BEFORE THE THAR COAL AND ENERGY BOARD

PETITION FOR DETERMINATION OF REFERENCE TARIFF FOR COAL EXTRACTED FROM BLOCK-I OF THAR COALFIELDS

ON BEHALF OF

SINO-SINDH RESOURCES LIMITED

FOR DEVELOPMENT OF A COAL MINE WITH A CAPACITY OF 7.8 MTPA

IN BLOCK-I OF THAR COALFIELDS IN THE PROVINCE OF SINDH

SEPTEMBER 2016

Sino-Sindh Resources Limited

Contents

ACRONYMS

CAPEX	Capital Expenditure
CCTEG	China Coal Technology & Engineering Group Corporation
COD	Commercial Operations Date
CPI	Consumer Price Index
CSA	Coal Supply Agreement
EPC	Engineering, Procurement, and Construction
GoP	Government of Pakistan
GoS	Government of Sindh
IDC	Interest During Construction
IRR	Internal Rate of Return
KIBOR	Karachi Inter-Bank Offer Rate
LIBOR	London Inter-Bank Offer Rate
NEPRA	National Electric Power Regulatory Authority
O&M	Operations & Maintenance
OPEX	Operational Expenses
PKR	Pakistani Rupee
PPA	Power Purchase Agreement
RFO	Residual Furnace Oil
ROE	Return on Equity
ROEDC	Return on Equity During Construction
RWE	RWE AG (German Electric Utilities Company)
SBP	State Bank of Pakistan
SSRL	Sino-Sindh Resources Limited
TCEB	Thar Coal & Energy Board
USD	United States Dollar
RMB	Chinese Reminbi
WPPF	Workers' Profit Participation Fund
WWF	Workers' Welfare Fund

INTRODUCTORY REMARKS

- Tariff Petition for feasibility stage is being filed before Thar Coal and Energy Board (TCEB) pursuant to Thar Coal Tariff Determination Rules, 2014.

- On 24th May 2012, TCEB issued a mining license to Sino Sindh Resources Limited for development of the Block-I of the Thar Coalfields, after completing detailed feasibility study of Block-I. The feasibility study was initially conducted by RWE of Germany in 2004, and revalidated by CCTEG in 2012. Following revalidation of feasibility study, TCEB had granted mining license to SSRL for a period of 30 years. For the purpose of the Project, SSRL was incorporated under the Companies Ordinance, 1984, as Sino-Sindh Resources Ltd.

- Financial package for the Project comprises of debt and equity in a ratio of seventy five percent (75%) debt and twenty five percent (25%) equity. Financial structure is permitted under the Infrastructure Project Guidelines provided by State Bank of Pakistan, as well as The Thar Coal and Energy Board Act issued by the Government of Sindh in 2011.

- In a scenario where TCEB requires any additional information, explanation, or clarification from SSRL during the evaluation process, SSRL would be pleased to furnish the required information on a prompt basis.

PARTICULARS OF PETITION

Details of the Petitioner

Name and Registered Office

Sino-Sindh Resources Limited

____________,
____________, D.H.A,
Karachi

Representatives of SSR

______________________ ______________________

Chief Executive Officer Director

1. BACKGROUND

1.1. Under the Thar Coal and Energy Board Act of 2011, TCEB is the authority inter alia competent to determine tariffs and other terms and conditions for extraction of coal from Thar Coalfields. TCEB is also the competent authority for determining the process and procedures for reviewing tariffs and recommending tariff adjustments, pertaining to extraction of coal from Thar Coalfields.

1.2. SSRL is a company incorporated and existing under the Companies Ordinance, 1984. SSRL was established to conduct coal excavation and production works on Block-I of the Thar Coalfields. SSRL has already completed feasibility studies, in addition to acquiring NOC from Sindh Environmental Protection Agency regarding the Environment & Social Impact Assessment plan.

1.3. In accordance with the requirements of Thar Coal and Energy Board Act of 2011 and the rules and regulations made thereunder, SSRL hereby submits this petition, for tariff determination for feasibility stage in respect of SSRL's mining activities in Block-I of Thar Coalfields, situated in the province of Sindh. The petition follows Thar Coal Tariff Determination Rules, 2014.

