



Thar Coal & Energy Board
Government of Sindh

No. TCEB/Registrar/2-2/2015/FC Stage
June 22, 2023

**DETERMINATION OF THAR COAL & ENERGY
BOARD IN THE MATTER OF REFERENCE FINANCIAL
CLOSE STAGE TARIFF FOR SINO SINDH
RESOURCES (PRIVATE) LIMITED FOR COAL MINE
OF 7.8 MTPA AT BLOCK-I OF THAR COALFIELDS,
DISTRICT THARPARKAR, SINDH, PAKISTAN**





Thar Coal & Energy Board Government of Sindh

No. TCEB/Registrar/2-2/2015/FC Stage
June 22, 2023

Determination of Reference Financial Close Stage Tariff for Sino Sindh Resources (Private) Limited for Coal Mine of 7.8 MTPA at Block I Thar Coalfields, District Tharparkar, Sindh, Pakistan

Thar Coal Tariff Determination Committee

Constituted in Pursuance of Rule 3(1) of Thar Coal Tariff Determination Rules, 2014

Dr. Fahad Irfan Siddiqui
Member

Mr. Ammar Habib Khan
Member

Mr. Khadim Hussain Channa
Member / Presiding Officer





Thar Coal & Energy Board Government of Sindh

No. TCEB/Registrar/2-2/2015/FC Stage

25th July 2023

In pursuance of the Rule 10(5) of the Thar Coal Tariff Determination Rules, 2014, it is certified that the Thar Coal & Energy Board, on the recommendation of the Thar Coal Tariff Determination Committee, has approved the Determination of Reference Financial Close Stage Tariff for Sino Sindh Resources (Private) Limited for Coal Mine of 7.8 MTPA at Block-I Thar Coalfields, District Tharparkar, Sindh, Pakistan, appended in the following pages.

Khadim Hussain Channa
Managing Director/Secretary
Thar Coal & Energy Board





Thar Coal & Energy Board

Government of Sindh

TABLE OF CONTENTS

S.#	DESCRIPTION	PAGE #
1.	TARIFF SOUGHT BY PETITIONER	2
	MATERIAL ASPECTS OF THE PETITION - ANALYSIS & DECISIONS	3
2.	OVERBURDEN WASTE VOLUME	3
3.	EQUIPMENT FLEET CONFIGURATIONS	4
4.	FINANCING STRUCTURE	5
5.	LAND ACQUISITION & REHABILITATION COSTS	6
6.	RETURN ON EQUITY	6
7.	EPC COSTS	6
	COAL TARIFF DETERMINATION ORDER	8
	GENERAL CONDITIONS	9
	TARIFF INDEXATIONS	11
	ANNEXURE A – TARIFF TABLE 7.8 MTPA MINE	17





Thar Coal & Energy Board Government of Sindh

BCM	Bank Cubic Meter
COD	Commercial Operations Date
CPI	Consumer Price Index
CPPAG	Central Power Purchasing Agency (Guarantee) Limited
ECC	Economic Coordination Committee
EPC	Engineering, Procurement & Construction
GCV	Gross Calorific Value
GOP	Government of Pakistan
GoS	Government of Sindh
IDC	Interest During Construction
IRR	Internal Rate of Return
KIBOR	Karachi Inter-Bank Offer Rate
LC	Letter of Credit
LHV	Lower Heating Value
LIBOR	London Inter-Bank Offer Rate
MJ / Kg	Mega Joules per Kilogram
MSF	Mine Service Facilities
MTPA	Million Tons Per Annum
MW	Megawatt
MT	Million Tons
NCV	Net Calorific Value
NEPRA	National Electric Power Regulatory Authority
O&M	Operations & Maintenance
OGRA	Oil & Gas Regulatory Authority
PKR	Pakistani Rupee
RMB	Chinese Renminbi
RoE	Return on Equity
RoEDC	Return on Equity During Construction
SCA	Sindh Coal Authority
SSRL	Sino Sindh Resources (Private) Limited
TCEB	Thar Coal & Energy Board
TCTDC	Thar Coal Tariff Determination Committee
TT & OD	Telegraphic Transfer & On Demand
US	United States
USD	United States Dollar





Thar Coal & Energy Board Government of Sindh

The Thar Coal & Energy Board, as per the respective notifications of the Government of Sindh and Government of Pakistan is the coal-pricing agency, in accordance with Section 5(m) of Thar Coal & Energy Board Act, 2011. This determination is conducted in accordance with the authority vested with TCEB and pertains to the petition dated September 18, 2022 of Sino Sindh Resources (Private) Limited ("SSRL" or the "Petitioner") for Determination Reference Financial Close Stage Tariff for SSRL's Coal Mine of 7.8 MPTA at Block I Thar Coalfields, District Tharparkar, Sindh, Pakistan. The petition has been assessed and reviewed in accordance with the parameters and guidelines established under the Thar Coal Tariff Determination Rules, 2014 dated November 27, 2014 as notified by Government of Sindh. The coal tariff, so determined, shall form the basis of fuel cost for downstream power generation to be determined by NEPRA.

