



# Thar Coal & Energy Board

## Government of Sindh

No. TCEB/Registrar/2-1/2014/COD-Phase.I/9147  
Dated: 29<sup>th</sup> December, 2022

To,

The Secretary  
Energy Department  
Government of Sindh  
**Karachi**

**Subject:- Decision of TCEB in the Matter of Commercial Operations Date (COD) Stage Tariff for Sindh Engro Coal Mining Company (SECMC) Mine of 3.8 Mtpa Phase-I at Block-II, Thar Coalfield, District Tharparkar**

The 24<sup>th</sup> meeting of Thar Coal & Energy Board was held on 29<sup>th</sup> December, 2022 at 11.00 am under the Chairmanship of Hon'ble Chairman TCEB/Chief Minister. Worthy Minister for Energy and Secretary Energy, Government of Sindh also attended the same among other members.

2. The Board has unanimously approved the subject Determination Order on SECMC petition as an Agenda Item No.4 and in this connection I am directed to enclose herewith the subject Determination of Thar Coal & Energy Board (27 pages) in Case No. TCEB/Registrar/2-1/2014/COD-Phase.I dated 29<sup>th</sup> December, 2022.

3. Therefore, the Determination/Decision is being intimated to the Government of Sindh for the purpose of the Notification of the approved tariff in the Official Gazette (Extra Ordinary) pursuant to Rule 10(9) of Thar Coal Tariff Determination Rules, 2014.

4. It may please be noted that only "Coal Tariff Determination Order" of Thar Coal & Energy Board at page-20 onwards along with (Annexure) needs to be notified in the Official Gazette (Extra Ordinary).

(Mansoor Rajput)  
Registrar TCEB

C.c to:

- i. Principal Secretary to Chief Minister, Chief Minister Secretariat, Karachi.
- ii. DS(Staff) to Chief Secretary Sindh, Karachi.
- iii. PS to Minister for Energy, Government of Sindh, Karachi.
- iv. ES to Managing Director TCEB, Government of Sindh, Karachi



# Thar Coal & Energy Board

Government of Sindh

No TCEB/Registrar/2-1/2014/COD-Phase.I  
November 15, 2022

**DETERMINATION OF THAR COAL & ENERGY  
BOARD IN THE MATTER OF TARIFF FOR SINDH  
ENGRO COAL MINING COMPANY MINE  
PURSUANT TO COMMERCIAL OPERATION  
STAGE TARIFF FOR 3.8 MTPA CAPACITY AT  
BLOCK II THAR COALFIELDS, DISTRICT  
THARPARKAR, SINDH, PAKISTAN**





# Thar Coal & Energy Board

Government of Sindh

No TCEB/Registrar/2-1/2014/COD-Phase.I  
November 15, 2022

**Determination of Reference Tariff for Sindh Engro Coal Mining Company Mine Pursuant to Commercial Operation Stage Tariff for 3.8 MTPA Capacity at Block II 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**

Managing Director -TCEB





# Thar Coal & Energy Board

Government of Sindh

No TCEB/Registrar/2-1/2014/COD-Phase.I  
December 29<sup>th</sup>, 2022

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 Tariff for Sindh Engro Coal Mining Company Mine Pursuant to Commercial Stage Operation Tariff for 3.8 MTPA Capacity at Block II Thar Coalfields, District Tharparkar, Sindh, Pakistan, appended in the following pages.



  
**Khadim Hussain Channa**  
Managing Director  
Thar Coal & Energy Board



# Thar Coal & Energy Board Government of Sindh

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# Thar Coal & Energy Board Government of Sindh

## List of Acronyms used in Determination Order

BCM	Bank Cubic Meter
CAR	Contractors' All Risk
COD	Commercial Operations Date
CPI	Consumer Price Index
CSA	Coal Supply Agreement
ECC	Economic Coordination Committee
EC	External Consultants
EPC	Engineering, Procurement & Construction
EPP	Energy Purchase Price
GCV	Gross Calorific Value
GoS	Government of Sindh
HSE	Health, Safety & Environment
IA	Implementation Agreement
IB	Inter-burden (waste rocks)
ICB	International Competitive Bidding
ICC	In-pit Crushing & Conveying
IDC	Interest During Construction
IRR	Internal Rate of Return
KIBOR	Karachi Inter-Bank Offer Rate
LC	Letter of Credit
LDs	Liquidated Damages
LHV	Lower Heating Value
LIBOR	London Inter-Bank Offer Rate
MJ / Kg	Mega Joules per Kilogram
MSF	Mine Service Facilities
MTPA	Million Tonnes Per Annum
MW	Megawatt
MT	Million Tonnes
MYT	Multi Year Tariff
NCV	Net Calorific Value
NEPRA	National Electric Power Regulatory Authority
NOC	No Objection Certificate
NTDC	National Transmission & Despatch Company
O&M	Operations & Maintenance
OB	Overburden (waste rocks)
OGRA	Oil & Gas Regulatory Authority
PKR	Pakistani Rupee
PPA	Power Purchase Agreement
RCOD	Required Commercial Operations Date
RMB	Chinese Renminbi
RoE	Return on Equity
RoEDC	Return on Equity During Construction
SBLC	Stand By Letter of Credit
SBP	State Bank of Pakistan
SECMC	Sindh Engro Coal Mining Company
SEPA	Sindh Environmental Protection Agency
TCEB	Thar Coal & Energy Board
TT & OD	Telegraphic Transfer & On Demand
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 and in accordance with Section 5(m) of Thar Coal & Energy Board Act, 2011 is the coal-pricing agency. This determination is conducted in accordance with the authority vested with TCEB and pertains to the Petition of Sindh Engro Coal Mining Company (SECMC) for the Determination of Commercial Operation Stage Tariff for SECMC's Mine of 3.8 MTPA<sup>1</sup> which will be enhanced up to a mine size of 7.6 MTPA after achievement of Phase II COD at Block II Thar Coalfields, District Tharparkar, Sindh, Pakistan, dated October 10<sup>th</sup>, 2019. The coal tariff determination relates to the specific mine lease of Block II Thar Coalfields. The Petition has been assessed and reviewed in accordance with the parameters and guidelines established under the Thar Coal Tariff Determination Rules dated November 27<sup>th</sup>, 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 59.05 per Tonne for development & operations of 3.8 MTPA capacity mine. The details of the petitioned tariff and costs are provided in Tables I to IV here below:

Table I – Petitioned Project Tariff for 3.8 MTPA Capacity Mine

Project Tariff	Year 1 - 10	Year 11 - 30	Year 1 - 30
	Average	Average	Levelized
Total Production Payment Tariff Components	16.71	14.35	16.01
Total Capacity Payment Tariff Components	49.30	30.88	43.05
<b>Total Project Tariff</b>	<b>66.01</b>	<b>45.23</b>	<b>59.05</b>

All amounts in USD per Tonne

Table II – Petitioned Production Payment Tariff for 3.8 MTPA Capacity Mine

Production Payment Tariff Components	Year 1 - 10	Year 11 - 30	Year 1 - 30
	Average	Average	Levelized
Fuel Cost	4.16	3.91	4.11
Variable O&M - Foreign	1.16	1.09	1.15
Variable O&M - Spares/Consumables	4.09	3.84	4.04
Duties and Taxes	0.51	0.48	0.50
Asset Replacement Cost	2.65	1.87	2.54
Royalty	4.15	3.16	3.68
<b>Total Production Payment Tariff Components</b>	<b>16.71</b>	<b>14.35</b>	<b>16.01</b>

