PETITION FOR TARIFF DETERMINATION

1320 MW COAL FIRED POWER PLANT AT JAMSHORO

JAMSHORO POWER COMPANY LIMITED (GENCO-I)

SEPTEMBER, 2014

FINANCIAL ADVISORS

GRANT THORNTON CONSULTING (PVT) LIMITED
Financial Advisors & Management Consultants

TECHNICAL ADVISORS

ÉLAN PARTNERS (PVT) LIMITED
Energy, Environment & Economics Solutions

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Particulars of Petitioner

COMPANY PARTICULARS	
Name of Company	Jamshoro Power Company Limited
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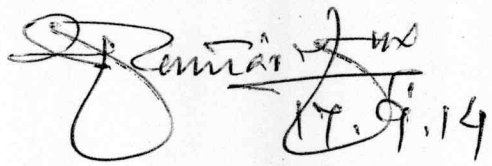
REPRESENTATIVES OF COMPANY	
Chief Executive Officer	Mr Iftikhar Aziz
Finance Director	Mr Shamsul Arfin

PROJECT TEAM	
Financial Advisors	Grant Thornton Consulting (Pvt) Limited
Technical Advisors	Élan Partners (Pvt) Limited



1 PROJECT BACKGROUND AND RATIONALE

1.1 Pakistan is facing chronic power shortages across industrial, commercial and residential sectors, which severely hampers the economic growth of the country. The growing dependence on the expensive imported furnace oil for power generation has added to the difficulties to consumers' at large in meeting their electricity expenditure on the one hand, and resulting in the ever increasing circular debt on the other hand. Resource constraint has heavily hindered investment in the power generation sector, which has consequently led to widespread periods of load shedding and power interruption, specifically for industrial and commercial activities, resulting in lost productivity and public discontent. The country has an urgent requirement to generate additional power at affordable price to feed into the national grid.

1.2 The current gap in the supply and demand of electricity in the country requires immediate addition of base load shoulder and peak load generation in the system, prioritized for affordable base load generation. The energy sector is currently experiencing an acute and worsening energy crises, which has a devastating effect on the economy, as well as, the well-being of the population of the country. In the summers of 2012, this gap in supply and demand was recorded at 6,600 MW, representing 35% of the electricity demand of the country at the time. The demand and supply of the country over the period 2009 – 2013, along with details on the electricity surplus / deficit and the percentage thereof relative to demand has been tabulated below for reference.

Financial Year	Generation	Demand	Surplus / (Deficit)	% of Demand
2009	13,637 MW	17,852 MW	(4,215) MW	23.61%
2010	12,751 MW	18,467 MW	(5,716) MW	30.95%
2011	13,193 MW	18,521 MW	(5,328) MW	28.77%
2012	12,320 MW	18,940 MW	(6,620 MW	34.95%
2013	13,577 MW	18,827 MW	(5,250) MW	27.89%

Source – NEPRA State of Industry Report 2012

1.3 In addition to increasing the generation capacity, it is equally imperative to reduce costs of generation, for which the government is already pursuing various fuel sources such as solar, wind, hydropower etc. However, the long gestation period and cyclicality of generation in the case of hydropower, combined with costly technology and insufficient base load for sustained generation in the case of solar and wind energy, does not allow for these sources to be a viable alternative source of fuel. In this scenario, and the fact that gas supply in Pakistan is diminishing on an exponential scale, coal as a source of electricity generation remains the only low cost solution for sustained economic growth of the country in the

medium to long term timeframe. Electricity generation by fuel source has been tabulated below for reference.

S No	Source of Fuel	Generation (GWh)	Percentage Share
1	Hydro	28,047	30.72%
2	Coal	66	0.07%
3	High Speed Diesel (HSD)	1,854	2.03%
4	Residual Fuel Oil (RFO)	31,869	34.91%
5	Natural Gas	23,931	26.21%
6	Nuclear	4,675	5.12%
7	Mixed / Hybrid	585	0.64%
8	Imported from Iran	259	0.28%
9	Wind	8	0.01%
	Total	**91,294**	**100.00%**

Source – NEPRA Determination Order for IESCO dated June 2013

1.4 In line with the NTDC Generation Expansion Plan 2013 and the National Energy (Power) Policy approved by Council of Common Interest in August 2013, Government of Pakistan (GoP) through Ministry of Water and Power aims to increase the share of coal based power projects, for which it approached the Planning Commission with concept papers for approval of various coal based power projects. Some of the projects under consideration includes establishment of 6,600 MW Gadani Power Park, and conversion of the existing power plants located in Jamshoro and Muzaffargarh to coal based generation.

1.5 Another one of these projects proposed by Ministry of Water and Power is the establishment of 2x660 MW supercritical coal fired units using blends of sub-bituminous coal and domestic lignite (the **"Project"**) at Jamshoro, Pakistan, near Kotri Barrage, enabling supply of more than 20% of the current power shortfall of the country. The Project shall be sponsored and executed by GENCO Holding Company Limited (GHCL), whereas the implementing agency shall be Jamshoro Power Company Limited (hereinafter referred to as the **"Company"** or **"Petitioner"** or **"JPCL"**), a limited company incorporated under the laws of Pakistan, which shall also be responsible for operations & maintenance of the Project.

1.6 The main objective for the establishment of the Project is provision of adequate facilities for generation of electricity to meet the current and future requirements for the domestic, industrial and agricultural sectors in order to support the overall economic development of the country. The two units combined are expected to be the first of the new coal fired power plants to be commissioned and shall be able to contribute a gross generating capacity of 1,320 MW, which is equivalent to 20% of the current electricity shortfall, at an approximate fuel cost of 20% and 30% relative to costs of HSD and RFO, respectively.

1.7 The Feasibility Study for this Project has been completed by US Power Consult LLC as of September, 2013, and the PC-I has also been compiled and approved by ECNEC. 30% of the Project shall be financed through equity injected by GoP through GENCO I, whereas the remaining amount is to be secured through debt financing. To this effect, a significant portion of the required debt financing has already been arranged through a mix of financing facilities of Asian Development Bank (ADB) and Islamic Development Bank (IDB), whereas the remaining amount shall be arranged through commercial debt arrangements. As a condition precedent for the financing arrangements of ADB and IDB, the Project Tariff needs to be awarded before initiating the process for EPC contracting.

