3.0933	5.1556
6	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.2364	0.3232	3.0933	5.1556
7	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.2984	0.2612	3.0933	5.1556
8	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.3635	0.1961	3.0933	5.1556
9	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.4318	0.1273	3.0933	5.1556
10	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.5035	0.0560	3.0933	5.1556
11	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
12	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
13	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
14	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
15	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
16	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
17	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
18	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
19	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
20	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
21	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
22	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
23	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
24	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
25	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
26	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
27	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
28	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
29	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
30	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
Average														
1-10	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	1.2185	0.3411	3.0933	5.1556
11-30	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562
Levelized														
1-30	3.6340	0.0931	0.0621	3.7892	0.1500	0.1500	0.1381	0.1688	0.8623	0.0647	0.0000	0.0000	1.5337	2.5562

Levelized Tariff = 8.0397 Rs./kWh

9.1360 US Cents/kWh

Levelized Tariff = 8.0397 Rs./kWh

9.1360 US Cents/kWh

Upfront Tariff - Imported Coal 600 MW

Assumptions for the Plant

Interest Rate % per annum - LIBOR	0.45%
Spread Over and above LIBOR	4.50%
Total Interest Rate	4.95%
Withholding Tax on Dividends	7.50%
Discount Rate	10%
Coal Delivered Price	88.35 US\$/M.Ton
Freight Charges	12.00 US\$/M.Ton
Total Coal Price	100.35 US\$/M.Ton
Coal Price	8,830.80 per Ton
Calorific Value	10,450.00 Btu/lb
Conversion Factor BTUs/KGs	2.2046
Reference Calorific Value LHV	23,038.07 Btu/KGs
HHV-LHV Factor	1.055
Reference Calorific Value LHV	23,038.07 KGs
Project Life	30.00 Years

Capital Structure:

Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%

Equity Draw down

1st Year of Construction Period	20%
2nd Year of Construction Period	20%
3rd Year of Construction Period	25%
4th Year of Construction Period	35%

ASSUMPTIONS - Imported Coal

		<u>Coal</u>
Basis for Tariff		
Gross Capacity (ISO)		600.000 MWs
Auxiliary Load	10.00%	60.000 MWs
Net Capacity at Site conditions	90.00%	540.000 MWs
Annual Net Generation at 100%		4,730.40 GWh
Project Development Costs		
EPC Cost		672.000 Million US \$
Total EPC Cost		672.000 Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	29.232 Million US \$
Non EPC Construction Cost - % of EPC	11.00%	73.920 Million US \$
CAPEX		775.152 Million US \$
Financial Charges		
Financing Fees & Charges		39.300 Million US \$
Interest During Construction		58.887 Million US \$
	Sub total	98.187 Million US \$
Total Project Cost		873.339 Million US \$
Cost per MW - Gross		1.456 US \$
Exchange Rate per US \$		88.00 Rs.
Financing Plan		
Debt	75%	655.005 Million US \$
Equity	25%	218.335 Million US \$
Construction Period		48 Months
Grace Period - Years		48 Months
Loan Repayment Period - Years		10
IRR on equity		17.00%
Variable O & M - Local	40.00%	3.3360 US \$ Million
Variable O & M - Foreign	60.00%	5.0040 US \$ Million
	Total Variable O&M	8.3400 US \$ Million
Fixed O & M Amount - Foreign	50.00%	8.0620 US \$ Million
Fixed O & M Amount - Local	50.00%	8.0620 US \$ Million
	Total Fixed O&M Amount	16.1240 US \$ Million
Insurance Cost - % of EPC Cost	1.35%	9.0720 US \$ Million
Working Capital Amount - Local		7.4210 US\$ Million
Thermal efficiency, LHV Net at Site on Coal		36.00%
Plant Factor		60.00%

