



Before the Thar Coal & Energy Board

Tariff Petition for Financial Close Tariff

For

Coal Mine of 7.8mtpa at Block-I of Thar Coalfields

*Pursuant to Thar Coal Tariff Determination Rules, 2014 read with the provisions of Thar Coal
& Energy Board Act, 2011*

Dated: 18th September 2022



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2. DETAILS OF PETITIONER

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3. GROUNDS FOR FINANCIAL CLOSE TARIFF

- 3.1 Thar has been blessed with 175 Bt of lignite reserves (95% of the entire country) which offers an opportunity to combat the power shortage issue that Pakistan has been plagued with since more than a decade. The target is to curb the energy supply and demand gap of 5000-7000 MW by producing cheaper electricity through the mine mouth powerplants in the Tharparkar district.
- 3.2 As far as the international coal prices go, the ICE Newcastle coal futures is currently trading at USD 439/t whereas the average price of coal in the international markets regardless of the grade hovers around USD 300/t to USD 340/t. Hence, this makes importing coal unfeasible for local power production and it became critical to explore the potential of Thar Coal to ascertain energy security in Pakistan.
- 3.3 The aforementioned realizations were the reason Sino Sindh Resources (Pvt.) Ltd. (“SSRL”) was established to construct, develop, own, and operate Block-I of Thar Coalfields, located in District Tharparkar, Sindh, Pakistan
- 3.4 SSRL, vide its tariff petition dated May 19, 2020, requested Thar Coal & Energy Board (“TCEB”) in accordance with the authority vested with TCEB to determine Contract Stage Tariff for SSRL’s coal mine of 7.8 million tons per annum (“mtpa”) at Block-I of Thar Coalfields, located in District Tharparkar, Sindh, Pakistan
- 3.5 TCEB pursuant to Rule 10(5) of the Thar Coal Tariff Determination Rules, 2014 (“Rules”), approved determination of EPC Stage Tariff (“Tariff Determination”) for SSRL on October 29, 2020, via determination order bearing reference no. TCEB/Registrar/2-212015/CS-Review
- 3.6 Following Tariff Determination, SSRL is filing this Financial Close Tariff Petition (“Financial Close Tariff Petition for Contract Stage”), before TCEB, to object, and to clarify key points detailed in Tariff Determination, which played a critical role in determination of Contract Stage Tariff. It is requested that TCEB kindly reconsiders these key points in an objective and holistic manner.
- 3.7 Key issues being covered in this Financial Close Tariff Petition are as follows, and are elucidated in detail in Section 4 to 10:
- Variable O&M cost
 - Fixed O&M cost
 - Working capital Interest
 - Insurance and Royalty
 - ROEDC and ROE
 - Principal and Interest



- Proposed Tariff for Financial close stage

- 3.8 It is requested that SSRL be allowed to submit additional evidence, as well as further submissions associated with this Financial Close Tariff Petition for Financial Close Stage, if required by TCEB
- 3.9 We may be pleased to provide any additional information as required by TCEB pertaining to this Financial Close Tariff Petition



4. VARIABLE O&M COST

Variable O&M Costs on a levelized basis have been reassessed to be USD 15.09 per ton.

The global economy saw a significant increase in the price of petroleum products due to the shortages in supply. Furthermore, Pakistan was at the receiving end of the brunt with a significant depreciation of the PKR combined with higher fuel prices globally. Since the fuels and lubricants are procured locally, this impacted the fuel and lubricant costs quite significantly. As shown in table 2, the fuel and lubricant prices at the time of the last tariff determination, were considerably lower than the current prices. The increase in the fuel cost, which has the highest absolute impact on the total variable cost, has been 133% only despite higher percentage changes in the prices.

Moreover, tyre costs have increased as well due to an increase in the rubber prices since 2020 when they were at the decade's lowest at USD cents 102 per kg and since have increased by almost 100% in 2021 to USD cents 200 per kg and now hovering around USD cents 140 per kg. This has increased the levelized estimates by 88% for the tyre costs.

Variable O&M cost	Assumptions for the FC Petition
Spares & Consumables	3.58
Fuel Costs	9.55
Lubricants Costs	1.08
Tyre Costs	0.88
Other costs	0.00
Totals	15.09

Table 1 Variable O&M cost breakdown

		Current Prices
- Price of Diesel	PKR per liter	250.68
- Price of RFO	PKR per ton	180,765.00
- Weighted Average Price of Lubricant	PKR per liter	1,354.80

Table 2 Prices of Fuels and Lubricants

The aforementioned considerations regarding higher commodity prices have moved the estimates by large margins and increased the variable costs associated with the project. We request the TCTDC to approve USD 15.09 per ton for the levelized variable O&M costs portion of the petition since SSRL is working with tight margins already and has shown efficiency in managing costs despite adversity in terms of higher prices.