2. INTRODUCTION

2.1. On 24th May 2012, TCEB granted mining lease for 30 years to SSRL after completion of feasibility report, which was finalized by CCTEG. In order to complete land acquisition process, and attain financial close – it is imperative that a tariff is finalized by TCEB, so that civil works on the Project may commence accordingly.

2.2. Shanghai Electric will be establishing 2x600MW mine mouth power plants, which will be sourcing coal extracted from Thar Coalfields by SSRL. The tariff would be based on the principles of *cost*+ basis – mainly comprising of capacity, and production charges. The tariff will be integrated into the Coal Supply Agreement (the "CSA") to be entered between SSRL and Shanghai Electric, and shall be based on the standardized CSA proposed by TCEB. A CSA between the two parties is already in place. Updated feasibility stage tariff as being requested in this petition, shall be made part of the CSA following necessary approvals.

2.3. Additional information, if any, as required by TCEB shall be provided by SSRL, as and when required.

3. INVESTMENT

3.1. The Construction Cost estimate of the Project is provided in US Dollars ("USD") in the table below. The Engineering, Procurement and Construction ("EPC") price has been fixed at USD 803.1 million. A component wise break up of mine development costs, in terms of civil works, equipment, and installation has been provided in Table 1 below.

Construction Costs

Mine Construction	USDm
Overburden Removal	383
Underground Water Dewatering	26.5
Total Mine Construction	**409.4**
Civil Works	
Mine Rock Work	20.4
Coal Handling System	9.3
Surface Transport	11.9
Dewatering & Water Prevention	41.3
Communication & Control Systems	0.2
Power Supply System	0.1
Outdoor Water Supply & Drainage	2.9
Machine Repair Shop	4.7
Specialized Warehouse	2.4
Administrative Welfare Facilities	27.5
Crushing Station & Storage Yard	19.2
Environmental Protection	9.7
Total Civil Works	**149.6**
Equipment & Installation	
Stripping Works	1.3
Coal Handling System	17.0
Dewatering & Water Prevention	38.7
Communication & Control Systems	8.6
Power Supply System	23.1
Outdoor Water Supply & Drainage	6.8
Machine Repair Shop	4.6
Professional Warehouse	1.6
Administrative Welfare Facilities	12.3
Total Equipment & Installation	**114.0**
Other Construction Costs	**130.1**
Total Capital Expenditure	**803.1**

3.2. "Engineering, Procurement & Construction Cost" covers all excavation equipment, civil works, in addition to necessary auxiliary machinery, installation, and systems including erection and commissioning of equipment, and construction of buildings. The stated EPC cost includes all works required for removal of overburden, civil works, and implementation of the approved resettlement plan. The turnkey price of the overburden removal, and civil works is based on a firm proposal, which has been negotiated with CCTEG Shenyang, which is the EPC contractor.

3.3. Non-EPC costs include "Land Acquisition & Rehabilitation" costs, which will be incurred by SSRL following determination of tariff. The land acquisition cost covers the purchase of land, in addition to stamp duty and registration fees. The amount also includes the fees of the broker and lawyers, in addition to the cost of fill required to levelize the site with the access road. Total land required is estimated to be 28.46 square kilometers, or approximately 7,033 acres, acres, resulting in displacement of roughly 2,000 households, inhabiting the area under consideration. It is estimated that the land will be acquired at a cost of USD 2,500 per acre, or at a price that is fixed by the Government of Sindh. Resettlement Cost per household is estimated to be USD 35,000. Total cost of land acquisition is estimated to be USD 17.6 million. Similarly, total cost of rehabilitation is estimated to be USD 70 million, resulting in total "Land Acquisition & Rehabilitation" Cost of USD 87.6 million.

Land Acquisition & Rehabilitation Cost

Cost of Land	USD per acre	2,500
Total Land Required	Square km.	28.46
Total Land Required	Acres	7,033
Number of Households to be Resettled	Households	2,000
Estimated Cost of Resettlement Per Household	USD per Household	35,000
		USDm
Total Cost of Land	USDm	17.6
Total Cost of Rehabilitation	USDm	70.0
Total Cost of Land Acquisition & Rehabilitation	USDm	87.6

3.4. Other Project costs include "Taxes & Duties", "Development Costs", "Insurance Cost", "Arrangement & Commitment Fee", "Interest During Construction", and "Sinosure Fee". Other Project Costs accumulate to USD 168.83 million. Detailed explanation of each cost has been provided in the table below.