<u>Upfront Tariff - Working Capital Requirement</u>		
Total Net Capacity	540.00	MW
Hours per Day	24	Hours
Thermal Efficiency	36.00%	
Coal Calorific Value - LHV	23,038.07	
Coal Price per M. Ton - HHV	8,830.80	
Fuel Cost Component	3.6340	Rs./kWh
Fuel Inventory		
Days	60	
Load	100%	
Daily Production	12,960,000	
Coal Price for 15 days Inventory	2,825,816,749	PKR
GST	17%	
Fuel Price Incl. GST - Rs	3,306,205,596	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	10,886,400	
Fuel Cost Receivable for 30 days	1,186,843,034	
GST	17%	
Fuel Price Incl. GST - Rs	1,388,606,350	
Total Working Capital Requirement	4,694,811,946	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	653,048,342	
Annual Off Take @ 100%	4,730,400,000	
Working Capital Component	0.1381	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	600.000 MWs
Project Capacity Net	540.000 MWs
Total Project Cost	873.339 US\$ Million
Equity Investment	218.335 US\$ Million
Equity %	25.00%
XIRR	17.00%
ROE	21.23%
Construction Start	30-Jun-11
Commissioning Date	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(43.67)		
31-Dec-12	(2.00)		(43.67)		
31-Dec-13	(1.00)		(54.58)		
31-Dec-14	0.00		(76.42)		
31-Dec-15	1	218.335	46.352	4,079.02	0.8623
31-Dec-16	2	218.335	46.352	4,079.02	0.8623
31-Dec-17	3	218.335	46.352	4,079.02	0.8623
31-Dec-18	4	218.335	46.352	4,079.02	0.8623
31-Dec-19	5	218.335	46.352	4,079.02	0.8623
31-Dec-20	6	218.335	46.352	4,079.02	0.8623
31-Dec-21	7	218.335	46.352	4,079.02	0.8623
31-Dec-22	8	218.335	46.352	4,079.02	0.8623
31-Dec-23	9	218.335	46.352	4,079.02	0.8623
31-Dec-24	10	218.335	46.352	4,079.02	0.8623
31-Dec-25	11	218.335	46.352	4,079.02	0.8623
31-Dec-26	12	218.335	46.352	4,079.02	0.8623
31-Dec-27	13	218.335	46.352	4,079.02	0.8623
31-Dec-28	14	218.335	46.352	4,079.02	0.8623
31-Dec-29	15	218.335	46.352	4,079.02	0.8623
31-Dec-30	16	218.335	46.352	4,079.02	0.8623
31-Dec-31	17	218.335	46.352	4,079.02	0.8623
31-Dec-32	18	218.335	46.352	4,079.02	0.8623
31-Dec-33	19	218.335	46.352	4,079.02	0.8623
31-Dec-34	20	218.335	46.352	4,079.02	0.8623
31-Dec-35	21	218.335	46.352	4,079.02	0.8623
31-Dec-36	22	218.335	46.352	4,079.02	0.8623
31-Dec-37	23	218.335	46.352	4,079.02	0.8623
31-Dec-38	24	218.335	46.352	4,079.02	0.8623
31-Dec-39	25	218.335	46.352	4,079.02	0.8623
30-Dec-40	26	218.335	46.352	4,079.02	0.8623
31-Dec-41	27	218.335	46.352	4,079.02	0.8623
31-Dec-42	28	218.335	46.352	4,079.02	0.8623
31-Dec-43	29	218.335	46.352	4,079.02	0.8623
31-Dec-44	30	218.335	46.352	4,079.02	0.8623

17.00%

Upfront Tariff - IDC Calculation Imported Coal

Debt Amount	655.000	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	
Total Interest Rate	4.95%	655.0046