All amounts in USD per Tonne

Table III – Petitioned Capacity Payment Tariff for 3.8 MTPA Capacity Mine

Capacity Payment Tariff Components	Year 1 - 10	Year 11 - 30	Year 1 - 30
	Average	Average	Levelized
Fixed O & M - Foreign Site Services	2.49	2.44	2.49
Fixed O & M - Foreign Tech. Services	4.26	4.18	4.25
Fixed O & M - Local	5.86	4.63	5.55
Duties and Taxes	0.90	0.88	0.90
Insurance	1.45	1.45	1.45
Power Cost - By Solar (15%)	0.12	0.12	0.12
Power Cost - By Diesel (85%)	3.50	3.50	3.50
Cost of Working Capital	1.11	1.05	1.10
Principal Debt Repayment	10.41		6.29
Interest Payment	6.58		4.78
ROE	8.28	8.28	8.28
ROEDC	4.35	4.35	4.35
<b>Total Capacity Payment Tariff Components</b>	<b>49.30</b>	<b>30.88</b>	<b>43.05</b>

All amounts in USD per Tonne

Please refer to point iii section 'General Conditions' for necessary clarification

6<sup>th</sup> Page

Determination of the Board  
3.8 Mtpa Commercial Operation Tariff - SECMC Thar Block II  
Case No TCEB/Registrar/2-1/2014/COD-Phase.I



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# Thar Coal & Energy Board

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Table IV – Petitioned Project Cost for 3.8 MTPA Capacity Mine

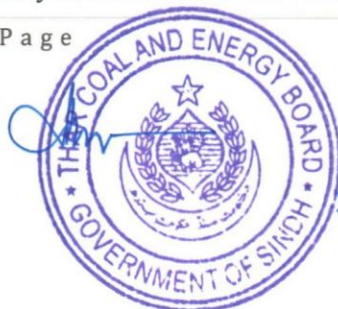
Petitioned Project Cost for 3.8 MTPA	Amount (USD Mn)
EPC Cost	379.2
Owner Scope Activities	27.9
Non-EPC Cost	95.7
Gorano Reservoir	13.0
Insurance Cost	3.3
Project Development till Financial Close	17.4
Financing Fee, LC Charges, Sinosure Fees etc.	33.9
Interest During Construction	54.4
Investment in Thar Co	2.0
<b>Total Project Cost</b>	<b>626.8</b>

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 129.03 per Litre
ii.	PKR to USD Exchange Rate Parity	PKR 157.90 per USD
iii.	RMB to USD Exchange Rate Parity	RMB 6.885 per USD
iv.	US CPI	256.14
v.	Local CPI	123.86
vi.	Cost of Foreign Financing	6-month LIBOR + 3.3%
vii.	Cost of Local Financing	6-month KIBOR + 1.75%
viii.	6-month LIBOR Assumption	2.26%
ix.	1-month KIBOR Assumption	12.98%
x.	6-Month KIBOR Assumption	13.14%
xi.	Debt to Equity Ratio	75:25
xii.	Debt Repayment Period	10 Years
xiii.	Equity IRR	20.00%
xiv.	Mining Technology	Trucks (60t & 100t) & Shovel (7m <sup>3</sup> & 15m <sup>3</sup> )
xv.	Construction Period	39 Months
xvi.	Overburden Removal Volume (During Construction)	112.0 million BCM
xvii.	Average Slope Angle of the Mine	24° (Degrees)
xviii.	Average Rate of Dewatering	78,590 m <sup>3</sup> /d

### Important Information Regarding Appointment of External Consultants (EC) for Assistance in True Up Tariff

Pursuant to Rule 3(1) of Tariff Rules, TCEB constituted Thar Coal Tariff Determination Committee (TCTDC) to analyse and evaluate the contents of the Tariff Petition and determine the COD stage tariff for the SECMC Project (the "Determination") in accordance with the requirements of the relevant laws of Pakistan, including without limitation, the TCEB Act, the Tariff Rules and other rules and regulations made thereunder. The Tariff Rules enable TCTDC to seek assistance from officers, staff, experts and consultants for the Tariff Determination as appropriate. To assist TCTDC in the review of the subject True Up Tariff Petition and Determination (the "Assignment"), which is also the first of its kind in Pakistan, TCEB invited consultants through an RFP floated in June 2020 (the RFP). The Consortium led jointly by M/s. Bridge Factor (Pvt.) Limited, and M/s. KPMG Taseer Hadi & Co (the "Consultants") was shortlisted as consultants for the project vide letter dated 14th January 2021 following a Quality and Cost Based Selection process (QCBS) under SPPR, 2010. The contract between the



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client and consultants was signed on 26<sup>th</sup> February, 2021. The consultants have engaged sub-consultants namely Axis Law Chambers, and Techno Consult International, for legal advisory, and engineering costing respectively, as well as an IPP Expert (together known as the sub-consultants).

The consultant after completing the assignment submitted the following reports which are annexed herewith and are a formal part of this determination.

- Satisfactory report related to Coal Extraction, Dewatering & OB removal
- Satisfactory report related to Quantity and Working hours of site equipment, site consumables, and other related costs
- Site survey and Geological report
- Final Recommendation report

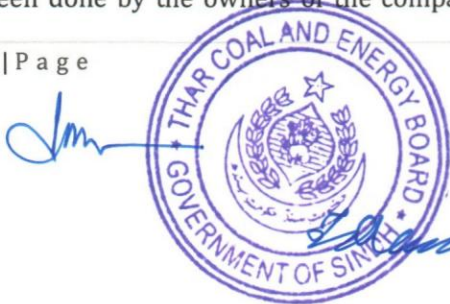
The observations and adjustments raised in their reports are duly incorporated in the determination order to the extent committee concur with that.

## 2. PUBLIC HEARING

Notice for Public Hearing was issued in reputed local, and national newspapers. Advertisement appeared in the Daily Dawn on 25<sup>th</sup> September, 2021, and in the Daily Jang, and the Daily Kawish, on 26<sup>th</sup> September, 2021. Public Hearing was held on 9<sup>th</sup> October, 2021 at 10:30 am at Movenpick Hotel, Karachi. The General Manager (Technical) SECMC presented the current status of the SECMC's 3.8 Mtpa coal mine at Block-II, Thar Coalfield. The presentation was followed by the presentations of one of the representatives of SECMC who highlighted the salient features of COD Stage Tariff Petition, regarding which the present hearing was being conducted. GM (CSR) also gave a long presentation on how SECMC is executing their CSR activities in Thar which is going to change the lives of the local people (Copy of the presentation is available on record).

After the presentation of the management, public was invited to offer comments or raise their queries, if any. One of the participants, who was representing the Pakistan Stock Exchange, asked that in the international market, current prices of imported coal are very high and the cement factories in Pakistan are utilizing imported coal whereas Thar coal is cheaper. The participant inquired whether the petitioners have spoken to the cement sector to provide them the same. The participant's second question was why they have given the price of Rs 157/= per USD whereas the rates of US Dollar is currently very high. The representative of the petitioners replied that they have discussed with the cement industry as they are evaluating the quality of Thar coal and in the process, they have carried out some trials with them and it is being established that gradually Thar lignite could be used in those factories. After addressing the industry's technical concerns, as well as expansion of mine, coal will be supplied to them. Regarding the second question of the public representative, the petitioner replied that the instant COD Stage Tariff Petition was filed in 2019 at that time the rate of USD was Rs. 157/= however, the rules provide for indexation.

A participant from the public appreciated the petitioner that they had done a great job as far as CSR component is concerned but whether they have done the same from their profits, or the cost of that CSR is built in the tariff. His second question was SECMC may clarify as they have said in the beginning that their first phase will have the price of coal which may not be economical due to economies of scale, but how the cost of coal per tonne would be after scalability of mine (On achieving Phase II and III) is it comparable with international coal or cheaper than that. With regard to first question, the petitioner replied that all the activities that have been carried out under CSR, were not mandated on them. All these activities have been done by the owners of the companies and there is no any reflection of the CSR cost





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mentioned in the petition. All these expenditures have been made for the benefit of people of Thar and suitable funds have been arranged by the owners of the company to make them sustainable. Hence the petitioner categorically denied that any such costs have been made part of this petition. Referring to the second question, the petitioner agreed and responded that after expansion of mine, the tariff of the coal (price) will come down and will be comparable to international prices or even lower in terms of exchange parity.