Other Project Costs	USDm
- Taxes & Duties	-
- Development Costs	26.0
- Insurance Cost	12.3
- Arrangement & Commitment Fee	17.7
- Interest During Construction	57.4
- Sinosure Fee	55.6
Total Other Project Costs	168.8

3.5. Taxes & Duties have been assumed to be zero, as the Project has tax-exemption, considering its strategic importance.

3.6. Development Costs are estimated to be USD 26 million, which is in-line with the total costs that have been incurred to-date. The figure would be trued up in latter stages of tariff determination, based on actual values. It covers the expenses of SSRL and O&M Contractor personnel, which include hiring of local personnel for operations and maintenance, training, etc. It also includes sponsors' development costs, any registration fees, and any delay in start-up insurance. It covers costs of feasibility studies, environmental studies, geological and hydrological studies, soil investigation, fees of engineering consultants, lawyers, technical consultants, and guarantees, furnished to relevant authorities, etc.

3.7. Arrangement & Commitment Fee is estimated to be USD 17.7 million. Arrangement Fee amounts to USD 9.7 million, which has been calculated assuming Arrangement Fee of 1.5 percent of Total Debt raised. Similarly, Commitment Fee amounts to USD 7.9 million, which has been calculated assuming a Commitment Fee of 1 percent of Undrawn Facility Amount.

3.8. Insurance Cost is calculated to be USD 12 million, with the cost being equivalent to 1.5 percent of Total Capital Expenditure. Currently, no firm insurance commitments are in place – but once the Project moves forward, the cost will be rationalized in-line with quotations received, and agreed upon.

3.9. Interest During Construction refers to the interest payments that would accrue but not paid off during the Construction period. Interest During Construction amounts to USD 57.4 million, progressively increasing during the Construction period, as facility drawdowns increase. The amount is calculated on the basis of anticipated interest rates, equity injections, CAPEX, and debt drawdown schedule. The COD of the Project is expected to be 36 months after financial close. The financial close is being targeted to be attained by 31st December 2016. IDC would be capitalized, and would be paid back on a pro-rata basis in-line with the debt repayment schedule of the Project.

3.10. Sinosure Fee is estimated to be USD 55.6 million, and has been calculated as a product of Sinosure Fee of 7 percent, and Total Debt raised of USD 794.7 million. Sinosure Fee is paid upfront, upon Financial Close, and initiation of Construction Period.

3.11. Project Cost is simply the sum of Total Construction Costs, Cost of Land Acquisition & Rehabilitation, and Other Project Costs, which have been enumerated in 3.1, 3.3, and 3.4. <u>Total Project Cost is estimated to be USD 1,059.5 million</u>.

3.12. Project Timeline is assumed to be 30 years, which is the duration of the mining license granted by TCEB on 24th May 2012.

3.13. Financial Close is expected to be attained by 31st December 2016, followed by Construction Period of 36 months. COD is expected to be attained by 31st December 2019.

3.14. Project Analysis

Project analysis, and consequent determination of tariff is done after taking into consideration the following assumptions:

3.14.1. Investment cost estimate, which includes a firm turnkey price.

3.14.2. Overburden removal costs.

3.14.3. Mine operating costs, including long-term impacts of scale.

3.14.4. Financing, taxation, depreciation and other obligations in-line with stipulation of law, and lenders.

3.14.5. Proposed 30-year tariff based on real life-time costs. SSRL's model is based upon the BOO or Build-Own-Operate concept.

3.14.6. It is also assumed that the Project qualifies for tax incentives as per various notifications issued by the Government, which includes an exemption from corporate income taxes, in addition to turnover and withholding taxes.

3.15. Capital Structure

3.15.1. The Project is being financed by a mix of seventy five percent (75%) debt and twenty five percent (25%) equity. The capital structure is in-line with stipulations of TCEB and Thar Coal Tariff Determination Rules, 2014. Total Debt of the Project (including IDC) would be USD 794.6 million, while Total Equity of the Project would be USD 264.9 million, resulting in Total Capital of USD 1,077 million.

Capital Structure	
- Equity	25%
- Debt	75%
	USDm
Total Debt (incl. IDC)	794.6
Total Equity	264.9
Total Capital	**1,059.5**

3.16. Project Dynamics

3.16.1. The Project would play an instrumental role in initiation of exploration of the seventh largest lignite deposits in the world located in Thar Desert. Overburden removal, and consequent development of opencast mine would involve local communities, generate employment, enhance social welfare and mobility, while catalyzing economic activity in the region.

