SECMC
Sindh Engro Coal Mining Company

TARIFF PETITION

SUBMITTED BEFORE

THAR COAL AND ENERGY BOARD

BY

SINDH ENGRO COAL MINING COMPANY LIMITED

FOR DETERMINATION OF

COMMERCIAL OPERATIONS STAGE TARIFF

IN RESPECT OF

OPEN CAST LIGNITE MINING PROJECT ENTAILING 7.6 MT/A COAL MINE

LOCATED AT

THAR BLOCK-II, DISTRICT THARPARKAR, SINDH, PAKISTAN

DATED
FEBRUARY 1ST, 2023

Sindh Engro Coal Mining Company Limited

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1 INTRODUCTION

1.1 PETITIONER DETAILS

SINDH ENGRO COAL MINING COMPANY

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PETITIONER'S REPRESENTATIVE'S DETAILS

(a)AMIR IQBAL, Chief Executive Officer.

(b)MOHAMMAD MUDDASIR, Chief Financial Officer.

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1.2 LIST OF ABBREVIATIONS

BCM	BANK CUBIC METERS
BoD	BOARD OF DIRECTORS
CSA	COAL SUPPLY AGREEMENT (S)
EPC	ENGINEERING, PROCUREMENT AND CONSTRUCTION
GoS	GOVERNMENT OF SINDH
KIBOR	KARACHI INTERBANK OFFER RATE
LBOD	LEFT BANK OUTFALL DRAINAGE CANAL
LIBOR	LONDON INTERBANK OFFER RATE
Mt/a	MILLION TONS PER ANNUM
NEPRA	NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
O&M	OPERATIONS AND MAINTENANCE
PKR	PAKISTANI RUPEES
SBP	STATE BANK OF PAKISTAN
SCA	SINDH COAL AUTHORITY
TCEB	THAR COAL AND ENERGY BOARD
USD	UNITED STATES DOLLAR

Note:

It is submitted before TCEB that all Project Cost and Coal tariff numbers contained in this Tariff Petition are based on and taken from the Financial Model, as submitted together with this Tariff Petition. All numbers have been rounded off to the nearest decimal places.

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1.3 DEFINITIONS

Unless otherwise defined herein or if the context otherwise requires, all capitalized terms used in this petition shall have the meanings assigned to them hereunder:

Annexure means a reference to an annexure of this Tariff Petition.

Auditor means A.F.Ferguson's and Co., Chartered Accountants, a member firm of the PWC network.

CHS means Coal Handling System installed by the Petitioner.

Commercial Operations Stage Tariff shall bear the meaning ascribed thereto in the Rules, being, in respect of the Phase II Mine, the tariff submitted by Petitioner for determination by the TCEB pursuant to this Tariff Petition.

Coal Purchaser(s) means TEL and TNTPL being the entities that have entered into Coal Supply Agreement(s) with the Petitioner for the purchase of Coal/Lignite, the same being the owner of the Power Plant(s).

Coal Supply Agreement(s) means the agreement(s) executed and/or to be executed by the Petitioner with the Coal Purchaser(s) for the sale of Coal/Lignite, as amended, modified, supplemented and/or novated from time to time (attached herewith as **SCHEDULE 11**).

Coal/Lignite means the lignite reserves in Thar Block-II, having heating value as referred in section 8.10.

Commercial Operations Date or **COD** shall bear the meaning ascribed to the term '*Commercial Operations Date*' in the GOS IA.

EPC Contracts means collectively the EPC Offshore Supply and Services Agreement and EPC Onshore Supply and Services Agreement, and **EPC Contract** means each of the foregoing individually.

EPC Contractors means collectively the EPC Offshore Contractor and the EPC Onshore Contractor and EPC Contractor means each of the foregoing individually.

EPC Offshore Contractor means CHINA MACHINERY ENGINEERING CORPORATION (a company duly organized and existing under the laws of the People's Republic of China, with its registered office located at No. 178, Guang An Men Wai Street, Xi Cheng District, 100055, Beijing, the People's Republic of China), being the party contracting with the Petitioner under the EPC Offshore Supply and Services Agreement.

EPC Offshore Supply and Services Agreement means the agreement entitled "*Offshore Supply & Services Agreement for Mining Project*" dated December 21, 2017 and entered into between the Petitioner and the EPC Offshore Contractor in respect of the Phase II Mine, as amended, supplemented, modified and/or novated from time to time.

EPC Onshore Contractor means CHINA EAST RESOURCE IMPORT & EXPORT CORPORATION (a company duly organized and existing under the laws of the People's Republic of China with its registered office located at No.248, Guang An Men Wai Street, Xi Cheng District, 100055, Beijing, the Peoples Republic of China), being the party contracting with the Petitioner under the EPC Onshore Supply and Services Agreement.

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EPC Onshore Supply and Services Agreement means the agreement entitled "Onshore Supply & Services Agreement for Mining Project" dated December 21, 2017 and entered into between the Petitioner and the EPC Onshore Contractor in respect of the Phase II Mine, as amended, supplemented, modified and/or novated from time to time.

Financial Model means the financial model submitted to the TCEB by the Petitioner together with this Tariff Petition, as attached hereto at **SCHEDULE 10 (FINANCIAL MODEL).**

GoS means the Government of Sindh.

Interburden means all material that lies between the coal seams and/ orfound associated with the coal.

GoS Implementation Agreement(s) (GoS IA) means the implementation agreement dated 17 August 2015 between the Petitioner and the GOS for the implementation of the Project, as amended from time to time.

IDC means interest during construction.

Law or Laws means any applicable statute, ordinance, rule, decree, notices, requirement, national, provincial or local legislation, statutes, ordinances and other laws and regulations including Mines Act 1923, Mines Act 1954, Sindh Mining Concession Rules 2002, labor laws, health, safety, environment laws, bye- laws, rules, orders, decrees, judicial decisions, delegated legislation, directives, guidelines (to the extent mandatory) policies or code of GoS/GoP or any Public Sector Entity or Relevant Authority or agency, whether federal, provincial, municipal, local or other government subdivision of Pakistan, or of any legally constituted Relevant Authority, as amended from time to time.

LEPCL means LUCKY ELECTRIC POWER COMPANY LIMITED, being an entity that has entered into a coal supply agreement with the Petitioner for the purchase of Coal from the subsequent expansion of the Mine.

Mine or Mining Facility means the open cast lignite mine at Thar Block-II and associated Mine Surface Facilities, Mine Infrastructure, Lignite Stock Yard, Interconnections, Outside Dump, Inside Dump, surface and mine drainage system, floods prevention dams, dust suppression system and any other system required for a safe, credible, sustainable efficient and most cost effective Operations & Maintenance of the Mining Facility.

Mine Infrastructure means the roads, utilities & effluent network, electric network, transmission line, communication network, mine & production planning & control system and other requisite infrastructure within Thar Block-II associated with the Mine, stock, outside dump, inter connections etc.

O&M Agreements shall mean collectively the O&M Phase I Agreements and the O&M Phase II Agreements (attached herewith as **SCHEDULE 8**).

O&M Phase I Agreements shall bear the meaning ascribed thereto in Section 8.3.

O&M Phase II Agreements shall bear the meaning ascribed thereto in Section 8.3.

O&M Contractor shall bear the meaning ascribed thereto in Section 8.3.

Operations & Maintenance (O&M) means removal, transfer and dumping of

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Overburden/Interburden, production, loading and dispatch of lignite, construction and maintenance of ramps, benches, and mine service roads, construction and maintenance of surface water prevention dams, installation, maintenance and operations of surface drainage system, installation, operations and maintenance of all other temporary and permanent works required for safe, sustainable and most cost-effective operations of mine and production of lignite at the most economical price.

Overburden (OB) means the top soil / all materials above the coal which are required to be removed to expose the coal seams and allow extraction of the coal as per the mine production plan.

Petitioner means Sindh Engro Coal Mining Company Limited.

Phase I Mine means the Mine having a capacity of 3.8 Mt/a.

Phase I COD Stage Tariff Petition means the tariff petition filed by the Petitioner before TCEB dated October 10, 2019 for determination by TCEB of the 'contract stage tariff' for the Phase II Mine of the Project.

Phase I COD Stage Tariff Determination means the Determination No. TCEB/Registrar/2-1/2014/1047 of TCEB dated December 29, 2022.

Phase II Mine means the Mine having a capacity of 7.6 Mt/a.

Phase II Contract Stage Tariff Determination means the Determination No. TCEB/Registrar/2-1/2014/1047 of TCEB dated September 25, 2018.

Phase II Contract Stage Tariff Petition means the tariff petition filed by the Petitioner before TCEB dated December 28, 2017 for determination by TCEB of the '*contract stage tariff*' for the Phase II Mine of the Project.

Phase II Contract Stage Motion For Leave For Review means the "*Motion for Leave for Review*" filed by the Petitioner before the TCEB in respect of matters relating to the Project and the Phase II Contract Stage Tariff Determination.

Phase II Financial Close Stage Tariff Determination means the Determination No. TCEB/Registrar/2-1/2014/FC-Phase.II/9148 of TCEB dated December 29, 2022 for determination by TCEB of the Financial Close Stage Tariff for the Phase II Mine of the Project.

Phase II Financial Close Stage Tariff Petition means the tariff petition filed by the Petitioner before TCEB dated June 26, 2020

Phase II Financial Close Stage Motion For Leave For Review means the "*Motion For Leave For Review*" filed by the Petitioner before TCEB in respect of matters relating to the Project and the Phase II Financial Close Stage Tariff Determination.

Power Plant(s) means the 2 x 330 MW Coal based mine mouth power generation facilities owned and developed by the Coal Purchaser(s).

Project means Open Cast Lignite Mine in Thar Block-II with an initial capacity of 3.8 Million tons/annum i.e. Phase I Mine, which is expanded to 7.6 Million tons/annum in phase II i.e Phase II MIne.

Project Cost means the total cost incurred or accrued on the Phase II Mine including project development cost, project execution cost including EPC costs and all expenses incurred for consultancy and studies, project management, project supervision, financing, insurances, infrastructure development cost, financial advisors' fees, legal advisors' fees, duties, taxes any other payments to the Relevant Authority or Public Sector Entity, land acquisition cost and all other associated costs related to achievement of COD of the Phase II Mine by the Petitioner and approved by Lenders.

Public Sector Entity means (a) The GoP, the GoS, any subdivision of either, or any local governmental authority with jurisdiction over the Petitioner, the Project, or any part thereof, (b) any department, authority, instrumentality, agency, or judicial body of the GoP, the GoS or any such local governmental authority, (c) courts and tribunals in Pakistan, and (d) any commission or regulatory agency or body having jurisdiction over the Petitioner, the Project or any part thereof.

Quarter means a calendar quarter.

Relevant Authority(ies) means the department, authority, agency or other relevant entity from which consent is to be obtained and any authority, body or other person having jurisdiction under the Laws of Pakistan with respect to the Project.

Schedule means a reference to a schedule of this Tariff Petition.

Section means a reference to a section of this Tariff Petition.

Solar Power System shall bear the meaning ascribed thereto in Section 8.7.

Tariff Rules or **Rules** means The Coal Tariff Determination Rules, 2014.

Tariff Petition means this petition submitted by the Petitioner before TECB for determination by TCEB of the Phase II Commercial Operations Stage Tariff for the Phase II Mine.

TCEB Act means the Thar Coal and Energy Board Act, 2011.

TEL means THAR ENERGY LIMITED, being an entity that has entered into a Coal Supply Agreement with the Petitioner for the purchase of Coal/Lignite from the Phase II Mine.

TNTPL means THAL NOVA POWER THAR (PRIVATE) LIMITED, being an entity that has entered into a Coal Supply Agreement with the Petitioner for the purchase of Coal/Lignite from the Phase II Mine.

Transport Contractor shall bear the meaning ascribed to the term in Section 9.2.

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1.4 Applicable Law & Policy

Under the TCEB Act, TCEB has been set up, *inter alia*, as a one window facilitator in matters relating to coal mining projects being established in the region of Thar, Sindh, Pakistan. Pursuant to section 5 of the TCEB Act, TCEB is mandated to determine the tariff of coal from Thar, Sindh, Pakistan subject to the need to comply with guidelines, not inconsistent with the provisions of the TCEB Act, laid down by the GoS. In addition, TCEB is also responsible for determining the process and procedures for reviewing tariff and recommending tariff adjustments.

In accordance with the requirements of the relevant laws of Pakistan (including, without limitation, the TCEB Act and rules and regulations made thereunder), the Petitioner hereby submits this Tariff Petition for tariff determination by the TCEB of the Commercial Operation Stage Tariff, as submitted herein, for the Petitioner's Mining Facility located at Thar Block – II, the same being the Phase II Mine.

This Tariff Petition is being filed under part III (*Tariff Determination Procedure*) of the Tariff Rules. This Tariff Petition and the matters contained herein have been prepared on the basis of the guidelines presented in part IV (*Standards and Guidelines*) of the Tariff Rules and the Economic Coordination Committee's approved incentive package for the Project. Further, any other information required to be filed is included in and /or with this Tariff Petition.