How much remains

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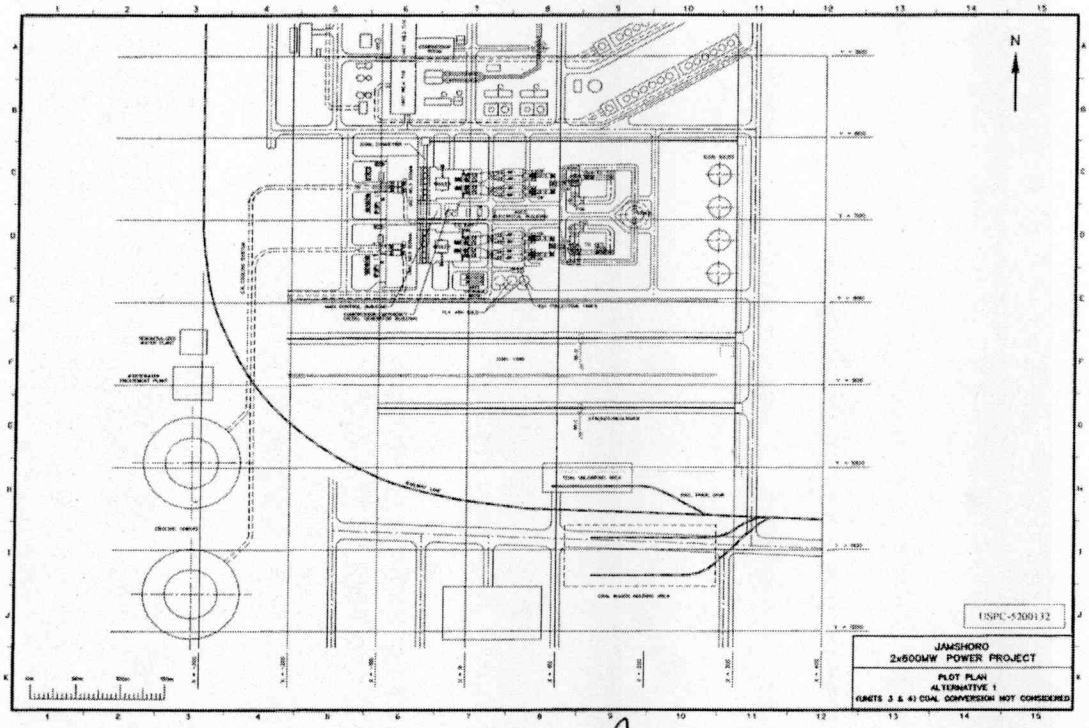
1.8 Under the Regulations of Generation, Transmission and Distribution of Electric Power Act (Act No XL) of 1997 (the **"NEPRA Act"**), the Authority is mandated to determine the tariffs and other terms and conditions for the supply of electricity through generation, transmission and distribution. Consequently, JPCL is required to file a petition for determination of tariff for the Project (the **"Petition"**) before National Electric Power Regulatory Authority (the **"Authority"** or **"NEPRA"**) pursuant to Rule 3 of the NEPRA (Tariff Standards and Procedure) Rules 1998.

2 PROJECT PROFILE

2.1 The Project Site is located approximately 20 KM northwest of Hyderabad, and about 150 KM northeast of Karachi. The Indus River is located approximately 3.5 KM east of the Project Site. Currently, there are four units having total generation capacity of 880 MW operating at the Project Site, where Unit 1, commissioned in 1990, initially rated at an output of 250 MW and is based on RFO as a source of fuel, and Unit 2 to 4, commissioned in 1989 to 1991 respectively, were initially rated at an output of 220 MW each and are based on both Gas and RFO as sources of fuel. Today, the effective rating of these units has been reduced to 710 MW due to aging factors and delays in Major Overhauls due to non-availability of shut down time to meet country's demand.

2.2 The two supercritical coal fired units proposed to be established under the Project – Unit 5 and Unit 6 – shall be erected south of the existing Unit 4, on an arrangement similar to that of the existing units, i.e. the components will be placed from west to east including electrical transformers, turbine hall, boilers, ESPs, FGDs, and stack. The coal receiving and storage yard will be located to the south of the new generation units, whereas the 100 acres land of ash pond is located to the northwest corner, adjacent to the power station. The proposed plant layout has been enclosed below for reference.



2.3 The Project is proposed to be fuelled through a blended mix of lignite procured from Thar Coalfields and sub-bituminous coal to be imported from a suitable source, on a 20:80 ratio respectively. Coal shall be delivered to the site primarily through the use of railroad cars, however provisions are made to receive, unload and store coal through the use of trucks also. The railroad trains will have five or six locomotives and fifty cars of 50 tonnes capacity each. Six to seven daily trains of 2,500 tonnes each will be delivered to the site for unloading, and the unloading system will deliver coal to the storage yard. If required, the unloading system has the option to deliver the coal directly to the boiler after appropriate crushing, tramp iron removal, weighing and analysis. However, railway track data is to be investigated if coal wagon capacity larger than 50 tonnes can be applied to reduce the train schedule.

2.4 Sub-bituminous coal will be imported and unloaded mainly at Port Qasim. In order to be able to unload a ship within a maximum of 3 days (after which the demurrage fees rise significantly in cost), the port must have adequate facilities and space for unloading and storage of the entire contents of the shipment. Whereas, lignite procured from Thar will be transported by trucks from the mine to the power station, with distance from the mine to the project site measuring at approximately 150 KM.

2.5 The Project shall be initially utilize imported sub-bituminous coal till such time that extraction of lignite from Thar commences and is available for commercial use. **Consequently, tariff computation in this petition has been based solely on sub-bituminous coal.** However, it is requested to the Authority that adjustments in thermal efficiency and fuel price resulting from use of blended coal be allowed, as and when the utilization of blended coal commences. Assuming the parameters tabulated below, each unit shall require an input of 1.883 Mtpa in the case of blended coal usage, and 1.718 Mtpa in the case of 100% sub-bituminous coal utilization.

Coal Parameters	
Unit Gross Capacity	660 MW
Auxiliary Load	8.12%
Availability Factor	85.00%
Calorific Value of Sub-Bituminous Coal (LHV)	5,670 kCal / Kg
Calorific Value of Lignite Coal (LHV)	3,553 kCal / Kg
Gross Thermal Efficiency (Sub-Bituminous Coal)	43.40%
Gross Thermal Efficiency (Blended Coal)	42.80%
Conversion Factor – Btu per kWh	3,412 Btu / kWh
Conversion Factor – Btu per kCal	3.97 Btu / kCal
Annual Coal Consumption per Unit (Sub-Bituminous Coal)	1.718 Mtpa
Annual Coal Consumption per Unit (Blended Coal)	1.883 Mtpa

2.6 In order to finalize coal supply arrangements, the Company has initiated the process of procurement of sub-bituminous coal through flotation of tenders in the international market, and the Company shall enter into long term Coal Supply Agreement (CSA) with a single or multiple parties as appropriate to ensure uninterrupted coal supply.

