

POWERING PAKISTAN'S FUTURE WITH THAR COAL

A GAME
CHANGER FOR
PAKISTAN









Thar Block II: Journey of SECMC

2009

Engro Energy Ltd & GOS entered a JVA













2011

SECMC was issued 30-year mining lease of Block II



2014

Both Mine and Power Projects included in CPEC's list of priority projects.



2019

Phase I completed & Coal production started



2020

Phase II mine expansion commenced

1990s

Thar coal discovered by the Geological Survey of Pakistan (GSP) with estimated reserves of 175bn ton – making it one of the largest lignite coal reserves in the world 2010

Bankable Feasibility Study concluded, project declared technically, commercially, environmentally and socially feasible.

2013

The GoP issued Sovereign Guarantee

2016

Financial Close for 3.8 MTPA

2019

Financial Closure for Mine Expansion from 3.8 to 7.6 MTPA 2022

Phase II completed











A Shining Example of Public and Private Partnership

~700\$ Mn ~55% ~750\$ Mn



SOVEREIGN GUARANTEE BY

GOVERNMENT OF PAKISTAN &

BACKED BY GOVERNMENT OF SINDH





INFRASTRUCTURE DEVELOPED BY THE GOVERNMENT OF SINDH INCLUDING ROADS, BUILDINGS AND AN AIRPORT



REGULATORY SUPPORT, BY ESTABLISHING THE TCEB FOR A CONDUCIVE ENVIRONMENT TO DEVELOP THAR COAL



Some Instances of Local Recognition for SECMC

DAWN

Thar will change Pakistan and Pakistan will change entire world, says Chinese CG







Mansoor Ahmad Political Economy April 24, 2022

Thar coal can produce base-load power at a fraction of the cost of imported fuels



BUSINESS

RECORDERThar Foundation recognised for CSR initiatives in Thar Block II

Recorder Report Published March 13, 2025



"Thar coal can produce base-load power at a fraction of the cost of imported fuels, including coal." – The News - 2022



Some Instances of Global Recognition for SECMC



In Pakistan's coal rush, some women drivers break cultural barriers

By Syed Raza Hassan

September 29, 2017 6:49 PM GMT+5 · Updated September 29, 2017





Engro, Thar Foundation Empowering Women In Thar Desert Financially And Socially – OpEd

II June 28, 2021 II 0 Comments



G|V|S

SECMC: The game changer for Pakistan's energy sector

By Magazine Desk February 14, 2022



"Pakistan has plenty of readily available indigenous resources that have the potential and capacity to be utilized for the benefit of the consumers and the country at large." – Global Spice Village - 2022

GLOBAL AWARDS & CERTIFICATIONS







National Safety Council 2025

10 Million Man-Hours Award & Corporate
Hazard Recognition Award



Pakistan Digital Awards 2020, 2024
Best Internet of Things, Best Use of
Creativity/Innovation



100% SEPA & EPA Compliance
Legal Compliance with engagement of IEMC



Safety & Health Management System
Based on Queensland Coal Mine Regulations



Alliance for Water Stewardship Gold Certification



Water Management Excellence

Recognized for responsible water stewardship across Thar due to Block II mining operations



Unprocessed water is being discharged, supporting aquifer recharge & maintaining ecosystem balance