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1.5 GROUNDS AND FACTS FORMING BASIS OF TARIFF PETITION

Pakistan has been blessed with the world's seventh largest lignite reserves of around 186 Bt. The largest reserves are located in the Tharparkar District in the province of Sindh, Pakistan where 95% of total lignite (175Bt) have been identified. It is in recognition of this potential that the Petitioner was incorporated as a joint venture between the GoS, Engro Energy Limited (formerly Engro Powergen Limited), Thal Limited, Hub Power Company, Habib Bank Limited, China Machinery Engineering Corporation and Huolinhe Open Pit Coal (HK) Investment Co., Limited to construct, develop, own and operate a coal Mine in Block II of the Thar Coal Fields.

In the initial phase of the Project i.e. Phase I Mine, the Phase I Mine was to be developed that would fuel the Power Plant as a proof of concept. The Phase I Mine is now being subsequently expanded in phases to enhance the associated power generation capacity from Block II until it reaches its optimum capacity and lowering the tariff of the Coal and power produced from the Project.

In addition to offering the lowest tariff among thermal independent power producers in the country, the use of Thar Coal will lead to substantial foreign exchange savings for the country of approximately USD ~700 million/annum.

The development of Mine and associated power plant in Thar has also provided unprecedented opportunities to the locals. Over 3,500 people have been directly employed at these projects. In addition, the region has also witnessed an investment by the companies involved in the Thar Coal projects in the fields of invested fields of healthcare, education, and infrastructure.

1.5.1 FACTS FORMING BASIS OF THE PETITION

It is submitted that the Petitioner, vide the Phase II Contract Stage Tariff Petition, requested the TCEB for determination of reference Contract Stage Tariff for the Phase II Mine. The Petitioner also submitted all relevant data/information required by the TCEB to arrive at an informed decision. Thereafter, TCEB, pursuant to the applicable Laws (including rule 10(5) of the Tariff Rules) issued the Phase II Contract Stage Tariff Determination. Following the Phase II Contract Stage Tariff Determination, pursuant to rule 10(8) of the Tariff Rules, the Petitioner had filed a Phase II Contract Stage Motion For Leave For Review before TCEB to highlight, *inter alia*, certain key points stated in the Contract Stage Tariff Determination that could potentially affect the Project. The TCEB, through its Contract Stage Tariff Review Determination, addressed most of the points highlighted in the Phase II Contract Stage Motion For Leave For Review.

Further, the Petitioner, through the Phase II Financial Close Stage Tariff Petition requested the TCEB for determination of reference Phase II Financial Close Stage Tariff for the Phase II Mine. Subsequently, TCEB issued the Phase II Financial Close Stage Tariff Determination. Following the Phase II Financial Close Stage Tariff Determination, the Petitioner has filed a Phase II Financial Close Stage Motion For Leave For Review before TCEB to highlight, *inter alia*, certain key points stated which may adversely affect the Project. The determination against the Phase II Financial Close Stage Motion for Leave for Review is currently pending, therefore the Phase II Contract Stage Tariff Determination has been used as a basis for this Tariff Petition.

Moreover, TCEB has determined the Commercial Operations Stage Tariff for the Phase I Mine and the same has been incorporated into the Financial Model for this

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Tariff Petition (attached herewith as **SCHEDULE 10**).

As the Commercial Operations Date for Phase II Mine has been achieved, the Petitioner hereby submits this Tariff Petition in accordance with and pursuant to the requirements of, in each case, the applicable Laws (including the TCEB Act and the rules and regulations made thereunder (including the Tariff Rules) for determination by TCEB of the reference Commercial Operations Stage Tariff for the Phase II Mine, as required under the Rules.

As outlined in detail in Section 8.12 below, it is highlighted that as of the date of filing of this Tariff Petition, TNPTL, being one of the offtakers of Phase II Mine, has still not achieved its COD. As such, the Petitioner is facing losses for each month of delay. The Petitioner, acting prudently, is in the process of mitigating said losses by selling Coal/Lignite to other offtakers including LEPCL. The Petitioner, however, hereby submits that it reserves the right under the Tariff Determination Rules to apprise TCEB of the total residual losses, in the future due to TNPTL's failure to achieve its COD and get the same adjusted from TCEB.

2 PROJECT COST

2.1 PROJECT COST IN CONTRACT STAGE TARIFF

At the time of determination of the Contract Stage Tariff for Phase II, TCEB reviewed the Phase II Contract Stage Tariff Petition filed by the Petitioner (alongside with its supporting data) and determined the reference Contract Stage Tariff for Phase II pursuant to the Phase II Contract Stage Tariff Determination. At this stage, the Project Cost determined was based on EPC Contracts and estimates of other costs to be incurred by the Petitioner over the construction period of Phase II Mine. TCEB determined a cost of USD 191.79 million with the following general conditions highlighted in the Phase II Contract Stage Tariff Determination:

"Project Tariff is based on a reference exchange rate of PKR 110.6 per USD, diesel price of PKR 88.08 per litre. An incremental project cost of USD 191.79 million for enhancement to 7.6 MTPA".

2.2 PROJECT COST IN FINANCIAL CLOSE STAGE TARIFF

The Petitioner submitted the total Project Cost of USD 214.07 million in its Phase II Financial Close Stage Petition. TCEB, however, through its Phase II Financial Close Stage Tariff Determination reduced the cost arbitrarily to USD 168.32 million. Therefore, the Petitioner has filed the Phase II Financial Close Stage Motion For Leave For Review, the determination of which is currently pending.

2.3 PROJECT COST IN COMMERCIAL OPERATIONS STAGE TARIFF

The Petitioner submits that it has placed reliance on the Phase II Contract Stage Tariff Determination which was determined by TCEB and accordingly has completed construction of the Phase II Mine . The total actual Project Cost incurred is USD 172.72 million. Details of the Project Cost incurred are set out in Section 3 to 5 below and the same have duly been verified by an independent Auditor.

3 EPC COST

To undertake the EPC of the Phase II Mine, the Petitioner entered into the EPC Offshore Supply and Services Agreement with the EPC Offshore Contractor and the EPC Onshore Supply and Services Agreement with the EPC Onshore Contractor. The agreed aggregate contract price under the EPC Contracts was USD 128.3 million. The same cost was approved by TCEB under the Phase II Contract Stage Tariff Determination in 2018 with indexations on account of PKR/ USD, RMB/ USD parity, US CPI and cost of Diesel. Based on this, the EPC contractor executed the works for the Phase II Mine.

With the Phase II Mine having achieved COD, the Petitioner hereby submits and details below for TCEB's approval the actual EPC cost incurred by the Petitioner under the EPC Contracts and in relation to the scope defined therein:

3.1 PROCUREMENT

The net cost of the procurement for the import of equipment and machinery and construction works that was required for OB removal was USD 77.70 million at the time of the Phase II Contract Stage Tariff Determination. However, after accounting for indexations and escalations (USD/ RMB and US CPI) included in the EPC Offshore Supply and Services Agreement, it is submitted that the actual cost incurred by the Petitioner under the EPC Offshore Supply and Services Agreement is USD 78.73 million. This cost has been duly verified by the Auditor and the supporting invoices and data are attached as SCHEDULE 4. It is submitted that this cost be allowed and approved by TCEB.

3.1.1 Variation in Procurement

In order to further the attempts at time optimization, the cost of a portion of the auxiliary equipment to be procured by the EPC Contractors was carved out and borne by the Petitioner. The equipment procured was readily available from a source where COVID-19 restrictions had been relaxed. Therefore, auxiliary equipment worth USD 5.39 million was carved out from EPC Contract (via amendment attached herewith as SCHEDULE 7) and directly procured by the Petitioner under the same head. Hence there was no additional cost impact on the Project.

DESCRIPTION	APPROVED COST AT CONTRACT STAGE DETERMINATION (USD M)	ACTUAL COST INCURRED AFTER INDEXATIONS IN THE CONTRACT (USD M)
Procurement, Supplies, and Construction	77.70	78.73
• *OB Equipment Spares*	*46.45*	*47.43*
• *OB Equipment*	*31.26*	*31.30*

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3.2 OVERBURDEN AND LIGNITE SERVICES

Under the EPC Onshore Supply and Services Agreement, the EPC Onshore Contractor was responsible for the removal of 50.8 M BCM of Overburden, production of 0.64 Mt of lignite and supply of power to Phase II Mine for safe mining operations.

Under the EPC Onshore Supply and Services Agreement, the Petitioner worked with the EPC Onshore Contractor to optimize the slope during the detailed engineering. As a result of such optimization, the total OB volume to be removed during the EPC phase of the Phase II Mine of the Project was reduced to 47 M BCM (via amendment attached herewith as SCHEDULE 7).

It is highlighted that the cost in relation to the Overburden and lignite production under the EPC Onshore Supply and Services Agreement was divided into two components, namely:

(i) non-Diesel; and

(ii) Diesel

3.2.1 Overburden Removal and Lignite Production Services – Non-Diesel

The total non-Diesel component related to OB removal and lignite production (LG) and services under the EPC Contracts was USD 20.34 million. After accounting for indexations and escalations (USD/ RMB and US-CPI) included in the EPC Onshore Supply and Services Agreement and early completion of the Phase II Mine, it is submitted before TCEB that the actual cost incurred by the Petitioner is USD 22.06 million. This cost has been duly verified by the Auditor and the supporting invoices and data are attached as **SCHEDULE 4 AND SCHEDULE 6.** It is submitted that this cost be allowed and approved by TCEB.

DESCRIPTION	APPROVED COST AT CONTRACT STAGE DETERMINATION (USD M)	ACTUAL COST INCURRED AFTER INDEXATIONS IN THE CONTRACT (USD M)
OB and LG (Non-Diesel)	20.34	22.06

3.2.2 Overburden Removal And Lignite Production Services – Diesel

The diesel component in relation to OB removal and lignite production services had a contract value of USD 30.22 million. This price was indexable against the price of diesel notified by OGRA for Islamkot, Mithi. Under the EPC Onshore Supply and Services Agreement, it was agreed that the total quantity of diesel, for the removal of 50.8 BCM of Overburden, to be provided by the Petitioner to the EPC contractor would be capped at 37.18 million litres. However, the mine design was revised to mitigate the delays to the project timelines as a result of the effects of the COVID-19 pandemic. As a result, the volume of the Overburden extracted was reduced to 47 BCM which also reduced diesel consumption to 36.1 million litres. In light of these mitigation measures, diesel consumption was reduced by 1 million litre.

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Following this change, it is submitted before TECB that the actual cost incurred on account of Diesel was USD 29.98 million. This cost has been duly verified by the Auditor and supporting invoices and data are attached as **SCHEDULE 4 AND SCHEDULE 6.**

It is submitted that this cost be allowed and approved by TCEB.

DESCRIPTION	APPROVED COST AT CONTRACT STAGE DETERMINATION (USD M)	ACTUAL COST INCURRED AFTER INDEXATIONS IN THE CONTRACT (USD M)
OB and LG (Diesel)	30.22	29.98

3.3 <u>MITIGATION PLAN FOR COVID-19 FORCE MAJEURE</u>

During the execution of the Phase II Mine, the world was met with the COVID-19 pandemic that led to an unprecedented challenge to the world of work, causing not only devastating social but also economic disruption. This pandemic brought the world's largest economy shock as global output dropped by 3.5% in 2020 as per IMF valuation. Studies concluded that it was a major threat not only for the economic growth, upsurge fiscal deficit and monetary burden but also increased the risks of macroeconomic instability. Owing to the pandemic and its life-threatening symptoms, governments all over the world started to enforce lockdown and asked their citizens to quarantine in their homes and called for the shutdown of businesses which did not fall under the label of 'essential business'. The World Health Organization (WHO) also declared a worldwide medical emergency and the authorities were on high alert to manage cross-border movements.

Financial close for Phase II Mine had already been achieved by December 2019, after which it was planned that the EPC Contractor would proceed with the ordering of Offshore equipment from China, as per the EPC Contract. However, as per WHO, the first COVID-19 case detected was in December 2019 in China after which a countrywide lockdown was implemented in January 2020.

During that time, China had restricted the mobilization of resources across the globe and all CPEC sites were operating under the guidelines of Chinese Authorities. Due to this, delivery of the offshore equipment was delayed. Moreover, the Pakistani authorities also imposed restrictions on businesses during this time. Those restrictions created further impediments in the progress of the Project e.g., restriction on travel resulting in Chinese nationals not being able to come to Pakistan, restriction on movement within Pakistan resulting in supply chain constraints and quarantine policies which restricted movement of manpower. Further, due to COVID-19 cases identified at Site, the Site went into multiple intermittent lock downs resulting in hindrance of expansion activities.

Due to the massive shutdowns and the policies enacted by the Chinese Government and the Pakistani authorities, the EPC Contractor also declared Force Majeure under EPC Contracts. Subsequently, the Petitioner also declared Force Majeure under the GoS Implementation Agreement (letters attached herewith in Schedule 12).