3.16.2. A detailed Environment & Social Impact Assessment has already been conducted, for which necessary approvals have been sought from relevant authorities.

3.16.3. The Project would be supplying coal to mine mouth power plants, which are being developed by Shanghai Electric. The coal-fired power plant would source all of its fuel requirements from SSRL under a long-term Coal Supply Agreement.

3.16.4. The tariff determined by the TCEB will act as pass-through cost for the power plant that is being established by Shanghai Electric – which will be taken into consideration by NEPRA at the time of determination of power tariff for CPI. The tariff determined will effectively act as Fuel Cost Component ("FCC") in determination of electricity tariff by NEPRA.

3.16.5. Generation of electricity through indigenous coal resources would assist in bringing down cost of generation substantially relative to generation through imported fuels, while also decreasing outlay of valuable foreign exchange reserves for procurement of energy supplies.

3.16.6. Leveraging indigenous resources would enhance energy security profile of the country, and would enable it to gradually transition towards a more indigenous fuel friendly energy mix, rather than an imported one. It will also reduce susceptibility to volatility in market prices of imported fuels.

3.16.7. Coal that will be extracted from the mine is estimated to have a calorific value of 10,337.7 BTU/kg, categorizing as lignite – which is effectively unstable and susceptible to self-combustion. Economic usage of coal excavated would only be possible near the coal mine, thereby necessitating presence of mine mouth power plants.

3.16.8. Moisture content constitutes 47.8 percent of coal to be extracted, followed by ash content of 13.98 percent, volatile matter of 52%～60% percent, and sulfur of 2.57 percent.

3.16.9. Average stripping ratio for the mine is 6.87 m^3/t, while average thickness of mineable coal seam is 24.51 meters. Lignite is being extracted in a large number of countries around the world, with similar mine parameters.

3.16.10. Mineable reserves amount to 1034.64 Million Tons within the mining boundary of the opencast mine.

3.16.11. Assuming a reserve coefficient of 1.2 and design production capacity of 7.8 Million Tons per annum, the design service line of the opencast mine is 110.5 years.

3.16.12. Opencast mine will operate for 330 days in a year, with 3 shifts per day, and 8 hours per shift.

3.16.13. Yield per day is estimated to be 23,636 tons. Yield per shift is estimated to be 7,879 tons.

3.16.14. Following overburden removal, the mine is expected to commence with production of 7.8 Million Tons per annum. Determination of tariff is being ought assuming that the mine will be producing 7.8 Million Tons per annum throughout Project lifecycle of 30 years.

3.16.15. Production capacity may be enhanced at a later stage, to accrue benefits of scale. Incremental Capital Expenditure may be done to enhance production levels to up to 30 Million Tons per annum at a later stage.

3.16.16. It has been recommended by CCTEG in the feasibility conducted that a semi-continuous process for mining, and a shove-truck process for stripping, would be optimal for extraction of coal from the proposed open-pit mine.

3.16.17. Working Capital is assumed to be financed by financial institutions based out of Pakistan in PKR.

4. TARIFF SUMMARY

4.1. Proposed tariff estimates for feasibility stage provided below have been calculated after a detailed review of prospective financial position of the project, as well as capital and operational cost estimated provided by CCTEG, as per revised implementation plan. The tariff has been determined after considering economic, financial, legal, and technical aspects, to ensure that the project parameters and performance stays in-line with requirements of the law, and all stakeholders. The financial analysis has been conducted for a 30-year period, which is the length of the mining license granted to SSRL.

4.2. In the petition, levelized costs are reviewed, calculated at a discount rate of 10 percent.

4.3. Cash costs of production comprises of Material Costs, Fuel Costs, Lubricant Costs, Tyre Costs, Power Costs, Equipment Rental Costs, Labor & Management Salary, Safety & Security Costs, Management Fee, and Other Costs. Levelized Variable O&M Costs accumulate to USD 11.36 per ton, while Fixed O&M Costs amount to USD 16.09 per ton. Total Operating Costs are estimated to be USD 27.45 per ton.