Among the audience, the representative of Sindh Environment Protection Agency (SEPA) appreciated SECMC for adhering to environmental protocols, and timely submission of mandatory reports. He also expressed his concern that they had carried out environmental assessment of the Lucky Electric Power Project which is going to be commissioned in few months but arrangement for provision of coal as per CSA has been delayed by SECMC and it is apprehend that the Lucky Power Plant may opt for imported coal. The representative of petitioner replied that the Private Power & Infrastructure Board (PPIB) may be in a better position to offer comment on this part of the question as it was contemplated that initially the Lucky Power plant would run on imported coal, and later Thar coal will be provided after expansion of the mine.

From the audience, one participant asked about the difference of quality of coal and rates between India, and Pakistan since both countries have availability of lignite coal. The SECMC representative replied that India is utilizing its coal since last 40-50 years and they have priced it at about USD 27 to USD 29 per tonne, so we cannot compare our rates with them since hardly a year ago we have been able to utilize our coal. It will take us 4 to 5 year of operations more before we can attain sufficient scale to reach to the level of India.

After taking questions from the audience, the representatives of PPIB who were participating remotely, endorsed the concern about the price of Thar coal vis-a-vis Indian coal of the same quality which is available around INR 2400 to INR 2500 per tonne i.e. around USD 27-28 per tonne. The PPIB though recognizes that Thar mines have many challenges as compared to Indian mines despite all the ground realities but of the view that the 20% IRR being offered is very high as compared to the IRR offered to IPPs by PPIB. They suggested that IRR may be kept at 17% for mining companies to benefit the end consumers. The other point that PPIB representative raised was that some of the costs which have been included in present petition were not envisaged at the time of EPC Contract, such as cost of the Gorano Reservoir, water scheme of SECMC, and cost of CSR etc. Director PPIB also pointed out that SECMC has not met its commitment with regard to Lucky Electric Power Plant as a result the project may suffer losses and subsequently the country, and the end consumer may also suffer. He advised that SECMC should expedite its expansion of mine and meet its commitment at the earliest so that required coal could be supplied to Lucky Electric Power. Further, he suggested that the TCEB may consider only those costs in present tariff determination which had already been agreed in the contract stage tariff determination.

The above observations of PPIB representatives were accordingly replied by the petitioner that the present hearing is being held about truing up of the COD Stage Tariff Determination of SECMC's Phase-I 3.8 Mtpa Mine hence all the queries must relate to the present subject. All the discussion about EPC Contract Stage Tariff and what should be the IRR have already been closed four years ago. At this stage discussing such matters will shake the confidence of investors who have taken great project and execution risks. He advised that the Petitioner may only be asked whether they have all the supporting documents related to the cost incurred as claimed in the petition. Moreover, whether petitioner shall be able to make the project sustainable as committed. The petitioner objected that the participants discussing comparison of Thar Coal mines with that of Indian mines are deviating from the subject on which present hearing is being conducted.





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Referring to the CSR query, the petitioner explained that the CSR related cost is not part of the project cost but the sponsors are utilizing their own resources, and that the same has been categorically explained earlier. The Representative of petitioner further said that they are doing their best to meet their targets. They reiterated that Phase-I was still in progress, when they initiated the preparation of Phase-II, and now they are going to complete the formalities of Phase- III. He further said that in Pakistan the development of such mega projects never goes on linear path, but they have done their best which needs to be appreciated.

### The summarized questions of the public hearing are as under: -

1. The cement factories in Pakistan are utilizing imported coal, which is higher in price than the Thar Coal, so has the petitioner approached the cement sector for utilization of Thar coal?
2. Why the petitioner has given the exchange rate of Rs. 157/- against the USD in its COD petition, whereas the current rate of USD is much higher?
3. There is general appreciation for the impressive CSR activities being carried out by the petitioner but whether the petitioner has done the same to the extent which was allowed in CSR component or exceeded the threshold? Whether or not the cost of such CSR activities is claimed in the petition?
4. The Petitioner may clarify as they have claimed that the price of coal for Phase-I is not feasible, and it will become feasible only after future expansions into Phase-II and III, so what will be variable factors contributing lowering of price?
5. What is the difference in quality and rates of lignite coal between India and Pakistan?
6. The representative of SEPA expressed his concern that they had carried out environmental assessment of the Lucky Electric Power project which is going to be commissioned in few months but arrangement for provision of coal as per CSA has been delayed by SECMC and it is apprehend that the Lucky Power Plant may opt for imported coal.
7. The PPIB representative pointed out the same observation that India has similar capacity of mines i.e., 4 Mtpa to 8 Mtpa and the price of coal is Rs. 2400 to Rs. 2500 per tonne in Indian Rupees which is less than 27 to 28 USD per tonne. Even though Thar mines have many challenges as compared to Indian mines but IRR being offered is very high and the IRR PPIB is offering to IPPs and Mining Companies that should be kept to 17% so that its benefit could be passed to the end consumers.
8. The PPIB representative also raised the point that some of the costs which have been included in present petition were not envisaged at the time of EPC Contract such as cost of the Gorano Reservoir, water scheme of SECMC and cost of CSR etc so the authority should only consider costs petitioned at the time of contract stage tariff.
9. The authority should consider only those costs which had been agreed in contract stage tariff determination specially about Gorano Pond and CSR.

*Jm*



*J*



# Thar Coal & Energy Board

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## 3. MATERIAL ASPECTS OF THE PETITION - ANALYSIS & DECISIONS

Following is the summary of the salient aspects of the 3.8 Mtpa COD Stage tariff petition:

## 4. COMBINE / COMPOSITE TARIFF

The TCEB is of the view that the mine developed under Phase I and the expansion thereafter of the same Pit into Phase II can't have two sets of tariffs after achievement of COD of Phase II, or September 2022, the final date allowed for COD whichever is earlier. In view of the above decision, effective October 1<sup>st</sup>, 2022, the mine would be treated as one Project and accordingly the operation and maintenance, the asset replacement, and other expenses would be treated as of one mine, and reflected in one tariff. However, TCEB is cognizant of the fact that Phase I and Phase II has different set of lenders, and their Debt Repayment streams are different. To facilitate and to avoid any doubt these two sets of repayment streams are reflected separately in levelized tariff table appended as Annexure A at the end of this tariff order.

Subsequently, any further expansion in the same pit would have the similar treatment upon achieving the COD.

## 5. PROJECT COST

The Petitioner submits that it has completed construction/development of the Phase I Mine and that the total actual cost incurred is USD 626.8 million. Details of the Project Cost incurred as well as cost-wise justification is set out herein:

Project Cost	
Descriptions	Claimed Cost USD million
<b>EPC Cost</b>	
EPC Offshore	91.611
EPC Onshore	284.480
Owners' OB removal	7.851
Duties and Taxes	3.104
Coal Handling System	17.149
Road Construction	2.896
<b>Non-EPC Cost</b>	
Controllable Cost	85.743
Non-Controllable Cost	42.419
<b>Other Costs</b>	
Insurance	3.266
Sinosure Fee	19.745
IDC	54.449
Financial Charges incl. Commitment Fee	14.133
<b>Total</b>	<b>626.849</b>

### A. EPC Cost

#### Off-shore EPC Contract

In COD Stage Tariff, the Petitioner has stated that the 'EPC Offshore Supply and Services Agreement price' was reduced to USD 95.4 million (from USD 101.6 million at FC stage) based on EPC Offshore "Amendment (V)", in which scope of **Coal Handling System (CHS)** Costing USD 6.2 million was carved out from the original EPC Offshore contract.