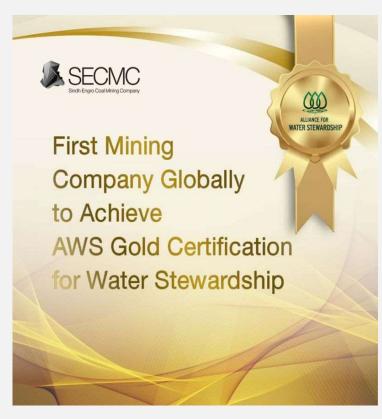


Arid Land Reclamation

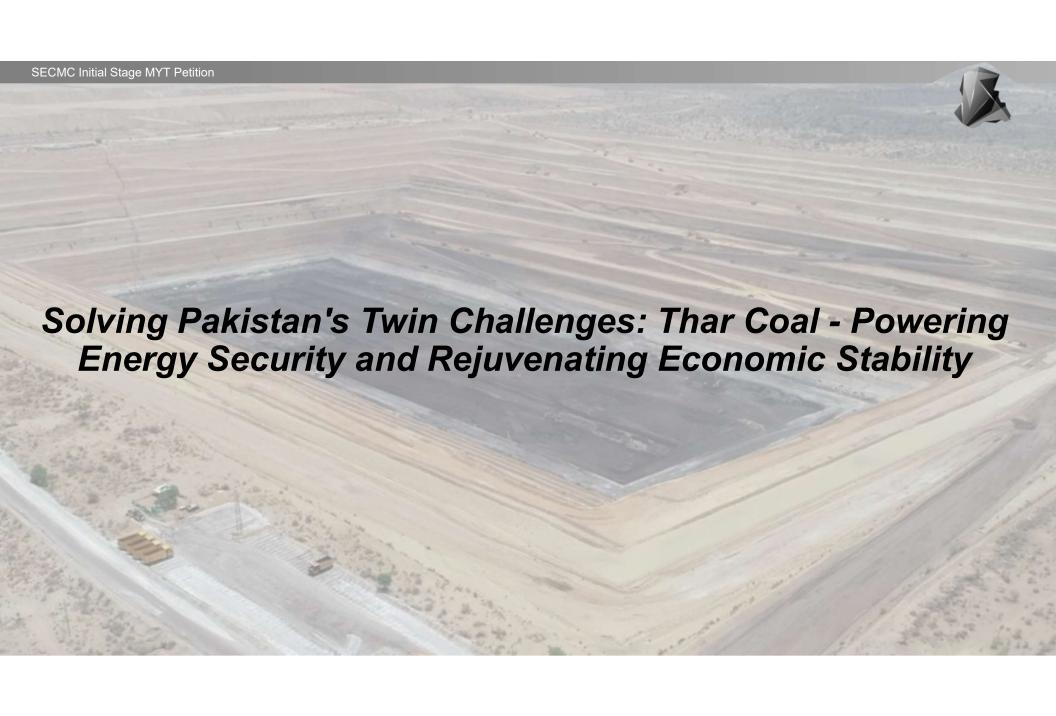
65 acres of barren land converted into productive farmland



100+ local farmers trained to cultivate through modern techniques, like drip irrigation



"Sustainable business practices are the foundation of our license to operate."



Driving Economic and Energy Resilience









- 7.6 MTPA Mine Capacity
- 1320 MW Power Generation Capacity
- ~31.6 Mn tons of Coal Supplied
- Expansion to 11.2 MTPA (Phase III) by 2026
- PKR ~18Bn paid in Royalties
- Forex saving of ~ \$1.6 Bn since inception
- Yearly expected forex saving of ~\$ 0.5 Bn post Phase III
- ~31,875 GWH Electricity Produced
- Thar Coal fuel price is ~PKR 4.8/kWh v/s Imported Coal of ~PKR 13.7/kWh
- ~3 Mn Households Energized Daily
- More than 3500 Jobs Created
- ~ 94% of employment from Sindh



Inclusive Development is at the Heart of SECMC's Business Model





HEALTH

With the support of GoS, we aim to transform Islamkot into the first UN SDG model tehsil in Pakistan

07 Health Facilities

Health facilities, including mobile units

ZERO Malnutrition Deaths

Child deaths due to malnutrition in Block II in the last 4 years

>370,000

Patients treated free of cost since inception

RECOGNITION

Presidential Award for Best COVID-19

Management at Tharparkar



PKR 15M/Month

Free medical services provided monthly

50-Bed Facility

Mother & Child Medical Facility at Thar Islamkot Hospital



EDUCATION & SKILLS DEVELOPMENT

With the support of GoS, we aim to transform Islamkot into the first UN SDG model tehsil in Pakistan

28 Schools

Operating quality education units

300 Engineersin-Training

Enrolled in GPI Mithi's Diploma of Associate Engineering (Mining, Electrical, Mechanical, Civil) 5,000+ Students

With 35% female; 100% passing rate in Matric results

2,000+ Trained

Vocational training in highdemand skills: Welding | Solar Energy Installation

Specialized training in China

75 Global

Scholars

IT Skill Training

Partnered with Zabtech to establish IT Lab in Islamkot – equipping local youth with essential IT skills





CLEAN DRINKING WATER

With the support of GoS, we aim to transform Islamkot into the first UN SDG model tehsil in Pakistan

30 RO Plants

Operational across communities

33,000+ Beneficiaries

Community members benefiting

3M+ Gallons Monthly

Clean water supplied

16 Women Operators

Trained to manage RO plants



* 4 RO plants are under construction



SOLARIZATION & VILLAGE IMPROVEMENT

With the support of GoS, we aim to transform Islamkot into the first UN SDG model tehsil in Pakistan

