



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

**SUBMITTED TO
THE THAR COAL AND ENERGY BOARD
ON BEHALF OF
SINO-SINDH RESOURCES LIMITED**

PETITION SOUGHT

- **Through the authority vested to the TCEB, this particular petition seeks the determination of Contract Stage tariff for SSRL Thar Coal Block I, 7.8 MTPA Mine, in Tharparker District, Sindh, Pakistan.**
- **The petition has been formed in accordance with the rules and instructions established under Thar Coal Tariff Determination Rules, 2014, issued on November 27, 2014 by Energy Department, Government of Sindh**

PROJECT DEVELOPMENT PLAN

- **2x660MW coal based power plant and 7.8 million tons per annum Open-Pit coal mine are being allocated in Thar coal block-1; both projects are developed under the CPEC prioritized listed projects.**
- **The 2x660MW power project is developed by Thar Coal Block-1 Power Generation Company (Private) Limited (Power Company), which is the subsidiary company of Shanghai Electric Group. The power company obtained tariff determination from NEPRA through upfront tariff and received the Letter of Support (LOS) from PPIB to establish the 2x660MW coal based power plant by using indigenous coal in Thar coal block-1. The COD timeline of the power project is expected to be 36 months after Financial Close.**

PROJECT EXECUTION PLAN

Works Initiated	Day / Month / Year	June 2019
Financial Close	Day / Month / Year	June 2019
Construction Period	Months	36
COD	Day / Month / Year	Mid 2022
Commissioning Period	Years	30

PROJECT PLAN

[CONTD.]

- The project cost of **1.17755 billion USD** has been financed through a mix of Equity and Debt in a 25:75 ratio

CAPITAL STRUCTURE	%	mUSD
Equity	25	294.39
Debt	75	883.16
Capital Cost	100	1,177.55

- The Project shall supply coal to mine mouth power plants with installed capacity of 2*660MW, 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 of 30 years to provide **7.8 mtpa of coal**

SUITABILITY OF TECHNOLOGY SELECTED

- Considering, characteristics of stripping materials, space constraints and initial investment, it is determined that coal mining and waste removal shall be carried out using **hydraulic excavator with the bucket capacity of classic 7.0m³ and 60t dump truck** for loading and transportation.
- The quantity of **hydraulic excavator and truck in the full production year is 29 sets and 269 sets respectively**. Auxiliary equipment shall correspondingly be accessed according to the main mining equipment.
- The annual working days of the mine are determined to be 330 days, 3 shifts per day and 8h per shift, according to the natural production condition and the mining technology of the open-pit mine.
- **Average stripping ratio for the mine is 8.21 m³/t**, while average thickness of mine-able coal seam is 31.39 meters.

ENGINEERING, PROCUREMENT & CONSTRUCTION

- The Engineering, Procurement and Construction (“EPC”) price is calculated to be **USD 902.71 million**
- The stated EPC cost includes all works required for overburden removal, civil works. The turnkey cost of the overburden removal, and civil works is based on a firm proposal, which has been negotiated with **Shanghai Electric Group Co. Ltd.**, which is the EPC contractor.

Total Equipment & Installation	mUSD	249.39
Civil Works	mUSD	181.81
OB Removal	mUSD	320.69
Other Project Costs	mUSD	150.82

NON-EPC COSTS

SSRL Operating Expenses	mUSD	34.3653
Security Cost	mUSD	9.0000
Transmission Line Re-Route (HESCO)	mUSD	1.0000
Existing Pipeline Re-Route	mUSD	1.7700
Existing Roads Re-Route	mUSD	6.8500
Development Costs	mUSD	13.1000
Land Acquisition & Rehabilitation	mUSD	67.0008
Commitment Fee	mUSD	3.4216
Arrangement Fee	mUSD	4.4158
Interest During Construction	mUSD	94.4193
Sinosure Fee	mUSD	53.7670
Income from Pre-COD Sales	mUSD	-68.5670
Royalty to TCEB on Pre-COD Sales	mUSD	4.7836
Total Non EPC Costs	mUSD	225.3288

FINANCIAL STRUCTURE

- Financial structure is as per 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.
- 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 **2.74 percent** for reference tariff. As the debt would be fully covered by a Sinasure guarantee, a coverage premium of **5.5 percent of the total debt** is also being considered.
- Total cost of debt is assessed to be **5.74 percent** for determination of reference tariff.