2.7 The Project has an estimated construction time of 48 months, subsequent to commencement of construction. The estimated life of Project is 30 Years. Project Schedules have been briefly tabulated overleaf.

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Project Schedules	
Commencement of Project	01 April 2013
Period to Financial Close	02 Years
Commencement of Construction	01 April 2015
Construction Period	04 Years
Commencement of Operations	01 April 2019
Operational Period	30 Years

3 PROJECT COST

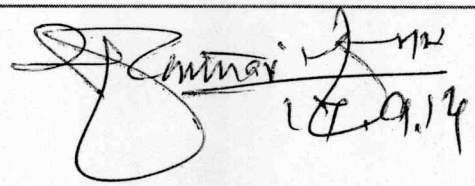
3.1 The Project has been estimated to be established at a total cost of USD 1.637 Billion, or the equivalent PKR 161.523 Billion, assuming an exchange rate of PKR 98.64 per USD. On a gross per MW basis, the cost is equal to USD 1.241 Million per MW. For the purposes of the tariff petition, the Company has, at this stage, relied upon the detailed costs provided in the PC-I Study, duly rationalized and subsequently approved by ECNEC, which, in turn, has been based on the Feasibility Study prepared by US Power Consult LLC. The total cost components of the Project have been tabulated as follows.

Project Cost	USD	PKR
EPC Cost	1,215,686,765	119,915,342,488
Non EPC Cost	165,423,723	16,317,396,048
Development Cost	30,390,736	2,997,742,192
Taxes and Duties	64,940,190	6,405,700,342
Insurance During Construction	9,880,509	974,613,365
Financing Fees and Charges	18,753,605	1,849,855,580
Interest During Construction	132,422,321	13,062,137,755
Project Cost	**1,637,497,848**	**161,522,787,770**

3.2 The EPC Cost has been further divided into three components – (a) Offshore EPC Cost, which includes foreign cost components of Site Preparation & Engineering, Handling of Fuel Ash & Water, and the lump sum amount for Supercritical Boiler, Coal Fired Steam Power Plant, Unit Transformer, Auxiliary Transformer, other MV / LV Transformers & Equipment, AC / DC System, Control Equipment & System, Demi Water Treatment Plant, Emission Control Panel and Spare Parts etc. which have been combined under the head of Thermal Power Station; (b) Onshore EPC Cost, which includes local cost components of Land for Power Station & Colony, Site Preparation & Engineering, Handling of Fuel Ash & Water, and Thermal Power Station; and (c) Freight & Transportation.

3.3 On the basis of a finalized EPC arrangement, the Company would be able to provide firm EPC costs as quoted from the EPC Contract, and based thereon, shall request Authority to adjust the tariff ruling accordingly.

EPC Cost	USD	PKR
Offshore EPC Cost	1,086,364,900	107,159,033,736
Onshore EPC Cost	100,829,278	9,945,800,000
Freight & Transportation	28,492,587	2,810,508,752
EPC Cost	**1,215,686,765**	**119,915,342,488**



Offshore EPC Cost	USD	PKR
Site Preparation & Engineering	4,028,400	397,361,376
Handling of Fuel, Ash & Water	132,393,400	13,059,284,976
Thermal Power Station	949,943,100	93,702,387,384
Offshore EPC Cost	**1,086,364,900**	**107,159,033,736**

Onshore EPC Cost	USD	PKR
Land for Power Station & Colony	2,139,092	211,000,000
Site Preparation & Engineering	4,409,976	435,000,000
Handling of Fuel, Ash & Water	18,182,279	1,793,500,000
Thermal Power Station	76,097,932	7,506,300,000
Onshore EPC Cost	**100,829,278**	**9,945,800,000**

3.4 Non EPC Costs account for a total of USD 0.165 Billion or 10.10% of Project Cost. This cost head broadly includes the costs of (a) Civil Works & Structure which has been provided to cover the costs of machine hall, buildings, foundations, and structure for equipment, boilers, steam turbine generators, ancillary equipment, water treatment plant, and cable tranches inclusive of cooling water system etc.; (b) Residential Buildings covering the costs of construction for offices, guest house, staff housing, hostels, mosque etc.; (c) Vehicles to provide for costs of passenger cars, jeeps, vans, pickups, coasters, and fire fighting vehicles etc.; and (d) overall erection charges.

3.5 It is requested to the Authority, that a provision for adjustment in the tariff ruling be granted on account of firm costs incurred, or expected to be incurred, based on finalized EPC contract arrangements.

Non EPC Cost	USD	PKR
Civil Works & Structure	74,218,978	7,320,960,000
Residential Buildings	12,216,139	1,205,000,000
Vehicles	606,245	59,800,000
Erection Charges	78,382,361	7,731,636,048
Non EPC Cost	**165,423,723**	**16,317,396,048**

3.6 Development Cost is estimated at USD 0.030 Billion to account for costs of (a) Engineering & Consultancy, which in turn are estimated at USD 0.018 Billion on the basis of quotations received by the Company in their process of finalizing the consultants for the task; (b) Training & Capacity Building to ensure that the staff of the Company is imparted adequate skills and knowledge for the operations of the plant; and (c) Administration & Management, which in turn accounts for the costs primarily related to the staff of the Company employed for the construction period of 48 months for administrative and supervisory responsibilities.

3.7 The Company is of the opinion that it shall have a more accurate representation of the scope of development, and the associated costs thereof, based on the finalized EPC arrangements, and requests the Authority for a provision of adjustment in the tariff ruling accordingly.

Development Cost	USD	PKR
Engineering & Consultancy	18,055,150	1,780,960,000
Training & Capacity Building	5,402,800	532,932,192
Administration & Management	6,932,786	683,850,000
Development Cost	**30,390,736**	**2,997,742,192**

3.8 It is requested to the Authority that all Taxes and Duties incurred by the Company as at the date of commercial operations commencement, on account of procurement of goods and services for the Project, be allowed as part of the Project Cost. However, for the purposes of the Petition, Taxes and Duties have been computed on imported equipment at the rate of 6% to cater for custom duties, surcharge etc.