5. FIXED O&M COST

The petitioner puts forth its requirement of USD 12.47 per ton for the fixed costs considering higher price for RFO, and higher logistics and additional works costs.

It was established in the last section that petroleum prices have taken a sharp upturn in the global and local markets causing most of the operating costs to increase by more than 100%. Fixed costs have seen a similar trend with power costs higher by 257%, compared to the last determined tariff, given the increase in the price of RFO from PKR 63,856.30 per ton to PKR 180,765.00 per ton: a 183% change. Given also that RFO has, on average, a 77% contribution to the energy mix on site, the impact of its price increase requires sizeable adjustment to the fixed costs and has been updated in the current petition accordingly.

Fixed O&M cost	Assumptions for the FC Petition
Power Costs	2.29
Labor & Management Salary	3.04
Safety & Security Cost	0.39
SSRL Operating Expenses	2.70
Other Costs	4.06
Totals	12.47

Table 3 Fixed O&M costs breakdown

SSRL, in light of the above rationalizations, requests the regulator to consider USD 12.47 per ton of fixed O&M costs. The petitioner faces adverse circumstances which are beyond its control and, ceteris paribus, are bound to increase operating costs. Hence, the petitioner submits to TCTDC its requirements for the fixed costs and appeals for the submission to be approved.

6. WORKING CAPITAL INTEREST

The working capital is financed completely by debt in the local currency (PKR) and hence the KIBOR is the applicable rate for interest calculations while the spread on the facility remains at 2%. Furthermore, since the cash conversion cycle (CCC) for the project during operations stage is assumed to be 47 days, then the petitioner is of the opinion that double the CCC should be when the repayments for working capital financing happens. Hence, SSRL requests the regulator to allow the use of 3-month KIBOR for the working capital interest calculation.

Since September 2021, the policy rate in Pakistan has increased by 800 bps and the 3-month KIBOR is 106 bps higher than the current policy rate. The soaring interest rates were to curtail the issue of inflation in the country and keep in line with the US Federal reserve rate. Higher benchmark rates have had an adverse effect on the cost of doing business and has eventually impacted all facets of the tariff proposal.

Working capital is a function of the tariff and the process is iterative. Subsequently, the interest on working capital is part of the tariff and hence a tariff would translate into a higher working capital interest and the process iteratively runs so long as the right balance is achieved. An increase in the benchmark rate directly impacts the interest expense but also increases the working capital requirement and therefore yields a non-linear result.

		Current Values
- Reference 3-month KIBOR	%	16.060%
- Indexed PKR-USD Exchange Rate	PKR per USD	234.3157

Table 4 KIBOR and PKR/USD Parity

- Working Capital financed by Debt	%	100%
- Currency of Debt	CCY	PKR
- 3-mth KIBOR	%	16.06%
- Working Capital Spread	%	2.00%
- Effective Interest Rate	%	18.06%

Table 5 Working Capital Financing Particulars

The petitioner requests that given the circular nature of the relationship between the working capital and the tariff, and further given the increase in the benchmark rate, the regulator allow the levelized working capital interest of USD 1.07 per ton. SSRL would also like to indicate that the value of this component reduces overtime as the working capital management efficiency improves.

7. INSURANCE AND ROYALTY

Insurance is a derivative of the EPC costs. Despite an increase in the underlying costs, the current petition for the insurance cost is equivalent to the EPC review submission by the petitioner. Although the EPC costs are higher in the current submission, due to changes in the macroeconomic variables, but insurance has plateaued at USD 0.49 per ton. SSRL believes that USD 0.49 per ton is a reasonable estimate for the insurance cost and has brought down its estimate for insurance as a percentage of EPC costs to 0.42% from 0.54%. The petitioner depicts, through this reduction, that it is attempting to optimally minimize costs wherever there is reasonable room.

Nonetheless, royalty is similar to working capital interest as it is also an iterative calculation and associated with the tariff value. Since the tariff in the current submission is proposed to be higher so is the royalty as it represents 7.5% of the year's tariff for thirty years. Iterative costs change along with the underlying tariff and their impact is non-linear and usually more pronounced than the change in the underlying, standalone.

