Sasol has announced plans to build a world-scale ethane cracker and derivatives complex at its existing site near Lake Charles, Louisiana, that will roughly triple the company’s chemical production capacity in the U.S. and enable it to build on its strong positions in robust and growing global chemicals markets.

At the heart of the project is an ethane cracker that will produce 1.5 million tons of ethylene annually, benefitting from significant economies of scale. The complex also includes six chemical manufacturing plants. Approximately 90 percent of the cracker’s ethylene output will be converted into a diverse slate of commodity and high-margin specialty chemicals for markets in which Sasol has a strong position underpinned by collaborative customer relationships.

Ethane cracking is the process of breaking down molecules of ethane contained in natural gas to create ethylene, one of the building blocks of the petrochemical industry.

**Key facts and figures**

- Capacity: 1.5 million tons of ethylene per year
- Contractors:
  - Fluor Technip Integrated: Primary engineering, procurement, construction and management contractor
  - WorleyParsons: Project management
- Anticipated employment
  - More than 5,000 construction jobs at peak construction
  - More than 500 full-time positions
  - Thousands of indirect jobs across Louisiana

**Key dates**

- Commenced feasibility study: September 2011
- Commenced front-end engineering and design phase: December 2012
- Reached final investment decision: October 2014
- Anticipated beneficial operation: 2018
Products

**Ethylene oxide/ethylene glycol**: Virtually all of the ethylene oxide produced is used as an intermediate to produce other useful chemicals, particularly ethylene glycol. Ethylene glycol is used for the manufacture of polyester fiber for clothes, upholstery, carpet, and pillows and the blending of automotive engine antifreeze and coolant. Ethylene glycol is also used to manufacture fiberglass.

**Ethoxylates**: Used in products such as detergents, paints, inks, coatings and adhesives

**Ziegler alcohol** and **Guerbet alcohol**: Used in products such as laundry detergent, hand lotions, fragrances and glass cleaners

**Linear low density polyethylene** and **low density polyethylene**: Used in products such as films, plastics bags and food packaging

About Sasol

Sasol is an international integrated energy and chemical company that employs more than 33,000 people in 37 countries. We build and operate large-scale petrochemical facilities using proprietary and licensed technologies to produce a range of products, including liquid fuels, chemicals and electricity.

Based in Johannesburg, South Africa, Sasol is listed on the New York and Johannesburg stock exchanges. Sasol’s U.S. headquarters are located in Houston, Texas, and its current U.S. operations are located in Arizona, California, Louisiana, Oklahoma, Pennsylvania and Texas, where it produces a range of chemical products.
The U.S. shale gas revolution, coupled with the current wide differential between gas and oil prices, has created attractive opportunities for Sasol’s continued growth and investment in the U.S. market. Sasol, a world leader in converting natural gas into clean-burning transportation fuels and other valuable products, is proposing the first commercial gas-to-liquids (GTL) facility in the United States at its existing site near Lake Charles, Louisiana.

**Key facts and figures**
- 96,000 barrels per day of liquid fuels and chemicals including: GTL diesel, GTL naphtha, liquefied petroleum gas, paraffin, GTL based oils and medium and hard waxes
- Front-end engineering and design contractor: Technip
- Anticipated employment
  - More than 5,000 construction jobs at peak construction
  - More than 700 full-time positions
  - Thousands of indirect jobs across Louisiana

**Key dates**
- Commenced feasibility study: September 2011
- Commenced front-end engineering and design phase: December 2012
- Anticipated final investment decision: 2016
Products
Approximately 70 percent of the facility production will be GTL diesel, with GTL naphtha and liquid petroleum gas (LPG) as co-products:

**GTL diesel:** A cleaner-burning, next generation fuel that can be used neat or as a blendstock in existing diesel vehicles and fuel delivery infrastructure without modifications, unlike other proposed alternatives to petroleum-based fuels

**GTL naphtha:** A high-quality liquid feedstock that can be used in cracking and is an ideal diluent for heavy hydrocarbons, such as those extracted from oil sands

**GTL LPG:** A mix of hydrocarbon gases, commonly sold as propane, butane or a mixture of both, and used as a fuel in heating appliances and vehicles

The balance of approximately 30 percent of production will be chemical products, including:

**Paraffin:** Used to produce linear alkylbenzene, a biodegradable chemical used in detergents

**GTL waxes:** With high purity and molecular linearity, are ideal for use in the adhesives and polymers industries, and for production of industrial waxes and construction boards, as well as candles and personal care products

**GTL base oils:** A premium feedstock for the production of high quality synthetic lubricants that help engine manufacturers meet increasingly stringent fuel economy and emission standards

**GTL diesel:**
- Is cleaner-burning than conventional diesel with equivalent or lower greenhouse gas emissions
- Is virtually free of sulfur and aromatic compounds
- Enables greater biodiesel usage in diesel without increasing NOx emissions
- Brings benefits when used as a blending component in a conventional refinery by debottlenecking middle distillate production while reducing greenhouse gas emissions
- Reduces emissions of particulates, NOx, carbon monoxide and other pollutants when used in transportation – especially in older vehicles without advanced exhaust after-treatment systems, thereby helping to improve ambient air quality

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