1. TARIFF SOUGHT BY PETITIONER

The Petitioner has submitted a request for determination of levelized tariff of USD 56.75 per tonne for the development & operations of 7.8 MTPA mining capacity. The details of the petitioned tariffs and costs are provided in Tables I to IV here below:

Table I – Petitioned Project Tariff for 7.8 MTPA Mining Capacity

Project Tariff	Year 1 – 10 Average	Year 11 – 20 Average	Year 21 – 30 Average	Year 1 – 30 Levelized
Total Production Payment Tariff Components	23.817	19.778	17.613	22.774
Total Capacity Payment Tariff Components	39.121	24.235	24.516	33.974
Total Project Tariff	62.938	44.014	42.130	56.748

All amounts in USD per Ton

Table II – Petitioned Production Payment Tariff for 7.8 MTPA Mining Capacity

Production Payment Tariff Components	Year 1 – 10 Average	Year 11 – 20 Average	Year 21 – 30 Average
Variable O&M	15.463	13.542	13.146
Asset Replacement	3.633	2.935	1.307
Royalty	4.720	3.301	3.159
Total Production Payment Tariff Components	23.817	19.778	17.613

All amounts in USD per Ton

Table III – Petitioned Capacity Payment Tariff for 7.8 MTPA Mining Capacity

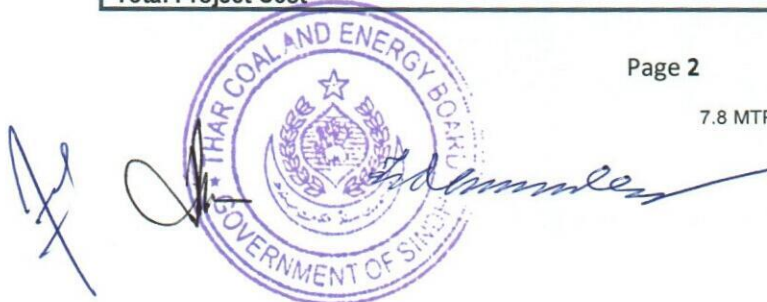
Capacity Payment Tariff Components	Year 1 – 10 Average	Year 11 – 20 Average	Year 21 – 30 Average
Fixed O&M	12.310	12.697	13.021
Insurance	0.489	0.489	0.489
Interest on Working Capital	1.211	0.796	0.754
Debt Principal Repayment	11.016	-	-
Debt Interest Payment	3.841	-	-
Return on Equity	7.375	7.375	7.375
Return on Equity During Construction	2.876	2.876	2.876
Total Capacity Payment Tariff Components	39.121	24.235	24.516

All amounts in USD per Ton

Table IV – Petitioned Project Cost for Development of 7.8 MTPA Mining Capacity

Petitioned Project Cost for 7.8 MTPA	Amount
EPC Cost	920.57
Non-EPC Cost	123.20
Insurance Cost	4.45
Financing Fee, LC Charges, sinosure Fees etc.	60.7
Interest During Construction	36.8
Total Project Cost	1145.80

All amounts in USD Million





Thar Coal & Energy Board Government of Sindh

The amounts illustrated above are petitioned on the basis of certain assumptions which are detailed in the following sections. The key assumptions and basis of the petition are summarized hereunder:

i.	Price of Diesel	PKR 250.68 per Litre
ii.	Price of Furnace oil	PKR 180,765 per Ton
iii.	PKR to USD Exchange Rate Parity	PKR 234.32 per USD
iv.	RMB to USD Exchange Rate Parity	RMB 6.91 per USD
v.	Cost of Foreign Financing	6-month LIBOR + 2.80%
vi.	6-month LIBOR Assumption	3.27%
vii.	1-month KIBOR Assumption	16.06%
viii.	Debt to Equity Ratio	75:25
ix.	Debt Repayment Period	10 Years
x.	Equity IRR	20.00%
xi.	Mining Technology	Trucks(60t) & Shovel(7m ³) & (2m ³)
xii.	Construction Period	36 Months
xiii.	Overburden Removal Volume (During Construction)	169 million BCM
xiv.	Average Slope Angle of the Mine	24° (Degrees)
xv.	Average Rate of Dewatering	142520m ³ /d

MATERIAL ASPECTS OF THE PETITION - ANALYSIS & DECISIONS

Subsequent to the award of the Contract Stage Tariff, the Petitioner is seeking to update the awarded Tariff on the basis of firm terms and conditions as established by the Financial Close agreements of the 7.8 MTPA mine. Furthermore, the Petitioner requested update certain technical details related to equipment fleet and overburden volumes.

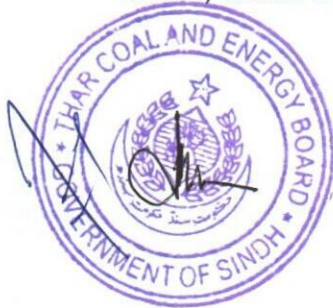
The following is a summary of the salient aspects of the 7.8 MTPA Financial Close stage tariff petition:

2. OVERBURDEN WASTE VOLUME:

Reference to the Contract Stage Review determination (Section 3.1), dated 29th October 2020, the petitioner was asked to submit the approval of competent authority i.e. Sindh Coal Authority (SCA) on updated geological model. The Geological Model submitted by SSRL has undergone changes, leading to an increased overburden volume of 1931 million cubic meters (at financial close stage) from 1834 million cubic meters (at feasibility stage) over 33 years of mining operations (with 3 years for development and 30 years for coal extraction) at Block-I. This has resulted in higher capital expenditures and operational expenditures, owing to an increased need for mining equipment.