SSRL requests the regulator to provide room in case of cost overruns and allow a 0.42% of EPC costs as insurance while allowing a minimum threshold of USD 0.49 per ton for the insurance

cost. The royalty is iteratively calculated as 7.5% of the tariff and as matter of defending its tariff proposal, the petitioner requests TCTDC to allow levelized royalty of USD 4.25 per ton.

8. ROEDC AND ROE

Most of the costs as shown in table 6 are higher due to external factors as discussed in other relevant sections of this petition.

<i>All amounts in USD Mn unless specified</i>	FC Petition
EPC Costs	920.57
Non-EPC cost	123.20
Insurance cost	4.45
Financing, shareholder guarantee fee, LC charges, etc.	60.7
Interest during construction	36.8
Total Project Costs	1,145.8

Table 6 Project costs breakdown

The levelized ROEDC in the current petition stands at USD 2.87 per ton. The increase, as mentioned earlier, is a consequence of rising project costs that had to be covered by injecting funds maintaining the debt-to-equity ratio of 75:25 after the first equity only drawdown of USD 48.96 Mn.

The levelized return on equity (ROE) in this financial close petition is USD 7.36 per ton. The rationalizations for the steeper ROE are the same as ROEDC as both are driven by the value of equity which is in turn driven by the project costs. The petitioner would like to emphasize that despite higher project costs.

Equity Funding		
- Equity Investment	USD Mn	286.4
- TCEB Guaranteed IRR	%	20%
- Total ROEDC	USD Mn	111.7

Table 7 Equity Funding Specifics and Total Return on equity during Construction

Considering the aforementioned reasons, the ROE and ROEDC have increased owing to non-synthetic factors and a reversal in the fuel prices and interest rates will pull the returns down. In addition to that, the petitioner requests TCTDC to consider in its decision the SSRL's compliance with the ground rules and, where possible, exceeded expectations in reducing peripheral costs in this tariff petition and hence be treated in accordance with its conduct.

9. PRINCIPAL AND INTEREST

The increase in project costs as illustrated in table 6 require higher debt and equity funding. Following the debt-to-equity ratio of 75:25, the debt, including the interest during construction (IDC), to be raised by SSRL of USD 857.4 Mn at the 3-Month LIBOR and a spread of 280 bps. The maturity on the debt is 13 years with 3 years being the grace period and 10 years as the repayment period. Due to the absence of any sovereign guarantee, a one-off Shareholder Guarantee fee (previously Sinosure fee) of 5% of the total principal and interest is agreed with Shanghai Electric Finance Company to provide a guarantee of repayment to the lenders. Besides, a one-time upfront fee of 0.5% of total debt and a commitment fee of 0.5% for the undrawn facility is also charged by the lender.

The spread negotiated for the project given the sovereign and project risk is quite positive for the project given that the sovereign, IR of Pakistan, witnessed a CDS spread of 1600 bps during May 2022. The competitive spread helps keep the overall debt servicing cost in check given the recent surge in the LIBOR from a low of 0.2% to 3.27% currently.

The global inflation fueled by the commodity super cycle, inter alia, caused the central banks across the world to take measures to curb the demand and control inflation. One countermeasure they pursued was to increase the policy rates and LIBOR witnessed a sharp increase to the levels before the COVID-19 crisis.

The effective LIBOR during the various periods of the project is in the table below with their comparison to the rate used in tariff determination at the EPC review stage.

		Current Values
- Reference 3-month LIBOR for Operation Period	%	3.270%
- Reference 3-month LIBOR for first year of Construction Period	%	0.742%
- Reference 3-month LIBOR for second year of Construction Period	%	0.163%
- Reference 3-month LIBOR for third year of Construction Period	%	1.453%

Table 8 LIBOR Assumption used

Apart from the second year of construction, the LIBOR rate has been higher than what was assumed in the tariff determination. The soaring benchmark rate has increased the interest cost by 196% and the IDC by 94% compared to the tariff determination values. This higher cost combined with higher debt requirement given the project costs, increased other costs related to guarantee and commitment fees.

Although the Shareholder Guarantee fee has increased in absolute terms given the reasons above, the petitioner would like to call to the attention of TCTDC that it has managed to reduce the Guarantee fee from 7% to 5% and that too without a sovereign guarantee. This is lower than 5.5% allowed in the last tariff and shows real commitment to the project and as discussed earlier, to optimally minimize costs wherever feasible. SSRL, through efficient cost planning has exhibited fidelity for Thar Coal and is making prudent efforts to optimize the economic viability for all the stakeholders.