Year	Construction Period			Debt	IDC	Fin. Chrg.
	1st Year	2nd Year	3rd Year	4th Year		
Opening Balance	-	134.26	275.25	456.46		
1st Half	10.00%	10%	10%	15%		
Principal Amount	65.50	65.50	65.50	98.25	294.75	
Financing Fee 6%	39.30	-	0.00	0.00		39.30
Interest	0.81	4.13	7.62	12.51		25.08
Closing Balance	66.31	203.90	348.38	567.23		
Opening Balance	66.31	203.90	348.38	567.23		
2nd Half	10.00%	10.00%	15.00%	20.00%		
Principal Amount	65.50	65.50	98.25	131.00	360.25	
Interest	2.45	5.86	9.84	15.66		33.81
Closing Balance	134.26	275.25	456.46	713.89		
Total Debt Incl. IDC				655.00	58.89	39.30

Upfront Tariff - Debt Servicing on Foreign Financing

Net Capacity	540.00	MWs
Total Project Cost	873.339	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	

Total Interest Rate
4.95%

Period	Debt Repayment Profile (Annuity Based)						Debt Interest Rs./kWh	Debt Interest Rs./kWh
	Principal Million \$	Principal Repayme nt Million \$	Interest Million \$	Balance Million \$	Debt Service Million \$	Principal Rep'ment Rs./kWh		
1	655.005	\$25.71	16.2114	\$629.30	\$41.92	0.9683	0.5913	1.5596
2	629.298	\$26.34	15.5751	\$602.96	\$41.92	0.9683	0.5913	1.5596
3	602.956	\$26.99	14.9232	\$575.96	\$41.92	1.0168	0.5428	1.5596
4	575.962	\$27.66	14.2551	\$548.30	\$41.92	1.0168	0.5428	1.5596
5	548.299	\$28.35	13.5704	\$519.95	\$41.92	1.0677	0.4919	1.5596
6	519.952	\$29.05	12.8688	\$490.90	\$41.92	1.0677	0.4919	1.5596
7	490.903	\$29.77	12.1499	\$461.14	\$41.92	1.1212	0.4383	1.5596
8	461.136	\$30.50	11.4131	\$430.63	\$41.92	1.1212	0.4383	1.5596
9	430.631	\$31.26	10.6581	\$399.37	\$41.92	1.1774	0.3822	1.5596
10	399.372	\$32.03	9.8845	\$367.34	\$41.92	1.1774	0.3822	1.5596
11	367.339	\$32.83	9.0916	\$334.51	\$41.92	1.2364	0.3232	1.5596
12	334.513	\$33.64	8.2792	\$300.87	\$41.92	1.2364	0.3232	1.5596
13	300.875	\$34.47	7.4467	\$266.40	\$41.92	1.2984	0.2612	1.5596
14	266.404	\$35.32	6.5935	\$231.08	\$41.92	1.2984	0.2612	1.5596
15	231.080	\$36.20	5.7192	\$194.88	\$41.92	1.3635	0.1961	1.5596
16	194.882	\$37.09	4.8233	\$157.79	\$41.92	1.3635	0.1961	1.5596
17	157.788	\$38.01	3.9052	\$119.78	\$41.92	1.4318	0.1278	1.5596
18	119.775	\$38.95	2.9644	\$80.82	\$41.92	1.4318	0.1278	1.5596
19	80.822	\$39.92	2.0004	\$40.91	\$41.92	1.5035	0.0560	1.5596
20	40.905	\$40.91	1.0124	\$0.00	\$41.92	1.5035	0.0560	1.5596

Upfront Tariff for Imported Coal based Power Projects for upto 1000 MW on Foreign Financing