Taxes and Duties	USD	PKR
Handling of Fuel, Ash & Water	7,943,604	783,557,099
Thermal Power Station	56,996,586	5,622,143,243
Taxes and Duties	**64,940,190**	**6,405,700,342**

3.9 Insurance During Construction has been computed as 1% of 70% of Capital Costs, including EPC Cost, Non EPC Cost and Development Cost, in line with the ruling of the Authority in the matter of Upfront Tariff for Coal Fired Power Projects. However, the same is requested to be allowed to be adjusted as per the actual costs incurred at the time of COD.

Insurance During Construction	USD	PKR
Insurance During Construction	9,880,509	974,613,365
Insurance During Construction	**9,880,509**	**974,613,365**

3.10 Financing Fees & Charges have been estimated based on costs expected to be incurred, and broadly includes costs associated with Arrangement Fee equal to 1% of debt, LC Charges equal to 0.15% per annum and a LC retirement cost of 0.10%, and Commitment Charges of 0.15% per annum applicable on the relevant debt financing facilities.

3.11 It is requested to the Authority that Financing Fees & Charges be adjusted on subsequent revision in accordance with the actual costs incurred.

Financing Fees and Charges	USD	PKR
Arrangement Fees	11,462,485	1,130,659,514
LC Charges	5,207,668	513,684,409
Commitment Charges	2,083,452	205,511,656
Financing Fees and Charges	**18,753,605**	**1,849,855,580**

3.12 Interest During Construction has been computed on the basis of cost drawdowns estimated in the feasibility study. It has been assumed that Debt and Equity injection shall be made on a pro rata basis. Similarly, debt injection shall be made proportional to the total share of each debt facility. Interest During Construction over a period of 48 months is thus estimated to be USD 0.132 Billion.

3.13 The Company requests the Authority that Interest During Construction be allowed as a pass through based on actual expenses incurred, and the actual drawdown schedule.

Interest During Construction	USD	PKR
Interest During Construction	132,422,321	13,062,137,755
Interest During Construction	**132,422,321**	**13,062,137,755**

4 FINANCING PLAN

4.1 The Project Cost of USD 1.637 Billion for the establishment of the 2x660 MW Coal Fired Power Project at Jamshoro has been financed through a mix of debt and equity financing in accordance with a Debt to Equity Ratio of 70:30.

Capital Structure		USD	PKR
Equity	30.00%	491,249,355	48,456,836,331
Debt	70.00%	1,146,248,494	113,065,951,439
Project Cost	**100.00%**	**1,637,497,849**	**161,522,787,770**

4.2 Equity for the Project shall be injected by the Government of Pakistan through the holding company, GENCO I, amounting to USD 0.491 Billion.

4.3 For the establishment of this Project, GoP has applied to Asian Development Bank (ADB) for two loans from ADB's Ordinary Capital Resources (OCR) and another from ADB's Special Funds (SF). GoP has also applied to Islamic Development Bank (IDB) for a loan of USD 0.220 Billion to finance part of the Project Cost. The arrangement for remaining debt financing to make up a total of 70% of the Project Cost is under process.

4.4 The first loan secured though ADB, namely OCR Loan 1, amounts to USD 0.840 Billion with a grace period of 5 years, biannual repayment period of 25 years, commitment charges of 0.15% per annum, and a financing rate of 6 Month LIBOR + 0.50% per annum. Similarly, the second loan secured through ADB, namely OCR Loan 2, amounts to USD 0.030 Billion with a grace period of 10 years, biannual repayment period of 10 years, commitment charges of 0.15% per annum, and a financing rate of 6 Month LIBOR + 0.40% per annum. Moreover, the third loan secured though ADB, namely SF Loan, in various currencies is equivalent to 19,380,000 Special Drawing Rights (SDR) which in turn is equal to USD 0.030 Billion assuming an exchange rate of USD 1.5425588 per SDR. The loan has a grace period of 5 years, biannual repayment period of 20 years, and a financing rate of 2.00% per annum.

4.5 As per the terms of the financing agreement with ADB for the three loans, GoP shall relend the proceeds of the (a) OCR Loan 1 on the basis of a 5 years grace period, 25 years biannual repayment period, commitment charges of 0.15% per annum, and a financing rate of 6 Month LIBOR + 4.50%; (b) OCR Loan 2 on the basis of a 10 years grace period, 10 years biannual repayment period, commitment charges of 0.15% per annum, and a financing rate of 15% per annum; and (c) SF Loan on the basis of a 5 years grace period, 20 years biannual repayment period, and a financing rate of 15% per annum.

4.6 Similarly, GoP secured financing of USD 0.220 Billion from Islamic Development Bank with a grace period of 4 years, biannual repayment period of 15 years, and a financing rate of 6 Month LIBOR + 1.15%. It is assumed that GoP shall relend the proceeds of the said loan over the same terms and conditions to the Project.

4.7 The remaining USD 0.026 Billion, to make up total debt as 70% of the Project Cost, is proposed to be arranged through financial institutions with a grace period of 4 years, biannual repayment period of 10 years, commitment charges of 0.15%, and a financing rate of 6 Month LIBOR + 4.50%. It is requested to the Authority that the resulting tariff be allowed to be adjusted on the basis of actual financing terms agreed at the time of financial close of the Project.

4.8 Details of debt financing for the Project, composing of various loan arrangements, have been tabulated below for reference. The following table consists of the financing terms secured by the Project (including the terms and conditions for relending by GoP).

Debt Financing		USD	PKR
ADB OCR Loan 1	73.28%	840,000,000	82,857,600,000
ADB OCR Loan 2	2.62%	30,000,000	2,959,200,000
ADB SF Loan	2.61%	29,894,790	2,948,822,040
IDB Loan	19.19%	220,000,000	21,700,800,000
Commercial Loan	2.30%	26,353,704	2,599,529,399
Total Debt	**100.00%**	**1,146,248,494**	**113,065,951,439**

Loan	Amount (USD)	Grace*	Tenor	Charges	Rate
ADB OCR Loan 1	840,000,000	5 Years	25 Years	0.15%	4.83%
ADB OCR Loan 2	30,000,000	10 Years	10 Years	0.15%	15.00%
ADB SF Loan	29,894,790	5 Years	20 Years	-	15.00%
IDB Loan	220,000,000	4 Years	15 Years	-	1.48%
Commercial Loan	26,353,704	4 Years	10 Years	0.15%	4.83%

** Grace Period for OCR Loan 1, OCR Loan 2, and ADB SF Loan assumed to commence from 2014, whereas the same for IDB Loan and Commercial assumed to commence from 2015, with COD assumed at April 01, 2019.*

5 PROJECT TARIFF

5.1 The Project Tariff has a typical two part structure with an Energy Purchase Price (EPP) for the energy actually dispatched based on the kWh offtake, and a Capacity Purchase Price Charge (CPP) based on the capacity available for dispatch.