- Commitment Fee (% of Undrawn Facility)	%	0.50%
- Upfront Fee (% of Total Debt)	%	0.50%
- Shareholder Guarantee Fee (% of Total Debt + Interest)	%	5.00%
- Principal Amount (incl. IDC)	USD Mn	859.32
- Currency of Debt	CCY	USD
- Total Debt Maturity	Years	13
- Grace Period	Years	3
- Debt Repayment Period	Years	10
- 3-month LIBOR for Operation Period	%	3.27%
- 3-month LIBOR for first year of Construction Period	%	0.74%
- 3-month LIBOR for second year of Construction Period	%	0.16%
- 3-month LIBOR for third year of Construction Period	%	1.45%
- LT Debt Spread	%	2.80%
- Effective Interest Rate for Operation Period	%	6.07%
- Effective Interest Rate for first year of Construction Period	%	3.54%
- Effective Interest Rate for second year of Construction Period	%	2.96%
- Effective Interest Rate for third year of Construction Period	%	4.25%

Table 9 Debt Financing Details

Given the higher benchmark rate and project costs, the levelized principal repayments in this financial close petition stands at USD 6.85 per ton whereas the levelized interest payments are USD 2.83 per ton.

Considering the changes in interest rate and project costs given, inter alia, higher fuel prices, higher debt service is required by the petitioner and hence the higher proposed values for principal and interest compared with the EPC review stage tariff decision. SSRL would also like to point out that it has made attempts at reducing the Shareholder guarantee fee and has brought it down to 5% from 7% previously, showing genuine resolve towards achieving optimum results for all the stakeholders. The petitioner requests that its appeal for USD 6.84 per ton and USD 2.83 per ton for principal and interest be approved in line with the other tariff components.



10. PROPOSED TARIFF FOR FINANCIAL CLOSE STAGE

After re-examining the market conditions and the now economically impractical tariff determination at the last stage, the petitioner attempts to provide a higher, more reasonable level of tariff where the project would be financially feasible for all stakeholders involved. This Financial Close petition proposes a levelized tariff of USD 56.75 per ton. The table below provides a detailed comparison of tariff proposed in the Financial Close stage Tariff Petition.

	SSRL Financial close Petition
Variable O&M	15.09
Fixed O&M	12.47
Working Capital Interest	1.07
Insurance	0.49
Asset Replacement Reserve	3.43
Royalty	4.26
ROEDC	2.88
ROE	7.38
Principal	6.85
Interest	2.83
Levelized Tariff	56.75

Table 10: Levelized Tariff for Financial Close

It is evident through the above table that the costs pertaining to operations and maintenance have increased considerably. In the levelized tariff currently proposed, the petitioner has tried to keep certain costs in line with its last petition like insurance despite higher project costs, but the costs which require revision have been presented to make a valid and rational economic case for all the stakeholders. The current level of tariff justifies the unit economics for SSRL with the bandwidth for further cost reductions being narrow.

Considering the recent adverse changes in the macroeconomic factors of the Project, which has been further illustrated in detail throughout the petition, it is humbly requested from TCTDC that a levelized tariff of USD 56.75 per ton is approved. It is fully understood that all costs will be actualized at COD Stage Tariff and SSRL will continue to focus on rationalizing costs across the board to keep overall cost levels under control.