Levelized Operating Costs

	USD per ton
Material Costs	2.51
Fuel Costs	5.28

Lubricants Costs	1.08
Tyre Costs	0.53
Power Costs	1.96
Equipment Rental Costs	2.11
Labor & Management Salary	7.31
Safety & Security Cost	1.14
Management Fee	2.61
Other Costs	2.92
Variable O&M	11.36
Fixed O&M	16.09
Total Operating Costs	**27.45**

4.4. Material Costs are calculated after taken into consideration all material that will be required during the period under consideration. The amount varies for different years, due to depreciation of machinery, replacement of parts, failure rates, etc. Levelized Material Costs amount to USD 2.51 per ton

4.5. Fuel Costs on a levelized basis are calculated to be around USD 5.28 per ton. Fuel Costs are calculated as a product of total number of liters consumed by various equipment, and retail price of Diesel, as prescribed by OGRA. In the petition under consideration, cost of Diesel is assumed to be PKR 72.79 per liter. It is estimated that total number of liters of Diesel required is around 64.5 million liters per annum, which would primarily be consumed by mining equipment.

4.6. Lubricant Costs on a levelized basis are calculated to be around USD 1.08 per ton. Lubricant Costs are calculated as a product of Cost of Lubricants per liter, and the total quantity of lubricants used in equipment on a per annum basis. It is estimated that annual lubricant requirement would be around 0.74 million liters per annum. Average price of lubricant is assumed to be USD 9.01 per liter, whereas price of lubricant for Coal Handling System is assumed to be USD 12 per liter.

4.7. Another key component of variable costs is Tyre Costs. It is estimated that Cost of Tyres is around USD 0.53 per ton. Prices of Tyres vary depending on the nature of equipment. Estimated costs of tyres being used by various equipment has been provided in the table below.

Tyres	USD per piece
Dump Truck (60 tons)	841
Wheel Loader (Coal Mining)	976
Sprinkling Truck	841
Grader	3,754
Road Roller	976
Wheel Truck Hydraulic Backhoe	3,754

Fuel Truck & Grease Vehicle	601
Mechanical Vehicle	601
Dump Truck (20 tons)	450
Ambulance	75
Golden Dragon Bus	300
Prado TX	150
Fire Control Command Vehicle	150
Fire Water Tanker	300
Pick-up Truck	150

4.8. Power Costs are estimated to be USD 1.96 per ton. It is estimated that mining & other equipment would consume 10,734 kWh of electricity. Cost of electricity is assumed to be PKR 14.92 per kWh, as per prevailing price and efficiency levels associated with electricity generation from Diesel Oil.

4.9. Equipment Rental Costs are estimated to be USD 2.11 per ton. This head refers to mining equipment amounting to USD 6.32 million that will be rented, at a cost of 4.9 percent per annum.

4.10. Labor & Management Salary amounts to a levelized cost of USD 7.31 per ton. The amount covers all personnel expenses associated with extraction of coal, both in labor, and management cadre. Similarly, Management Fee amounts to levelized cost of USD 2.61 per ton.

4.11. Safety & Security Cost amounts to a levelized cost of USD 1.14 per ton.

4.12. Levelized Cost for Variable O&M expenses amounts to <u>USD 11.36 per ton</u>, and takes into consideration Material Costs, Fuel Costs, Lubricant Costs, Tyre Costs, and Power Costs.

4.13. Levelized Cost for Fixed O&M expenses amounts to <u>USD 16.09 per ton</u>, and takes into consideration Equipment Rental Costs, Labor & Management Salary, Management Fee, Safety & Security Costs, and Other Costs.

4.14. Levelized Operating Costs accumulate to <u>USD 27.45 per ton</u>.

5. CAPACITY CHARGES

5.1. Internal Rate of Return ("IRR") for the Project's equity is guaranteed at 20 percent for lifetime of the Project. Financial close is being slated to be attained by

31st December 2016.

5.2. In order to ensure a fixed ROE, fixed costs pertaining to debt payments, will be categorized as pass-through costs, and will be a part of the tariff.

5.3. Key assumptions factored in the capacity charge are total capital costs of the Project, Debt-Equity ratio, cost of debt, and currency of debt.

5.4. Capital Structure is assumed to be in a Debt-Equity ratio of 75-25 as discussed in 3.15.1. Debt funding is denominated in USD, and will be provided by a consortium of Chinese Banks, covered by Sinosure guarantee. Premium paid for Sinosure guarantee will be added to the total stock of debt.

