



# **JORDAN PETROLEUM REFINERY COMPANY**



# Jordan Petroleum Refinery Company – ZARQA REFINERY 4TH EXPANSION PROJECT

## Opportunity Overview:

Jordan Petroleum Refinery Co. Ltd “JPRC” is the owner and operator of Jordan’s sole refinery (“Zarqa Refinery”) which was founded in 1956 and is listed on the Jordan Stock Exchange. The Current crude processing capacity of the existing refinery is 70,000 barrels per day, JPRC is planning to execute an expansion project (“Fourth Expansion”) for the Zarqa Refinery in order to increase the crude processing capacity to 120,000 barrels per day, with a product that is compliant with the requirement of Jordanian specification to meet the latest vehicle emission standard. A significant amount of pre-work has been completed (i.e., market study, pre-feasibility study, licensor selection, process licensor basic engineering documents, front end engineering design, and bankable feasibility study, ...etc.). The selected processes and technologies are from renowned technology providers (UOP, KBR). The project is planned to be executed via EPC contract Lump Sum Turnkey contract. The qualification and selection of the preferred contractor have been already executed. Negotiation with the selected preferred EPC contractor is still on going.

## Investment Highlights:

- Expected investment size: USD 3.0 bn
- Expected IRR: 13.2 % on Equity
- Payback period: 14 Years
- Job creation:
  - Local jobs during construction phase: Expected direct hire monthly peak manpower (during EPC) [6500]; Average direct hire monthly manpower (during EPC) [5000].
  - Long-term, high-quality jobs for the operation of the refinery
  - Hundreds of indirect jobs created and a positive impact on employment in Jordan SMEs

## Location Features and Characteristics

The project is located in close proximity of the existing refinery site in Zarqa, 25 Km north-east of Amman. The refinery is centrally located within a 50km radius of 80% of Jordan’s oil product demand and near major airports.

## Value proposition

- The refinery will be capable of producing fuels of higher quality, output compliant with EN 228 and EN 590 to meet Euro 5/V and Euro 6/VI vehicle emission standards as required by Jordanian specifications.
- Improved Nelson complexity index (3.2 to 9.2) to reduce carbon emissions.
- The expansion will result in a net positive economic impact due to improved operations and efficiency.
- Enhance energy efficiency and reduce greenhouse gas emissions as required and outlined by the International Finance Corporation’s (IFC) guidelines, Equator Principles, and the Jordanian Ministry of Environment.
- Improve air quality in the neighborhood of the refinery and across the kingdom.
- Enhance water management, conservation, treatment, and recycling.
- The expansion project increases production of the existing refinery to meet domestic demand for refined products. Production capacity will be increased from 70,000 bpd to 120,000 bpd, and there shall be no need to import refined light products.

## Insights

- Improvements in product specification to meet Euro 5/V and Euro 6/VI vehicle emission standards;
- Zero liquid discharge;
- Optimised steam production;
- Flare gas recovery unit;
- Smokeless flaring;
- Sulphur recovery plant;
- Minimisation of:
  - Greenhouse (GHG) emissions;
  - Fugitive emissions;
  - SO<sub>x</sub>, NO<sub>x</sub> and PM emissions.
- JPRC is the sole refinery in Jordan, located in-land close to demand and population centers like Amman, Irbid and Zarqa, which are key economic and industrial centers, contributing towards ~80% of domestic demand.
- Advantageous position to serve Jordan's product demand over imports, which incur costly transportation cost from the Aqaba port.
- Increased production capacity and optimized product slate will enable JPRC to strategically meet local demand and displace imports.

## Opportunity details

- The existing refinery will be upgraded to meet the environmental targets as required in the Safety and Environment Audit report and relevant environmental TOR approved by Ministry of Environment.
- The future configuration comprises a new 68 kbd crude distillation unit and various downstream processing units for a total crude processing capacity of 120 kbd, which shall include a new diesel hydro treater, a new hydrocracker, and a new residue slurry hydrocracking unit. The refinery has been designed to process either Arab light (from Saudi Arabia) or Basra light (from Iraq) crudes, but could be fed by many other different diets, including heavier crudes.
- Site Preparation Works 7,000,000 m<sup>3</sup>, Piping and Erection 38,000 tons, Pipe Welding 2,700,000-inch diameter, Equipment Erection 41,000 tons, Heavy Lifts 12,800 tons, Tankage 4,200 tons, Concrete Works 150,000 m<sup>3</sup>, Buildings 20,000 m<sup>2</sup>, Roads and Paving 450,000 m<sup>2</sup>, Steel Structures 63,000 tons, Painting 650,000 m<sup>2</sup>, Insulation 350 m<sup>2</sup>, Fire Proofing 500m<sup>2</sup>, Electrical Cabling 5,000,000 m, Instrument Cabling 4,000,000 m.

## Investor Role

To participate in equity financing.

To enable the interested investor to make a decision, JPRC and its advisers have prepared the following documents, these documents are available on the virtual data room. Access for interested investors can be granted after signing NDA with JPRC.

Environmental and Social Impact Assessment for Petra Project; prepared during the FEED

- Safety and Environment Audit of Existing Refinery (to enable integration with fourth expansion project).
- Terms of Reference for the EPC Environmental and Social Impact Assessment; Approved by Ministry of Environment
- JPRC GHG Emissions Reduction Plan
- Environmental Benefits and Improvements of Petra Project
- Process letter
- Information Memorandum
- Financial Model
- Share Subscription Agreement Term sheet
- Vendor Due Diligence Reports, Commercial prepared by Wood Mackenzie, Financial, and Tax prepared by Ernst and Young.
- Bankable Feasibility Study ("BFS").
- Basic Engineering Design, prepared by process licensor (UOP, KBR) this document can be viewed upon execution of separate NDA with JPRC and process licensors
- Front End Engineering Design ("FEED") this document can be viewed upon execution of separate NDA with JPRC and process licensors
- Market Survey

## Success Factors

- Government support during the life cycle of the project (mainly from regulatory point of view to eliminate the political risk).
- Source investors to inject in equity financing.



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