FINANCIAL STRUCTURE

[CONTD.]

- **Working capital** is completely financed by debt in local currency, that is, Pak Rupee. Therefore, the applied 1-month KIBOR rate of 10.68% is used for tariff calculations. The working capital spread is 2%; hence the total Effective Interest Rate is 12.68%.

Working Capital Financed by Debt	100%
Currency of Debt	PKR
1-mth KIBOR	10.68%
Working Capital Spread	2%
Effective Interest Rate	12.68%

COAL INVENTORY ASSUMPTION

The coal production is 7.8 million tons. It is assumed to have coal inventory of 30 days with the amount of coal to be stored in inventory to be **0.64 million tons**.

Fuel (Diesel) Inventory Days	21
RFO Inventory Days	21
Lubricant Inventory Days	10
Spares Inventory Days	180

TARIFF STRUCTURE

TARIFF COMPONENTS			LEVELIZED COSTS USD/TON		
7.8 mTPA Coal Mine			1-10 Years	11-20 Years	21-30 Years
Production Payment	Variable OM - Foreign	Spares and Consumables	3.063553	2.812135	2.756702
		Tyres	1.072626	0.898372	0.868642
		Lubricants	0.989866	0.873875	0.773423
	Variable OM - Local	Fuel (Diesel)	6.264814	5.394080	4.650700
		Power (Belts, Crushers, Production Equip.)	0.415495	0.415495	0.415495
	Asset Replacement		3.295150	2.872176	1.300421
	Royalty		3.9827	2.6539	2.4638

TARIFF STRUCTURE

[CONTD.]

7.8 mTPA Coal Mine			1-10 Years	11-20 Years	21-30 Years
Capacity Payments	Fixed OM - Foreign	Dewatering OpEx (Spares,Tyres,Lubricants)	0.181556	0.187641	0.224829
		MSF OpEx (Spares,Tyres,Lubricants)	0.364375	0.364375	0.364375
		Other OPEX	6.055031	5.760620	5.658470
	Fixed OM - Local	Fuel (Dewatering and MSF)	0.211957	0.211957	0.211957
		Power (Dewatering and MSF)	1.055833	1.075029	1.192339
		Other OPEX	2.683379	2.516992	2.487214
	Interest on Working Capital		1.3225	0.9151	0.8579
	Insurance		0.802040	0.802040	0.802040
	ROEdc		2.7056	2.7056	2.7056
	ROE		7.5803	7.5803	7.5803
	Principal Repayment		11.3226	0	0
	Interest Payments		3.7162	0	0

VARIABLE O&M

- The overall levelized Variable O&M cost is estimated to be **USD 11.4884 per ton**. Details of the components included in Variable O&M are discussed as follows:

SPARES AND CONSUMABLES COST

- This component includes the annual maintenance cost for spare parts of all the equipment and machinery in use. Overall Levelized cost for Spares and Consumables is calculated to be **USD 3.0108 per ton**.

TYRES COST

- This component includes the annual maintenance cost for Tyres for the vehicles used. Overall Levelized cost for Tyres is calculated to be **USD 1.0403 per ton**.

LUBRICANTS COST

- This component includes the cost of lubricants for the equipment and vehicles used for Over-burden and mining operations. Overall Levelized cost for Lubricants is calculated to be **USD 0.9628 per ton**.

VARIABLE O&M

[CONTD.]

FUEL COST

- This cost accounts for all the diesel used by the equipment and vehicles deployed for Over-Burden removal and Coal Extraction.
- The main equipment include Dump Trucks, Hydraulic Excavators, Rock Breaker, Wheel Dozer, Auxiliary Equipment and other equipment operated on diesel fuel for OB and Mining operations.
- Levelized cost for Fuel is calculated to be **USD 6.0589 per ton**. The cost is based on diesel price of PKR 106.6/litre (as notified by OGRA for Islamkot City, Mithi District).

POWER COST

- The power cost accounts for the generation of electricity for mine operations from RFO fuel. Overall Levelized cost for Power is calculated to be **USD 0.4155 per ton**.