100% Solarized Households

3,150 homes across 15 villages (Block II) with battery backup

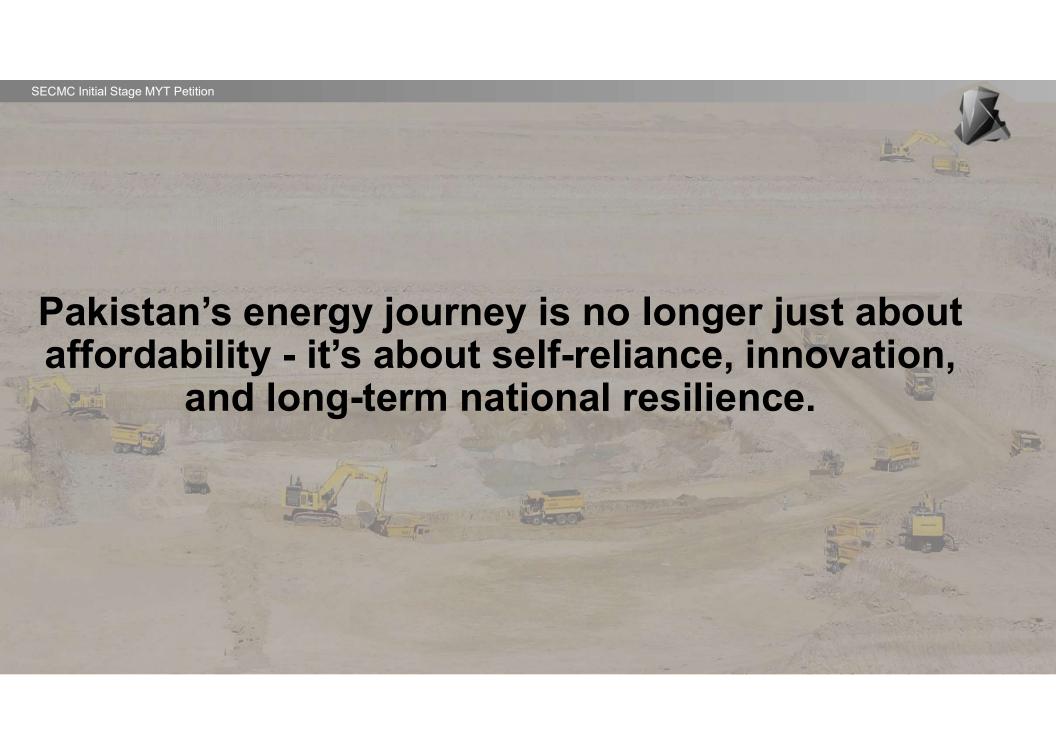
205 Pit Latrines
Constructed

Sanitation facilities in Gorano & Block II

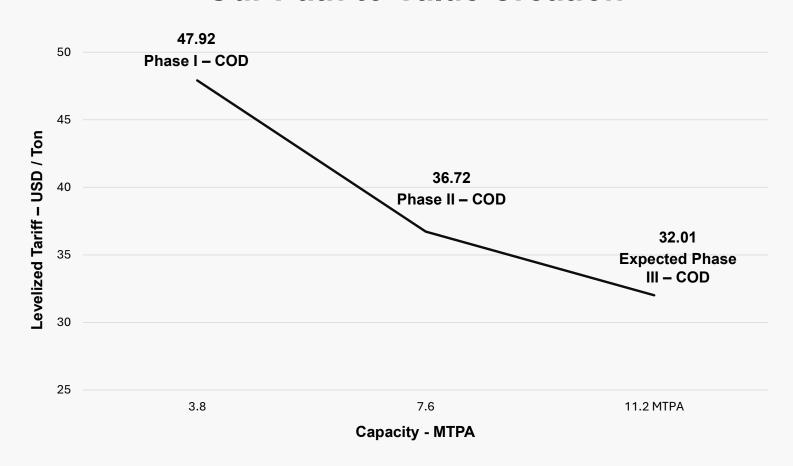
551 Streetlights Installed

Illuminating Block II communities





Our Path to Value Creation



With the increasing mine expansion, the price of Coal per Ton reduces, benefiting the end consumer



Transition of O&M Strategy

Cost Reduction | ~32%

Transition to Self O&M at 7.6 MTPA has cut operational costs by nearly one-third.