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The Petitioner has claimed USD 91.61 million as actual cost of 'procurement and supplies' after adjustment of escalations on EPC Offshore contract price. The claimed cost was duly verified by EC, and suggested that the cost is true based on evidence submitted to them.

### On-shore EPC Contract

The Petitioner submitted that the 'EPC Onshore Supply and Services Agreement' price was reduced to USD 289.49 million (from USD 307.6 million at FC stage) based on EPC Onshore Amendment (VI) in which

- (i) the scope of CHS (USD 4.96 million) was eliminated.
- (ii) the scope of construction of roads (USD 2.87 million) was reduced; and
- (iii) scope of Overburden (OB) Removal of 4 M BCM (USD 10.28 Mn) was reduced.

The Petitioner claimed USD 284.47 million as actual cost incurred after adjustments on account of cost of Diesel, USD/RMB and US CPI on EPC onshore contract price. The claimed cost was duly verified based on relevant evidence submitted. The break-up of EPC Off-shore and On-Shore is provided hereunder,

EPC On-shore & Off-shore Cost		
Descriptions	Claimed Cost	Determined Cost
	USD million	USD million
<b>EPC Offshore - Procurement and Supplies</b>	<b>91.611</b>	<b>91.611</b>
<b>EPC Onshore</b>		
Construction Service	30.833	30.833
<b>Onshore EPC - Services (Non-Diesel)</b>		
- OB removal	145.380	145.380
- Power generation	2.491	2.491
- Lignite production	2.77	2.77
	<b>150.149</b>	<b>150.149</b>
<b>Onshore EPC (Diesel)</b>		
- OB removal	82.203	82.203
- Power generation	20.033	20.033
- Lignite production	1.260	1.260
	<b>103.497</b>	<b>103.497</b>
<b>Total Onshore</b>	<b>284.479</b>	<b>284.479</b>
<b>Total</b>	<b>376.091</b>	<b>376.091</b>

### Other EPC Cost

#### **Owner's OB Removal (OB)**

The petitioner claims USD 7.8 million as owners' OB removal expenses, which relates to expenses utilized for excavation of 4 million BCM overburden by an independent third party contractor.

The contract price consists of 60% overheads and 40% diesel component. An amount of USD 0.462 million mainly pertains to marketing expense, ground-breaking ceremony, and custom charges etc. which are unjustified and unacceptable. Hence, in purview of TCTDC, the said cost is disallowed, due to which the total cost of owners' OB removal will be reduced from USD 7.8 million to 7.4 million.





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## Coal Handling System (CHS)

At present three crushers, having the capacities of 2500 t/h, 1200 t/h and 600 t/h, are installed at Coal Handling System (CHS) at Block-II mine. Crushed coal is transported through conveyor belt to stock yard equipped with 2500 t/h capacity tripper stacker. Stocked coal is then loaded on trucks by loaders and dispatched to the power station. Three weighing bridges, each of 150-tonne capacity, are also installed at coal handling system.

Initially Coal Handling System was part of EPC contract then petitioner has carved it out from EPC contract and awarded CHS contract to M/s NHI based in Shenyang, China. Due to delay caused by M/s NHI, petitioner encashed performance bond of USD 4.1 million and appoint following contractors,

- Beijing MMD Mining Machinery Co.,
- Beijing Bochuang Kaishenc Machinery Manufacturing Co. Ltd. and,
- AMCORP.

Later, the Petitioner set up a temporary system to provide coal to the power plant, which was mostly financed by the encashment of NHI bond. Additionally, to meet the requirement of storage and blending, the Petitioner also installed a skyline tripper with a crusher costing USD 17 million, as part of the CHS.

The total cost incurred and claimed for setting up the CHS for Phase I is USD 17.15 Million. The said cost is verified through invoices and Bank statements.

## Road construction

Road Construction cost was initially part of EPC cost, considering EPC Contractors inability to complete the road construction with proper quality, the road construction scope was carved out, as a result of which the EPC Contract value was reduced by USD 2.9 million.

The Petitioner engaged a local contractor through competitive bidding for construction of the road, and claimed USD 2.9 million for Road construction cost which was verified through invoices, and bank statement.

## Duties and Taxes

The petitioner claimed duties and taxes which include custom duties on import of equipment, spare parts and dump trucks relating to coal mining activities amounting to USD 3.1 million. According to Clause (xi) of the Reference Tariff Adjustments and Escalations, it was determined that:

*"No provision for income tax, workers profit participation fund and workers welfare fund, any other tax, custom/excise duty or other duty, levy, charge, surcharge or other governmental impositions, payable by the Project has been accounted for in the tariff. If the Petitioner is obligated to pay any tax the exact amount will be reimbursed by the off taker on production of original receipts. However, withholding tax on dividend will not be pass though under the tariff."*

The incentive package by Government of Pakistan introduced for Coal Mining, included that no customs duty be levied on import of coal mining equipment and machinery including vehicle for site use. Hence as per TCTDC purview, the said cost should not be the part of project cost.





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The detailed Other EPC cost is summarized hereunder:

Other EPC Cost		
Descriptions	Claimed Cost	Determined Cost
	USD million	USD million
Owner's OB Removal (OB)	7.851	7.389
Coal Handling Systems (CHS)	17.149	17.149
Road construction	2.896	2.896
Duties and Taxes	3.104	-
<b>Total</b>	<b>31.001</b>	<b>27.435</b>

### B. NON - EPC COST

Non-EPC Costs are bifurcated into Controllable Cost and Non-Controllable Cost. Controllable Costs were capped by the Tariff Committee at USD 109.67 million, whereas Non-Controllable Costs were determined at USD 39.59 million. The details of both are provided hereunder.

#### Controllable Cost

**Capital Items** budget approved by TCEB to be utilized for procurement of backup gensets for dewatering system & water supply, SAP implementation fee, purchase of vehicles for office and site, purchase of furniture & fittings for employee colony and office, procurement of equipment & security equipment, development of security staff accommodations, check posts and other infrastructure including watch towers, search lights etc.

During evaluation process it was identified that expenses amounting to USD 0.030 million pertained to CSR, and sports related expenditure. Also, additional costs of USD 0.024 million and USD 0.009 million pertaining to consultancy and legal respectively, were also reclassified under their respective heads. As a result, the balance of Capital Items reduced from USD 9.10 million to USD 9.04 million.

**OPEX** includes operations and maintenance of site facility, and head office, security agreements for site, and travelling expenses of employees for local and international travel.

It was also Identified that costs amounting to USD 0.067 million, USD 0.004 million, and USD 0.003 million pertaining to legal, consultancy, and financial charges respectively should be reclassified under their respective heads, and cost of USD 1.81 Million incurred on account of miscellaneous events (Thar Coal Day, August Fest, etc.), is disallowed by TCTDC. As a result, the cost is reduced from USD 16.37 million to USD 14.49 million.

**Salaries, Wages and Benefits Expense** includes employees' remuneration including basic salary, bonuses, allowances, pension, and gratuity expenses of 155 employees. The total cost amounting to USD 21.30 million is reduced to USD 21.19 million due to disallowance of USD 0.123 million which mainly pertains to entertainment related expense of employees.

**Consultancy and Studies expenses** includes engagement of consultant for hydro-geological monitoring, geological technical studies and implementation of Health, Safety and Environmental (HSE) Standards. Actual cost incurred and petitioned by SECMC was USD 16.78 million.





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During evaluation process an irrelevant expense equal to USD 1.89 million which pertained to CSR related activities, and ceremonies etc., as well as an additional cost equivalent to USD 1 million that were incurred prior to Financial Close, have been reclassified to Project Development Cost (PDC). Hence, after adjustment and reclassification of cost, the total consultancy cost has been reduced from USD 16.8 million to USD 13.91 million.

**Legal and Professional expenses** include legal counsel for Project, audit & tax advisory services and professional, legal & expert advice charges etc.