However, given the significance of the Project and in the greater national interest, the Petitioner felt it necessary to develop alternate plans in order to cater for the unforeseen delays resulting from the COVID-19 pandemic and to ensure that the Project gets completed as per schedule. As restrictions gradually relaxed in China from July 2020, the equipment for the Phase II Mine was dispatched from the factories which arrived at by September 2020. This delay along with COVID-19 cases at Site caused the Project to fall behind schedule by around six (6) months, during which approximately 7.2 BCM of Overburden could have been extracted. As such the EPC Contractor faced the challenge of extracting 50.8 BCM of Overburden within a shorter timeframe. In order to meet the Phase II execution plan and in lieu of the Force Majeure declared by the EPC Contractor, the Petitioner received an alternate plan to provide an additional 125 trucks and 04 excavators. This would have resulted in an additional cost of USD 15 million. Hence, it was negotiated with the EPC Contractor that the Petitioner shall provide used mining trucks which had already completed life cycle of 18,000 hours, overhauled from the Phase I Mine. Whereas the cost of the additional 04 excavators was borne by the EPC Contractor. The Petitioner engaged Original Equipment Manufacturer (OEM) of the trucks to overhaul and increase their life cycle by 10,000 hours at a cost of USD 4.09 million (Section 5.4, Other Non-EPC Costs) thus avoiding additional cost of USD 11 million.

Post September 2020, OB removal activities started at site. However, there were several COVID-19 waves till Q3 2021 which affected the expansion activities. However, due to the pre-emptive measures in the form of additional/repaired equipment taken by the Petitioner, the Petitioner was able to mitigate the construction downtimes which occurred frequently during this period.

Alternatively, instead of taking remedial measures had the Petitioner relied on the remedies available to it under the GoS Implementation Agreement, COD for Phase II of the Mine would have been delayed by at least six (6) months, which would have increased the cost of the Project by approximately USD 15 million (mainly due to idling cost, inflation, and IDC (ultimately becoming a part of the project cost on the basis of FMEs), translating into a further impact of USD 0.5/ton on the consumer tariff for a period of 30 years, cumulatively resulting in USD 50 million over the period.

3.4 SUMMARY OF EPC COST

Based on the submissions presented above, it is submitted for TCEB's approval that the total cost incurred by the Petitioner under the EPC Contracts as part of the EPC scope is as follows and it is requested that these costs be allowed and are approved by TCEB:

DESCRIPTION	APPROVED COST AT CONTRACT STAGE DETERMINATION (USD M)	ACTUAL COST INCURRED AFTER INDEXATIONS IN THE CONTRACT (USD M)
EPC		
Procurement and Supplies	77.70	78.73
OB & LG (non-Diesel)	20.34	22.06
OB & LG (Diesel)	30.22	29.98
TOTAL	**128.26**	**130.77**

It is to further highlight that at the date of financial close of the Phase II Mine the USD to PKR exchange rate was PKR 155.35 per USD while at the COD date the USD to PKR exchange rate has moved to PKR 228.45 per USD, showing devaluation of the local currency around 47% (over a period of 33 months). Post COD and as of the date of filing of this Tariff Petition, currency has further devalued ~20% in just 4 months, resulting in an unprecedented devaluation in such a short span of time.

Moreover, Government of Pakistan has taken various administrative measures to control the devaluation of Rupee against US Dollar and resultantly, entire business sector of Pakistan is facing immense difficulty in remitting US Dollars outside Pakistan. Similarly, the Petitioner is also facing difficulties in extinguishing its US Dollar based liabilities specifically EPC cost which is evident from the long outstanding accrued liabilities in the Project Cost. As per the accounting rule, accruals are valued at the rate prevailing on the reporting date i.e. COD, however, till date the Petitioner hasn't received any approval from SBP and doesn't expect payment against aforesaid accruals in near future due to strict control from regulators on foreign exchange remittances. At the time of filing petition, the USD to PKR exchange rate has devalued by ~20% in just 4 months. While, the Petitioner is ready to discharge its liability, however its due to the Government of Pakistan that the Petitioner is unable to pay its EPC Contractors which will eventually result in higher PKR payments. The Petitioner reserves the right to approach TCEB for the adjustment of the aforementioned differential which may be through allowance of additional funding requirement, either through fresh loan, equity or Pre-COD proceeds, subsequent to COD.

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4 DUTIES AND TAXES

The Phase II Contract Stage Tariff Determination did not include any taxes or duties. However, it expressly stated that these costs will be a pass-through in the tariff.

Under clause (xi) of the Reference Tariff Adjustments & Escalations, it was provided as follows:

> *"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 offtaker on production of original receipts. However, withholding tax on dividend will not be pass though under the tariff."*

As part of its Phase II Contract Stage Tariff Determination, TCEB clarified that:

> *"The Determination already recognizes the concept of unforeseen duties and taxes as a pass-through in the Tariff Regime. In the event such situation emerges, the tariff will be trued up as per established procedure"*

During the construction phase, the Petitioner incurred USD 1.86 million in lieu of duties and taxes. This cost of USD 1.86 Million should, therefore, be considered part of Project Cost and the same should be allowed as this cost has been prudently incurred by Petitioner in accordance with the Rules.

Though the Government of Pakistan has introduced an incentive package providing that no customs duty is to be levied on import of coal mining equipment and machinery, including vehicles for site use, Petitioner has not been allowed to avail the incentives in practice. The Customs Department has refused to allow such exemption to Petitioner on various occasions. Though adjudication by the Customs Tribunal is pending on this issue, Petitioner had no choice but to pay the relevant customs duties so that it could use the equipment and machinery in the Project. It could not simply let the Project come to a standstill. Petitioner has, therefore, been compelled to pay duties and taxes due to no fault of its own. As such, these costs should be included in the Project Cost.

This has been duly been verified by the Auditor. The supporting documents and evidences are included in this Tariff Petition and attached herewith in **SCHEDULE 6.** It is submitted that this cost be allowed and approved by TCEB as a Project Cost for the Phase II Mine.

5 NON-EPC COST

Non-EPC Cost relates to the scope of work that was undertaken by the Petitioner on its own for the development of Phase II Mine. In the Phase II Contract Stage Tariff Determination, TCEB divided the Non-EPC cost into '***Controllable Costs***' and '***Non-Controllable Costs***'.

Controllable Costs were described as those expenditures in which the Petitioner could exercise a degree of control and spending under these heads were capped by the TCEB. In addition, Non-Controllable costs related to acquisition and fencing of land and resettlement of Senhri Dars Village – costs which are driven by government approved policies and directives. As a result, such costs were not capped and were to be adjusted against actuals at the time of the COD.

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5.1 CONTROLLABLE COSTS

Under the head of Controllable Costs, TCEB allowed the Petitioner approximately USD 43.31 million during the construction period of the Phase II Mine.

Understanding its responsibility to keep the tariff as low as possible for the end-consumer, the Petitioner employed strict cost controls and optimized its implementation strategy to ensure that the project cost remains well below the approved cost.

The actual cost incurred by the Petitioner against the Controllable Cost scope is USD 37.09 million. This cost has been duly verified by the Auditor along with supporting invoices and data are attached herewith in **SCHEDULE 4 AND SCHEDULE 6.** It is submitted that this cost be allowed and approved by TCEB as a Project Cost for the Phase II Mine.

DESCRIPTION	APPROVED COST AT CONTRACT STAGE DETERMINATION (USD M)	TOTAL APPROVED COST (USD M)	ACTUAL COST INCURRED AFTER INDEXATIONS IN THE CONTRACT (USD M)
Capital Items (excluding CHS)	15.47	15.47	10.55
CHS	10.57	21.67	26.72
Consultancy and Studies	2.31	2.31	0.10
Operating Expenses	9.27	9.27	-
Security	3.34	3.34	0.84
Project Development Cost	1.59	1.59	1.57
Legal and Professional charges	0.76	0.76	0.46
Total	**43.31**	**54.41**	**40.24**

5.2 Coal Handling System

As part of the Contract Stage Tariff determination for the Phase I Mine, the TCEB approved cost for Coal Handling System (CHS) amounting to aggregate of USD 28.3 M (**"Phase I Allowed CHS Amount"**). It was petitioned at the time of COD of Phase I, the actual cost incurred by the Petitioner for CHS was USD 17.2 M (**"Phase I Incurred CHS Amount"**). Furthermore, in the Phase I COD Stage Tariff Petition, the Petitioner had requested to roll over the remaining USD 11.10 M from the Phase I Allowed CHS Amount to Phase II of the Project. As such, the cumulative cost of CHS was USD 21.67 M for Phase II of the Project.

During the course of Phase I Mine construction, the Petitioner had started developing a plan for Phase II Mine. Since CHS played an integral role in the sustainable coal supply operations, the Petitioner decided to construct a consolidated CHS for the entire capacity of 7.6 Mt/a (**"Integrated CHS"**) instead of 3.8 mt/a each i.e separately for each phase. This decision also stemmed from the fact that development of standalone systems for each phase would result in a higher project cost in comparison to the development of a consolidated system. Moreso, it was in the greater consumer interest, that the Petitioner took a cautious call to construct an interim CHS and subsequently integrated CHS for Phase II Mine, so that consumers are not burdened with higher tariff until completion of Phase II Mine and integrated CHS. Furthermore, it was also calculated that it would increase the O&M cost if standalone systems for each phase were opted. In light of the foregoing, the Petitioner constructed an interim CHS during Phase I Mine construction which would allow it to manage the commercial supply of coal to IPP for Phase I Mine until such time the integrated CHS was installed. The interim CHS was designed such that maximum equipment could be utilized in the integrated CHS besides creating a redundancy in the system which is required to cater for any unforeseen breakdowns, disruption in operations and any unusual spikes in coal demand during a shorter duration of time.

Integrated CHS was developed in consultation with the consultants who had advised to construct CHS on the basis of 2 x stacker reclaimers, conveyor belt, 1 x 2500 tph crusher, its loading system, dust protection barrier and associated equipment including stockyard having capacity of 10-15 days of storage. Out of which the interim CHS consisted of a 35,000 tonne stockyard (1.5 days inventory capacity for Phase II Mine) and 1 x 2500 tph crusher.

Since Integrated CHS will be integrated with interim CHS, the overall capacity of CHS needs to be sufficient to cater to all three IPPs. Each IPP requires dedicated stockpile which undergoes blending, certification and dispatch processes simultaneously on all such stockpiles. The stockpiles are developed through a carefully managed blending and storage mechanism so that the available coal is acceptable for the concerned IPP. In addition to this, off taking is carried out through trucks with total of ~800 trips being undertaken on a daily basis. Due to these technical constraints and to avoid rejection of supplied Coal/Lignite, the required stockyard, truck loading system and crushing/handling system of sufficient capacity was required in consultation with international consultants and in line with customer requirements.

The Petitioner conducted international competitive bidding for the remainder of Integrated CHS scope. However, the finalization of the bids and commencement of supply of equipment for the CHS coincided with the COVID-19 pandemic which resulted in not only an increase in steel prices but also significant increases in manufacturing, shipping and onshore construction cost. Subsequently, acting prudently, the Petitioner incurred the actual cost for the Integrated CHS of USD 26.72 million.

It is thus submitted that this cost be allowed and approved by TCEB for the Phase II Mine CHS.

DESCRIPTION	APPROVED COST AT CONTRACT STAGE DETERMINATION (USD M)	ROLLOVER (USD M)	TOTAL COST (USD M)	ACTUAL COST INCURRED (USD M)
CHS	10.57	11.10	21.67	26.72

5.3 Non-Controllable Costs

The Phase II Contract Stage Tariff Determination determined USD 2.29 million for land acquisition and village relocation and outlined that these costs are driven by determination/ policies of the competent government, However, land and village relocation has been deferred to O&M phase to optimize coal tariff in line with on-ground requirements. It has been planned. The Petitioner, therefore, reserves the right to claim the same in the subsequent phase.

Description	Approved Cost at Contract Stage Determination (USD M)	Actual Cost Incurred After Indexations In The Contract (USD M)
Land and Village Relocation	2.29	0

5.4 OTHER COSTS

Under the EPC Offshore Supply and Services Agreement, the EPC Contractor was responsible for the procurement and import of equipment and machinery (including coal trucks and auxiliary equipment). Further, the EPC Contractor was also responsible for the extraction of 50.8 BCM of overburden. As highlighted in section 3.3 of this Tariff Petition, Phase II Mine of the Project was delayed due to COVID-19 resulting in additional cost quoted by the EPC Contractor, which was undertaken by the Petitioner at an actual cost of USD 4.09 million resulting in savings of USD 10.91 million.

5.5 Summary Of Non-Epc Cost

Total cost incurred by the Petitioner as part of the Non-EPC scope is as follows:

Description	Approved Cost at Contract Stage Determination (USD M)	Actual Cost Incurred After Indexations In The Contract (USD M)
Controllable Costs	43.31	40.24
Non-Controllable Cost	2.29	-
Others Costs	-	4.09
Total Costs	**45.60**	**44.34**

The costs mentioned herein have been actually incurred and have been duly verified by the Auditor. This cost of USD 44.34 million should, therefore, be allowed as this cost has been prudently incurred by Petitioner in accordance with the Rules.

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6 OTHER COSTS INCLUDED IN PROJECT COST

6.1 INSURANCE

In the Phase II Contract Stage Tariff Determination, TCEB allowed the Petitioner actual expenditure incurred in lieu of insurance, subject to a maximum cap of 1% of EPC price. The actual cost incurred by the Petitioner on account of insurance is USD 1.48 million.