SSRL was invited to provide concrete evidence to justify the increment in overburden volumes. In this regard, the SSRL submitted the responses vide letter number SSRL-ME-2022-70 and 77, dated 6th and 26th October 2022. The petitioner maintained that SCA's mandate is limited to conducting scrutiny the feasibility study for the award of mining lease. SSRL also referred to bankable feasibility submitted by RWE to Sindh Coal Authority (SCA) in 2004. The petitioner elaborated that their pit location is similar to RWE planned pit. The overburden volumes reported by RWE are 1964.19 million cubic meters.

TCTDC holds the view that the overburden volumes at the feasibility stage (1834 million cubic meters) should be used for the determination of this Financial Close Stage Tariff. However,



Signature



Thar Coal & Energy Board Government of Sindh

overburden volumes estimated by SSRL should be re-evaluated through a confirmatory survey at the time of Commercial Operation Date (COD) petition. As the scope of current petition is largely restricted to financing arrangements, overburden volumes as estimated through confirmatory survey may be adjusted accordingly at the COD stage. Table V presents the summary of waste (OB + IB) volume and coal tonnage for 7.8 MTPA mine at Block I.

Table V – Comparison of Petitioned and Determined Excavation Schedules

Material	SSRL Petitioned			TCTDC Determination (Feasibility/Contract Stage Coal tonnage and Waste volume)		
	Development period	Mining period	Total	Development period	Mining period	Sub Total
OB+IB (MBCM)	169.47	1761.24	1930.71	169.47	1664.71	1834.18
Coal (MT)	1.15	234.00	235.15	1.15	234.00	235.15
Overall S/R	8.21			7.80		

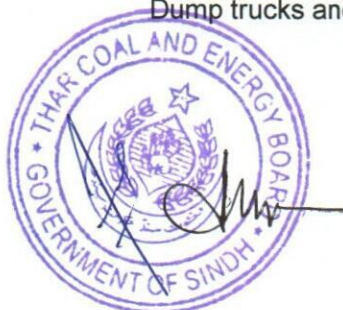
3. EQUIPMENT FLEET CONFIGURATIONS

SSRL has petitioned revised equipment configuration of 114 shovels (7 m³) and 2067 trucks (60 ton) for overburden removal and 7 shovels (7 m³), 16 shovels (2 m³) and 302 trucks (60 ton) for coal extraction during 33 years of mining operation. The petitioner claimed that the revised equipment configuration is based on updated performance evaluation and operational experiences on excavation pertaining to sub-recent and bara formations, which was not amply available at previous tariff stages. The financial close tariff mandate typically focuses on the financial terms. However, few adjustments have been made in number of shovels and fuel consumption based on available empirical data pertaining to Thar mining operations. Equipment fleet configuration should be re-assessed through more detailed and on-site evaluations at the COD stage. Comparison of SSRL requirement with TCTDC calculations of machinery is given at Table VI.

Table VI - Comparison of Major equipment requirements for 7.8 MTPA Mine at Block I

Machinery	SSRL Requirement			TCTDC Calculations (Feasibility/Contract Stage Coal tonnage and Waste volume)		
	Development period	Mining period	Total	Development period	Mining period	Total
Hydraulic excavator, 7.0m ³	39	82	121	31	48	79
Hydraulic excavator, 2.0m ³	07	16	23	01	06	07
Dump truck, 60 tonne	409	1960	2369	256	1116	1372

TCTDC is of a view that the current mining equipment configurations proposed by SSRL is inefficient for 7.8 MTPA mine capacity. Such large capacity open pit coal mines require efficient and reliable equipment for excavation and transportation of coal. The Committee believes that it is important to consider both the short-term and long-term impacts of machinery deployment decisions to ensure that the most cost-effective and efficient solutions are adopted. The deployment of high-capacity shovels and dump trucks by SSRL may represent a viable solution to their machinery configuration needs. Additionally, SSRL may consider the implementation of electric dump trucks/shovels and in-pit crushing and conveying system (IPCC) at Block I mine. SSRL to make efforts to electrify the mine via auxiliary power of mine-mouth power plants. This will reduce reliance on RFO/Diesel and also enable utilization of EV Dump trucks and excavators.



[Handwritten Signature]



Thar Coal & Energy Board Government of Sindh

TCTDC urged SSRL to submit a comprehensive comparative statement evaluating different equipment configurations at the time of Commercial Operation Date (COD) tariff petition. The comparative statement should carefully compare the various options available, considering factors such as cost-effectiveness, operational efficiency, and environmental impact. The goal of this evaluation is to determine the most appropriate machinery configuration for SSRL and to ensure that their operations are cost-effective, efficient, and environmentally responsible.

4. FINANCING STRUCTURE

The Feasibility Stage Tariff as well as Contract Stage Tariff, was based upon a debt / equity ratio of 75:25, and the same capital structure is being envisaged for the financial close stage. The Petitioner assumes a financing spread of 280 basis points over 6-month LIBOR, which is the benchmark rate for debt denominated in USD. Due to tight monetary conditions on a global level, LIBOR has considerably increased over the last one year. At the time of submission of petition, LIBOR was hovering in the range of 3.27%. Since then, there has been upward movement in LIBOR, and it is currently at 5.39%, and the same has been incorporated in this determination. As interest repayments, and capitalization depends on the LIBOR prevalent at the start of relevant quarter, actual interest paid, and capitalized will be actualized at COD Stage accordingly.

