

CLIENT:

One of the largest state-owned energy companies in the UAE.

PROJECT DESCRIPTION:

Feasibility study of large-scale coal and petcoke gasification followed by CO₂ capture and its use in Enhanced Oil Recovery (EOR) and for production of downstream products.

IMPACT

- ⊙ Strategic leadership through pioneering initiatives –
 - Alignment with UAE Energy Strategy 2050 for clean energy
 - Carbon Capture
 - EOR oil production
 - Clean power generation from hydrogen-rich syngas running a combined cycle power plant.
 - Syngas-based methanol, ammonia, hydrogen, and clean power
 - Approximate ROI ~ 10%

CLIENT OBJECTIVES

Large-scale blended fuel (coal and petcoke) gasification with CO₂ capture and its use in Enhanced Oil Recovery (EOR) in mature oil fields, and production of clean energy carriers.

SOLUTION DESCRIPTION

Dastur Energy's feasibility study included:

- ⊙ Technology evaluation for coal and petcoke gasification.
- ⊙ Evaluation of coal and petcoke blending options, economics, and sourcing mechanisms.
- ⊙ Market analysis of feedstock and envisaged products incl. demand-supply projection, price projection, and premium for low-CO₂
- ⊙ Evaluation and selection of suitable technologies for gasification-based value-added products (H₂, methanol, ammonia, power) and CO₂ capture.
- ⊙ In-plant & out-bound logistics infrastructure for feedstocks, products, and CO₂ transportation.
- ⊙ Financial assessment, funding & financing options, and appropriate business model for the project.
- ⊙ Environmental impact assessment, legal and regulatory framework and risk assessment.
- ⊙ Phasing strategy and implementation plan for optimized capital outlay and financial returns.



ABOUT DASTUR ENERGY

Dastur Energy Inc. is an Austin, Texas, based energy technology company specializing in conceptualization, design and development of commercial scale clean energy transition and carbon management solutions for the Power, Industrial and Government sectors. These solutions maximize ROI potential by leveraging existing assets, site level energy landscape, market models and government initiatives. Dastur Energy's offerings include – market analysis, technology options analysis, policy design, concept & feasibility studies, techno-economic analysis, integrated process design & engineering, technology licensing and project management from concept to commissioning.

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