During evaluation process, it was identified that a cost of USD 1.07 Million under the claimed cost of Legal and Professional Charges was incurred prior to FC, and should therefore be reclassified into PDC. Furthermore, costs of USD 0.009 million, USD 0.066 million and USD 0.003 million were reclassified under this head from Capital Items, Operating Costs and Consultancy & Studies, respectively. Hence, Legal, and professional cost has been reduced from USD 2.88 million to USD 1.72 million.

**Project Development Cost (PDC)** entails expenses including consultancy charges, salaries and wages, operating expenses, fees & charges etc. prior to financial close, which is capped at USD 17.59 million.

During evaluation process it was identified that costs equal to USD 1 million and USD 1.07 million from consultancy and legal that were incurred before Financial Close, should be included in PDC. However, this results in PDC exceeding the allowable limit of USD 17.59 million set by TCTDC during contract stage tariff. Hence in TCTDC purview, the cost of USD 17.6 million is allowed to SECMC for COD stage tariff.

#### **Non-Controllable Cost**

**Land Acquisition and Village Relocation** comprises of land acquisition from Government of Sindh, and various costs incurred for construction of residential houses for resettlement of village, for which the petitioner claimed USD 27.40 million.

During evaluation process, it was identified that costs equal to USD 1.61 million mainly pertaining to CSR related activities were embedded, hence they should be excluded from the Tariff. The total cost of land acquisition, and village relocation has been reduced from USD 27.4 million to USD 25.78 million. Furthermore, in-line with TCEB's decision in Phase I FC stage tariff, all the cost associated with land acquisition and village relocation have been disallowed during operation period.

**Investment in Thar Power Company Limited (TPCL)** the Petitioner has established a wholly owned subsidiary based on no profit & loss, for reliable water supply to power plant and submitted a cost of USD 2 million on account of paid-up capital to establish the subsidiary and set up its organization. After due evaluation and discussion, TCTDC has disallowed this cost as petitioner has not shared any information regarding expenditures made in TPCL.

**Gorano Pond:** The petitioner has claimed the cost of Gorano Pond in the Project Cost amounting to USD 13 million. The Thar Coal Energy Board in its 20<sup>th</sup> meeting held on April 20<sup>th</sup>, 2019, resolved that

*"After detailed discussion board unanimously ratified the action /decision of the Chairman TCEB regarding approval of determination of Financial Close stage coal tariff for Sind Engro Mining Company at thar block II mine with modification that actual cost of construction of Gorano Reservoir be included in the project cost subject to scrutiny and accounts verification by tariff*







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committee. This additional cost is allowed as without 20% IRR and coverage and without any other markup".

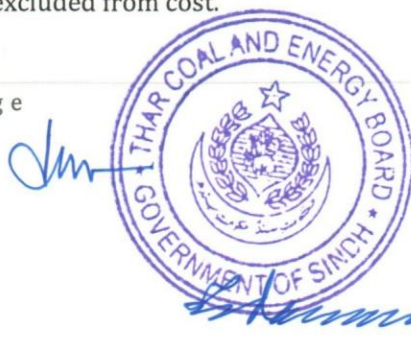
The above TCEB decision has been incorporated in the ROE component of this determination accordingly. The summary of aforementioned cost along with other cost is provided hereunder:

Non-EPC Cost		
Descriptions	Claimed Cost	Determined Cost
	USD million	USD million
<b>Controllable cost</b>		
Capital Items	9.106	9.042
OPEX Expenses	16.370	14.486
Salaries, Wages and Benefits Expense	21.320	21.196
Consultancy and Studies expenses	16.780	13.914
Legal and Professional expenses	2.872	1.715
Utility System (Effluent Pond)	1.880	1.880
Project Development Cost (PDC)	17.413	17.590
	<b>85.743</b>	<b>79.827</b>
<b>Non-Controllable cost</b>		
Land Acquisition and Village Relocation	27.398	25.783
<b>Investment in Thar Power Company Limited</b>	2.004	-
<b>Gorano Pond</b>	13.016	13.016
<b>Total</b>	<b>128.162</b>	<b>118.627</b>

#### C. OTHER COST

Other Cost		
Descriptions	Claimed Cost	Determined Cost
	USD million	USD million
Insurance	3.266	3.266
Sinosure Premium	19.745	19.745
IDC	54.448	53.996
Financial Charges	14.133	14.136
Accruals	-	(2.157)
<b>Total</b>	<b>91.594</b>	<b>88.987</b>

- Insurance charges consists of premiums in relations to Contractor's risk insurance, marine cargo insurance, Terrorism insurance and Third-Party Liability Insurance @ of 1% of EPC cost.
- Sinosure fee is premium paid @ 6.616% of (total foreign debt of USD 200 million plus interest) over the 14 years life of the loan as per Buyer's Credit Insurance Policy.
- IDC is charged on loan drawdown in local and foreign currency, which may change due to adjustment in project cost and subtraction of interest income from it.
- During the evaluation, TCTDC has observed some of the accruals pertaining to petitioned cost are still unpaid amounting to USD 5.68 million out of which USD 2.8 million pertains to Salaries (long term incentive plan), which will be settled after approval of Tariff, and USD 0.721 million have already excluded under respective cost head as disallowable cost, hence the remaining accrual balance of USD 2.16 million is excluded from cost.





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### Summary of Claimed vs Determined Cost:

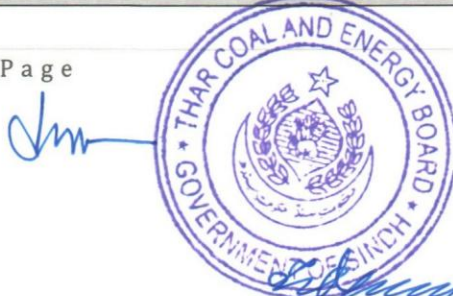
Petitioned Cost			
Descriptions	Claimed Cost	Disallowable Cost	Determined Cost
EPC	USD million	USD million	USD million
EPC Offshore	91.612	-	91.612
EPC Onshore	284.480	-	284.480
	<b>376.091</b>		<b>376.091</b>
Owner's OB Removal (OB)	7.851	0.462	7.389
Coal Handling Systems (CHS)	17.150	-	17.150
Road construction	2.896	-	2.896
Duties and Taxes	3.104	3.104	-
	<b>31.001</b>		<b>27.435</b>
<b>Non-EPC Cost</b>			
Controllable Cost	<b>85.744</b>	<b>5.917</b>	<b>79.827</b>
Non-Controllable Cost	<b>27.398</b>	<b>1.614</b>	<b>25.784</b>
<b>Investment in Thar Power Company Limited</b>	<b>2.004</b>	<b>2.004</b>	<b>-</b>
<b>Gorano Pond</b>	<b>13.016</b>	<b>-</b>	<b>13.016</b>
	<b>128.163</b>		<b>118.627</b>
<b>Other Cost</b>			
Insurance	3.267	-	3.267
Sinosure Premium	19.745	-	19.745
IDC	54.449	0.452	53.996
Financial Charges	14.134	(0.003)	14.137
	<b>91.594</b>		<b>91.145</b>
<b>Accruals</b>	<b>-</b>	<b>2.158</b>	<b>(2.158)</b>
<b>Total</b>	<b>626.850</b>	<b>15.709</b>	<b>611.141</b>

#### D. TERMS OF FINANCING

Project has been financed by way of Bank loan (75%) and Equity (25%) the financing details along with shareholding pattern in provided hereunder.