SSRL also petitions a Shareholder Guarantee Fee of 5%, which is an alternative to the Sinosure guarantee, which was earlier available at 7%. As the Shareholder Guarantee Fee has been reduced to 5%, the reduction will benefit the overall tariff, and reduce the overall cost of the project, while also covering the total debt of the project. The same will also be actualized at COD Stage depending on amount actualized, and paid accordingly, subject to verification.

A maximum cap of 25% equity is established under this Determination, as per earlier decisions and there is not change. It is further clarified that any additional (approved) capital injections shall be treated as Project Debt on Terms and Conditions to be established in accordance with approved debt terms, wherein equity would remain capped at the levels determined at this stage.

As iterated earlier, Commitment fee should also be renegotiated with the lenders in a manner that the change would be based on committed quarterly undrawn balance, rather than in a manner it is been proposed. The same would be actualized at the COD Stage, depending on how much of the same has been incurred, and paid.

It is advisable that SSRL should continue with a reputable top four/big four audit firms in Pakistan for the preparation and finalization of annual financial statements of the company, and the latest financials should be submitted for the same at the COD Stage.

5. LAND ACQUISITION AND REHABILITATION COSTS:

The Petitioner provides that the total area of the land to be acquired is estimated at 49.72 square kilometres (12,285 acres), with the acquisition to cost an estimated USD 1,100 per acre or a price fixed by the Government of Sindh. The quantity of land being acquired was earlier approved at 34.86 square kilometres (8,615 acres). The incremental land is being acquired for water disposal purposes, as earlier water disposal plan was in contravention of certain internal treaties.

Similarly, roughly 1,000 acres of land of the incremental quantity is being acquired to meet environmental consideration of forest plantation. Despite acquisition of incremental land, the





Thar Coal & Energy Board Government of Sindh

total cost of acquisition of land accumulates to USD 14.6 million, which is lower than the earlier approved amount of approximately USD 25 million. It is imperative that the amount being petitioned is actualized, and relevant evidence be provided at the COD Stage for the same.

Similarly, the Petitioner has also proposed cost of settling 948 households at a cost of USD 38,650 per household. The earlier approved amount for the same was USD 67 million against 1200 households. Considering the total amount of resettlement has reduced to USD 36.65 million, the same is concurred by the TCTDC. However, as mentioned above, relevant evidence for actualization of the same needs to be provided at the COD Stage.

The amounts mentioned above marginally exceed the maximum cap of USD 50 Million as approved by TCEB earlier. Incremental cost of USD 1.26 million is allowed as incremental land had to be acquired for water disposal. However, relevant supporting evidence needs to be furnished at the COD Stage for all costs incurred in this head of land acquisition, and rehabilitation costs.

6. RETURNS ON EQUITY (ROE):

TCEB had provided in the Feasibility/Contract Stage Tariff that the equity returns allowed to become a part of the tariff shall be such that SSRL is able to realise a 20.00% IRR (Return) on its (equity) investment in line with the directions of the Economic Coordination Committee of the Cabinet (ECC) dated October 15, 2010.

SSRL shall be allowed 20% IRR provided that it achieves financial close by 31st December 2019. In the event SSRL fails to achieve financial close by 31st December 2019 and achieve its financial close at any date subsequent to precedent date but not later than 31st December 2020 SSRL shall be allowed IRR of 18%. As SSRL was able to achieve financial close by 31st December 2019, IRR of 20.00% is allowed.

7. EPC COSTS:

As per the petition submitted by SSRL, the EPC costs petitioned include all excavation equipment, civil works, auxiliary machinery, installation, erection and commissioning of equipment, construction of buildings, overburden removal and implementation of the approved resettlement plan, etc. The earlier determination allowed EPC costs of USD 565.48 million. Equipment configuration as approved earlier, and overburden quantity remains unchanged, and would be updated at COD Stage as detailed in Section 2, and Section 3 of this determination. EPC Costs have increased in this determination to USD 583.28 million largely due to increase in diesel prices, and adjustment in fuel consumption in Section 3. Any adjustments as detailed in Section 2, and Section 3 above may be adjusted for in COD Stage. These costs are subject to adjustment and verification at the COD stage on the basis of provision of appropriate evidence and supporting documents.

8. PRE-COD SALES:

The TCEB (Thar Coal Energy Board) sought information on the pre-COD sales made by the Petitioner through a letter no. TCEB/Registrar/2-2/2015/9401, dated 3rd April, 2023. The Petitioner provided the requested information through a letter no. SSRL-ME-2023-22, dated 20th April 2023. According to SSRL, the total production of coal prior to COD amounted to 1.6 million tons, out of which 0.867 million tons were sold to power plant for commissioning and 0.72 million tons is stored in stockyard. However pre-COD sales on an actual basis, must be adjusted against capital expenditure for development of Block I mine.