Annex - L

Year	Energy Purchase Price (Rs./kWh)				Capacity Purchase Price (PKR/kW/Hour)						Capacity Charge@ 60% Rs./kWh	Total Tariff Tariff Cents/kWh				
	Fuel	Var. O&M	Total		Fixed O&M	Cost of W/C	Insurance	ROE	Withholding Tax@7.5	Debt Repayment	Interest Charges	Total CPP				
1	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.0028	0.6124	3.1493	5.2488	8.8010	10.0011
2	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.0531	0.5622	3.1493	5.2488	8.8010	10.0011
3	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.1059	0.5094	3.1493	5.2488	8.8010	10.0011
4	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.1613	0.4540	3.1493	5.2488	8.8010	10.0011
5	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.2195	0.3958	3.1493	5.2488	8.8010	10.0011
6	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.2806	0.3347	3.1493	5.2488	8.8010	10.0011
7	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.3448	0.2705	3.1493	5.2488	8.8010	10.0011
8	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.4122	0.2031	3.1493	5.2488	8.8010	10.0011
9	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.4829	0.1324	3.1493	5.2488	8.8010	10.0011
10	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.5572	0.0580	3.1493	5.2488	8.8010	10.0011
11	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
12	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
13	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
14	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
15	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
16	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
17	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
18	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
19	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
20	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
21	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
22	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
23	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
24	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
25	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
26	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
27	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
28	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
29	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
30	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
Average																
1-10	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	1.2620	0.3533	3.1493	5.2488	8.8010	10.0011
11-30	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.0000	0.0000	1.5340	2.5566	6.1088	6.9418
Levelized																
1-30	3.3980	0.0925	0.0617	3.5522	0.1350	0.1350	0.1291	0.1748	0.8931	0.0670	0.4207	0.1178	2.0724	3.4540	7.0062	7.9616

Levelized Tariff = 7.8636 Rs./kWh

8.9359 US Cents/kWh

Upfront Tariff - Imported Coal 1000 MW

Assumptions for the Plant

Interest Rate % per annum - LIBOR	0.45%
Spread Over and above LIBOR	4.50%
Total Interest Rate	4.95%
Withholding Tax on Dividends	7.50%
Discount Rate	10%
Coal Delivered Price	88.35 US\$/M.Ton
Freight Charges	12.00 US\$/M.Ton
Total Coal Price	100.35 US\$/M.Ton
Coal Price	8,830.80 per Ton
Calorific Value	10,450.00 Btu/lb
Conversion Factor BTUs/KGs	2.2046
Reference Calorific Value LHV	23,038.07 Btu/KGs
HHV-LHV Factor	1.055
Reference Calorific Value LHV	23,038.07 KGs
Project Life	30.00 Years
Capital Structure:	
Debt % of Total Project Cost	75%
Equity % of Total Project Cost	25%
Equity Draw down	
1st Year of Construction Period	20%
2nd Year of Construction Period	20%
3rd Year of Construction Period	25%
4th Year of Construction Period	35%

ASSUMPTIONS - Imported Coal

		<u>Coal</u>
Basis for Tariff		
Gross Capacity (ISO)		1,000.000 MWs
Auxiliary Load	10.00%	100.000 MWs
Net Capacity at Site conditions	90.00%	900.000 MWs
Annual Net Generation at 100%		7,884.00 GWh
Project Development Costs		
EPC Cost		1,160.000 Million US \$
	Total EPC Cost	1,160.000 Million US \$
Customs Duty & Cess at 75% of EPC Cost	5.8%	50.460 Million US \$
Non EPC Construction Cost - % of EPC	11.00%	127.600 Million US \$
CAPEX		1,338.060 Million US \$
Financial Charges		
Financing Fees & Charges		67.840 Million US \$
Interest During Construction		101.651 Million US \$
	Sub total	169.491 Million US \$
Total Project Cost		<u>1,507.551</u> Million US \$
Cost per MW - Gross		1.508 US \$
Exchange Rate per US \$		88.00 Rs.
Financing Plan		
Debt	75%	1,130.663 Million US \$
Equity	25%	376.888 Million US \$
Construction Period		48 Months
Grace Period - Years		48 Months
Loan Repayment Period - Years		10
IRR on equity		17.00%
	Variable O & M - Local	40.00%
	Variable O & M - Foreign	60.00%
	Total Variable O&M	13.8100 US \$ Million
Fixed O & M Amount - Foreign	50.00%	12.0950 US \$ Million
Fixed O & M Amount - Local	50.00%	12.0950 US \$ Million
	Total Fixed O&M Amount	24.1900 US \$ Million
Insurance Cost - % of EPC Cost	1.35%	15.6600 US \$ Million
Working Capital Amount - Local		11.5652 US\$ Million
Thermal efficiency, LHV Net at Site on Coal		38.50%
Plant Factor		60.00%