FX Savings | ~20M\$ pa

Reduced foreign contractor reliance saved ~\$20 million annually in Forex.

Affordable Power

Thar coal enables lower-cost power production supporting tariff reductions.

Control over 4 Key Ops

Reduced foreign contractor reliance; managing critical operations Dewatering, Procurement, Mine Planning & Power Generation.

Local Employment

SECMC hired 300 employees, creating 200+ new jobs for locals, & 100% skill certification for new hires.

Safety Performance | HSE

MOC & PTW protocol implementation leads to improvement in HSE indicators

SECMC has successfully transitioned from Turnkey contract to Self O&M





Transition To Large Class Equipment





Maximizing efficiency for SECMC has always been a top priority, which also led to the adoption of 90-ton dump trucks from the earlier 60-ton dump trucks and mining shovels from 6.5 m³ to 12 m³ to enhance operational productivity, improve safety and reduce traffic congestion

- Larger class trucks, SECMC reduces traffic congestion and accidents, creating a safer environment
- Increased capacity equipment also paves way for future mine expansion



Introduction of Electric Dump Trucks to Fleet









SECMC is setting a new benchmark for tech-driven coal mining, ensuring competitiveness that reinforces commitment to innovation, technological advancement and operational excellence

- By using EV trucks, SECMC is actively contributing to cut emissions and air pollution, boosting sustainability and worker health through cleaner air
- Trucks have instant torque which enable faster haul cycles, improving productivity and minimizing transportation delays, reflecting our obligation to ensure a more reliable supply chain
- The utilization of EV Trucks will reduce the consumption of diesel and save the national exchequer in forex



Implementation of Advanced Slope Monitoring Radar (SMR)





SECMC is setting a new benchmark for tech-driven coal mining, ensuring competitiveness that reinforces commitment to innovation, technological advancement and operational excellence

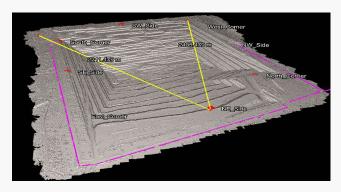
- Recognized at Pakistan Digital Awards (2025) in the category Best Internet of Things, Best Use of Creativity/Innovation
- SMR continuously scans all mine slopes, providing real-time data to detect slope failure, giving SECMC early warnings to mitigate hazards
- The system significantly reduces the risk to SECMC workers and machinery operating, reducing potential accidents and injuries
- With accurate and detailed data on slope behavior, SECMC depicts its strong commitment to responsible mining practices, complying with stringent safety and environmental regulations.

Transition to World Class Technology



3D Laser for West Wall

Enhance mine planning, reduce reliance on static data and external surveys



Truck Volumetric Measurement System – Laser Based

Measure dump truck loads in real time for improved efficiency, accuracy and tracking



Fatigue Monitoring System in Mining Equipment

Detect operator fatigue and enhance fleet safety and efficiency.



Fixed Wing Drone Surveying

Replaced time consuming, labor-intensive topographic surveying for pits, dumps & stockyard



Truck Information Monitoring System

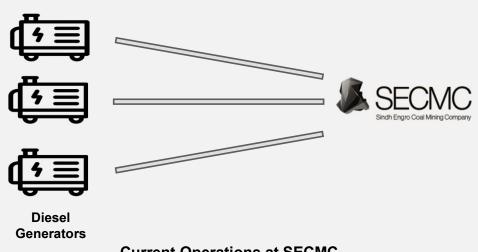
Monitor, optimize haul truck movement, loading and performance



Illustration for the Supply of Power for Integration to Thar Block from Grid



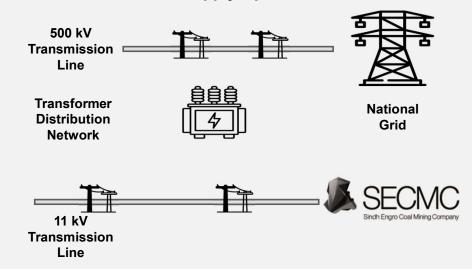
Existing Power Supply Options for SECMC



Current Operations at SECMC

- Relies on heavy duty diesel generators, which result in high generation costs and large annual expenses.
- Potential demand is set to substantially increase with adoption of EV trucks.