Financing Structure	
	USD million
Loan drawdowns in local currency	258.355
Loan drawdowns in foreign currency	200.000
Equity Injection	152.785
<b>Total</b>	<b>611.141</b>

Particulars of shareholders		
	% Holding	Number of Shares (in million)
<b>Ordinary shareholders</b>		
The Government of Sindh	54.70%	608.114
Engro Energy Limited	11.90%	132.295
Thal Limited	11.90%	132.295
Hub Power Company Limited	8.00%	88.938
Habib Bank Limited	9.50%	105.614
CMEC Thar Mining Investments Limited	4.00%	44.469
	<b>100%</b>	<b>1,111.726</b>
<b>Preference shareholder</b>		
Huolinhe Open Cut Coal Industry Corporation Limited of Inner Mongolia (HOCIC)	-	539.379
<b>Total</b>		<b>1,112.265</b>





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### E. ROEDC ON EQUITY DRAWDOWN

The Petitioner claimed accumulated ROEDC of USD 82.3 million on equity injection of USD 154.91 million. It was observed that the equity injected by SECMC is not in line with the parameters provided in FC Stage Tariff Determination (i.e., 35% initial equity injection followed by pro-rata drawdowns of debt and equity) for purpose of computation of ROEDC.

Furthermore, two more reasons have been identified which resulted in higher claim of ROEDC in the COD Stage Tariff Petition.

- the equity injected by SECMC is much before its utilization on payment of project costs; and
- calculation of ROEDC claimed by the Petitioner is calculated on compound basis instead of simple return basis.

TCTDC has adjusted equity injections according to mechanism provided in the FC Stage Tariff Determination by capping the upfront equity at 35% of approved equity followed by pro-rata drawdowns of debt and equity in ratio of 75:25. This has resulted in a further reduction in ROEDC by USD 6.85 million and total value of ROEDC stands at USD 64.7 million

During evaluation process, it was also identified that SECMC has transferred /sold its shares worth of USD 10 million to Huolinhe Open Pit Coal (HK) Investment Co. Limited (HOCIC) at fixed return rate of 15.4% (instead of 20%) per annum (after COD) computed in US Dollars. Which was duly adjusted by TCTDC in repayment schedule of ROE and ROEDC.

### 6. MINING TECHNOLOGY & WASTE VOLUME

#### 1. Revised Excavation Schedule

SECMC submitted a revised year wise schedule of waste (OB and IB) volume and coal tonnage which was verified by TCTDC through 3-D pit files for Phase I and Phase II. Table V presents the summary of waste (OB + IB) volume and coal tonnage for Phase I (3.8 Mtpa) and Phase II (7.6 Mtpa).

#### 2. Mining Technology

In Phase-I, SECMC is using 7 m<sup>3</sup> bucket size hydraulic excavators for waste (OB and IB) removal and coal extraction and 60-tonne capacity trucks for the transportation of waste material and coal. SECMC have petitioned 18 excavators and 125 trucks for development period and 58 excavators and 657 trucks for mining period.

In Phase-II, SECMC will deploy 15 m<sup>3</sup> bucket size hydraulic excavators and 100-tonne capacity trucks from 2024 for the excavation and transportation of waste material in sub-recent and Bara formations, while 7 m<sup>3</sup> bucket size hydraulic excavators and 60-tonne capacity trucks will be used in Phase-II for the excavation and transportation of dune sand and coal. COD of Phase-II is scheduled in September 2022, after which, both the Phases will be combined practically. Therefore, both the Phases are combined in the determination of COD stage tariff of Phase-I and FC stage tariff of Phase-II from the year 2023.

TCTDC has calculated the requirement of excavators and trucks for Phase-I as given as follows:

- 18 hydraulic excavators of 7 m<sup>3</sup> bucket size and 125 dump trucks of 60-tonne capacity for the development period of Phase-I.





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- 10 hydraulic excavators of 7 m<sup>3</sup> bucket size and 77 dump trucks of 60-tonne capacity for mining period of Phase-I.

Comparison of SECMC requirement with TCTDC calculations of machinery for Phase-I is given at Table VI.

### 3. Dewatering of Ground Water

The consultants (KPMG) have reported that 29 water wells are installed in Block-II mine, out of which 5 are non-operational. In each well 40 litres/sec capacity submersible pump is installed. SECMC have submitted that dewatering was started in April 2017 and total working hours of all the pumps installed in water wells from April 2017 to July 2019 are 496,510 hours, and total volume of dewatering is calculated as 69,511,400 cubic meters.

Table V – Verified Revised Excavation Schedules

Material	Phase I			Phase II			Phase I + Phase II
	Development period	Mining period	Sub Total	Development period	Mining period	Sub Total	Total
OB+IB (MBCM)	112	92	204	51.5	1480	1531.5	1735.5
Coal (MT)	1.12	13	14.12	0.64	225.56	226.2	240.32
Overall S/R	7.13						

Table VI - Comparison of Mining Machinery in Phase-I

Machinery	SECMC Requirement			TCTDC Calculations <sup>+</sup>		
	Development period	Mining period	Total	Development period	Mining period	Total
7 m <sup>3</sup> Excavator	18	58	76	18	10	28
15 m <sup>3</sup> Excavator	Nil	Nil	Nil	Nil	Nil	Nil
Truck, 60 tonne	125	657	782	125	77	202
Truck, 100 tonne	Nil	Nil	Nil	Nil	Nil	Nil

\* The machinery requirement for Phase I is calculated until COD of Phase II i.e. September 2022





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### COAL TARIFF DETERMINATION ORDER

**No. TCEB/Registrar/2-1/2014/COD-Phase.I:** This determination is conducted in accordance with the authority vested with Thar Coal Energy Board and pertains to the Petition dated October 10<sup>th</sup>, 2019, of Sindh Engro Coal Mining Company for Determination of Reference Tariff pursuant to Commercial Operation Stage for 3.8 MTPA<sup>2</sup> which will be enhance up to mine size of 7.6 MTPA after achievement of Phase II COD at Block II 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 dated 27<sup>th</sup> November, 2014.

The Petitioner has submitted a request for determination of levelized tariff of USD 59.05 per Tonne for development & operations of 3.8 MTPA mining capacity.

Pursuant to Rule 10 of the Thar Coal Tariff Determination Rules 2014, Sindh Engro Coal Mining Company is allowed to charge the following ex mine mouth tariff for the production regimes of 3.8 MTPA. The following tariff is applicable for mine until SECMC achieve COD of Phase II, which is expected on September 30<sup>th</sup>, 2022, or as per FC stage tariff order of Phase II approved by TCEB (whichever is earlier):

*Table VII – Determined Composite Tariff for 3.8MTPA*

Project Tariff	Year 1 – 10 Average	Year 11 – 30 Average	Year 1 – 30 Levelized
Total Production Payment Components	16.29	15.51	16.03
Total Capacity Payment Components	36.03	20.12	31.90
<b>Total Project Tariff</b>	<b>52.33</b>	<b>35.63</b>	<b>47.92</b>

*All amounts in USD per Tonne*

*Table VIII – Production Payment Component for 3.8 MTPA*

Project Tariff	Year 1 – 10 Average	Year 11 – 30 Average	Year 1 – 30 Levelized
Fuel Cost	6.59	7.43	6.75
Variable O&M	3.89	3.07	3.79
Asset Replacement Cost	2.72	2.53	2.68
Royalty	3.09	2.49	2.81
<b>Total Production Payment</b>	<b>16.29</b>	<b>15.51</b>	<b>16.03</b>

*All amounts in USD per Tonne*

*Table IX – Capacity Payment Component for 3.8 MTPA*

Project Tariff	Year 1 – 10 Average	Year 11 – 30 Average	Year 1 – 30 Levelized
Fixed O & M	7.65	6.02	7.45
Insurance	1.02	0.82	0.99
Power Cost	1.92	1.38	1.84
Cost of Working Capital	3.24	4.01	3.33
Principal Debt Repayment	6.71	0.55	4.70
Interest Payment	6.20	0.16	4.61
ROE	6.66	5.08	6.44
ROEDC	2.62	2.09	2.54
<b>Total Capacity Payment</b>	<b>36.03</b>	<b>20.12</b>	<b>31.90</b>