Edmond



Thar Coal & Energy Board Government of Sindh

Coal Tariff Determination Order

No. TCEB/Registrar/2-2/2015/FC Stage: This determination is conducted in accordance with the authority vested with Thar Coal Energy Board and pertains to the petition dated September 18, 2022 of Sino Sindh Resources (Private) Limited for Determination of Financial Close Stage Tariff for SSRL's Coal Mine of 7.8 MTPA at Block I Thar Coalfields, District Tharparkar, Sindh, Pakistan. The petition is assessed and reviewed in accordance with the parameters and guidelines established under the Thar Coal Tariff Determination Rules, 2014 (the "Rules").

The Petitioner has submitted a request for determination of levelized tariff of USD 56.748 per Ton for development & operations of 7.8 MTPA mining capacity.

Pursuant to Rule 10 of the Thar Coal Tariff Determination Rules 2014, Sino Sindh Resources (Private) Limited is allowed to charge the following ex mine mouth tariff for the production of 7.8 MTPA:

Table I – Determined 7.8 MTPA Tariff

Project Tariff	Year 1 – 10	Year 11 – 30	Year 1 – 30
	Average	Average	Levelized
Total Production Payment Tariff Components	14.9399	10.4451	13.8265
Total Capacity Payment Tariff Components	27.7685	15.3794	23.5372
Total Project Tariff	42.7083	25.8245	37.3637

All amounts in USD per Ton

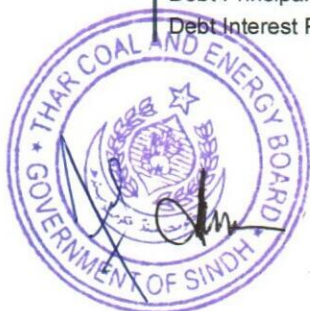
Table II – Production Payment Component 7.8 MTPA

Production Payment Tariff	Year 1 – 10	Year 11 – 30	Year 1 – 30
	Average	Average	Levelized
Variable O&M – Foreign (Spares and Consumables)	1.948	1.557	1.830
Variable O&M – Foreign (Tyres)	1.033	0.796	0.990
Variable O&M – Foreign (Lubricants)	0.558	0.430	0.529
Variable O&M – Local (Fuel (Diesel))	5.200	3.948	4.902
Variable O&M – Local (Power (Belts, Crushers, Production Equip))	0.466	0.466	0.466
Asset Replacement	2.756	1.446	2.502
Royalty	2.980	1.802	2.607
Total Production Payment Tariff Components	14.940	10.445	13.826

All amounts in USD per Ton

Table III – Capacity Payment Component

Capacity Payment Tariff	Year 1 – 10	Year 11 – 30	Year 1 – 30
	Average	Average	Levelized
Fixed O&M – Foreign (Dewatering OpEx (Spares, Tyres, Lubricants))	0.1812	0.1812	0.1812
Fixed O&M – Foreign (MSF OpEx (Spares, Tyres, Lubricants))	0.2627	0.2627	0.2627
Fixed O&M – Foreign (Other OpEx)	4.2783	4.0123	4.2300
Fixed O&M – Local (Fuel (Dewatering and MSF))	0.2089	0.2089	0.2089
Fixed O&M – Local (Power (Dewatering and MSF))	1.1134	1.1134	1.1134
Fixed O&M – Local (Other OpEx)	2.3232	2.0951	2.2743
Insurance	0.5240	0.5240	0.5240
Interest on Working Capital	0.6264	0.4285	0.5652
Debt Principal Repayment	7.8126		4.7757
Debt Interest Payment	3.8846		2.8487



[Handwritten signature]



Thar Coal & Energy Board Government of Sindh

Capacity Payment Tariff	Year 1 – 10 Average	Year 11 – 30 Average	Year 1 – 30 Levelized
Return on Equity	5.2304	5.2304	5.2304
Return on Equity During Construction	1.3228	1.3228	1.3228
Total Capacity Payment Tariff Components	27.7685	15.3794	23.5372

All amounts in USD per Ton

Table IV –Project Cost for Development of 7.8 MTPA Mining Capacity

Project Cost for 7.8 MTPA	Petitioned	Determined
EPC Cost	920.57	583.28
Non-EPC Cost	123.20	89.68
Insurance Cost	4.45	4.06
Financing Fee, LC Charges, sinosure Fees etc.	60.7	44.08
Interest During Construction	36.8	91.42
Total Project Cost	1145.80	812.513

All amounts in USD Million



Edenm...