The cost incurred has been duly verified by the Auditor and supporting invoices and data are attached in SCHEDULE 6. It is submitted that this cost be allowed and approved by TCEB as a Project Cost for the Phase II Mine.

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6.2 FINANCIAL CHARGES

As part of the Phase II Contract Stage Tariff Determination, TCEB allowed the Petitioner to incur costs in relation to financial charges such as commitment fee, arrangement fees, letter of credit charges etc. TCEB however, capped the expenses to be incurred against such costs at 4% of total debt secured for the Project. The total debt arranged for the Phase II Mine was USD 123.46 million, which implies a financial charges cap of USD 4.94 million.

However, due to effective negotiation by the Petitioner, the actual cost incurred in this regard is USD 1.7 million.

DESCRIPTION	APPROVED COST AT CONTRACT STAGE DETERMINATION	ACTUAL COST INCURRED AFTER INDEXATIONS IN THE CONTRACT
	(USD M)	(USD M)
Financial Charges	4.18	1.66

The cost incurred has been duly verified by the Auditor and supporting invoices and data are attached in **SCHEDULE 4 AND SCHEDULE 6**. It is submitted that this cost be allowed and approved by TCEB as a Project Cost for the Phase II Mine.

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6.3 INTEREST DURING CONSTRUCTION

The Phase II Contract Stage Tariff Determination determined the IDC at USD 12.43 million. IDC is a function of the cost incurred in respect of the Phase II Mine, drawdowns of debt and actual rates of KIBOR at the time of drawdowns. The negotiated rate on local were KIBOR +175 bps, as allowed by TCEB as part of the Phase II Contract Stage Tariff Determination. The Petitioner incurred an IDC cost of USD 10.94 million.

The cost incurred has been duly verified by the Auditor and the supporting invoices and data are attached herewith in **SCHEDULE 4 (ANNEXURE C)**. It is submitted that this cost be allowed and approved by TCEB as a Project Cost for the Phase II Mine.

Coal Mining Comp.

6.4 ACTUALIZED PRE-COD SALE PROCEEDS FROM THE PHASE I MINE

At the time of the Phase II Contract Stage Tariff Determination, it was assumed that the Petitioner will be able to sell approximately 1.45 million tons of Coal/Lignite prior to the COD of Phase I Mine and, as a result, generate Pre-COD Sale Proceeds of USD 56.38 million from the Phase I Mine, which were to be used as a source of funding for expansion of the Phase II Mine. This estimate was however subject to actualization of the Phase I Pre-COD Sale Proceeds post achievement of commercial operations of the Phase I Mine.

The Petitioner has since achieved the commercial operations for the Phase I Mine. Based on the actual requirement of the off-taker of Coal from Phase I Mine, the Petitioner sold 0.348 million tons of on-spec coal to the off-taker for electricity generation prior to commercial operations for the Phase I Mine. This generated, PKR 3,434.08 million (which is equivalent to USD 22.10 million net of transportation charges of USD 494,858 @ USD/PKR exchange rate of 155.35) of pre- COD sale revenue. However, as per the prevailing exchange rate during the construction phase, this amount translates into a total revenue of USD 18.33 million.

It is imperative to note that revenue generated from pre-cod sale of Phase I Mine has been utilized for Phase II Mine expansion at zero funding cost. Therefore the Petitioner requests that since the pre-cod sales from Phase I Mine of PKR 3,434.08 million have already been utilized therefore the same should not be re-priced since any retrospective adjustment at a later stage will result in a funding gap.

Further, Petitioner has sold certain quantities of Pre-COD sales, the revenue of which shall be adjusted in subsequent mine expansion of phase III in line with earlier discussions with TCEB. The same shall be priced on year 1 of Phase II Mine tariff.

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7 Summary Of Project Cost

On account of the submissions of cost in Sections 2, 3, 4, 5 and 6, it is submitted that the Petitioner has completed the Phase II Mine at a cost of USD 172.72 million as opposed to the provisional Project Cost of USD 191.79 million notified by TCEB at the time of Phase II Contract Stage Tariff Determination. As a result, savings of approximately USD 13 million have been recognized in the Phase II Mine.

An item wise summary of the Project Cost is below, and it is submitted that the same be allowed and approved by TCEB as a Project Cost for the Phase II Mine:

Description	Contract Stage Tariff Project Cost (USD M)	Petitioned COD Stage Project Cost (USD M)
EPC	**128.3**	**130.77**
Procurement, Supplies, and Construction	77.70	78.73
OB, PG & LG (non-Diesel)	20.34	22.06
OB, PG & LG (Diesel)	30.22	29.98
Duties & Taxes – EPC	**0**	**1.03**
NON-EPC	**45.6**	**45.16**
Controllable Cost	43.31	40.24
Capital Items	26.04	37.27
Consultancy and Studies	2.31	0.10
Operating Expenses	9.27	0.00
Security	3.34	0.84
Project Development Cost	1.59	1.57
Legal and Professional charges	0.76	0.47
Non-Controllable Cost	2.29	0
Land Acquisition and Village Relocation	2.29	0
Other Costs	0	4.09
Change in scope	0	4.09
Duties & Taxes – Non EPC	**0**	**0.83**
IDC	**12.43**	**10.94**
Insurance	**1.28**	**1.49**
Financial Charges	**4.18**	**1.66**
Pre COD sales	**0**	**-18.33**
Total	**191.79**	**172.72**

To finance the above Project Cost, the Petitioner obtained a loan of USD 127.62 million and injected equity of USD 45.10 million. The debt and equity injection have been verified by the Auditor and relevant documents are attached in **Schedule 4**.

8 COMMERCIAL OPERATIONS STAGE TARIFF

At the Phase II Contract Stage Tariff Determination, the tariff was determined in USD as recovery of capital cost was allowed in USD. However, the indexation mechanism specified therein outlined that the tariff at the Phase II Commercial Operations Stage will be converted to PKR.

Since both the Petitioner and Coal Purchaser(s) are companies incorporated in Pakistan and therefore the transactions between them are denominated and settled in PKR, in light of the above, the Petitioner hereby requests TCEB to highlight mechanism for conversion of monthly tariff from USD to PKR.

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8.1 PRINCIPAL REPAYMENT AND INTEREST

As outlined in Section 7, total local loan requirement to fund the Project Cost was PKR 24.19 billion. The Sovereign Guarantee issued by GoP at the time of financial close was PKR 52 billion of which PKR 30.88 billion was utilized during construction of Phase I Mine, leaving remaining of PKR 21.12 billion for Phase II Mine. In order to meet the funding requirements and bridge the gap between available loan and requirement, the Petitioner utilized PKR 3.07 billion through non-sovereign guarantee backed facility, summarized as follows:

i. PKR 21.12 billion (equivalent USD 111.42 million) as the Sovereign Guarantee Backed Facility). It is submitted that such Sovereign Guarantee backed local facility carries a spread of one point seven five percent (1.75%) over KIBOR.

ii. PKR 3.07 billion (equivalent USD 16.20 million) as the Non-Sovereign Guarantee Backed Facility). It is submitted that such Non-Sovereign Guarantee backed local facility carries a spread of two point five percent (2.5%) over KIBOR. The additional financing facility carries a markup at KIBOR with a spread of 2.5% which is in line with the spread allowed by NEPRA in the upfront Tariff for Thar Coal IPPs. Given that the risk profile of the Petitioner is higher than Thar Coal based IPPs, as the Petitioner does not benefit from a security package provided by the GoP (including a sovereign guarantee in relation to non-payment by customer) and is solely relying on non-sovereign customers, the Petitioner submits that the spread of two and a half percent (2.5%) over KIBOR is very reasonable.

Repayment schedules for local debt have been worked out and attached as **SCHEDULE 2** and the same are submitted before TCEB for approval.

Applicable indexations in line with the framework for the Thar Coal Tariff Determination are as follows:

$$\textbf{Interest (Local)}_{\mathrm{Adj}} = \text{Interest (Local)}_{\mathrm{Ref}} \times \frac{\mathrm{KIBOR}_{\mathrm{Adj}} + \mathrm{Spread}}{\mathrm{KIBOR}_{\mathrm{Ref}} + \mathrm{Spread}}$$

Where:

$\text{Interest (Local)}_{\mathrm{Adj}}$	is the revised Interest (Local) component of the Tariff applicable for the relevant quarter
$\text{Interest (Local)}_{\mathrm{Ref}}$	is the Reference Interest (Local) Tariff Component as determined by TCEB for the relevant biannual period in PKR
$\mathrm{KIBOR}_{\mathrm{Adj}}$	is the revised 6-Month KIBOR rate on the last day of the quarter prior to the period in which indexation is applicable, as notified by the SBP

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$KIBOR_{Ref}$	15.91%, being the 6-Month KIBOR rate prevailing on the Commercial Operations Date, as notified by the SBP
Spread (sovereign)	175 bps
Spread (non sovereign)	250 bps

There are no indexations on the component of Debt Principal (Local).

Frequency of indexation shall be quarterly.

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8.2 ROE AND ROEDC

To finance the Project Cost of USD 172.72 million, the Petitioner injected a total equity of USD 45.10 million. A USD denominated IRR of 20% was allowed to the Petitioner on equity injected in the Project.

ROEDC of USD 20.86 million during the construction phase. This has been verified by the Auditor and attached in **SCHEDULE 4**.

Based on the actual drawdown of equity, the ROE and ROEDC component of the Commercial Operations Stage Tariff is calculated as USD 7.42/ton which converted to PKR at the exchange rate on the date of COD is PKR 1,696/ton.

Indexation for the Return on Equity Components is as follows:

$$\textbf{Equity Payments}_{\textbf{Adj}} = \text{Equity Payments}_{\text{Ref}} \times \frac{\text{PKR/ USD}_{\text{Adj}}}{\text{PKR/ USD}_{\text{Ref}})}$$

Where:

Equity $\text{Payments}_{\text{Adj}}$	is the revised Equity Payments (IRR) component applicable for the relevant quarter in PKR
Equity $\text{Payments}_{\text{Ref}}$	is the Reference Equity Payments Tariff Component determined by TCEB in PKR
$\text{PKR/USD}_{\text{Adj}}$	is the revised TT & OD selling rate of PKR / USD as on the date on which the indexation is applicable, as notified by the NBP
$\text{PKR/USD}_{\text{Ref}}$	228.45, being the TT & OD selling rate of PRK / USD as on the Commercial Operations Date as notified by the NBP

Frequency of indexation shall be quarterly.

As mentioned in the Project Cost section, the Petitioner has incurred Rs. 31,402 Mn for Phase II Mine which is funded by a Rupee based loan of Rs. 24,192 Mn and US Dollar based equity of USD 45.1 Mn. The unprecedented devaluation of Rupee against US Dollar has distorted the debt-to-equity ratio of the project to 74:26 as compared to allowed ratio of 75:25 as per the Phase II Financial Close Stage Tariff Determination, for which the Phase II Financial Close Stage Motion For Leave For Review has also been filed. Paragraph (f) of section 2.1 of Chapter 2 of Thar Coal Pricing Framework provides that, "*The Petitioner shall undertake the Mining Project within a range of 20% - 30% Equity contribution. The upper ceiling of Equity contribution for specific project(s) shall be as determined by TCEB on a case-to-case basis. The parameters for determination of upper ceiling of Equity by TCEB will be largely governed by, amongst other things, the overall economic parameters impacting availability of capital and the progressive growth and development of indigenous skill sets for open pit mining in the country, etc,*". It is submitted that considering the overall economic condition of Pakistan, which includes (i) strict administrative controls from the SBP in remitting foreign currency payments; (ii) the resulting delay in paying liabilities ; and (iii) the consequent impact on the dollar parity of local borrowing, the debt to equity ratio has been affected. In light of these factors, it is submitted that the debt to equity ratio of 74:26 should be allowed. In this regard, it is pertinent to note that the scheme of the cost plus arrangement envisages actualization. Similar issues were faced by IPPs filing COD petitions in the past before NEPRA. Those IPPs pleaded that their debt to equity ratio be revised in light of their actual financing structure. NEPRA accepted their submissions and revised their debt to equity ratio accordingly. Two such examples are cited below:

COD Tariff Determination of Saif Power Limited

17 Adjustment on account of Return on Equity (ROE)

The Authority in its determination dated January 16, 2009 assessed ROE on the basis of debt to equity ratio of 80:20. In the latest determination it was provided that ROE would be revised on the basis of ROE established at COD. In the light of Authority's determination in this regard SPL requested to take actual debt of Rs. 12.907 billion and the remaining amount as equity. Accordingly debt to equity ratio in the instant case at COD has been worked out as 76:24 against the determined 80:20. Based on the adjusted project cost of US$ 236.950 (Rs. 16,960.669) million and debt equity ratio of 76:24, the equity of SPL has been calculated as US$ 55.88 million. On the basis of adjusted equity, ROE @ 15% has been worked out as US$ 8.37 million. Based on revised net capacity of 209.786 MW established at COD the adjusted ROE component of tariff in the instant case has been worked out as Rs 0.3824/kW/hr.