Alternative Power Supply Options for SECMC

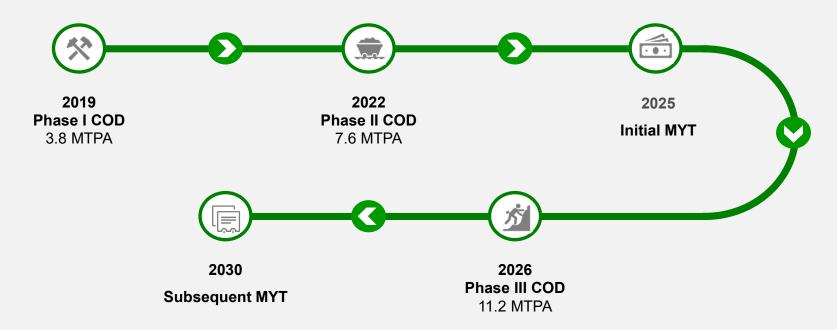


Potential Option being Evaluated

- Use power from the 500kV grid, which is stable and reliable power source with redundant capacity
- To make EV trucks more sustainable and viable, a relatively low electricity tariff is required

To establish new standards for more affordable power, SECMC is also exploring diverse power options to further prioritize additional benefit to the end consumer and national exchequer, paving the way for a much stronger and resilient power future for Pakistan

Overview of MYT Petition



Background

TCEB vide **Thar Coal Pricing Framework** and Tariff Determination
Rules has established an efficient
mechanism to adjust cost plus tariff
through MYT cycles

MYT cycles have been built on specific intervals throughout the tariff period to ensure Thar actual costs (incurred above or below allowed tariff) are appropriately captured

MYT presents an opportunity for the mine operator to revisit tariff assumptions with updated operational learnings

MYT Petition



Scope of SECMC's MYT

- Covers the period from July 2019 to September 2024
- Actual cost incurred versus allowed tariffs has been submitted
- Future tariff of next 30 Years has been submitted
- SECMC has through following strategic interventions saved ~ PKR 21 Bn from the allowed Tariff

Strategic Vendor Engagement & Cost Efficiency

Operational Transition to Self O&M Model

Prudently Incurred Expenses

Energy Optimization

Liquidity Management via Retained Funds

External Audit Verification

- While SECMC accounts are audited at end of each financial year despite that, SECMC onboarded PwC for a special audit covering the entire scope of MYT which involves verification of cost incurred against allowed tariff for the complete period
- This was done to ensure that SECMC's petition is thoroughly audited by an independent external auditor
- Detailed audit reports along with annexures are part of the submitted initial MYT Petition



MYT Petition

Future Tariff Proposal in MYT Petition

- SECMC's initial tariffs were based on certain assumptions at the start of period.
- As the mine progresses and with the interventions that SECMC has taken, such as self O&M, large class equipment etc, the tariff assumptions have been duly updated
- As such the proposed future tariff is based on the learnings of actual operational experience
- As mining is an evolving business, it is best to have MYT cycles at specific intervals which helps adjust tariff to practical considerations

Tariff Components	Average		Levelized
	(1-10 Years)	(11-30 Years)	(1-30 Years)
	USD / Ton		
Fuel Cost	6.89	6.33	6.82
Site Services Variable	1.10	1.14	1.11
Spares	3.31	3.22	3.30
Asset Replacement Reserve	3.61	3.29	3.58
Royalty	2.75	2.01	2.60
Production (Variable) Payments	17.66	15.99	17.41
Foreign Site Services	3.33	3.13	3.31
Fixed O&M Local	3.41	2.88	3.33
Insurance	0.62	0.59	0.62
Power Cost - By Solar	0.03	0.03	0.03
Power Cost - By Diesel	1.47	1.38	1.47
Cost of Working Capital	1.97	1.82	1.95
Principal Debt Repayment	3.41	0.02	2.54
Interest Payment	2.16	0.02	1.67
ROE	3.81	2.09	3.53
ROEDC	1.55	0.83	1.44
Capacity (Fixed) Payments	21.77	12.79	19.89
Ex- Mine Coal Price	39.42	28.79	37.30

Phase 3 Progress



- Mine expansion to increase by 3.8Mt/pa to 11.2Mt/pa through coal supplied to Lucky Electric (LEPCL) for 660MW plant
- LEPCL currently imports coal worth \$500mn/pa this will be substituted with Thar Coal from SECMC's mine
- Financial close expected within August 2025; COD targeted for Q2 2026

PROJECT ENABLERS

- Tariff from TCEB Phase III.
- Ease of LC opening and Foreign Remittances
- Availability of local financing
- Timely completion of Thar Rail Link