Upfront Tariff - Working Capital Requirement

Total Net Capacity	900.00	MW
Hours per Day	24	Hours
Thermal Efficiency	38.50%	
Coal Calorific Value - LHV	23,038.07	
Coal Price per M. Ton - HHV	8,830.80	
Fuel Cost Component	3.3980	Rs./kWh
Fuel Inventory		
Days	60	
Load	100%	
Daily Production	21,600,000	
Coal Price for 15 days Inventory	4,403,870,258	PKR
GST	17%	
Fuel Price Incl. GST - Rs	5,152,528,202	
Coal Cost Component Receivables		
Days	30	
Load	84%	
Daily Production	18,144,000	
Fuel Cost Receivable for 30 days	1,849,625,508	
GST	17%	
Fuel Price Incl. GST - Rs	2,164,061,845	
Total Working Capital Requirement	7,316,590,046	PKR
Base Interest Rate	11.91%	
Spread	2.00%	
Total Interest Rate	13.91%	
Cost of Working Capital	1,017,737,675	
Annual Off Take @ 100%	7,884,000,000	
Working Capital Component	0.1291	Rs./kW/h

Upfront Tariff - Return on Equity

Project Capacity Gross	1000.000 MWs
Project Capacity Net	900.000 MWs
Total Project Cost	1507.551 US\$ Million
Equity Investment	376.888 US\$ Million
Equity %	25.00%
XIRR	17.00%
ROE	21.23%
Construction Starts	30-Jun-11
Commissioning Date	1-Jul-15

Date of Investment	Year	Equity Million \$	Return Million \$	Return on Equity Million Rs.	Return kW/h
31-Dec-11	(3.00)		(75.38)		
31-Dec-12	(2.00)		(75.38)		
31-Dec-13	(1.00)		(94.22)		
31-Dec-14	0.00		(131.91)		
31-Dec-15	1	376.888	80.013	7,041.17	0.8931
31-Dec-16	2	376.888	80.013	7,041.17	0.8931
31-Dec-17	3	376.888	80.013	7,041.17	0.8931
31-Dec-18	4	376.888	80.013	7,041.17	0.8931
31-Dec-19	5	376.888	80.013	7,041.17	0.8931
31-Dec-20	6	376.888	80.013	7,041.17	0.8931
31-Dec-21	7	376.888	80.013	7,041.17	0.8931
31-Dec-22	8	376.888	80.013	7,041.17	0.8931
31-Dec-23	9	376.888	80.013	7,041.17	0.8931
31-Dec-24	10	376.888	80.013	7,041.17	0.8931
31-Dec-25	11	376.888	80.013	7,041.17	0.8931
31-Dec-26	12	376.888	80.013	7,041.17	0.8931
31-Dec-27	13	376.888	80.013	7,041.17	0.8931
31-Dec-28	14	376.888	80.013	7,041.17	0.8931
31-Dec-29	15	376.888	80.013	7,041.17	0.8931
31-Dec-30	16	376.888	80.013	7,041.17	0.8931
31-Dec-31	17	376.888	80.013	7,041.17	0.8931
31-Dec-32	18	376.888	80.013	7,041.17	0.8931
31-Dec-33	19	376.888	80.013	7,041.17	0.8931
31-Dec-34	20	376.888	80.013	7,041.17	0.8931
31-Dec-35	21	376.888	80.013	7,041.17	0.8931
31-Dec-36	22	376.888	80.013	7,041.17	0.8931
31-Dec-37	23	376.888	80.013	7,041.17	0.8931
31-Dec-38	24	376.888	80.013	7,041.17	0.8931
31-Dec-39	25	376.888	80.013	7,041.17	0.8931
31-Dec-40	26	376.888	80.013	7,041.17	0.8931
31-Dec-41	27	376.888	80.013	7,041.17	0.8931
31-Dec-42	28	376.888	80.013	7,041.17	0.8931
31-Dec-43	29	376.888	80.013	7,041.17	0.8931
31-Dec-44	30	376.888	80.013	7,041.17	0.8931