COD Tariff Determination of Engro Energy Limited

6.8 EEL has requested the Authority to revise its debt equity ratio according to its actual financing structure. EEL has further requested that in case any cost is not allowed by the Authority, its entire equity actually injected should be fully allowed and effect of such adjustment should only be made in its debt component. Debt equity ratio as per the original determination of EEL was 75:25. The Authority considers that the request of EEL is reasonable and has accepted the same. Accordingly debt equity ratio of EEL stands revised to 72.16 : 27.84.

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8.3 O&M – FOREIGN

During the Phase II Contract Stage Petition evaluation, the Petitioner had detailed discussion with TCDC (Thar Coal tariff Determination Committee) on the long term O&M pricing wherein it was agreed between the Petitioner and TCEB that it shall conduct competitive bidding for Phase II O&M before its Phase II COD and try to optimize the pricing for O&M II based on ICB.

Accordingly, the Petitioner conducted an internationally competitive bidding process in 2020/21, wherein many bidders submitted their proposal. However, only five contractors were shortlisted based on the technical criteria of the Petitioner. Of those five contractors, only three submitted their commercial proposals while the remaining two declined to proceed further citing different challenges with respect to country risks. Subsequently the Petitioner, after evaluation of commercial proposals and associated negotiations, issued the LOI to the lowest bidder, one of the largest coal producing companies of China. Later, the Petitioner held detailed negotiations with them leading to initialing of the draft agreements.

However when the Petitioner formally invited lowest bidder to sign the O&M contract, the lowest bidder, citing the rapidly deteriorating security and uncertain political and security situation in Pakistan (recent attacks on Chinese nationals in Pakistan including the Karachi university bombing in April/May 2022), increased their bid proposal (the "**Revised Quote**"). Later through a letter attached herewith in Schedule 12, the lowest bidder declined to even honor their revised bid proposal as they were not willing to work in Pakistan given the prevailing security situation and restrictions by Chinese government on mobilization of Chinese personnel in any new project in Pakistan. The Petitioner tried to convince the senior management of the lowest bidder and requested them to reconsider their stance, giving them assurances in relation to the security concerns raised by them (letter attached herewith in Schedule 12). However, they refused to work for the Project. Being prudent, the Petitioner also encashed the bid bond submitted by them as the lowest bidder failed to comply with its bid.

Considering the lack of interest of prospective bidders in working in Pakistan, the Petitioner while approaching the second lowest bidder also started parallel negotiations with the existing contractor (since it was already mobilized) at the site.

The second lowest bidder, (while already partially mobilized in Pakistan) also expressed its unwillingness to mobilize any new resources from China for the Project because of Chinese government restrictions.

The situation posed grave risk to the operations and continuity of the expanded mine. The Petitioner could not simply let the operations halt. During that time CMEC expressed its willingness to undertake O&M for Phase II Mine.

Since CMEC ("**O&M Contractor**") had already been awarded O&M contract for Phase I Mine which was legally binding and enforceable till January 2024 ("**O&M Phase I Agreement**"), CMEC expressed its willingness to only negotiate the incremental scope of work for O&M of Phase II Mine while keeping the O&M for the Phase I Mine unchanged up to the expiry of the existing O&M agreement.

Based on the concept of economies of scale, the Petitioner, after extensive negotiations with CMEC, managed to reduce CMEC's Phase II Mine coal production price by approximately 10% in comparison to Phase I Mine coal production price. Subsequently the Petitioner in the interest of operations and continuity of the mine signed the Operations and Maintenance Agreement(s) with CMEC for the additional scope of

Phase II Mine at a rate which was even lower than the Revised Quote issued by lowest bidder ("**O&M Phase II Agreement**").

Furthermore, in order to reduce the operation cost, the Petitioner plans on transitioning from a turnkey model to a contractor miner model by the third year from commercial operations of Phase II Mine, whereby the scope of operations will be split between various contractors. In order to enable this transition, the Petitioner will engage third party experts who will support it in core mining operations (including *inter alia* mine planning, maintenance etc.). As a result of these measures, the overall operating costs will reduce from implementation of the aforementioned transition, which is also depicted in this Tariff Petition and the Financial Model.

DESCRIPTION	LOWEST BIDDER (USD/TON)	CMEC (USD/TON)
O&M I Rate – CMEC	12.89	12.89
O&M II Revised Quote - Lowest Bidder	9.45	8.9
Total Cost	**11.17**	**10.90***

**Note: This only includes contractor cost, however transitioning costs and cost pertaining to execution of other scopes such as utilities, dewatering and coal handling increases this cost to USD 12.23/ton during the first year.*

Based on the aforementioned the following table depicts the total O&M price:

Year	Contract	O&M 1 USD/ton	O&M 2 USD/ton	Petitioned Tariff rate USD/ ton
1	Total O&M cost	12.89	11.60	12.24
2	Total O&M cost	12.47	11.67	12.07
3 and beyond	Total O&M cost	10.43	10.43	10.43

8.3.1 Variable O&M - Foreign

The Variable O&M – Foreign component consists of two segments:

(a) Procurement of Spares, Tyres & Consumables; and

(b) Variable Site Services.

Variable O&M Costs are directly linked to production of Coal.

In the Procurement of Spares, Tyres & Consumables section, the O&M Contractor is responsible for the tyres, spares and lubes required for the operation of the mining equipment.

$$\textbf{Variable O\&M} - \textbf{Proc.}_{\text{Adj}} = \text{Variable O\&M} - \text{Proc.}_{\text{Ref}} \times \left[\frac{\text{US CPI}_{\text{Adj}}}{\text{US CPI}_{\text{Ref}}} \times \frac{\text{USD/RMB}_{\text{Ref}}}{\text{USD/RMB}_{\text{Adj}}} \times \frac{\text{PKR/USD}_{\text{Adj}}}{\text{PKR/USD}_{\text{Ref}}}\right]$$

$\text{Variable O\&M} - \text{Proc.}_{\text{Adj}}$	is the is the revised Variable O&M component for the supply of tyres, spares and consumables component applicable for the relevant quarter in PKR
$\text{Variable O\&M} - \text{Proc.}_{\text{Ref}}$	is the Reference Variable O&M component for the supply of tyres, spares and consumables for the reference quarter determined by TCEB in PKR
$\text{PKR/USD}_{\text{Adj}}$	is the revised TT & OD selling rate of PKR / USD as on the date on which the indexation is applicable, as notified by the NBP
$\text{PKR/USD}_{\text{Ref}}$	228.45 being the TT & OD selling rate of PRK / USD as on the Commercial Operations Date as notified by the NBP
$\text{US CPI}_{\text{Adj}}$	is the revised Consumer Price Index for All Urban Consumer (CPI-U) as notified by the US Bureau of Labor Statistics
$\text{US CPI}_{\text{Ref}}$	296.81 being the reference Consumer Price Index for All Urban Consumer (CPI-U) as notified by the US Bureau of Labor Statistics for the month of September 2022
$\text{USD/RMB}_{\text{Adj}}$	is the revised average of the last buying and selling rate of USD / RMB, as published on the Bank of China website prior to 12 noon on the date on which indexation is applicable
$\text{USD/RMB}_{\text{Ref}}$	7.117 being the average of the last buying and selling rate of USD / RMB as published on the Bank of China website prior to 12 noon on the Commercial Operations Date

Frequency of indexation shall be quarterly.

The Variable O&M – Site Services component includes the services rendered such as short term mine planning, fleet management and management of the Diesel supply.

$$\boldsymbol{Variable\ \textbf{O\&M} - \textbf{Site}_{\textbf{Adj}}} = \text{Variable O\&M} - \text{Site}_{\text{Ref}} \times \left[\frac{\text{PKR/USD}_{\text{Adj}}}{\text{PKR/USD}_{\text{Ref}}}\right]$$

$\text{Variable O\&M} - \text{Site}_{\text{Adj}}$	is the is the revised Variable O&M component for Site Services applicable for the relevant quarter in PKR
$\text{Variable O\&M} - \text{Site}_{\text{Ref}}$	is the Reference Variable O&M component for Site Services for the reference quarter determined by TCEB in PKR

PKR/USD_{Adj}	is the revised TT & OD selling rate of PKR / USD as on the date on which the indexation is applicable, as notified by the NBP
PKR/USD_{Ref}	228.45 being the TT & OD selling rate of PRK / USD as on the Commercial Operations Date as notified by the NBP

Frequency of indexation shall be quarterly.

8.3.2 Fixed O&M – Foreign

The Fixed O&M Component – Foreign consists of the Technical Services and Onshore Site Services.

The scope of Technical Services includes long range mine planning, engineering services, design audits by experts, hydrological and geotechnical detailed design, project management services and overheads.

$$\text{Fixed O\&M} - \text{Tech.}_{Adj} = \text{Fixed O\&M} - \text{Tech.}_{Ref} \times \left[\frac{\text{US CPI}_{Adj}}{\text{US CPI}_{Ref}} \times \frac{\text{USD/RMB}_{Ref}}{\text{USD/RMB}_{Adj}} \times \frac{\text{PKR/USD}_{Adj}}{\text{PKR/USD}_{Ref}}\right]$$

Fixed O&M – Tech. $_{Adj}$	is the is the revised Fixed O&M - Technical Services component applicable for the relevant quarter in PKR
Fixed O&M – Tech.$_{Ref}$	is the Reference Fixed O&M - Technical Services Component for the reference quarter determined by TCEB in PKR
PKR/USD_{Adj}	is the revised TT & OD selling rate of PKR / USD as on the date on which the indexation is applicable, as notified by the NBP
PKR/USD_{Ref}	228.45 being the TT & OD selling rate of PRK / USD as on the Commercial Operations Date as notified by the NBP
US CPI_{Adj}	is the revised Consumer Price Index for All Urban Consumer (CPI-U) as notified by the US Bureau of Labor Statistics
US CPI_{Ref}	is 296.81 being is the reference Consumer Price Index for All Urban Consumer (CPI-U) as notified by the US

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	Bureau of Labor Statistics for the month of September 2022.
USD/RMB_{Adj}	is the revised average of the last buying and selling rate of USD / RMB, as published on the Bank of China website prior to 12 noon on the date on which indexation is applicable
USD/RMB_{Ref}	7.117 being the average of the last buying and selling rate of USD / RMB as published on the Bank of China website prior to 12 noon on the Commercial Operations Date

Frequency of indexation shall be quarterly.

The Fixed O&M Site Services includes construction & supervision of mining, dewatering, power distribution, supply & utilities for day to day site operations.

Annual payment milestones under this Fixed O&M Site Services along with applicable indexations is as follows:

$$\textbf{Fixed O\&M} - \textbf{Site}_{\textbf{Adj}} = \text{Fixed O\&M} - \text{Site}_{\text{Ref}} \times \left[\frac{PKR/USD_{Adj}}{PKR/USD_{Ref}} \right]$$

$\text{Fixed O\&M} - \text{Site}_{Adj}$	is the is the revised Fixed O&M component for Site Services applicable for the relevant quarter in PKR
$\text{Fixed O\&M} - \text{Site}_{Ref}$	is the Reference Fixed O&M component for Site Services for the reference quarter determined by TCEB in PKR
PKR/USD_{Adj}	is the revised TT & OD selling rate of PKR / USD as on the date on which the indexation is applicable, as notified by the NBP
PKR/USD_{Ref}	228.45 being the TT & OD selling rate of PRK / USD as on the Commercial Operations Date as notified by the NBP

Frequency of indexation shall be quarterly.

8.3.3 <u>Duties and Taxes in relation to the O&M Agreements</u>

The Phase II Contract Stage Tariff Determination did not include any provision for taxation. It did, however, allow pass-through of any taxes to be borne by the Petitioner.

As part of its Phase II Contract Stage Tariff Review Determination, TCEB clarified that:

> *"The Determination already recognizes the concept of unforeseen duties and taxes as a pass-through in the Tariff Regime. In the event such situation emerges, the tariff will be trued up as per established procedure"*

Based on the prevailing tax regime, the Petitioner will be required to pay the following taxes/ duties in relation to the O&M Agreements:

YEAR	CONTRACT	IMPORT DUTIES (USD/Ton)	OTHER TAXES (USD/Ton)	COMPOSITE RATE USD/ Ton
Year 1	Variable O&M	0.32	0.26	0.58
Year 2	Variable O&M	0.21	0.38	0.59
Year 1	Fixed O&M	0	0.84	0.84
Year 2	Fixed O&M	0	0.72	0.72

The table above is based on the Petitioner's best estimate with respect to interpretation of the current Laws. It assumes that any SST and GST will be adjustable in line with incentives provided for in the Laws and there will be no requirement of Income Tax withholding on offshore procurement of spares, tyres and consumables.

No further 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 this Tariff Petition.

In the event that the Petitioner is obligated to pay any tax, it is submitted that Petitioner reserves the right to pass through the exact amount in the tariff upon production of original receipts, as set out in Phase II Contract Stage Tariff.

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8.4 DIESEL

As per TCEB guidance in all existing and future contracts, the diesel will be procured directly by the Petitioner as opposed to being part of the contractor's scope of work. In this regard, the requirement of diesel has been based by the Petitioner on mine expansion design and haulage distances, which is based on technical studies and engineering estimates. The Petitioner has estimated the number as mentioned in the financial model, which will be actualized on consumption basis. The Petitioner reserves the right to adjust any positive or negative variation in the consumption from the aforementioned estimate in the Multi Year Tariff (MYT). Any such adjustment will, therefore, be reflected in the MYT.