5.5. Sinosure Premium will be at 7 percent of total debt raised, and will be payable upfront, at the time of Financial Close.

5.6. Equity contributions, and debt drawdown are assumed to be in-line with CAPEX schedule.

Funding Plan (USDm)	Equity Contribution	Debt Drawdown	Total
Mar-17	31.9	95.8	127.7
Jun-17	32.6	97.8	130.3
Sep-17	27.0	81	108.0
Dec-17	12.7	38.2	50.9
Mar-18	22.6	67.9	90.6
Jun-18	18.8	56.3	75.1
Sep-18	19.4	58.3	77.7
Dec-18	20.5	61.5	82.0
Mar-19	19.2	57.7	76.9
Jun-19	21.4	64.2	85.6
Sep-19	20.3	61.0	81.4
Dec-19	18.8	56.5	75.4

5.7. Cost of Debt is assumed to be at a spread of 300 basis points over 6-month LIBOR, which is the benchmark rate for debt denominated in USD. LIBOR is assumed to be 1.13 percent for reference tariff. As the debt would be fully covered by a Sinosure guarantee, a coverage premium of 7 percent of the total debt is also being considered. Total cost of debt is assessed to be 4.13 percent for determination of reference tariff. At the time of financial close, the actual cost of debt may differ, depending on changes in LIBOR, and the final spread that has been negotiated with lenders.

Debt Funding Assumptions

	USDm
Principal Amount (incl. IDC)	794.6
Currency of Debt	USD
Total Debt Maturity	13
Grace Period	3
Debt Repayment Period	10
6-month LIBOR	1.13%
LT Debt Spread	3.00%
Effective Interest Rate (p.a.)	4.13%

5.8. Tenor of debt is assumed to be thirteen years, with a grace period of three years. Principal repayments shall commence from the first year of production, following three years of mine development and overburden removal. Principal would be fully repaid in ten years, after COD. Payments will be made on a semi-annual basis, with "Interest During Construction" (IDC) already considered to be a constituent of Total Project Cost. Mark-up rate would be pegged to prevailing benchmark rate, and would be reset as per guidelines provided in Thar Coal Determination Rules, 2014.

5.9. Principal repayments and interest payments would be a pass-through cost which will keep tariffs in the first ten years higher compared to the rest of the Project lifetime.

5.10. Principal repayments and mark-up payments will be made according to the following schedule; with first repayment being made in Mar-2019, assuming financial close is attained by end-2015. The payments exhibited in the table have been used for reference tariff, and may change with market dynamics, following COD. Debt drawdown is assumed to be in-line with CAPEX schedule. Debt amortization schedule has been provided in the table below.

Debt Amortization Schedule

USD Million	Opening Balance	Drawdown	Principal Repayment	Ending Balance	Interest Expense
Mar-17	-	95.6	-	95.6	1.0
Jun-17	95.6	97.6	-	193.3	2.0
Sep-17	193.3	80.8	-	274.1	2.8
Dec-17	274.1	38.0	-	312.2	3.2
Mar-18	312.2	67.8	-	379.9	3.9
Jun-18	379.9	56.2	-	436.1	4.5
Sep-18	436.1	58.1	-	494.3	5.1