*All amounts in USD per Tonne*

<sup>2</sup> Please refer to point iii section 'General Conditions' for necessary clarification





# Thar Coal & Energy Board

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### GENERAL CONDITIONS

- i. The reference tariff is computed on the basis of net Coal extraction capacity of 3.8 MTPA until SECMC achieves COD of Phase II mine (i.e., September 2022), and 7.6 MTPA during combined (Phase I & II) mining operation.
- ii. The above tariff is applicable on BOO basis commencing from Commercial Operations Date of mine until Company achieve its phase II mine Commercial Operation (COD), which is expected on September 30<sup>th</sup>, 2022, or till that date as approved by TCEB in FC stage tariff Determination of Phase II mine (whichever is earlier)
- iii. Operational year 2019 tariff is configured based on cost of operation and coal excavation for 6 months.
- iv. The cost of financing is based upon 6-months KIBOR + 1.75%- and 6-months LIBOR + 3.3%. Tariff is computed on basis of PKR 28.4 billion local debt and USD 200 million foreign debt.
- v. The basis of this determination is a Debt-to-Equity ratio of 75:25.
- vi. Tariff is configured on upfront initial equity drawdowns up to a maximum of 35% followed by pro-rata drawdowns of debt and equity.
- vii. Debt servicing shall be paid during the first 10 years.
- viii. The reference coal tariff is determined such that it covers 100% repayment of local and international debt against approved project cost.
- ix. Working Capital facility and the resultant cost is permitted for a maximum of 30 days of receivables on production payment tariff, 30 days of coal inventory, 30 days of (foreign) O&M advance, 6 months of spares inventory and 21 days of fuel inventory. The financing cost of the working capital facility is permitted at a maximum of 1-Month KIBOR + 2.00%.
- x. Project Tariff is based on a reference exchange rate of PKR 157.9 per USD, project cost of USD 611.14 Million for development of 3.8 MTPA capacity.
- xi. The Petitioner is entitled to adjustment of costs in accordance with the adjustments listed in detail below under 'REFERENCE TARIFF ADJUSTMENTS & ESCALATIONS' section of this document and also indexations in accordance with the mechanisms laid down under the 'REFERENCE TARIFF INDEXATIONS' section of this document.
- xii. The detailed cost components of tariff are tabulated in Annexure A appended to the end of this Order.





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### Reference Tariff Indexations

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

#### i. Fuel Cost

$$\text{Fuel Cost}_{(\text{rev})} = \text{Fuel Cost}_x \times \frac{\text{Diesel Price}_{(\text{rev})}}{110.28}$$

Where,

Fuel Cost<sub>(rev)</sub> is the revised Fuel Cost Component

Fuel Cost<sub>x</sub> is the Fuel Cost of  $x^{\text{th}}$  year of operations

Diesel Price<sub>(rev)</sub> 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

$$\text{Variable O\&M}_{(\text{rev})} = \text{Variable O\&M}_x \times \frac{\text{US CPI}_{(\text{rev})}}{256.14} \times \frac{\text{PKR/USD}_{(\text{rev})}}{157.90} \times \frac{6.885}{\text{RMB/USD}_{(\text{rev})}}$$

Where,

Variable O&M<sub>(rev)</sub> is the revised Variable O&M Component

Variable O&M<sub>x</sub> is the Variable O&M Component of  $x^{\text{th}}$  year of operations

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

PKR/USD<sub>(rev)</sub> 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<sub>(rev)</sub> 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

$$\text{Asset Replacement}_{(\text{rev})} = \text{Asset Replacement}_x \times \frac{\text{US CPI}_{(\text{rev})}}{256.14} \times \frac{\text{PKR/USD}_{(\text{rev})}}{157.90} \times \frac{6.885}{\text{RMB/USD}_{(\text{rev})}}$$

Where,

Asset Replacement<sub>(rev)</sub> is the revised Asset Replacement Component

Asset Replacement<sub>x</sub> is the Asset Replacement Component of  $x^{\text{th}}$  year of operations





# Thar Coal & Energy Board

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

PKR/USD<sub>(rev)</sub> 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<sub>(rev)</sub> 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

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

Where,

Royalty<sub>(rev)</sub> is the revised Royalty Component

Coal Price<sub>y</sub> is the Price of Coal (excluding Royalty) in  $y^{\text{th}}$  month of operations

Royalty is the minimum of 7.5% of Production Payment Price of Coal (excluding Royalty) or PKR 150 per Tonne 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

$$\text{Fixed O\&M - Local}_{(\text{rev})} = \text{Fixed O\&M - Local}_x \times \frac{\text{Local CPI}_{(\text{rev})}}{123.89}$$

Where,

Fixed O&M - Local<sub>(rev)</sub> is the revised Fixed O&M - Local Component

Fixed O&M - Local<sub>x</sub> is the Fixed O&M - Local Component in  $x^{\text{th}}$  year of operations

Local CPI<sub>(rev)</sub> is the latest is Consumer Price Index of Pakistan as notified by the Pakistan Bureau of Statistics

Frequency of Indexation shall be quarterly

#### vi. Fixed O&M - Foreign

$$\text{Fixed O\&M Foreign}_{(\text{rev})} = \text{Fixed O\&M Foreign}_x \times \frac{\text{US CPI}_{(\text{rev})}}{256.14} \times \frac{\text{PKR/USD}_{(\text{rev})}}{157.90} \times \frac{6.885}{\text{RMB/USD}_{(\text{rev})}}$$

Where,

Fixed O&M - Foreign<sub>(rev)</sub> is the revised Variable O&M Component

Fixed O&M - Foreign<sub>x</sub> is the Variable O&M Component of  $x^{\text{th}}$  year of operations







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

PKR/USD<sub>(rev)</sub> 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<sub>(rev)</sub> 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 Diesel

$$\text{Power Cost - By Diesel}_{(rev)} = \text{Power Cost - By Diesel}_x \times \frac{\text{Diesel Price}_{(rev)}}{110.28} \times \frac{\% \text{ of Diesel}_{(rev)}}{85.29\%}$$

Where,

Power Cost - By Diesel<sub>(rev)</sub> is the revised Power Cost - By Diesel Component

Power Cost - By Diesel<sub>x</sub> is the Power Cost - Diesel Component in  $x^{\text{th}}$  year of operations

Diesel Price<sub>(rev)</sub> 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)

% of Diesel<sub>(rev)</sub> is the percentage of power generated by Diesel in  $x^{\text{th}}$  year of operations

Frequency of indexation shall be as and when notified by OGRA

### viii. Cost of Working Capital

$$\text{WC}_{(rev)} = \text{WC}_x \times \left( a_x \frac{\text{Prod Pmt}_{(rev)}}{\text{Prod Pmt}_x} + b_x \frac{\text{Coal}_{(rev)}}{\text{Coal}_x} + c_x \frac{\text{Diesel}_{(rev)}}{110.28} + d_x \frac{\text{US CPI}_{(rev)} \times \text{PKR/USD}_{(rev)} \times 6.88}{256.14 \times 157.90 \times \text{RMB/USD}_{(rev)}} \right) \times \frac{\text{KIBOR}_{(rev)} + 2.00\%}{14.98\%}$$

Where,

Cost of WC<sub>(rev)</sub> is the revised Cost of Working Capital Component

Cost of WC<sub>x</sub> is the Cost of Working Capital in  $x^{\text{th}}$  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  $x^{\text{th}}$  year of operations

$b_x$  is the proportion of Production Payment Price for 30 days to amount of working capital facility in  $x^{\text{th}}$  year of operations

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

Prod Pmt<sub>(rev)</sub> is the Production Payment Price as determined by TCEB after incorporating indexations till latest month

Prod Pmt<sub>x</sub> is the Production Payment Price as determined by TCEB for  $x^{\text{th}}$  year of operations





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Coal<sub>(rev)</sub> is the Coal Price (excluding Working Capital Component) as determined by TCEB after incorporating indexations till latest month

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

Diesel Price<sub>(rev)</sub> 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<sub>(rev)</sub> 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 - Local

$$\text{Interest} - \text{Local}_{(rev)} = \text{Interest} - \text{Local}_x \times \frac{\text{KIBOR}_{(rev)} + 1.75\%}{14.89\%}$$

Where,

Interest - Local<sub>(rev)</sub> is the Interest Payment - Local Component

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

KIBOR<sub>(rev)</sub> 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

### x. Interest Payments - Foreign

$$\text{Interest} - \text{Foreign}_{(rev)} = \text{Interest} - \text{Foreign}_x \times \frac{\text{LIBOR}_{(rev)} + 3.3\%}{5.56\%}$$

Where,

Interest - Foreign<sub>(rev)</sub> is the Interest Payment - Foreign Component

Interest - Foreign<sub>x</sub> is Interest Payment - Foreign Component determined by TCEB for  $x^{th}$  year of operations, subject to adjustment on account of escalations till COD.