Applicable indexation is as follows:

$$\mathbf{Fuel}_{\mathrm{Adj}} = \mathrm{Fuel}_{\mathrm{Ref}} \times \left[\frac{\mathrm{Diesel}_{\mathrm{Adj}}}{(\mathrm{Diesel}_{\mathrm{Ref}})}\right]$$

$\mathrm{Fuel}_{\mathrm{Adj}}$	is the is the revised Fuel price component for the relevant month
$\mathrm{Fuel}_{\mathrm{Ref}}$	is the Reference Fuel price component determined by TCEB for the Reference month in PKR
$\mathrm{Diesel}_{\mathrm{Adj}}$	is the ex-GST Diesel Price per liter as notified by OGRA for Islamkot, Mithi the relevant month
$\mathrm{Diesel}_{\mathrm{Ref}}$	is PKR 238.63/Liter, being the ex-GST Diesel price notified by OGRA for Islamkot, Mithi for the month of October 2022

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

8.5 FIXED O&M LOCAL

In the Phase II Contract Stage Tariff Determination, TCEB reviewed the cost structure of the Petitioner and determined costs in relation to the Fixed O&M for the Petitioner., The Petitioner has largely aligned the costs in accordance with the Phase II Contract Stage Tariff Determination. As such the petitioned tariff in USD/ton is as follows:

Description	Year 1-10
	USD/ton
Fixed O&M – local	3.28

Applicable indexation is as follows:

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$$\text{Fixed O\&M} - \text{Local}_{Adj} = \text{Local O\&M}_{Ref} \times \left[\frac{\text{Local CPI}_{Adj}}{\text{Local CPI}_{Ref}}\right]$$

$\text{Fixed O\&M} - \text{Local}_{Adj}$	is the is the revised Fixed O&M - Local component applicable for the relevant quarter in PKR
$\text{Fixed O\&M} - \text{Local}_{Ref}$	is the is the reference Fixed O&M - Local component determined by TCEB for the reference quarter in PKR
Local CPI_{Adj}	is the latest Consumer Price Index of Pakistan as notified by the Pakistan Bureau of Statistics
Local CPI_{Ref}	is 185.68, being the Consumer Price Index of Pakistan (Base year 2015-16) notified by the Pakistan Bureau of Statistics for the month of September 2022.

8.6 ASSET REPLACEMENT

In the Phase II Contract Stage Tariff Determination, the Asset Replacement schedule was devised based on $7m^3$/60t shovel and truck combination keeping in view a mine expansion up to 6.5 Mt/a. However, since then the Petitioner has revised its expansion plan to expand the mine to 7.6 Mt/a and as part of the Phase II Contract Stage Tariff Determination, a revised asset replacement schedule was reviewed and approved by TCEB.

A revised "**Asset Replacement Schedule,**" as applicable to Phase II Mine in line with TCEB's determination in the Phase II Contract Stage Tariff Determination, is attached as **SCHEDULE 3.**

As determined by TCEB in the Phase II Contract Stage Tariff Determination, the '*Replacement Reserve*' will be included in the tariff over 3 levelized periods using an annual interest of 0.25%.

The asset replacement cost is submitted as follows.

Year	Asset Replacement Component (USD/Ton)	Opening Balance (USD M)	Interest Earned (USD M)	Asset Expense (USD M)	Closing Balance (USD M)
1	4.97	37.7	0.0	0.0	37.8
2	4.97	75.5	0.1	17.0	58.6
3	4.97	96.3	0.1	8.1	88.3
4	4.97	126.1	0.0	125.9	0.1
5	3.45	26.4	0.0	1.0	25.4
6	3.45	51.6	0.0	41.7	9.9
7	3.45	36.1	0.0	18.7	17.4
8	3.45	43.6	0.0	7.5	36.1
9	3.45	62.4	0.1	2.4	60.0
10	3.45	86.2	0.1	22.0	64.3
11	3.45	90.5	0.1	0.9	89.7
12	3.45	116.0	0.1	42.8	73.3
13	3.45	99.5	0.1	8.3	91.3
14	3.45	117.5	0.1	72.2	45.4
15	3.45	71.6	0.0	71.6	0.0
16	4.32	32.9	0.0	32.9	0.0
17	3.56	27.0	0.0	18.9	8.1
18	3.56	35.2	0.0	28.6	6.6
19	3.56	33.7	0.0	16.5	17.1
20	5.03	55.4	0.0	52.8	2.6
21	3.56	29.6	0.0	0.9	28.8
22	3.56	55.8	0.0	35.6	20.2
23	3.56	47.3	0.0	8.1	39.2
24	3.56	66.2	0.1	6.3	60.0
25	3.56	87.1	0.1	6.6	80.6

26	3.56	107.6	0.0	90.5	17.1
27	1.02	24.9	0.0	23.7	1.2
28	0.80	7.2	0.0	7.2	0.0
29	0.00	0.0	0.0	0.0	0.0
30	0.00	0.0	0.0	0.0	0.0

Since the equipment is to be imported into the country, the Asset Replacement Component will be indexed based on the USD/PKR exchange rate and US CPI.

$$\text{Asset Replacement}_{\text{Adj}} = \text{Asset Replacement}_{\text{Ref}} \times \left[\frac{\text{US CPI}_{\text{Adj}}}{\text{US CPI}_{\text{Ref}}} \times \frac{\text{PKR/USD}_{\text{Adj}}}{\text{PKR/USD}_{\text{Ref}}}\right]$$

$\text{Asset Replacement}_{\text{Adj}}$	is the is the revised Asset Replacement Component applicable for the relevant quarter in PKR
$\text{Asset Replacement}_{\text{Ref}}$	is the Reference Asset Replacement Component for the reference quarter determined by TCEB in PKR
$\text{PKR/USD}_{\text{Adj}}$	is the revised TT & OD selling rate of PKR / USD as on the date on which the indexation is applicable, as notified by the NBP
$\text{PKR/USD}_{\text{Ref}}$	228.45 being the TT & OD selling rate of PRK / USD as on the Commercial Operations Date as notified by the NBP
$\text{US CPI}_{\text{Adj}}$	is the revised Consumer Price Index for All Urban Consumer (CPI-U) as notified by the US Bureau of Labor Statistics
$\text{US CPI}_{\text{Ref}}$	296.81 being is the reference Consumer Price Index for All Urban Consumer (CPI-U) as notified by the US Bureau of Labor Statistics for the month of September 2022.

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8.7 POWER GENERATION

At the time of Phase II Contract Stage Tariff Determination, the power generation source mix was determined on the basis of supply of 80% of the power from the national grid and 20% of power through self-power generation from diesel. There was, however, no stable grid supply. The Petitioner along with TCEB made all reasonable efforts to secure a grid supply and contacted all the relevant stakeholders including but not limited to the Federal Government, NEPRA, PPIB and relevant DISCOs. However, no support was provided to the Petitioner. The Petitioner was, therefore, left with no option but to obtain power using diesel.

In view of the afore-stated circumstances, the Petitioner, on its own initiative, took efforts to arrange supply of cheap and green energy for the Project. It, therefore, entered into an agreement for the provision of 5 MW solar power with a private party, being the contractor, on build, own, operate and transfer (BOOT) mode following a competitive bidding process. BOOT was a cautious call on part of the Petitioner to avoid increase in the overall tariff. The Petitioner negotiated and entered into a 15-year contract whereby the contractor will supply approx. 7.65 MkWh on annual basis at a fixed ex-GST price of 9.25 PKR/kWh (based on an exchange rate of PKR 120 to USD), without any indexations ("**Solar Power System**"). The Solar Power System has been operational since 2019 and it is pertinent to note that the Petitioner has effectively negotiated the agreement for 15 years without any indexations, whereas if it had followed the industry norm on indexations, the same tariff would have been subject to exchange rate disparity/fluctuations (as such the same would have been around 15 PKR/kWh based on the prevailing exchange rate).

In order to further optimize the power generation cost, the Petitioner has handed over the diesel based power generation operations from the Chinese O&M contractor to local contractor through competitive bidding. The Chinese O&M contractor was charging 33 cents/kwh for power generation whereas the local contractor, is charging ~PKR 5/kwh for the operation and maintenance with diesel cost being charged at the prevailing diesel rate with the diesel consumption estimated at 0.3 litre/kwh. This mechanism has resulted in significant savings in terms of power generation which shall be trued up at MYT stage.

In light of the aforementioned, the Petitioner now submits that until such time that the power is available and supplied from the grid, the only sources of power available to the Petitioner are from the Solar Power System and diesel gensets. Further, the Petitioner is evaluating options to further optimize the power generation cost for which installation of a small-scale coal fired power plant is being evaluated. However, the lignite boilers for 8-10 mwh capacity are not readily available in the industry. Therefore, designing and constructing such projects will take two to three years from the date of award of contract. Furthermore, owing to the forex issues which have brought the foreign payment and LC establishment to a standstill, there are further challenges in the execution of such an initiative, and this initiative can only commence once such issues are resolved. The Petitioner hereby requests TCEB to allow power generation through diesel and solar, as per the tariff petitioned, for the next year three years. Once the cost of coal-based power plants is determined, the Petitioner will petition the same under MYT.

The applicable indexations with respect to the power generation component are as follows:

$$\textbf{Power Cost} - \textbf{Diesel}_{\textbf{Adj}} = \text{Power Cost} - \text{Diesel}_{\text{Ref}} \times \left[\frac{\text{Diesel}_{\text{Adj}}}{(\text{Diesel}_{\text{Ref}})}\right] \times \frac{\%\ of\ Diesel_{\text{Adj}}}{88\%}$$

Where:

$\text{Power Cost} - \text{Diesel}_{\text{Adj}}$	is the revised Power Cost – Diesel Component for the relevant quarter in PKR
$\text{Power Cost} - \text{Diesel}_{\text{Ref}}$	is the reference Power Cost – Diesel Component for the relevant quarter determined by TCEB in PKR
$\text{Diesel}_{\text{Adj}}$	is the ex-GST Diesel Price per liter as notified by OGRA for Islamkot, Mithi the relevant month
$\text{Diesel}_{\text{Ref}}$	is PKR 238.63/Liter, being the ex-GST Diesel price notified by OGRA for Islamkot, Mithi for the month of October 2022

$$\textbf{Power Cost} - \textbf{Solar}_{\text{Adj}} = \text{Power Cost} - \text{Solar}_{\text{Ref}} \times \frac{\%\ of\ Solar_{\text{Adj}}}{12\%}$$

Where:

$\text{Power Cost} - \text{Solar}_{\text{Adj}}$	is the revised Power Cost – Solar Component for the relevant quarter in PKR
$\text{Power Cost} - \text{Solar}_{\text{Ref}}$	is the reference Power Cost – Solar Component for the relevant quarter determined by TCEB in PKR
$\%\ \text{of Solar}_{\text{Adj}}$	is the percentage of power generated to be generated by Solar for the relevant quarter of operations

Frequency of the indexation shall be quarterly.

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8.8 INSURANCE

In the Phase II Contract Stage Tariff Determination, TCEB allowed the Petitioner actual expenditure incurred in lieu of insurance, subject to a maximum cap of 1.00% of EPC price.

Based on the EPC Price of Phase II (USD 130.77 million) and the determined EPC Price of Phase I (USD 403.53 million), the insurance cost in USD/ton is USD 0.9/ton.

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8.9 COST OF WORKING CAPITAL

In the Contract Stage Tariff Determination, TCEB allowed the Petitioner cost of working capital based on 30 days Production Price Payment receivables, 30 days coal inventory, 21 days Diesel Storage, 30 days advance payment to the O&M Contractors and 6 months inventory of spares and tires. The allowed rate of KIBOR + 2%.

$$WC_{(rev)} = WC_x \times \left(a_x \frac{\text{Prod Pmt}_{(rev)}}{\text{Prod Pmt}_x} + b_x \frac{\text{Coal}_{(rev)}}{\text{Coal}_x} + c_x \frac{\text{Diesel}_{(rev)}}{238.63} + d_x \frac{\text{US CPI}_{(rev)} \times \text{PKR/USD}_{(rev)}}{296.81 \times 228.45} \right) \times \frac{\text{KIBOR}_{(rev)} + 2.00\%}{15.91\%}$$

Where,

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

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 30 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

d_x is the proportion of Spares for 06 months to amount of working capital facility in x^{th} year of operations

Prod $\text{Pmt}_{(rev)}$ is the Production Payment Price as determined by TCEB after incorporating indexations till latest month in PKR/ ton

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

$\text{Coal}_{(rev)}$ is the Coal Price as determined by TCEB after incorporating indexations till latest month

Coal_x is the Coal Price as determined by TCEB at COD for x^{th} year of operations

$\text{Diesel}_{(rev)}$ is the Ex-GST Diesel Price in terms of PKR per Litre notified by OGRA for Islamkot, District Mithi

US $\text{CPI}_{(rev)}$ is the latest United States Consumer Price Index for All Urban Consumers (CPI-U) notified by the US Bureau of Labor Statistics

$\text{PKR/USD}_{(rev)}$ 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

$\text{KIBOR}_{(rev)}$ is 3-Month KIBOR rate at the end of the 3 month period prior to the month in which indexation is applicable, as notified by the State Bank of Pakistan
Frequency of Indexation shall be quarterly.