11. ANNEXURE-A: LEVELIZED TARIFF

Year	Variable O&M	Fixed O&M	Working Capital Interest	Insurance	Asset Replacement Reserve	Royalty	ROEDC	ROE	Principal	Interest	Tariff
1	17.95	11.80	1.37	0.49	8.61	5.30	2.88	7.38	8.29	6.56	70.64
2	17.95	12.45	1.25	0.49	3.05	4.89	2.88	7.38	8.81	6.05	65.19
3	17.95	12.72	1.25	0.49	3.05	4.91	2.88	7.38	9.35	5.51	65.48
4	17.95	12.97	1.25	0.49	3.00	4.93	2.88	7.38	9.92	4.93	65.70
5	13.81	12.00	1.16	0.49	3.00	4.51	2.88	7.38	10.54	4.32	60.08
6	13.81	12.11	1.16	0.49	3.15	4.53	2.88	7.38	11.19	3.67	60.37
7	13.81	12.16	1.17	0.49	3.35	4.55	2.88	7.38	11.87	2.98	60.63
8	13.81	12.13	1.16	0.49	2.87	4.51	2.88	7.38	12.61	2.25	60.07
9	13.81	12.25	1.18	0.49	3.79	4.59	2.88	7.38	13.38	1.47	61.23
10	13.81	12.49	1.15	0.49	2.45	4.50	2.88	7.38	14.21	0.65	60.00
11	13.81	13.05	0.80	0.49	2.49	3.31	2.88	7.38	-	-	44.19
12	13.81	12.29	0.80	0.49	3.03	3.30	2.88	7.38	-	-	43.97
13	13.81	12.32	0.80	0.49	3.24	3.32	2.88	7.38	-	-	44.22
14	13.81	12.25	0.81	0.49	3.43	3.33	2.88	7.38	-	-	44.36
15	13.81	13.01	0.81	0.49	3.25	3.37	2.88	7.38	-	-	45.00
16	13.81	13.24	0.82	0.49	3.25	3.39	2.88	7.38	-	-	45.25
17	13.15	12.50	0.78	0.49	2.76	3.24	2.88	7.38	-	-	43.16
18	13.15	12.49	0.78	0.49	2.74	3.23	2.88	7.38	-	-	43.13
19	13.15	13.10	0.79	0.49	2.63	3.28	2.88	7.38	-	-	43.68
20	13.15	12.72	0.78	0.49	2.55	3.24	2.88	7.38	-	-	43.17
21	13.15	13.45	0.78	0.49	2.17	3.27	2.88	7.38	-	-	43.56
22	13.15	12.86	0.77	0.49	1.99	3.20	2.88	7.38	-	-	42.71
23	13.15	13.08	0.77	0.49	2.08	3.23	2.88	7.38	-	-	43.05
24	13.15	13.02	0.79	0.49	2.69	3.27	2.88	7.38	-	-	43.65
25	13.15	12.85	0.75	0.49	1.28	3.14	2.88	7.38	-	-	41.90
26	13.15	13.30	0.76	0.49	1.23	3.18	2.88	7.38	-	-	42.35
27	13.15	12.76	0.75	0.49	1.12	3.12	2.88	7.38	-	-	41.63
28	13.15	12.81	0.73	0.49	0.51	3.08	2.88	7.38	-	-	41.02
29	13.15	12.93	0.72	0.49	0.00	3.04	2.88	7.38	-	-	40.58
30	13.15	13.16	0.72	0.49	-	3.06	2.88	7.38	-	-	40.84
	15.09	12.47	1.07	0.49	3.43	4.26	2.88	7.38	6.85	2.83	56.75

Figure 4: Coal Tariff Table Levelized (USD per ton)

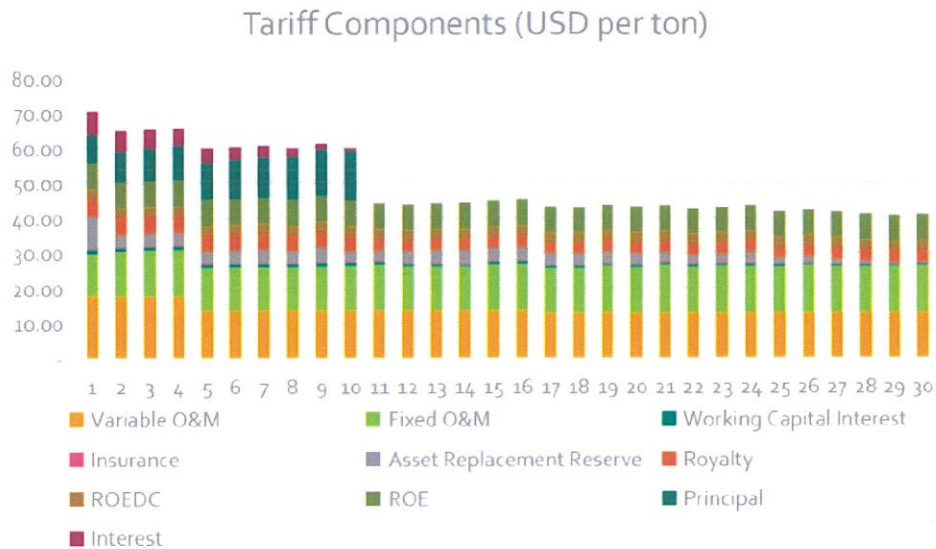


Figure 5: Tariff Components (USD per ton)