5.2 The reference generation tariff table, annexed herein as Annexure A, is the result of a detailed techno financial analysis. The levelized tariff is based on a notional 85% plant factor as per the Authority's decision in the matter of Upfront Tariff for Coal Fired Power Projects dated June 26, 2014. The Project Tariff has been computed to be PKR 8.3132 per kWh or US¢ 8.4278 per kWh on the basis of general assumptions contained in Section 6 and elsewhere.

Project Tariff	Energy Charge PKR per kWh	Capacity Charge* PKR per kW per Month	Total Tariff PKR per kWh	Total Tariff US¢ per kWh
Year 1 – 30	5.1835	1,941.9695	3.1297	8.3132	8.4278

** Capacity Charge at 85% Plant Availability Factor*

5.3 The Energy Charge, based on the actual net electrical output measured on kWh, consists of variable cost components including Cost of Fuel, Cost of Ash Disposal, Cost of Limestone, Variable O&M – Foreign, and Variable O&M – Local. The individual cost components, levelized over a period of 30 years, have been detailed in the table below.

Energy Charge	Fuel	Ash Disposal	Limestone	Variable O&M Foreign	Variable O&M Local
		PKR per kWh			
5.1835	4.5045	0.2200	0.0900	0.3559	0.0130

5.4 Cost of Fuel for the Project has been computed based on the assumptions tabulated overleaf. The requirement for coal per annum has computed in line with the general practice of computing the annual energy produced from heating coal required in order to achieve the energy output of the plant based on the thermal efficiency of the same. The calorific value of the imported sub-bituminous coal, price of the imported sub-bituminous coal, thermal efficiency of the plant, and other plant parameters have all been based on the values contained in the PC-I Feasibility Study for the Project.

Fuel Cost Parameters	
Plant Capacity	1,320 MW
Plant Capacity / Availability Factor	85.00%
Annual Energy Output of Plant	9,030,627,936 kWh
Calorific Value of Sub-Bituminous Coal (LHV)	5,670 kCal / Kg
Price of Coal	USD 120.00 / Tonne
Exchange Rate	PKR 98.64 per USD
Gross Thermal Efficiency of Plant	43.40%
Conversion Factor – Btu per kWh	3,412.14 Btu / kWh
Conversion Factor – Btu per kCal	3.97 Btu / kCal
Heat Rate	7,862.08 Btu / kCal
Heat Value Required per Annum	77,274,158 MMBtu
Annual Coal Consumption	3.4366 Mtpa
Cost of Fuel	PKR 4.5045 / kWh

5.5 Cost of Ash Disposal, along with Cost of Limestone, has been discussed in the PC-I Feasibility Study of the Project, however have not been quantified in the same. For the purposes of the Petition, both these costs have been assumed in accordance with the Authority's decision in the matter of Upfront Tariff for Coal Fired Power Projects dated June 26, 2014. Consequently, based on the net energy output of the Project, and the costs of ash disposal and limestone at the indicated price of PKR 0.22 per kWh and PKR 0.09 per kWh respectively, these costs are respectively computed as USD 0.020 Billion per annum and USD 0.008 Billion per annum for the Project.

5.6 Variable O&M Costs have been assumed to include Spares & Maintenance, as indicated in the PC-I Feasibility Study, where the bifurcation into Foreign and Local has been undertaken on the basis of the foreign and local cost components provided therein.

Variable O&M Cost	USD	PKR	Foreign	Local
Year 1 to 10	33,760,000	3,330,086,400	33,760,000	-
Year 11 to 30	33,806,602	3,334,683,200	30,380,000	338,000,000

5.7 The Capacity Charge, based on the availability of the plant, consists of fixed cost components including Cost of Working Capital, Cost of Insurance, Return on Equity, Cost of Debt Servicing, Fixed O&M – Foreign, and Fixed O&M – Local. The sum of these components results in Capacity Charge at 100% Plant (Availability / Capacity) Factor, which in turn is tailored to 85% Plant Factor in accordance with the formula provided below.

$$\text{Capacity Charge}_{PF} = \frac{\text{Working Capital Cost} + \text{Insurance} + \text{ROE} + \text{Debt Servicing} + \text{Fixed O\&M}}{\text{Energy Output at 100\% Plant Factor} \times \text{Plant Factor}}$$

CC at 85% PF	CC at 100% PF	Insurance	Cost of WC	ROE	Debt Service	Fixed O&M	
						Foreign	Local
PKR per kWh			PKR per kW per Month				
3.1297	1,941.9695	66.9663	132.2175	905.6237	779.5368	24.8535	32.7717

5.8 In accordance with the Authority's decision in the matter of Upfront Tariff for Coal Fired Power Projects dated June 26, 2014, Working Capital equal to 01 Month of Fuel Charge receivables amount and cost of 03 Months of Coal Inventory shall be allowed to the Project, the cost of which has in turn be allowed to be secured through a short term debt facility for which financing rate has been assumed at 1 Month KIBOR + 2.00%. The Working Capital shall be adjusted subsequent to the introduction of blended coal for utilization in the Project on pro rata basis, where the local coal inventory shall be allowed for only 01 Month.

Working Capital Requirement	
Fuel Cost per kWh	PRK 4.5045 per kWh
Coal Inventory Requirement at 100% Output	PKR 11,800,489,643
Fuel Charge Receivables Requirement at 100% Output	PKR 3,933,496,549
Total Working Capital Requirement	PKR 15,733,986,198
Annual Cost of Working Capital	**PKR 1,924,266,512**

5.9 Operating Insurance, for the purposes of the petition has been worked out as 1.00% of 70% of Capital Costs including EPC Cost, Non EPC Cost, and Development Cost. This is in line with the Authority's decision in the matter of Upfront Tariff for Coal Fired Power Projects dated June 26, 2014. The resulting costs has been worked out as USD 9.880 Million, which shall be subject to adjustments on the basis of actual costs incurred.

5.10 The Return on Equity percentage has been assumed at 27.20% for imported coal fired power projects as per the Authority's decision in the matter of Upfront Tariff for Coal Fired Power Projects dated June 26, 2014. However, the Project envisages the use of blended coal by incorporating 20% of local (Thar) coal. It is requested to the Authority that the Return on Equity percentage allowed to the Project be adjusted accordingly to 27.66% (27.20% × 80% + 29.50% × 20%) so as to cater to the partial use of local coal, when applicable.