ASSET REPLACEMENT

- The equipment used has a specified life. Subsequently, at the end of its useful life the equipment are replaced.
- An Asset Replacement Reserve is established as part of the tariff to account for the Asset Replacement Cost.
- Equipment that have a life of 3 years, are replaced at COD.
- The overall levelized cost for Asset Replacement is **USD 3.0164 per ton.**

ROYALTY

- As per the decision of the relevant authority, Royalty payments are assumed to be 7.5% of Coal price/ton or PKR 150/ton (whichever is higher).
- The Royalty Payments may be adjusted with time, depending on the decision of the Authorities.
- The levelized cost of Royalty is estimated to be **USD 3.5318 per ton.**

FIXED O&M (FOREIGN) COSTS

The levelized Fixed O&M (Foreign) cost is estimated to be **USD 6.5574 per ton**. Details of the components included in Fixed O&M (Foreign) are discussed as follows:

DEWATERING OPEX COST

- This component includes the annual cost of operational expenses comprising of Spares, Tyres and Lubricants for Dewatering of mine. According to the mine design, the dewatering work is constant and fixed. Overall Levelized cost for Dewatering operational expenses is calculated to be **USD 0.1922 per ton**.

MSF OPEX COST

- The Mine Services Facility incurs operational costs of Spares, Tyres and Lubricant for the on-site vehicles. The levelized cost for MSF operational expenses is **USD 0.3644 per ton**.

FIXED O&M (FOREIGN) COSTS

[CONTD.]

OTHER OPEX COST-FOREIGN

- **Levelized cost of Other Operational Expenditures is **USD 6.0009 per ton.****
- **The Other OPEX costs include the following:**
 - **Labour and Personnel-Foreign**
 - **Logistics - Mine Office Supplies**
 - **SSRL Operating Expenses - Foreign**
 - **EPC/O&M Operating Expenses - Foreign**
 - **Health, Safety and Environment**
 - **Consultancies**
 - **Legal**
 - **Additional Works**

FIXED O&M (LOCAL) COSTS

The levelized Fixed O&M (Local) cost is estimated to be **USD 3.952 per ton**.

Details of the components included in Fixed O&M Costs (Local) are discussed as follows:

FUEL COSTS [DEWATERING AND MINE SERVICE FACILITIES]

- The fixed component of fuel costs is on account of the diesel used for equipment and vehicles employed for Dewatering and MSF operations. Levelized cost of Fuel for Dewatering and MSF is **USD 0.212 per ton**. The cost is based on diesel price of PKR 106.6/litre (as notified by OGRA for Islamabad City, Mithi District).

POWER COST [DEWATERING AND MINE SERVICE FACILITIES]

- The fixed component of power cost is on account of the generation of electricity through RFO fuel for Dewatering and MSF operations. Levelized cost of Power for Dewatering and MSF is **USD 1.0893 per ton**. The cost is based on RFO price of PKR 62.279/ton (Ex-Refinery price, Byco).

FIXED O&M (LOCAL) COSTS

[CONTD.]

OTHER OPEX COSTS-LOCAL

Levelized cost of Other Operational Expenditures is **USD 2.6508 per ton**. The Other OPEX costs include the following:

- **Labour and Personnel-Local**
- **Logistics - Travel and Training**
- **SSRL Operating Expenses - Local**
- **EPC/O&M Operating Expenses - Local**
- **Land Lease Operating Expenditures**

INTEREST ON WORKING CAPITAL

Levelized cost of Interest on Working Capital is calculated to be **USD 1.1861 per ton.**

Following are the assumed parameters for calculating the Interest on Working Capital:

- **Working Capital Financed by Debt** **100%**
- **Currency of Debt** **PKR**
- **1-mth KIBOR** **10.68%**
- **Working Capital Spread** **2%**
- **Effective Interest Rate** **12.68%**

INSURANCE

- Levelized cost of Insurance is calculated to be **USD 0.8020 per ton.**
- The Pre-COD and post-COD Insurance is assumed to be **0.70 %.**

RETURN ON EQUITY DURING CONSTRUCTION

- Levelized cost of ROEDC is calculated to be **USD 2.7056 per ton.**
- is being considered for 36 months, which is assumed to be the period in which mine will be developed.
- COD is assumed to be after 36 months.