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8.10 HEATING VALUE

Reference Heating Value for 7.6 mt/a mine is 11.6 MJ/Kg, however, as per the Bankable Feasibility Study (BFS) approved by SCA, the average heating value is 10.86 MJ/Kg for the project is mentioned. Moreover, as per the Coal Supply Agreements entered into by the Petitioner with all its offtakers, the Petitioner has to supply the coal within Heating Value range of 10.312 to 12.771 MJ/Kg. This range is linked with power plant design, as boiler can only operate within these limits. In order to meet the energy requirement of power plant, additional coal tonnage has to be supplied in case of heating value lower than 11.6 Mj/kg. Same has been stipulated in the Coal Supply Agreement(s) and its Schedule N that 11.6 Mj/kg is the reference heating value for coal quantities and the tonnage of coal shall be adjusted as per actual heating value supplied.

$$Q_{adj} = Q_0 * HV_{Ref} / HV_A$$

Where:

Q_{adj}	= Adjusted Quantity of coal at the Actual heating value; and
Q_0	= Coal quantity at Reference Heating Value
HV_{Ref}	= the Reference Heating Value of 11.6 MJ/kg
HV_A	= the Actual Heating Value of Coal supplied during the day, month, year or any other period (as applicable) as long as it falls within acceptable range as defined in Section 4, 9 and Schedule G

Adjustment in Quantity Supplied:

As per the JORC certified Block Model by 3rd party for Thar Block II and the BFS, the heating value of coal varies across the mine across different periods and areas and the Mine will be required to supply the equivalent amount of energy to all its off-takers based on actual heating value of coal being extracted during such month. Hence, at times where the Heating Value of coal drops below reference heating value of 11.61 MJ/Kg, excess coal beyond 7.6 Mt/a will need to be supplied to match the heating content requirement of the power plant and vice versa. Therefore, it is petitioned that any additional quantity beyond 7.6 Mt/a (to existing off-takers) will be sold at variable price. The same is in accordance with the Article No.2.2 of Chapter 2 of the Thar Coal Pricing Framework – in terms of Rule (11) of Thar Coal Tariff Determination Rules, 2014.

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8.11 RELIEF SOUGHT FROM TCEB OWING TO UNAVAILABILITY OF ONE IPP

The Petitioner filed the Phase II Contract Stage Tariff Petition in which it anticipated the occurrence of a situation whereby one of its Phase II Coal Purchasers might not achieve its COD by the time the Petitioner achieves its Phase II Mine COD. The same was further communicated to TCEB vide letter referenced SECMC: 1013-10-2022 (attached herewith in Schedule 12).

COD for the Phase II mine was achieved in September 2022, however, as anticipated COD for TNPTL had been delayed. In wider national interest petitioner had declared its COD in Sept 22 in line with TEL COD which has resulted in overall coal price & basket power tariff reduction. As of the date of filing of this Tariff Petition, TNPTL, being one of the Coal Purchasers of Phase II Mine, has still not achieved its COD. As such, the Petitioner is facing losses for each month of delay, while the Petitioner, acting prudently, is in the process of mitigating said losses by selling it to other offtakers including LEPCL. Moreover, the Petitioner hereby highlights that it reserves the right under the Rules to apprise TCEB of the total residual losses in the future due to TNPTL's failure in achieving its COD and get the same adjusted from the TCEB.

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8.12 SUMMARY OF TARIFF

In light of the above, the Petitioner requests that the following Commercial Operations Stage Tariff is approved and determined by TCEB with respect to the Phase II Mine:

PRODUCTION (VARIABLE) PAYMENTS	Average (1-10 Years) USD/Ton	Average (11-30 Years) USD/Ton	Levelized (1-30 Years) USD/Ton
Fuel Cost	7.38	6.46	7.24
Variable O&M			
- Site Services Variable	4.63	4.60	4.57
- Spares/ Tyres/Consumables	1.88	1.60	1.84
- Duties and Taxes	0.58	0.55	0.57
Asset Replacement Cost	4.06	3.02	3.94
Royalty	3.50	2.58	3.27
	22.02	**18.81**	**21.43**
CAPACITY (FIXED) PAYMENTS			
Fixed O&M			
- Foreign Site Services	1.80	1.81	1.80
- Foreign Technical Services	2.38	2.00	2.36
- Fixed O&M Local	3.28	2.83	3.16
- Duties and Taxes	0.54	0.48	0.53
Insurance	0.90	0.90	0.90
Power Cost - By Solar	0.04	0.04	0.04
Power Cost - By Diesel	2.47	2.47	2.47
Cost of Working Capital	1.28	1.10	1.26
	12.70	**11.62**	**12.52**
DEBT & ROE			
Principal Debt Repayment	4.73	0.00	3.19
Interest Payment	3.24	0.00	2.47
ROE	5.16	4.52	5.07
ROEDC	2.26	1.98	2.22
	15.40	**6.50**	**12.96**
Ex-Mine Coal Price	**50.12**	**36.94**	**46.90**

8.13 SUMMARY OF APPLICABLE INDEXATIONS

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In light of the above, the Petitioner requests that the following indexations and escalation are allowed in the Commercial Operations Stage Tariff by TCEB with respect to the Phase II Mine:

COMPONENT	INDEXATIONS
Fuel Cost	Ex-GST Diesel Price notified by OGRA for Islamkot, Mithi
Variable O&M	
- Site Services - Variable	USD/PKR
- Spares/ Tyres/Consumables	USD/PKR, USD/RMB, US CPI
- Duties and Taxes	As per actual
Asset Replacement Cost	US CPI, USD/PKR
Royalty	As notified by GoS
Fixed O&M	
- Foreign Site Services	USD/PKR
- Foreign Technical Services	USD/PKR, USD/RMB, US CPI
- Fixed O&M Local	Local CPI
- Duties and Taxes	As per Actual
Insurance	As per Actual
Power Cost - By Solar	Units produced through Solar
Power Cost - By Diesel	Ex-GST Diesel Price notified by OGRA for Islamkot, Mithi, Units produced through Diesel
Cost of Working Capital	USD/PKR, US CPI, 3-month KIBOR
Principal Debt Repayment	USD/PKR for Foreign Debt, No indexation for LCY Debt
Interest Payment	6 Month Libor and USD/PKR for Foreign Debt 6-month KIBOR for Local Debt
ROE	USD/PKR
ROEDC	USD/PKR

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9 OTHER SUBMISSIONS

9.1 CHANGE IN HYDROGEOLOGICAL CONDITIONS

The ground water in Thar is one of the major risks for the Project and any change in hydrogeological condition may adversely affect the activities. However, keeping mine dry is of paramount importance and therefore, the Petitioner requests that any additional cost incurred during the operations phase of the mine due to any change in the hydrogeological conditions be allowed at the time of Multi Year Tariff (MYT).

9.2 RESTRICTIONS AND DELAYED APPROVALS BY STATE BANK OF PAKISTAN AND CURRENCY DEVALUATION

It is to highlight that the Petitioner is currently facing issues in import of spares and remitting payments under the O&M Agreement(s) to the O&M Contractor due to significant delays in approval by SBP. It is to highlight that SBP has not approved any USD payment for the project since May 2022. Even with spare parts worth USD 4.1 Mn for normal operations & maintenance (nearly 100 trucks not operational at the site awaiting necessary repairs) already shipped and arrived at Karachi Port as of the date of this Petition, the Petitioner still awaits approval for the LC opening, leading to several additional costs including but not limited to Currency devaluation, port charges, storage/demurrage charges, delay payment charges, etc. The current situation has also resulted in the O&M Contractor's offshore payments not being remitted since May 2022. These issues are beyond Petitioner's control. The Petitioner hereby submits that arranging USD for the project is the responsibility of Government of Pakistan. Moreover, arranging SBP approvals in such macro-economic conditions is significantly delayed and outside the Petitioner's control. To add to the delays in SBP approvals, PKR has significantly devalued which means that while Dollar amount for remittance will remain same but the actual PKR used shall be significantly more than if the payment had been been remitted in a timely manner. The Petitioner hereby requests that any additional costs incurred owing to the same during the operations phase of the mine be allowed at the time of Multi Year Tariff (MYT).

9.3 COST OF TRANSPORTATION

As per Phase I COD Stage Tariff Petition, the Petitioner had submitted a transportation cost of USD 0.88/ton as per certain indexations. As part of Phase II, the Petitioner has further negotiated with the Transport Contractor a lower cost of USD 0.73/ton pursuant to the Transportation Agreement (attached herewith as Schedule 9) which is detailed as per the table below:

DESCRIPTION	COST AT PHASE I COD STAGE PETITION	COST AT PHASE I COD STAGE PETITION INDEXED AT PHASE II COD MACROS	PETITIONED COST – PHASE II COD STAGE	APPLICABLE INDEXATIONS
	(USD/TON)	(USD/TON)	(USD/TON)	
Fixed	0.20	0.14	0.09	No indexation
Fixed O&M	0.27	0.28	0.20	Local CPI adjustment
Variable O&M	0.06	0.06	0.04	Local CPI adjustment
Diesel	0.27	0.41	0.41	Ex-GST Diesel Price Notified by OGRA
Total	**0.80**	**0.88**	**0.73**	

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10 CONCLUSION & DETERMINATION SOUGHT

10.1 SUBMISSION

In light of the foregoing submissions contained in this Tariff Petition, together with all Schedules, Annexures and information referred herein and/or attached hereto, the Petitioner hereby submits before TCEB and requests TCEB to approve and determine the Phase II Commercial Operations Stage Tariff of the Petitioner's Phase II Mine, as contained herein, together with the Project Cost, indexations, adjustments, escalations, assumptions and other matters set out herein.

The Petitioner will be pleased to provide any further information, clarification and explanation that TCEB may require during its evaluation process.

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LIST OF SCHEDULES

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SCHEDULE 1: YEARLY COAL PRICE PROFILE

(Yearly Profile for Coal Price of 7.6 Mt/a Mine Capacity in (USD/ton)

	PRODUCTION (VARIABLE) PAYMENTS							CAPACITY (FIXED) PAYMENTS													
Year	Fuel Coal	Variable O&M Site Services	Variable O&M Spares/Consumables	Duties and Taxes	Asset Replacement Cost	Royalty	Total Production Payments	Fixed O&M Foreign Site Services	Fixed O&M Foreign Tech Services	Fixed O&M Local	Duties and Taxes	Insurance	Power Cost – Solar (15%)	Power Cost By Diesel (85%)	Cost of Working Capital	Principal Debt Repayment	Interest Payment	ROE	ROEDC	Total Capacity Payments	Total
1	7.32	3.10	3.18	0.58	4.97	3.94	23.08	1.57	4.39	3.83	0.84	0.90	0.04	2.47	1.49	4.11	6.25	5.16	2.26	33.33	56.41
2	7.32	4.50	2.12	0.59	4.97	3.91	23.41	2.03	3.42	3.83	0.72	0.90	0.04	2.47	1.41	4.61	5.75	5.16	2.26	32.61	56.02
3	7.32	4.92	1.71	0.59	4.97	3.71	23.21	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.34	5.19	5.17	5.16	2.26	29.96	53.18
4	7.32	4.92	1.71	0.59	4.97	3.71	23.21	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.34	5.66	4.50	5.16	2.26	29.96	53.18
5	7.56	4.92	1.71	0.59	3.45	3.61	21.85	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.23	6.62	3.74	5.16	2.26	29.85	51.71
6	7.56	4.92	1.71	0.59	3.45	3.61	21.85	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.23	7.50	2.86	5.16	2.26	29.85	51.71
7	7.56	4.92	1.71	0.59	3.45	3.47	21.72	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.23	6.63	1.69	5.16	2.26	28.02	49.73
8	7.56	4.92	1.71	0.59	3.45	3.06	21.30	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.22	1.90	1.13	5.16	2.26	22.50	43.81
9	7.09	4.60	1.60	0.55	3.45	2.98	20.27	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.17	2.25	0.78	5.16	2.26	22.45	42.73
10	7.09	4.60	1.60	0.55	3.45	2.98	20.27	1.81	2.00	3.14	0.48	0.90	0.04	2.47	1.17	2.67	0.36	5.16	2.26	22.45	42.73
11	7.12	4.60	1.60	0.55	3.45	2.73	20.05	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.16	0.00	0.00	5.16	2.26	19.11	39.16
12	7.12	4.60	1.60	0.55	3.45	2.73	20.05	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.16	0.00	0.00	5.16	2.26	19.11	39.16
13	7.12	4.60	1.60	0.55	3.45	2.73	20.05	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.16	0.00	0.00	5.16	2.26	19.11	39.16
14	7.12	4.60	1.60	0.55	3.45	2.73	20.05	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.16	0.00	0.00	5.16	2.26	19.11	39.16
15	7.48	4.60	1.60	0.55	3.45	2.76	20.45	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.18	0.00	0.00	5.16	2.26	19.13	39.57
16	7.48	4.60	1.60	0.55	4.32	2.83	21.39	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.25	0.00	0.00	5.16	2.26	19.19	40.58
17	7.48	4.60	1.60	0.55	3.56	2.77	20.56	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.13	39.70
18	7.48	4.60	1.60	0.55	3.56	2.77	20.56	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.13	39.70
19	7.48	4.60	1.60	0.55	3.56	2.77	20.56	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.13	39.70
20	7.48	4.60	1.60	0.55	5.03	2.69	22.16	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.30	0.00	0.00	5.16	2.26	19.25	41.41
21	7.48	4.60	1.60	0.55	3.56	2.77	20.56	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.13	39.70
22	7.51	4.60	1.60	0.55	3.56	2.77	20.60	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.14	39.73
23	7.51	4.60	1.60	0.55	3.56	2.77	20.60	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.14	39.73
24	7.51	4.60	1.60	0.55	3.56	2.77	20.60	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.14	39.73
25	7.51	4.60	1.60	0.55	3.56	2.77	20.60	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.14	39.73
26	7.51	4.60	1.60	0.55	3.56	2.77	20.60	1.81	2.00	2.83	0.48	0.90	0.04	2.47	1.19	0.00	0.00	5.16	2.26	19.14	39.73
27	3.47	4.60	1.60	0.55	1.02	2.14	13.38	1.81	2.00	2.83	0.48	0.90	0.04	2.47	0.82	0.00	0.00	4.17	1.83	17.35	30.73
28	3.47	4.60	1.60	0.55	0.60	1.81	12.82	1.81	2.00	2.83	0.48	0.90	0.04	2.47	0.79	0.00	0.00	1.19	0.55	13.06	25.88
29	2.12	4.60	1.60	0.55	0.00	1.64	10.50	1.81	2.00	2.83	0.48	0.90	0.04	2.47	0.67	0.00	0.00	1.19	0.55	12.94	23.44
30	1.76	4.60	1.60	0.55	0.00	1.61	10.11	1.81	2.00	2.83	0.48	0.90	0.04	2.47	0.66	0.00	0.00	1.19	0.55	12.93	23.04
Levelized																					
1-30 Years	7.24	4.57	1.84	0.57	3.94	3.27	21.43	1.80	2.38	3.16	0.53	0.90	0.04	2.47	1.26	3.10	2.47	5.07	2.22	25.48	46.90