5.11 Debt Servicing Costs for the Project is driven from the various debt facilities arranged for the Project. A detailed debt servicing schedule has been annexed to the end of this document as Annexure B. Due to the difference in the terms of the various facilities secured, debt servicing costs, catering to both the principal repayments and interest charge, does not conform to the traditional cash flow stream, but rather varies in cost each year for up to 25 years. It is requested to the Authority that this be allowed as a pass through cost to the Project, subject indexations provided in Section 6.

5.12 Fixed O&M primarily caters to the Administrative Expenses of the Project, which in turn comprises of both foreign and local components. Since this is one of the first coal fired power plants to be operated in Pakistan, the top level management shall consist of expatriates having expertise of operating coal fired power plants. The dependence on foreign resources for the O&M of the Project shall reduce after a period of 10 years, through indigenization.

Fixed O&M Cost	USD	PKR	Foreign	Local
Year 1 to 10	8,500,527	838,492,000	4,050,000	439,000,000
Year 11 to 30	8,505,556	838,988,000	2,950,000	548,000,000

6 INDEXATIONS

6.1 The **Fuel Cost** Component (FCC) shall be adjusted in accordance with the price variation of the fuel consumed using international coal price indices for sub-bituminous coal. The coal freight and the coal premium / discount shall be charged at actual, but will be subject to the transparent tendering process with the coal suppliers. The FCC will be subject to foreign exchange adjustment, load correction, and heat rate degradation factor. When utilization of blended coal commences, the coal price of Thar Coal shall be subject to indexation based on the coal price quoted by Thar Coal & Energy Board. Transportation of coal shall be charged at actual.

6.2 The local components of **Fixed O&M** and **Variable O&M** shall both be quarterly indexed to the WPI (Manufacturing) as notified by the Pakistan Federal Bureau of Statistics, whereas the both the foreign components of the above shall be indexed to (a) the US CPI issued by the US Bureau of Labour Statistics, and (b) the USD / PKR exchange rate based on the revised TT & OD selling rate of USD as notified by the National Bank of Pakistan.

6.3 **Cost of Working Capital** component of the reference generation tariff shall be indexed to (a) change in FCC due to fuel price variations, and (b) the 1 Month KIBOR rate as notified by the State Bank of Pakistan.

6.4 The tariff component, **Return on Equity**, shall be quarterly indexed to the USD / PKR exchange rate based on the revised TT & OD selling rate of USD as notified by the National Bank of Pakistan.

6.5 The **Cost of Insurance** component of the reference generation tariff shall be quarterly indexed to the USD / PKR exchange rate based on the revised TT & OD selling rate of USD as notified by the National Bank of Pakistan, and the actual premium secured for each period.

6.6 The **Debt Servicing** cost component shall be adjusted in accordance with the applicable indexations of (a) USD / PKR exchange rate based on the revised TT & OD selling rate of USD as notified by the National Bank of Pakistan, and (b) the 6 Month LIBOR rate (or other benchmark as applicable).

7 GENERAL ASSUMPTIONS

In addition to the assumptions made in this document above, the following general assumptions have been taken into account for the computation of the Petitioner's generation tariff. Any changes in these assumptions shall result in a change to the tariff proposed in this document.

7.1 Annual Plant Availability has been assumed to be 85%, along with an auxiliary consumption of 8.12% resulting in a net capacity of 1,213 MW. Factoring in the annual plant availability factor results in annual net output of 9,030.63 GWh.

7.2 The Power Purchaser shall be responsible for procurement, financing, construction, operations, and maintenance of the interconnection, metering, and transmission facilities at the Project Site.

7.3 All fuels and chemicals, consumables, and associated costs during the plants tests after synchronization are assumed to be paid for by the Power Purchaser.

7.4 A constant Return on Equity of 27.20% has been assumed over the duration of the Project.

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7.5 No hedging costs have been assumed for exchange rate fluctuations during the construction phase of the Project.

7.6 No political risk insurance has been assumed on debt and / or equity. The premium prevailing at the time of financial close, based on the changes in the international and Pakistani macro-economic scenario, including the geopolitical situation, would be charged as applicable.

7.7 Project contingencies, debt service reserves, and maintenance reserves have not been included in the tariff computation. If and as required by the lenders, these facilities shall need to be catered for, and the tariff adjusted accordingly.

7.8 An aggregate of 6% of the custom duties and other surcharge, federal excise duty etc. have been assumed for reference purposes. Any increase therein would form part of the Project Cost at the time of COD based on actual expenditure.

7.9 Any tax on any income of the Company, including sale proceeds received from NTDC, general sales tax, and all other corporate taxes shall be treated as pass through items.

7.10 No withholding tax on supply of plant and equipment, or those on dividends, have been assumed. Similarly, no taxes or duties, including stamp duties have been assumed on the execution of the financing documents, loan repayment, interest repayment, agency fee, commitment fee, upfront fee, and coal purchase or transportation.

7.11 It is requested that adjustments shall be made in the Project Cost, and subsequently the tariff, on account of Letter of Credit (LC) confirmation charges and Standby LC charges on the basis of actual expense at the time of COD, as applicable.

7.12 The Power Purchaser shall be responsible for the transmission and system studies. Further, the cost of metering system, except for that of the backup meter, as well as the cost of the Remote Terminal Unit (RTU) shall be borne by the Power Purchaser. In case the Company is required to meet these costs, then they would be treated as part of the Non EPC Cost and the tariff shall be adjusted accordingly.

7.13 No free start-ups are assumed.

7.14 The information pertaining to the plant gross efficiency of 43.40% (LHV) and start-up costs shall be adjusted in accordance with the finalized EPC Contract.

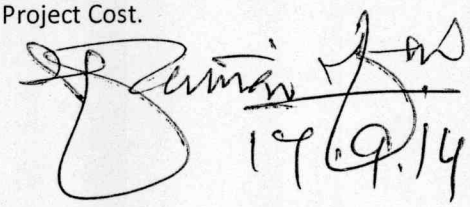
7.15 The foreign currency applicable has been assumed to be US Dollars. In case any other foreign currency applies, then indexation shall be provided in the applicable currency.

7.16 Additional coal (over and above the minimum take or pay) will be purchased through options and / or additional quantity from coal suppliers and / or the spot market. Any additional costs and / or premium paid in this regard shall be passed on to the Power Purchaser.