Thar Coal & Energy Board Government of Sindh

GENERAL CONDITIONS

- i. The Financial close stage tariff is computed on the basis of net capacity production of 7.8 MTPA for thirty (30) years.
- ii. The above tariff is applicable for a period of 30 years on BOO basis commencing from Commercial Operations Date of the 7.8 MTPA coal mine.
- iii. As per decision made in Contract Stage Review Tariff Determination, the Petitioner was bound to achieve Commercial Operations Date (COD) on or before September 30th, 2022. Any cost overruns beyond the abovementioned date (including interest during construction and return on equity during construction) will not be allowed, and any adjustment will be made in the COD stage tariff.
- iv. The Petitioner shall maintain its statutory auditors from any of the big four (4) firms from the financial year 2019 and onwards.
- v. The basis of this determination is a Debt to Equity ratio of 75:25. Equity quantum in excess of 25% will be treated as commercial debt to the project at the prevailing rates but not to exceed LIBOR plus 2.8% per annum.
- vi. If required, SSRL can draw upfront initial equity drawdowns up to a maximum of 25% of total equity, followed by pro-rata drawdowns of debt and equity.
- vii. Petitioner may negotiate the arrangement and commitment fee on the undrawn portion of the debt instead of existing mechanism proposed in its financial model.
- viii. Debt servicing shall be paid during the first 10 years of operations.
- ix. Pre-COD sale of lignite will be priced at the full first year tariff of coal as per this Determination. The proceeds of this sale will be utilized to finance project costs. The Petitioner must report the volume of Pre-COD to TCEB on monthly basis.
- x. The TCTDC advises that the petitioner must submit the payment proof related to expenses incurred under development and resettlement cost at COD Stage. Furthermore TCTDC strongly reiterate that the resettlement as per approved Resettlement Policy Framework 2015, should be completed before COD.
- xi. Short-term working capital facilities for receivables, inventories of coal, lubricants, diesel, RFO, spares and consumables, and the resultant cost is permitted; provided that the financing cost of the working capital facility shall not exceed a maximum of 1 Month KIBOR + 2%.
- xii. Project Tariff is based on a reference exchange rate of PKR 286 per USD, diesel price of PKR 253 per Litre.
- xiii. The Petitioner is entitled to adjustment of costs in accordance with the adjustments listed in detail below under 'TARIFF ADJUSTMENTS & ESCALATIONS' section of this determination and also indexations in accordance with the mechanisms laid down under the 'TARIFF INDEXATIONS' section of this document.
- xiv. All equipment provided under the EPC Contract will be new and unused.
- xv. The detailed cost components of tariff are tabulated in Annexure-A appended to the end of this Order.



[Handwritten signature]



Thar Coal & Energy Board Government of Sindh

Tariff Indexations

The indexations shall be applicable on the tariff shall only be as detailed hereunder.

i. Fuel Cost

$$\text{Fuel Cost}_{(\text{rev})} = \text{Fuel Cost}_x \times \frac{\text{Diesel Price}_{(\text{rev})}}{253}$$

Where,

Fuel Cost_(rev) is the revised total Fuel Cost Component

Fuel Cost_x is the total Fuel Cost of xth year of operations

Diesel Price_(rev) is the Delivered Diesel Price in terms of PKR per Litre notified by OGRA for Islamkot, District Mithi adjusted for NCV-GCV factor (Reference – 1.0574), Specific gravity (Reference – 0.84), and Calorific Value (Gross) (Reference – 44.2MJ/kg)

Frequency of indexation shall be as and when notified by Oil & Gas Regulatory Authority

ii. Variable O&M

$$\text{Variable O\&M}_{(\text{rev})} = \text{Variable O\&M}_x \times \frac{\text{US CPI}_{(\text{rev})}}{301.88} \times \frac{\text{PKR/USD}_{(\text{rev})}}{286} \times \frac{7.18}{\text{RMB/USD}_{(\text{rev})}}$$

Where,

Variable O&M_(rev) is the revised Variable O&M Component

Variable O&M_x is the Variable O&M Component of xth year of operations

US CPI_(rev) is the latest United States Consumer Price Index for All Urban Consumers (CPI-U) notified by the US Bureau of Labor Statistics

PKR/USD_(rev) is the revised TT & OD selling rate of US Dollars as on the date on which the indexation is applicable, as notified by the National Bank of Pakistan

RMB/USD_(rev) is the revised TT & OD selling rate of Chinese RMB as on the date on which the indexation is applicable, as notified by the People's Bank of China

Frequency of indexation shall be quarterly

iii. Asset Replacement

$$\text{Asset Replacement}_{(\text{rev})} = \text{Asset Replacement}_x \times \frac{\text{US CPI}_{(\text{rev})}}{301.88} \times \frac{\text{PKR/USD}_{(\text{rev})}}{286} \times \frac{7.18}{\text{RMB/USD}_{(\text{rev})}}$$

Where,





Thar Coal & Energy Board Government of Sindh

Asset Replacement_(rev) is the revised Asset Replacement Component

Asset Replacement_x is the Asset Replacement Component of x^{th} year of operations

US CPI_(rev) is the latest United States Consumer Price Index for All Urban Consumers (CPI-U) notified by the US Bureau of Labor Statistics

PKR/USD_(rev) is the revised TT & OD selling rate of US Dollars as on the date on which the indexation is applicable, as notified by the National Bank of Pakistan

RMB/USD_(rev) is the revised TT & OD selling rate of Chinese RMB as on the date on which the indexation is applicable, as notified by the People's Bank of China

Frequency of indexation shall be quarterly

iv. Royalty

$$\text{Royalty}_{(rev)} = \text{Coal Price}_y \times \text{Royalty}$$

Where,

Royalty_(rev) is the revised Royalty Component

Coal Price_y is the Price of Coal (excluding Royalty) in y^{th} month of operations

Royalty is the minimum of 7.5% of Total cost of Coal (excluding Royalty) or as otherwise notified by GoS for Royalty in Thar Coalfields

Frequency of Indexation shall be as and when notified by GoS

v. Fixed O&M – Local

$$\text{Fixed O\&M – Local}_{(rev)} = \text{Fixed O\&M – Local}_x \times \frac{\text{Local CPI}_{(rev)}}{224.41}$$