17.00%

Upfront Tariff - IDC Calculation Imported Coal

Debt Amount 1,130.660 US\$ Million
 LIBOR 0.45%
 Spread over LIBOR 4.50%
 Total Interest Rate 4.95%

		Construction			Debt	IDC	Fin. Chrg.
Year		1st Year	2nd Year	3rd Year	4th Year		
Opening Balance	-	231.76	475.14	787.95			
1st Half		10.00%	10%	10%	15%		
Principal Amount	113.07	113.07	113.07	169.60	508.80		
Financing Fee 6%	67.84	-	0.00	0.00			67.84
Interest	1.40	7.14	13.16	21.60			43.29
Closing Balance	114.47	351.96	601.37	979.15			
Opening Balance	114.47	351.96	601.37	979.15			
2nd Half							
Principal Amount	10.00%	10.00%	15.00%	20.00%			
Interest	4.23	10.11	16.98	27.03			58.36
Closing Balance	231.76	475.14	787.95	1,232.31			
Total Debt Incl. IDC					1130.66	101.65	67.84

Upfront Tariff - Debt Servicing on Foreign Financing

Net Capacity	900.00	MWs
Total Project Cost	1507.551	US\$ Million
LIBOR	0.45%	
Spread over LIBOR	4.50%	
Total Interest Rate	4.95%	
Debt	75.00%	
	1130.66	US\$ Million

Debt Repayment Profile (Annuity Based)

Period	Principal Million \$	Principal Repayme nt Million \$	Interest Million \$	Balaance Million \$	Debt Service Million \$	Principal Rep'ment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h	Debt Interest
1	1130.663	\$44.37	27.9839	\$1,086.29	\$72.36				
2	1086.289	\$45.47	26.8857	\$1,040.82	\$72.36	1.0028	0.6124	1.6153	1.0028 0.6124
3	1040.818	\$46.60	25.7602	\$994.22	\$72.36				1.0531 0.5622
4	994.220	\$47.75	24.6069	\$946.47	\$72.36	1.0531	0.5622	1.6153	1.1059 0.5094
5	946.469	\$48.93	23.4251	\$897.54	\$72.36				1.1613 0.4540
6	897.537	\$50.14	22.2140	\$847.39	\$72.36	1.1059	0.5094	1.6153	1.2195 0.3958
7	847.393	\$51.38	20.9730	\$796.01	\$72.36				1.2806 0.3347
8	796.009	\$52.66	19.7012	\$743.35	\$72.36	1.1613	0.4540	1.6153	1.3448 0.2705
9	743.352	\$53.96	18.3980	\$689.39	\$72.36				1.4122 0.2031
10	689.393	\$55.30	17.0625	\$634.10	\$72.36	1.2195	0.3958	1.6153	1.4829 0.1324
11	634.097	\$56.66	15.6939	\$577.43	\$72.36				1.5572 0.0580
12	577.434	\$58.07	14.2915	\$519.37	\$72.36	1.2806	0.3347	1.6153	
13	519.368	\$59.50	12.8543	\$459.86	\$72.36				
14	459.864	\$60.98	11.3816	\$398.89	\$72.36	1.3448	0.2705	1.6153	
15	398.888	\$62.49	9.8725	\$336.40	\$72.36				
16	336.403	\$64.03	8.3260	\$272.37	\$72.36	1.4122	0.2031	1.6153	
17	272.372	\$65.62	6.7412	\$206.76	\$72.36				
18	206.755	\$67.24	5.1172	\$139.51	\$72.36	1.4829	0.1324	1.6153	
19	139.515	\$68.90	3.4530	\$70.61	\$72.36				
20	70.610	\$70.61	1.7476	\$0.00	\$72.36	1.5572	0.0580	1.6153	