7.17 The Company has not assumed any security deposit that may be required by the coal supplier pursuant to the Coal Supply Agreement.

7.18 No royalty or fees or payment to the relevant port authorities have been assumed.

7.19 If the Company is required to comply with an environmental regime more stringent than the assumed regime then there would be an increase in the EPC Cost on account of FGD and SCR to offset SOx and NOx emissions. The tariff shall need to be adjusted on account of such costs become part of the overall Project Cost.



7.20 All invoicing and payment terms are assumed to be in accordance with the 2008 standardized PPA specific to the coal power plants.

7.21 The Company has not assumed any costs that may be incurred for the Worker's Welfare Fund or Workers Profit Participatory Fund. Any such costs shall be considered pass through items in the terms and conditions of the PPA.

7.22 Any benefit / concession / incentives available to the other IPPs or projects, shall also be made available to the Company.

7.23 Any additional costs incurred to cater for any modifications or additions required by the Power Purchaser shall form part of the Project Cost, and subsequently the tariff, at the time of COD.

8 DETERMINATION SOUGHT

8.1 The learned Authority is kindly requested to approve the Company's generation tariff, along with the pertinent indexations, in accordance with the Project Costs and the assumptions related thereto mentioned above, for a 30 years PPA term post COD.

The Petitioner would be pleased to provide any further information, clarification, or explanation that may be required by the Authority during its evaluation process.

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Annexure A – Reference Generation Tariff

Year	Fuel	Ash	Limestone	Variable O&M		EC	Fixed O&M		WC	Insurance	ROE	Principal	Interest	CC	CC 85%	Tariff	
				Foreign	Local		Foreign	Local									
	PKR per kWh					PKR per kW per Month										PKR per kWh	US¢ per kWh
1	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	352.4817	694.8900	2,209.7926	3.5613	**8.7446**	**8.8652**
2	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	354.5049	666.8011	2,183.7268	3.5193	**8.7026**	**8.8226**
3	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	356.5817	638.6585	2,157.6611	3.4773	**8.6606**	**8.7800**
4	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	358.7142	610.4603	2,131.5954	3.4353	**8.6186**	**8.7374**
5	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	360.9044	582.2044	2,105.5297	3.3933	**8.5766**	**8.6948**
6	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	447.8747	549.8791	2,160.1746	3.4813	**8.6646**	**8.7841**
7	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	450.1867	505.4633	2,118.0709	3.4135	**8.5968**	**8.7153**
8	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	452.5632	460.9831	2,075.9671	3.3456	**8.5289**	**8.6465**
9	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	455.0064	416.4361	2,033.8634	3.2778	**8.4611**	**8.5777**
10	4.5045	0.2200	0.0900	0.3688	-	5.1833	27.4493	30.1640	132.2175	66.9663	905.6237	457.5190	371.8198	1,991.7596	3.2099	**8.3932**	**8.5090**
11	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	400.5029	330.1506	1,893.1085	3.0509	**8.2348**	**8.3483**
12	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	402.0387	297.4908	1,861.9844	3.0008	**8.1846**	**8.2974**
13	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	403.5973	264.8082	1,830.8604	2.9506	**8.1344**	**8.2466**
14	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	405.1790	232.1025	1,799.7364	2.9005	**8.0843**	**8.1957**
15	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	406.7841	199.3733	1,768.6124	2.8503	**8.0341**	**8.1449**
16	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	308.3459	166.8561	1,637.6569	2.6393	**7.8231**	**7.9309**
17	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	308.3459	135.0337	1,605.8345	2.5880	**7.7718**	**7.8789**
18	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	308.3459	103.2113	1,574.0122	2.5367	**7.7205**	**7.8269**
19	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	308.3459	71.3890	1,542.1898	2.4854	**7.6692**	**7.7750**
20	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	308.3459	39.5666	1,510.3674	2.4341	**7.6179**	**7.7230**
21	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	32.5325	14.9149	1,209.9023	1.9499	**7.1337**	**7.2321**
22	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	32.5325	11.7749	1,206.7624	1.9448	**7.1286**	**7.2269**
23	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	32.5325	8.6349	1,203.6224	1.9398	**7.1236**	**7.2218**
24	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	32.5325	5.4950	1,200.4824	1.9347	**7.1185**	**7.2167**
25	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	32.5325	2.3550	1,197.3424	1.9296	**7.1135**	**7.2115**
26	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	-	-	1,162.4549	1.8734	**7.0572**	**7.1545**
27	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	-	-	1,162.4549	1.8734	**7.0572**	**7.1545**
28	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	-	-	1,162.4549	1.8734	**7.0572**	**7.1545**
29	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	-	-	1,162.4549	1.8734	**7.0572**	**7.1545**
30	4.5045	0.2200	0.0900	0.3318	0.0374	5.1838	19.9940	37.6534	132.2175	66.9663	905.6237	-	-	1,162.4549	1.8734	**7.0572**	**7.1545**
															Levelized Tariff	**8.3132**	**8.4278**

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Annexure B – Debt Schedule

ADB OCR Loan 1

Year	Opening Balance	Principal Charge	Interest Charge	Closing Balance
1	840,000,000	35,199,998	80,225,762	804,800,002
2	804,800,002	35,199,998	76,828,328	769,600,003
3	769,600,003	35,199,998	73,430,895	734,400,005
4	734,400,005	35,199,998	70,033,461	699,200,006
5	699,200,006	35,199,998	66,636,028	664,000,008
6	664,000,008	42,000,000	63,074,514	622,000,008
7	622,000,008	42,000,000	59,020,758	580,000,008
8	580,000,008	42,000,000	54,967,002	538,000,008
9	538,000,008	42,000,000	50,913,246	496,000,008
10	496,000,008	42,000,000	46,859,490	454,000,008
11	454,000,008	42,000,000	42,805,734	412,000,008
12	412,000,008	42,000,000	38,751,978	370,000,008
13	370,000,008	42,000,000	34,698,222	328,000,008
14	328,000,008	42,000,000	30,644,466	286,000,008
15	286,000,008	42,000,000	26,590,710	244,000,008
16	244,000,008	44,000,006	22,488,695	200,000,002
17	200,000,002	44,000,006	18,241,902	155,999,995
18	155,999,995	44,000,006	13,995,109	111,999,989
19	111,999,989	44,000,006	9,748,317	67,999,982
20	67,999,982	44,000,006	5,501,524	23,999,976
21	23,999,976	4,799,995	2,200,608	19,199,981
22	19,199,981	4,799,995	1,737,322	14,399,986
23	14,399,986	4,799,995	1,274,036	9,599,990
24	9,599,990	4,799,995	810,750	4,799,995
25	4,799,995	4,799,995	347,464	-
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
30	-	-	-	-