Dec-18	494.3	61.4	-	555.7	5.7
Mar-19	555.7	57.5	-	613.2	6.3
Jun-19	613.2	64.1	-	677.3	7.0
Sep-19	677.3	60.9	-	738.2	7.6
Dec-19	738.2	56.4	-	794.6	8.2
Mar-20	794.6	-	-	794.6	8.2
Jun-20	794.6	-	(32.5)	762.1	8.2
Sep-20	762.1	-	-	762.1	7.9
Dec-20	762.1	-	(33.2)	729.0	7.9
Mar-21	729.0	-	-	729.0	7.5
Jun-21	729.0	-	(33.8)	695.1	7.5
Sep-21	695.1	-	-	695.1	7.2
Dec-21	695.1	-	(34.5)	660.6	7.2
Mar-22	660.6	-	-	660.6	6.8
Jun-22	660.6	-	(35.3)	625.3	6.8
Sep-22	625.3	-	-	625.3	6.5
Dec-22	625.3	-	(36.0)	589.3	6.5
Mar-23	589.3	-	-	589.3	6.1
Jun-23	589.3	-	(36.7)	552.6	6.1
Sep-23	552.6	-	-	552.6	5.7
Dec-23	552.6	-	(37.5)	515.1	5.7
Mar-24	515.1	-	-	515.1	5.3
Jun-24	515.1	-	(38.3)	476.8	5.3
Sep-24	476.8	-	-	476.8	4.9
Dec-24	476.8	-	(39.1)	437.8	4.9
Mar-25	437.8	-	-	437.8	4.5
Jun-25	437.8	-	(39.9)	397.9	4.5
Sep-25	397.9	-	-	397.9	4.1
Dec-25	397.9	-	(40.7)	357.2	4.1
Mar-26	357.2	-	-	357.2	3.7
Jun-26	357.2	-	(41.5)	315.7	3.7
Sep-26	315.7	-	-	315.7	3.3
Dec-26	315.7	-	(42.4)	273.3	3.3
Mar-27	273.3	-	-	273.3	2.8
Jun-27	273.3	-	(43.3)	230.1	2.8
Sep-27	230.1	-	-	230.1	2.4
Dec-27	230.1	-	(44.2)	185.9	2.4
Mar-28	185.9	-	-	185.9	1.9
Jun-28	185.9	-	(45.1)	140.9	1.9
Sep-28	140.9	-	-	140.9	1.5
Dec-28	140.9	-	(46.0)	94.9	1.5
Mar-29	94.9	-	-	94.9	1.0
Jun-29	94.9	-	(46.9)	47.9	1.0
Sep-29	47.9	-	-	47.9	0.5
Dec-29	47.9	-	(47.9)	0.0	0.5

5.11. ROE has been calculated at a rate of 20 percent on the equity invested in the Project. ROE is a pass-through cost, and decreases on a per ton basis as overall production levels increase. As the equity invested is in USD, the ROE component is escalable, and would change in PKR terms, as the PKR-USD parity changes.

5.12. Working Capital is assumed to be <u>fully funded by PKR denominated debt</u>. Working Capital Finance would be raised from local banks, and would be denominated in PKR, and thereby would be pegged to 3-month KIBOR. It is assumed that Working Capital Finance would be raised at a spread of 300 basis points over 3-month KIBOR. Coal inventory is assumed to be held for 15-days, while Accounts Receivables are expected to be recovered after a period of 30-days. Similarly, Payables are expected to be settled by 18-days. Under the fairly static assumptions of this reference tariff petition, levelized Working Capital Interest is assumed to be USD 0.50 per ton.

6. ESCALATION & INDEXATION

6.1. After COD, tariff tables that have been provided will be indexed to factors as detailed above. On the date of financial closing, reference tariff table will be updated by the prevailing indices, exchange rates, and base numbers at that point in time.

6.2. Production components will be adjusted for relevant indices.

6.3. All components denominated in FCY would be subject to exchange rate indexation.

6.4. Interest payments would be subject to interest rate indexation. The relevant benchmark would be 6-month LIBOR, as the debt would be denominated in USD. In a scenario where the Project raises debt in PKR, the relevant benchmark would be 6-months KIBOR.

6.5. Change in market price of Diesel may result in a base change for Fuel Costs, which is a critical component of aggregate cash production costs.

6.6. Any taxes and levies, etc. have not been factored in the tariff calculation, and shall be treated as pass-through items

6.7. Adjustments at Commercial Operations Date

6.7.1. Escalable ROE component and non-escalable components will be adjusted by inflation factors and exchange rates as defined earlier.

6.7.2. All assumed costs will be trued up at the time of COD tariff.

6.7.3. Cost of debt will be adjusted by indexing it to prevailing benchmark interest rate.

6.7.4. Hedging costs during construction on EPC payment shall be made part of Project cost, as required by lenders. Otherwise subject to the lenders' consent the final local amount at the COD would be based on actual Exchange Rates used by the lenders to make payment to the EPC contractor.

7. Adjustable Factors to be Reviewed in Consequent Petition Stages.

7.1 Because PPA and CSA are not signed, the cost of trial operation Pre-COD has not been incorporated in the Petition.

7.2 Taxes & Duties have not been considered in the Petition this time. Any additional taxes & duties levied will be considered as pass-through items.