PRINCIPAL REPAYMENT

- Levelized cost of Principal Repayment is calculated to be **USD 7.0612 per ton**. The repayment shall be made on semi-annual basis.
- The assumptions for calculation of Principal Repayment are tabulated hereunder:

Principal Amount	mUSD	883.16
6M LIBOR + Premium	(%)	5.74%
Total Number of Payments	(No.)	20

INTEREST PAYMENT COST

- Levelized cost of ROEDC is calculated to be **USD 2.7413 per ton**. The repayment shall be made on semi-annual basis.

RETURN ON EQUITY

- Levelized cost of ROE is evaluated to be **USD 7.5803 per ton**.

ADJUSTMENTS AT FINANCIAL CLOSE

- The Petitioner hereby requests adjustments in the project cost at Financial Close due to any changes in financial assumptions. 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.
- The components that may require adjustments are as follows:
- EPC cost may be adjusted according to the agreed indexations in the contract. Further adjustments may be made at COD.
- Estimated Project Development cost may be adjusted dependent on the actual Project Development Cost.
- Spread on local and foreign financing may be adjusted.
- Financing cost may be adjusted in accordance with the lender's requirement.

TRUE-UP OF TARIFF AT COD

- As per the indexations agreed upon during construction, fuel costs, dollar price and other adjustments, the tariff shall be re-evaluated at COD and trued-up.

APPLICABLE TAXES & DUTIES

- **In accordance with the Rules and Regulations issued by the Federal Board of Revenue for Thar Coal Mining Projects, customs duty on all imported supplies is assumed to be 0%. However, Sindh Excise Duty of 2.07% is applied on imported equipment. Sales Tax on supplies is assumed 0% and Sales Tax on Offshore Services is considered to be 13 %.**
- **As per the new budget which is issued by the government on 2018 the offshore supplier contract is applying to 7% withhold income tax.**
- **According to the Agreement between China and Pakistan for the Avoidance of Double Taxation and The Prevention of Fiscal Evasion with Respect to Taxes on Income we are applying to the Clause 13 "Technical Services" and the withhold tax is applying to 12.5%. Here we are sending you the soft copy for this agreement.**

APPLICABLE TAXES & DUTIES

- **As per the Sindh Sales Tax on Services ACT, 2011, Clause 3 the offshore service are applying to the Sindh Sale tax even we release the payment to non- resident. It means that we are applying to 13% SST .**
- **A withholding tax of 7% on supplies and 12.5% on services is applied as per the notifications appended in Annexure.**
- **Because of the reasons explained above an additional USD 49.5150 million have been estimated to be the applicable Taxes and Duties. Final total project shall be adjusted based on actual taxations.**
- **No taxes have been considered during the operations period of the mine and are considered to be a pass-through item.**

ADJUSTMENTS AT COD

- **At COD, adjustments shall be applied to the tariff. The tariff shall be trued-up as per the following considerations:**
- **Adjustments in EPC Cost in case of any variations from estimated values of OverBurden Volume and Dewatering Volume**
- **All payments involving USD/PKR conversions shall be adjusted as per the rate on the date of payment**
- **Indexations shall be applied according to the US Consumer Price Index (USCPI) for labour, spares and tyres**
- **The fuel price shall be adjusted as per the HSD price**
- **Power price shall be adjusted as per the RFO price**
- **At COD, the Petitioner shall submit proof of any withholding tax/sales tax included in payment to contractor; which may be added to project cost**
- **Costs for rehabilitation of villages may be actualized in accordance with the approval by the Government**
- **The applicable LIBOR and KIBOR rates at COD shall be used for the adjustment of IDC.**
- **Royalty payments, if adjusted by GoS, shall be actualized.**

LEVELIZED TARIFF

Levelized Tariff (1-30)	(USD/Ton)	50.6224
Average		
1 to 10	(USD/Ton)	57.0856
11 to 20	(USD/Ton)	38.0397
21 to 30	(USD/Ton)	35.3142

PETITION

- **With reference to the preceding documents, a request is, hereby, put forth by the Petitioner before the Authority of TCEB for approval of Reference Coal Tariff of 7.8 mTPA coal mine at Thar, Sindh; along with the approval relevant requested adjustments and indexations sought in the Petition.**
- **The Petitioner assures to readily and promptly provide any additional supporting documents that may be required by TCEB.**

THANK YOU!