Where,

Fixed O&M – Local_(rev) is the revised Fixed O&M – Local Component

Fixed O&M – Local_x is the Fixed O&M – Local Component in x^{th} year of operations

Local CPI_(rev) is the latest is Consumer Price Index of Pakistan as notified by the Pakistan Bureau of Statistics on base of 2015-16 = 100

Frequency of Indexation shall be quarterly

vi. Fixed O&M – Foreign



Edummes



Thar Coal & Energy Board Government of Sindh

$$\text{Fixed O\&M Foreign}_{(\text{rev})} = \text{Fixed O\&M Foreign}_x \times \frac{\text{US CPI}_{(\text{rev})}}{301.88} \times \frac{\text{PKR/USD}_{(\text{rev})}}{286} \times \frac{7.18}{\text{RMB/USD}_{(\text{rev})}}$$

Where,

Fixed O&M – Foreign_(rev) is the revised Fixed O&M Component

Fixed O&M – Foreign_x is the Fixed O&M Component of xth year of operations

US CPI_(rev) is the latest United States Consumer Price Index for All Urban Consumers (CPI-U) notified by the US Bureau of Labor Statistics

PKR/USD_(rev) is the revised TT & OD selling rate of US Dollars as on the date on which the indexation is applicable, as notified by the National Bank of Pakistan

RMB/USD_(rev) is the revised TT & OD selling rate of Chinese RMB as on the date on which the indexation is applicable, as notified by the People's Bank of China

Frequency of indexation shall be quarterly

vii. Power Cost – By RFO

$$\text{Power Cost – By RFO}_{(\text{rev})} = \text{Power Cost – By RFO}_x \times \frac{\text{RFO Price}_{(\text{rev})}}{138,000}$$

Where,

Power Cost – By RFO_(rev) is the revised Power Cost – By RFO

Power Cost – By RFO_x is the Power Cost – RFO in xth year of operations

RFO Price_(rev) is the Delivered RFO Price in terms of PKR per ton notified by Ex-Refinery Byco Price inclusive of Sales Tax,

Frequency of indexation shall be as and when notified by Byco.

viii. Cost of Working Capital

$$\text{WC}_{(\text{rev})} = \text{WC}_x \times \left(a_x \frac{\text{Prod Pmt}_{(\text{rev})}}{\text{Prod Pmt}_x} + b_x \frac{\text{Coal}_{(\text{rev})}}{\text{Coal}_x} + c_x \frac{\text{Diesel}_{(\text{rev})}}{253} + d_x \frac{\text{US CPI}_{(\text{rev})} \times \text{PKR/USD}_{(\text{rev})} \times 7.18}{301.88 \times 286 \times \text{RMB/USD}_{(\text{rev})}} \right) \times \frac{\text{KIBOR}_{(\text{rev})} + 2.00\%}{22.55\%}$$

Where,

Cost of WC_(rev) is the revised Cost of Working Capital Component



[Signature]



Thar Coal & Energy Board Government of Sindh

Cost of WC_x is the Cost of Working Capital in x^{th} year of operations

a_x is the proportion of Coal Inventory Cost for 30 days calculated at Production Payment Price to amount of working capital facility in x^{th} year of operations.

b_x is the proportion of Production Payment Price for 60 days to amount of working capital facility in x^{th} year of operations

c_x is the proportion of Fuel Cost for 21 days to amount of working capital facility in x^{th} year of operations

Prod $Pmt_{(rev)}$ is the Production Payment Price as determined by TCEB after incorporating indexations till latest month

Prod Pmt_x is the Production Payment Price as determined by TCEB for x^{th} year of operations

$Coal_{(rev)}$ is the Coal Price (excluding Working Capital Component) as determined by TCEB after incorporating indexations till latest month

$Coal_x$ is the Coal Price (excluding Working Capital Component) as determined by TCEB at COD for x^{th} year of operations

Diesel Price $_{(rev)}$ is the Delivered Diesel Price in terms of PKR per Litre notified by OGRA for Islamkot, District Mithi adjusted for NCV-GCV factor (Reference – 1.0574), Specific gravity (Reference – 0.84), and Calorific Value (Gross) (Reference – 44.2MJ/kg)

KIBOR $_{(rev)}$ is 1-Month KIBOR rate at the end of the 1 month period prior to the month in which indexation is applicable, as notified by the State Bank of Pakistan

Frequency of Indexation shall be monthly

ix. Interest Payments

$$\text{Interest} - \text{Local}_{(rev)} = \text{Interest} - \text{Local}_x \times \frac{\text{KIBOR}_{(rev)} + 2.00\%}{22.55\%}$$

Where,

Interest – Local $_{(rev)}$ is the Interest Payment – Local Component

Interest – Local $_x$ is Interest Payment – Local Component determined by TCEB for x^{th} year of operations, subject to adjustment on account of escalations till COD.