ADB OCR Loan 2

Year	Opening Balance	Principal Charge	Interest Charge	Closing Balance
1	30,000,000	-	9,000,000	30,000,000
2	30,000,000	-	9,000,000	30,000,000
3	30,000,000	-	9,000,000	30,000,000
4	30,000,000	-	9,000,000	30,000,000
5	30,000,000	-	9,000,000	30,000,000
6	30,000,000	5,700,000	8,572,500	24,300,000
7	24,300,000	5,700,000	6,862,500	18,600,000
8	18,600,000	5,700,000	5,152,500	12,900,000
9	12,900,000	5,700,000	3,442,500	7,200,000
10	7,200,000	5,700,000	1,732,500	1,500,000
11	1,500,000	300,000	427,500	1,200,000
12	1,200,000	300,000	337,500	900,000
13	900,000	300,000	247,500	600,000
14	600,000	300,000	157,500	300,000
15	300,000	300,000	67,500	-
16	-	-	-	-
17	-	-	-	-
18	-	-	-	-
19	-	-	-	-
20	-	-	-	-
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
30	-	-	-	-

ADB SF Loan

Year	Opening Balance	Principal Charge	Interest Charge	Closing Balance
1	29,894,790	1,494,739	8,856,331	28,400,050
2	28,400,050	1,494,739	8,407,910	26,905,311
3	26,905,311	1,494,739	7,959,488	25,410,571
4	25,410,571	1,494,739	7,511,066	23,915,832
5	23,915,832	1,494,739	7,062,644	22,421,092
6	22,421,092	1,494,739	6,614,222	20,926,353
7	20,926,353	1,494,739	6,165,800	19,431,613
8	19,431,613	1,494,739	5,717,378	17,936,874
9	17,936,874	1,494,739	5,268,957	16,442,134
10	16,442,134	1,494,739	4,820,535	14,947,395
11	14,947,395	1,494,739	4,372,113	13,452,655
12	13,452,655	1,494,739	3,923,691	11,957,916
13	11,957,916	1,494,739	3,475,269	10,463,176
14	10,463,176	1,494,739	3,026,847	8,968,437
15	8,968,437	1,494,739	2,578,426	7,473,697
16	7,473,697	1,494,739	2,130,004	5,978,958
17	5,978,958	1,494,739	1,681,582	4,484,218
18	4,484,218	1,494,739	1,233,160	2,989,479
19	2,989,479	1,494,739	784,738	1,494,739
20	1,494,739	1,494,739	336,316	-
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
30	-	-	-	-

IDB Loan

Year	Opening Balance	Principal Charge	Interest Charge	Closing Balance
1	220,000,000	13,205,407	3,198,434	206,794,593
2	206,794,593	13,401,024	3,002,817	193,393,569
3	193,393,569	13,599,540	2,804,301	179,794,029
4	179,794,029	13,800,996	2,602,845	165,993,033
5	165,993,033	14,005,437	2,398,405	151,987,596
6	151,987,596	14,212,905	2,190,936	137,774,691
7	137,774,691	14,423,448	1,980,393	123,351,243
8	123,351,243	14,637,109	1,766,732	108,714,134
9	108,714,134	14,853,935	1,549,906	93,860,199
10	93,860,199	15,073,973	1,329,868	78,786,226
11	78,786,226	15,297,271	1,106,570	63,488,955
12	63,488,955	15,523,876	879,965	47,965,079
13	47,965,079	15,753,839	650,003	32,211,241
14	32,211,241	15,987,207	416,634	16,224,033
15	16,224,033	16,224,033	179,808	-
16	-	-	-	-
17	-	-	-	-
18	-	-	-	-
19	-	-	-	-
20	-	-	-	-
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
30	-	-	-	-

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Commercial Loan

Year	Opening Balance	Principal Charge	Interest Charge	Closing Balance
1	26,353,704	2,106,599	1,246,691	24,247,105
2	24,247,105	2,209,488	1,143,802	22,037,618
3	22,037,618	2,317,402	1,035,888	19,720,216
4	19,720,216	2,430,587	922,703	17,289,629
5	17,289,629	2,549,299	803,990	14,740,330
6	14,740,330	2,673,810	679,479	12,066,519
7	12,066,519	2,804,403	548,887	9,262,117
8	9,262,117	2,941,373	411,917	6,320,744
9	6,320,744	3,085,033	268,256	3,235,710
10	3,235,710	3,235,710	117,579	-
11	-	-	-	-
12	-	-	-	-
13	-	-	-	-
14	-	-	-	-
15	-	-	-	-
16	-	-	-	-
17	-	-	-	-
18	-	-	-	-
19	-	-	-	-
20	-	-	-	-
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
30	-	-	-	-

17.9.14

Annexure C – Capital Costs

Capital Costs*	USD	PKR	Foreign Component	Local Component
Land for Power Station & Colony	2,139,092	211,000,000	-	211,000,000
Site Preparation & Engineering	8,438,376	832,361,376	4,028,400	435,000,000
Handling of Fuel, Ash & Water	150,575,679	14,852,784,976	132,393,400	1,793,500,000
Thermal Power Station				
Super Critical Boiler				
Coal Fired Steam Power Plant				
Unit Transformer				
Auxiliary Transformer				
Other MV/LV Transformers & Equipment	1,026,041,032	101,208,687,384	949,943,100	7,506,300,000
AC / DC System				
Control Equipment & System				
Demi Water Treatment Plant				
Emission Control Panel				
Thermal Power Station Spare Parts				
Civil Works & Structure	74,218,978	7,320,960,000	14,000,000	5,940,000,000
Residential Buildings	12,216,139	1,205,000,000	-	1,205,000,000
Vehicles	606,245	59,800,000	-	59,800,000
Erection Charges	78,382,361	7,731,636,048	27,488,200	5,020,200,000
Engineering & Consultancy	18,055,150	1,780,960,000	14,000,000	400,000,000
Training & Capacity Building	5,402,800	532,932,192	5,402,800	-
Administration & Management	6,932,786	683,850,000	-	683,850,000
Freight & Transportation	28,492,587	2,810,508,752	25,581,800	287,120,000

** Excluding Taxes and Duties*