7.3 The petitioner may request adjustment in the Project Cost due to change in financial assumptions. The following components of the Project Cost may be adjusted at the Financial Close:

(a) Any deviation from current assumptions;

(b) Owing to incomplete data of geological drilling holes, the slope angle may be adjusted according to the supplementary data of geological drilling holes;

(c) Land acquisition cost to be trued up as per actual amount, in-line with relevant notification;

(d) The actual resettlement plan will be dependent upon the discharge location associated with dewatering, the cost will be trued up as per actual upon.

8. PROPOSED TARIFF

Proposed levelized tariff is **USD 48.50 per ton**, after taking into consideration variable, and capacity charges discussed in this tariff petition.

Coal Tariff Table (USD per ton)

	Variable O&M	Fixed O&M	Working Capital Interest	Insurance	Asset Replacement Reserve	Royalty	ROEDC	ROE	Principal	Interest	Tariff
Dec-20	12.79	18.98	0.66	1.54	1.85	-	2.27	6.82	8.42	4.12	57.46
Dec-21	11.91	18.79	0.65	1.54	1.85	-	2.27	6.82	8.77	3.77	56.37
Dec-22	12.28	16.80	0.63	1.54	1.85	-	2.27	6.82	9.13	3.40	54.73
Dec-23	11.55	16.36	0.62	1.54	1.85	-	2.27	6.82	9.52	3.02	53.54
Dec-24	11.00	15.87	0.60	1.54	1.85	-	2.27	6.82	9.91	2.63	52.50
Dec-25	11.47	15.65	0.61	1.54	1.85	-	2.27	6.82	10.33	2.21	52.75
Dec-26	9.69	14.85	0.58	1.54	1.85	-	2.27	6.82	10.76	1.78	50.14
Dec-27	10.63	14.91	0.59	1.54	1.85	-	2.27	6.82	11.21	1.33	51.14
Dec-28	11.48	15.04	0.60	1.54	1.48	-	2.27	6.82	11.67	0.87	51.77
Dec-29	10.98	15.04	0.59	1.54	1.48	-	2.27	6.82	12.16	0.38	51.26
Dec-30	11.97	15.28	0.46	1.54	1.48	-	2.27	6.82	-	-	39.83
Dec-31	11.38	15.11	0.45	1.54	1.48	-	2.27	6.82	-	-	39.05
Dec-32	10.94	15.08	0.45	1.54	1.48	-	2.27	6.82	-	-	38.58
Dec-33	11.36	15.37	0.45	1.54	1.48	-	2.27	6.82	-	-	39.30
Dec-34	9.66	14.89	0.43	1.54	1.48	-	2.27	6.82	-	-	37.09
Dec-35	10.54	15.08	0.44	1.54	1.48	-	2.27	6.82	-	-	38.18
Dec-36	11.39	15.60	0.46	1.54	1.48	-	2.27	6.82	-	-	39.56
Dec-37	11.04	15.11	0.45	1.54	1.48	-	2.27	6.82	-	-	38.71
Dec-38	12.22	15.36	0.46	1.54	1.48	-	2.27	6.82	-	-	40.15
Dec-39	11.50	15.40	0.45	1.54	1.48	-	2.27	6.82	-	-	39.47
Dec-40	11.39	15.60	0.46	1.54	1.48	-	2.27	6.82	-	-	39.56
Dec-41	11.99	15.75	0.46	1.54	1.48	-	2.27	6.82	-	-	40.32
Dec-42	10.01	15.44	0.44	1.54	1.48	-	2.27	6.82	-	-	38.01
Dec-43	9.52	14.24	0.42	1.54	1.48	-	2.27	6.82	-	-	36.30
Dec-44	10.29	14.39	0.43	1.54	1.48	-	2.27	6.82	-	-	37.23
Dec-45	9.68	14.32	0.42	1.54	1.48	-	2.27	6.82	-	-	36.54
Dec-46	10.96	14.47	0.44	1.54	1.48	-	2.27	6.82	-	-	37.98
Dec-47	10.42	14.43	0.43	1.54	1.48	-	2.27	6.82	-	-	37.40
Dec-48	9.91	14.36	0.43	1.54	1.48	-	2.27	6.82	-	-	36.81
Dec-49	10.39	14.44	0.43	1.54	1.48	-	2.27	6.82	-	-	37.38
Levelized Cost	**11.27**	**15.88**	**0.54**	**1.54**	**1.66**	**-**	**2.27**	**6.82**	**5.63**	**1.46**	**48.50**