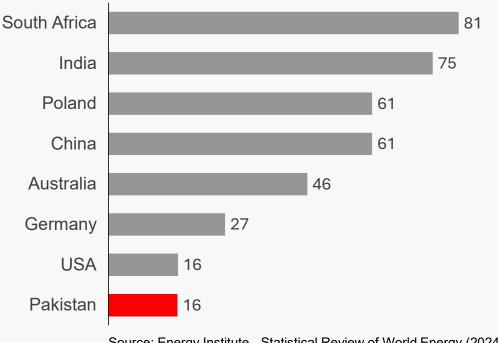




Thar Coal is a Game Changer to Become Energy Self – Sufficient

Pakistan's reliance on coal is limited

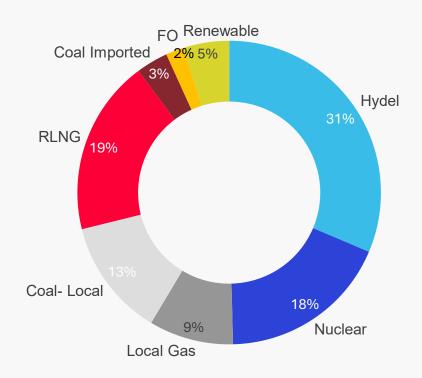
Coal share in energy mix - %



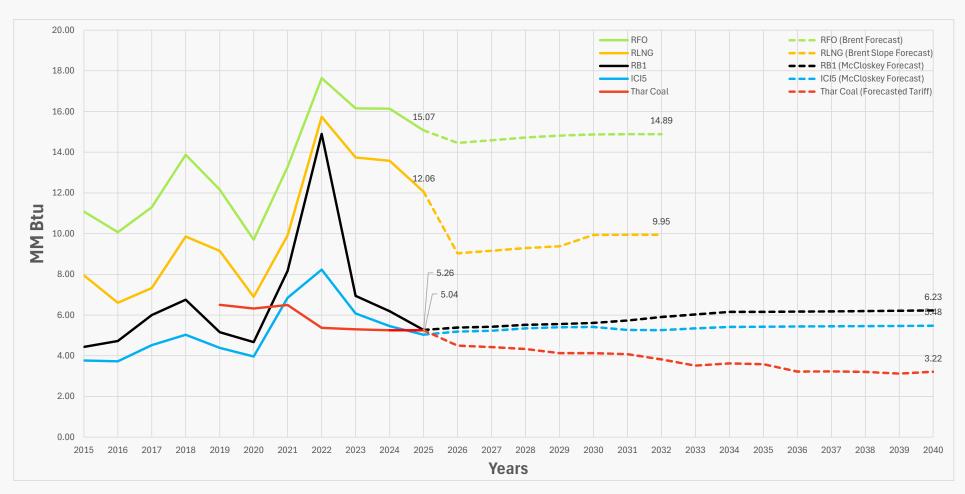
Source: Energy Institute - Statistical Review of World Energy (2024) NEPRA FY 2024 numbers

Thar coal has the potential to replace imported thermal energy sources

Energy mix based on generation - %



Thar Coal - Pakistan's Most Affordable Fuel at PQ



Future Expansion Plan

<u>Overview</u>

- SECMC completed a Bankable Feasibility Study (BFS) for Phase IV expansion, mine capacity is expected to increase to 20 MTPA. Mining technology is finalized, and funding needs are identified for the mine expansion
- TCEB pricing framework now allows sales beyond IPPs to other industries to the likes
 of cement and fertilizer. This will contribute to utilization of indigenous resource across
 different sector and reduce Pakistan's overall foreign reliance, which will in turn reduce
 imports and save foreign exchange.

Coal Gasification - FFC Urea Plant at Thar

- MoU has been signed between FFC & SECMC for 2 MTPA coal supply in Thar Block II
- Currently FFC is conducting BFS which is targeted completion by Q4 2025 with completion by 2030
- This initiative will improve Pakistan's food security with indigenous resource utilization

Thar Coal in Other Industries including Cement Sector

- SECMC supplied trial coal to cement players including Cherat, Power Cement etc
- Results showed up to 20% blending is feasible without any plant modifications, as such demand for Thar coal is ~4 MTPA
- Thar coal has potential in other general industries such as paper mill, glass manufacturing, pharmaceutical industry, textile etc



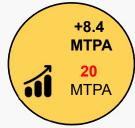


































تھر بدل رہا ہے پاکستان!

Thank You