KIBOR $_{(rev)}$ is the relevant KIBOR rate prevailing for x^{th} year of operations, as notified by State Bank of Pakistan

Frequency of Indexation shall be semi-annually or as repayments are agreed with lender

x. Equity Returns

$$\text{Equity Returns}_{(rev)} = \text{Equity Returns}_x \times \frac{\text{PKR/USD}_{(rev)}}{286}$$



[Handwritten Signature]



Thar Coal & Energy Board Government of Sindh

Where,

Equity Returns_(rev) is the revised Equity Returns Component

Equity Returns_x is the Equity Returns component determined by TCEB for x^{th} period of operations

PKR/USD_(rev) is the revised TT & OD selling rate of US Dollars as on the date on which the indexation is applicable, as notified by the National Bank of Pakistan

Frequency of Indexation shall quarterly

xi. Cost of Transportation

$$\text{Cost of Transportation}_{(rev)} = \text{Cost of Transportation}_x \times \frac{\text{Diesel Price}_{(rev)}}{288}$$

Where,

Cost of Transportation_(rev) is the revised Cost of Transportation applicable on tariff

Cost of Transportation_x is the Cost of Transportation applicable on tariff as determined by TCEB for x^{th} period of operations

Diesel Price_(rev) is the Delivered Diesel Price in terms of PKR per Litre notified by OGRA for Islamabad, District Mithi adjusted for NCV-GCV factor (Reference – 1.0574), Specific gravity (Reference – 0.84), and Calorific Value (Gross) (Reference – 44.2MJ/kg)

Frequency of Indexation shall be as notified by OGRA

xii. Heat Content Adjustment

$$\text{Adjusted Prod Pmt}_{(rev)} = \text{Prod Pmt}_x \times \frac{\text{Heating Value}_{(ref)}}{\text{Heating Value}_{(rev)}}$$

Where

Adjusted Prod Pmt_(rev) is the Production Payment Price adjusted for heating value (LHV)

Indexed Prod Pmt_x is the reference Production Payment Price in x^{th} year of operations

Indexation shall be computed annually.





Thar Coal & Energy Board Government of Sindh

ANNEXURE A – TARIFF TABLE 7.8 MTPA MINE:

Coal Tariff Table (USD per ton)											
Year	Variable O&M	Fixed O&M	Working Capital	Insurance	Asset Replacement	Royalty	ROEDC	ROE	Principal	Interest	Tariff
1	10.12	9.07	0.66	0.52	3.21	3.14	1.32	5.23	5.25	6.45	44.97
2	10.07	8.29	0.65	0.52	3.21	3.07	1.32	5.23	5.70	6.00	44.07
3	10.17	9.00	0.66	0.52	3.21	3.14	1.32	5.23	6.19	5.51	44.95
4	8.92	7.86	0.61	0.52	2.65	2.91	1.32	5.23	6.72	4.98	41.73
5	8.92	8.52	0.62	0.52	2.64	2.96	1.32	5.23	7.29	4.40	42.43
6	8.92	7.88	0.61	0.52	2.64	2.91	1.32	5.23	7.92	3.78	41.74
7	8.92	8.51	0.62	0.52	2.45	2.95	1.32	5.23	8.60	3.10	42.22
8	8.92	7.99	0.61	0.52	2.45	2.91	1.32	5.23	9.33	2.36	41.66
9	8.55	8.76	0.61	0.52	2.54	2.94	1.32	5.23	10.13	1.57	42.18
10	8.54	7.81	0.60	0.52	2.54	2.87	1.32	5.23	11.00	0.70	41.13
11	7.78	8.28	0.46	0.52	2.52	1.96	1.32	5.23	-	-	28.08
12	7.78	8.30	0.46	0.52	2.52	1.96	1.32	5.23	-	-	28.09
13	7.78	7.85	0.45	0.52	2.52	1.93	1.32	5.23	-	-	27.61
14	7.78	7.67	0.45	0.52	2.36	1.90	1.32	5.23	-	-	27.23
15	7.78	8.22	0.45	0.52	2.30	1.94	1.32	5.23	-	-	27.76
16	7.78	7.69	0.45	0.52	2.30	1.90	1.32	5.23	-	-	27.19
17	7.78	8.27	0.46	0.52	2.26	1.94	1.32	5.23	-	-	27.78
18	7.78	7.86	0.45	0.52	2.26	1.91	1.32	5.23	-	-	27.33
19	7.78	8.17	0.45	0.52	1.96	1.91	1.32	5.23	-	-	27.34
20	7.78	7.76	0.45	0.52	1.91	1.87	1.32	5.23	-	-	26.85
21	7.53	8.86	0.44	0.52	1.35	1.89	1.32	5.23	-	-	27.15
22	7.53	7.64	0.43	0.52	1.33	1.80	1.32	5.23	-	-	25.81
23	7.52	8.29	0.43	0.52	0.76	1.81	1.32	5.23	-	-	25.89
24	7.52	7.66	0.43	0.52	0.73	1.76	1.32	5.23	-	-	25.17
25	6.75	7.91	0.41	0.52	0.47	1.70	1.32	5.23	-	-	24.32
26	6.75	7.43	0.40	0.52	0.47	1.66	1.32	5.23	-	-	23.79
27	6.75	7.82	0.41	0.52	0.42	1.69	1.32	5.23	-	-	24.16
28	6.75	7.58	0.40	0.52	0.42	1.67	1.32	5.23	-	-	23.90
29	4.55	7.09	0.35	0.52	0.03	1.43	1.32	5.23	-	-	20.53
30	4.50	7.14	0.35	0.52	0.02	1.43	1.32	5.23	-	-	20.51
	8.72	8.27	0.57	0.52	2.50	2.61	1.32	5.23	4.78	2.85	37.36