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SCHEDULE 2: REPAYMENT SCHEDULE FOREIGN DEBT & LOCAL DEBT

Annexure 2.0 (A)						
Debt Schedule - 7.6Mt/a Mine Capacity – Phase II Local Loan Sovereign						
Total Non- Sovereign LCY Debt		PKR 21,120.5 M		Spread	1.75%	
KIBOR		15.91%		Interest Rate	17.66%	
Year	Period	Principal Outstanding (PKR M)	Principal Repayment (PKR M)	Interest (PKR M)	Balance (PKR M)	Annuity Installment (PKR M)
1	1	21,120.5	420.8	1,864.9	20,699.7	2,285.7
	2	20,699.7	457.9	1,827.8	20,241.8	2,285.7
2	3	20,241.8	498.4	1,787.3	19,743.4	2,285.7
	4	19,743.4	542.4	1,743.3	19,201.0	2,285.7
3	5	19,201.0	590.3	1,695.5	18,610.8	2,285.7
	6	18,610.8	642.4	1,643.3	17,968.4	2,285.7
4	7	17,968.4	699.1	1,586.6	17,269.3	2,285.7
	8	17,269.3	760.8	1,524.9	16,508.5	2,285.7
5	9	16,508.5	828.0	1,457.7	15,680.5	2,285.7
	10	15,680.5	901.1	1,384.6	14,779.3	2,285.7
6	11	14,779.3	980.7	1,305.0	13,798.6	2,285.7
	12	13,798.6	1,067.3	1,218.4	12,731.3	2,285.7
7	13	12,731.3	1,161.5	1,124.2	11,569.8	2,285.7
	14	11,569.8	1,264.1	1,021.6	10,305.7	2,285.7
8	15	10,305.7	1,375.7	910.0	8,930.0	2,285.7
	16	8,930.0	1,497.2	788.5	7,432.8	2,285.7
9	17	7,432.8	1,629.4	656.3	5,803.4	2,285.7
	18	5,803.4	1,773.3	512.4	4,030.1	2,285.7
10	19	4,030.1	1,929.9	355.9	2,100.3	2,285.7
	20	2,100.3	2,100.3	185.5	0.0	2,285.7

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Annexure 2.0 (B)

Debt Schedule - 7.6Mt/a Mine Capacity – Phase II Local Loan Non Sovereign

Total Non- Sovereign LCY Debt	PKR 3071.2 M	Spread	2.50%
KIBOR	15.91%	Interest Rate	18.41%

Year	Period	Principal Outstanding (PKR M)	Principal Repayment (PKR M)	Interest (PKR M)	Balance (PKR M)	Annuity Installment (PKR M)
1	1	3,071.2	58.7	282.7	3,012.5	341.4
	2	3,012.5	64.1	277.3	2,948.4	341.4
2	3	2,948.4	70.0	271.4	2,878.5	341.4
	4	2,878.5	76.4	265.0	2,802.1	341.4
3	5	2,802.1	83.4	257.9	2,718.6	341.4
	6	2,718.6	91.1	250.3	2,627.5	341.4
4	7	2,627.5	99.5	241.9	2,528.0	341.4
	8	2,528.0	108.7	232.7	2,419.4	341.4
5	9	2,419.4	118.7	222.7	2,300.7	341.4
	10	2,300.7	129.6	211.8	2,171.1	341.4
6	11	2,171.1	141.5	199.9	2,029.6	341.4
	12	2,029.6	154.5	186.8	1,875.1	341.4
7	13	1,875.1	168.8	172.6	1,706.3	341.4
	14	1,706.3	184.3	157.1	1,522.0	341.4
8	15	1,522.0	201.3	140.1	1,320.8	341.4
	16	1,320.8	219.8	121.6	1,101.0	341.4
9	17	1,101.0	240.0	101.3	860.9	341.4
	18	860.9	262.1	79.2	598.8	341.4
10	19	598.8	286.2	55.1	312.6	341.4
	20	312.6	312.6	28.8	0.0	341.4

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SCHEDULE 3: ASSET REPLACEMENT

MME Required	Life	Cost per Unit (USD M)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Hydraulic excavator 7m³	8	1.60			12		2						12		4						12		4							
Hydraulic excavator 15m3	8	4.10			4								4								4				1					
Dump Trucks 100t	11	1.58			44		3									44	15										44	15		
Dump Trucks 60t	4	0.20	85		12		85				85				105				105				105				105			
Phase I - Auxiliary Equipment																														
Water Sprinklers	8	0.16			6								6	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	6	-
Grader	8	0.37			4								4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-
Dozers	8	0.46			4								4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-
Wheel Loader	8	0.16			7								7	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	7	-
Wheel Excavator	8	0.22			1								1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
Trailer	8	0.08			1								1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
Fuel Truck	8	0.09			3								3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3	-
Cranes	8	0.07			2								2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	-
Truck crane	8	0.18			1								1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
Roller	8	0.07			2								2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	-
Buses	8	0.05			6								6	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	6	-
Maintenance Vehicles	8	0.07			3								3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3	-
Vigos/Hilux	8	0.05			5								5	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	5	-
Phase II - Auxiliary Equipment																														
Water Sprinklers	8	0.16					5								5	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-
Grader	8	0.37					3								3	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
Crawler Dozers	8	0.75					5								5	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-

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Wheel Dozers	8	0.87					2								2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Fuel Truck	8	0.09					1								1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Hydraulic Backhoe	8	0.35					1								1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Production Command Car	8	0.20					1								1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Vigos/Hilux	8	0.05					4								4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-
Coal Handling System																														
Semi-Mobile crusher (2,500t / h)	15	11.53	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belt Conveyor (L=2100 m)	15	0.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belt Conveyor (L=2x800 m/04 years)	15	6.00		1					1					1					1					1					1	
Bucket wheel stacker-reclaimer (2,500 t/h)	15	0.27	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coal Quality Laboratory	10	1.06	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Auxiliary equipments for Coal conveying and storage system(increased)	10		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dewatering																														
Stainless steel submersible pumps (132KW)	10	0.15	-	-	-	-	23	-	-	6	-	-	-	-	-	-	23	-	-	8	-	-	-	-	-	-	-	-	-	-
steel pipe with coating plastic DN150	10	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
steel pipe with coating plastic DN630 x 9	10	0.00	-	-	-	660	660	2,388	-	-	660	660	-	-	-	1,320	1,320	2,388	-	-	1,760	660	-	-	-	1,320	-	-	-	-
steel pipe with coating plastic DN720 x 10	10	0.0008000	-	-	-	880	660	4,136	-	-	660	660	-	-	-	1,540	1,320	4,136	-	-	6,050	660	-	-	-	7,150	-	-	-	-
steel pipe with coating plastic DN920 x10	10	0.00	-	-	-	-	2,090	-	-	-	-	-	-	-	-	-	2,090	-	-	-	-	-	-	-	-	-	-	-	-	-
steel pipe with coating plastic D325 x 6	10	0.00	-	-	-	-	1,500	-	-	-	-	-	-	-	-	-	1,500	-	-	-	-	-	-	-	-	-	-	-	-	-
steel pipe with coating plastic D219 x 6	10	0.00	-	-	18	50	160	16	-	55	33	22	-	22	71	105	160	38	-	127	77	22	-	22	109	-	-	-	-	-
Crossing pipe Spiral welded steel pipe D920 x 18, Q235a	10	0.00	-	-	-	-	385	-	-	-	-	-	-	-	-	-	385	-	-	-	-	-	-	-	-	-	-	-	-	-
Others																														
Replacement of dewatering wells	10	0.01	-	-	-	4	2	-	-	-	4	-	-	-	-	-	6	-	-	-	7	-	-	-	-	-	-	-	-	-
Additional drilling - m	10	0.0053000	-	-	1,903	-	-	-	-	-	-	-	-	-	2,037	-	-	-	-	2,604	-	-	-	-	-	-	-	-	-	-
Surface drainage	10	0.00	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
drainage pump 37kw	10	0.02	-	-	-	-	-	-	-	-	6	3	-	-	-	-	-	-	-	-	6	3	-	-	-	-	-	-	-	-
drainage pump 90kw	10	0.03	-	-	-	-	-	3	-	-	5	-	-	-	-	-	-	3	-	-	5	-	-	-	-	-	-	-	-	-
drainage pump 560kw	10	0.19	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-

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steel pipe with coating plastic D219×6	10	0.00	-	-	-	-	-	-	-	-	2,255	-	-	-	-	-	-	-	-	2,255	-	-	-	-	-	-	-	-
steel pipe with coating plastic D529×8	10	0.00	-	-	-	-	-	-	-	-	1,406	-	-	-	-	-	-	-	-	1,406	-	-	-	-	-	-	-	-
steel pipe with coating plastic DN630×8	10	0.00	-	-	-	-	-	-	-	-	4,550	-	-	-	-	-	-	-	-	4,550	-	-	-	-	-	-	-	-
drainage pump 160KW	10	0.05	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
drainage pump 4KW	10	0.00	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
drainage pump 15KW	7	0.01	-	-	-	-	3	-	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-	-	-
drainage pump 160KW	7	0.05	-	-	-	-	2	-	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	-	-	-
drainage pump 18.5KW	7	0.01	-	-	-	-	3	-	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-	-	-
Spiral welded steel pipe D273×6 235a	10	0.00	-	-	-	-	-	-	-	690	-	-	-	-	-	-	-	-	690	-	-	-	-	-	-	-	-	-
Straight seam welding steel pipe D133×4 235a	10	0.00	-	-	-	-	-	-	-	690	-	-	-	-	-	-	-	-	690	-	-	-	-	-	-	-	-	-
Straight seam welding steel pipe D159×6 235a	10	0.00	-	-	-	-	-	-	-	2,320	-	-	-	-	-	-	-	-	2,320	-	-	-	-	-	-	-	-	-
Other parts	10		-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Control & Communication	10	0.82	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Late increase costs of control & communication	10	0.47	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Power Distribution	10	0.81	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Late increase costs of power distribution [Mio. $US]	10	2.13	-	1	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-
Cable	10	0.76	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Late increase costs of cable [Mio. $US]	10	0.33	-	-	1	-	-	-	-	1	0	-	-	-	1	1	-	-	0	1	0	-	-	-	1	1	-	-	-	-
Diesel Generator & Aux Equipment	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Late increase costs of high voltage switch cabinet [Mio. $US]	10	0.04	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-
Water Supply	10	0.66	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Water pipes	10	8.18	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Ventilation /Dust Suppression	10	0.23	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Maintainance Facility Equipment	10	3.19	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Storage Building Equipment	10	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Fuel Storage Equipment	10	0.99	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
HVAC and other equipment for colony	10	0.09	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Colony & office utilities	10	0.50	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Sewage station	10	0.11	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sindh Engro Coal Mining Company Limited