LIBOR<sub>(rev)</sub> is the relevant LIBOR rate prevailing for  $x^{th}$  year of operations, as notified by State Bank of Pakistan

Frequency of Indexation shall be semi-annually





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### xi. Equity Returns

$$\text{Equity Returns}_{(\text{rev})} = \text{Equity Returns}_x \times \frac{\text{PKR/USD}_{(\text{rev})}}{157.90}$$

Where,

Equity Returns<sub>(rev)</sub> is the revised Equity Returns Component

Equity Returns<sub>x</sub> is the Equity Returns component determined by TCEB for  $x^{\text{th}}$  period of operations

PKR/USD<sub>(rev)</sub> 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

### xii. Cost of Transportation

$$\text{Cost of Transportation}_{(\text{rev})} = \text{Cost of Transportation}_x \times \frac{\text{Diesel Price}_{(\text{rev})}}{110.28}$$

Where,

Cost of Transportation<sub>(rev)</sub> is the revised Cost of Transportation applicable on tariff

Cost of Transportation<sub>x</sub> is the Cost of Transportation applicable on tariff as determined by TCEB for  $x^{\text{th}}$  period of operations

Diesel Price<sub>(rev)</sub> 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

### xiii. Heat Content Adjustment

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

Where,

Adjusted Prod Pmt<sub>(rev)</sub> is the Production Payment Price adjusted for heating value (LHV)

Indexed Prod Pmt<sub>x</sub> is the reference Production Payment Price in  $x^{\text{th}}$  year of operations

Heating Value<sub>(ref)</sub> is the heat content of coal, which for Year 1 – 8 is equal to 11.30 MJ / kg (LHV) and for Year 9 – 30 is equal to 11.61 MJ / kg (LHV)

Heating Value<sub>(rev)</sub> is the actual average heating value (LHV) during the relevant quarter of  $x^{\text{th}}$  of operations subject to a minimum heating value (LHV) permitted for Year 1 – 8 of 11.0175 MJ / Kg and for Year 9 – 3 of 11.31975 MJ / Kg

Indexation shall be computed annually.





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### ANNEXURE A – TARIFF TABLE SECMC PHASE I 3.8 MTPA MINE:

Yearly Profile for Coal Price of Phase I 3.8Mt/a and Phase II 7.6Mt/a Mine Capacity in (USD/ton)																	
Year	PRODUCTION (VARIABLE) PAYMENTS				CAPACITY (FIXED) PAYMENTS												Total
	Fuel Cost	Variable Cost	Asset Replacement	Royalty	Fixed O&M	Insurance	Power Cost	Working Capital	Principal - Phase I	Interest - Phase I	Principal - Phase II	Interest - Phase II	ROE - Phase I	ROEDC - Phase I	ROE - Phase II	ROEDC - Phase II	
1	4.64	5.57	3.96	0.00	12.67	1.34	3.23	0.67	6.21	9.98	0.00	0.00	9.97	3.42	0.00	0.00	61.64
2	5.54	5.32	1.98	2.24	9.59	1.34	2.73	2.24	6.63	9.56	0.00	0.00	9.12	3.42	0.00	0.00	59.70
3	5.54	5.20	1.98	4.61	9.43	1.34	2.48	2.21	7.24	8.94	0.00	0.00	9.12	3.42	0.00	0.00	61.52
4	6.97	5.20	1.98	4.65	9.43	1.34	2.48	2.38	7.93	8.26	0.00	0.00	7.92	3.42	0.00	0.00	61.95
5	6.05	2.42	2.89	3.09	6.10	0.82	1.38	3.67	4.48	3.74	0.49	2.03	3.97	1.71	1.11	0.38	44.32
6	7.28	2.97	2.89	3.24	5.84	0.82	1.38	4.17	4.91	3.31	0.58	1.94	3.97	1.71	1.11	0.38	46.51
7	7.47	3.04	2.89	3.27	5.86	0.82	1.38	4.25	5.39	2.83	0.68	1.83	3.97	1.71	1.11	0.38	46.88
8	7.47	3.04	2.89	3.27	5.86	0.82	1.38	4.25	5.93	2.29	0.81	1.71	3.97	1.71	1.11	0.38	46.88
9	7.47	3.06	2.89	3.27	5.87	0.82	1.38	4.26	6.54	1.68	0.96	1.56	3.97	1.71	1.11	0.38	46.93
10	7.47	3.06	2.89	3.27	5.87	0.82	1.38	4.26	7.23	0.99	1.13	1.39	3.97	1.71	1.11	0.38	46.93
11	7.47	3.06	2.89	2.96	5.83	0.82	1.38	4.19	3.90	0.21	1.34	1.18	3.97	1.71	1.11	0.38	42.41
12	7.47	3.06	2.89	2.66	5.98	0.82	1.38	4.14	0.00	0.00	1.59	0.93	3.97	1.71	1.11	0.38	38.09
13	7.54	3.08	2.89	2.66	5.97	0.82	1.38	4.16	0.00	0.00	1.88	0.64	3.97	1.71	1.11	0.38	38.20
14	7.54	3.08	2.89	2.67	5.99	0.82	1.38	4.16	0.00	0.00	2.22	0.30	3.97	1.71	1.11	0.38	38.22
15	7.51	3.08	2.44	2.43	5.94	0.82	1.38	4.00	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	34.76
16	7.48	3.07	2.44	2.42	5.95	0.82	1.38	3.99	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	34.73
17	7.72	3.16	2.44	2.46	6.02	0.82	1.38	4.09	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.26
18	7.72	3.16	2.44	2.46	6.02	0.82	1.38	4.09	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.27
19	7.72	3.16	2.44	2.46	6.04	0.82	1.38	4.09	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.28
20	7.72	3.21	2.44	2.47	6.07	0.82	1.38	4.11	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.39
21	7.72	3.21	2.44	2.47	6.08	0.82	1.38	4.11	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.40
22	7.72	3.21	2.44	2.47	6.09	0.82	1.38	4.11	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.41
23	7.72	3.21	2.44	2.47	6.10	0.82	1.38	4.11	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.42
24	7.78	3.23	2.44	2.48	6.12	0.82	1.38	4.13	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.56
25	7.78	3.23	2.44	2.48	6.13	0.82	1.38	4.14	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.58
26	7.78	3.23	2.44	2.48	6.15	0.82	1.38	4.14	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.59
27	7.78	3.23	2.44	2.48	6.16	0.82	1.38	4.14	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	35.60
28	7.46	3.11	2.44	2.44	6.11	0.82	1.38	4.01	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	34.94
29	5.76	2.41	2.44	2.19	5.86	0.82	1.38	3.31	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	31.35
30	5.17	2.19	2.44	2.10	5.77	0.82	1.38	3.08	0.00	0.00	0.00	0.00	3.97	1.71	1.11	0.38	30.12
Levelized Tariff																	<b>47.92</b>

