

On 6 June 2006, the groundbreaking ORYX GTL plant in Qatar was officially inaugurated by His Highness, Sheikh Hamad Bin Khalifa Al-Thani, Emir of the State of Qatar.

ORYX



REALISING THE VISION

INAUGURATION OF GROUND-BREAKING
ORYX GTL IN QATAR

“ORYX GTL is a defining moment in the growth in a whole new industry. GTL will grow here in Qatar and, as a result of this groundbreaking venture, also in many other parts of the world. Sasol is proud to have worked with Qatar Petroleum, Chevron and partners like Foster Wheeler in developing this exciting new industry. We are at the threshold of providing the world with an attractive alternative to crude-derived transportation fuels.”

Pat Davies
Chief Executive, Sasol



HH Sheikh Hamad Bin Khalifa Al-Thani, Emir of the State of Qatar, with HE Abdullah Bin Hamad Al-Attiyah, the Second Deputy Premier, and Ms Buyelwa Patience Sonjica, Minister of Minerals and Energy of the Republic of South Africa, during the inauguration of the ORYX GTL plant at Ras Laffan.

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Top: One of the two cigar-shaped LTFT reactors, each weighing 2,100 tonnes, which lie at the heart of the ORYX GTL plant.



ORYX overview

The ORYX GTL plant is a 'world first': the first plant to convert natural gas to liquid fuel using low-temperature Fischer-Tropsch technology.

The facility will produce 34,000 barrels per day (bbl/d) of liquids comprising 24,000 bbl/d of low emission, high performance GTL diesel, 9,000 bbl/d high-grade GTL naphtha and 1,000 bbl/d LPG from a lean natural gas feedstock.

The plant utilises Sasol's Slurry Phase Distillate™ (Sasol SPD™) technology to process 330 million cubic feet per day of lean natural gas. The Sasol SPD™ process comprises synthesis gas production, low-temperature Fischer-Tropsch conversion and product work-up

The high-quality GTL diesel produced will have a sulphur content below 5ppm, cetane rating greater than 70 (compared with 45-55 from typical diesel produced from crude) and low aromatics content of less than 1%, allowing higher performance and reductions in exhaust emissions.

It is expected that the early volumes of ORYX GTL diesel will be sold into the European market as a blend for upgrading conventional diesel. Europe has strong and growing demand for high performance diesel and stringent quality standards.

The GTL naphtha produced is highly paraffinic (98% compared with 65-85% for naphtha typically produced from crude) with a very low sulphur, naphthenic and aromatics content and is an ideal feed for ethylene cracking. Asia is the likely market for GTL naphtha.

Team effort

Everyone involved at Ras Laffan now appreciates the complex nature of starting up these heavily interdependent and integrated units. We executed the feasibility and FEED for this innovative project in conjunction with Sasol and have been an integral part of the joint Project Management Team (PMT), comprising Foster Wheeler, Sasol and Qatar Petroleum personnel.

The dedication and enthusiasm of the PMT and the ORYX GTL team, which also includes Foster Wheeler, in leading the EPC contractor safely through this multi-phase completion, with coincident construction, commissioning and operation, has to be appreciated and is an achievement of which all of the team members can be justifiably proud.

ORYX GTL *fact file*

- Shareholders: Qatar Petroleum (51%); Sasol (49%)
- Estimated project costs: \$950 million
- 72 hectare site
- 1.5 million m³ earth moved during site preparation
- 70,000 m³ of concrete
- 7,000 tonnes of steel
- 15,000 tonnes of steel pipe
- 1,700 km of cable
- Over 800 items of equipment
- 15 heavy lifts over 200 tonnes including:
 - world's largest cold box (2 x 550 tonnes each)
 - world's largest single shaft air compressor (2 x 360 tonnes each)
 - world's heaviest lift by land crane (2 x 2,100 tonne reactors)
- 3,000 hydrotests
- 8,500 instruments loops
- 30 million construction manhours expended
- Peak construction workforce of over 6,000
- Over 200 commissioning systems