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REPORT HIGHLIGHTS

The total market value of products produced using GTL (gas-to-liquids), CTL (Coal-to-liquids), and BTL (biomass-to-liquids) was $4.4 billion in 2010 and $4.5 billion in 2011. BCC projects this market will increase from $4.6 billion in 2012 to $6.8 billion by 2017, a CAGR of 8.1% over the five year period.

The market value of products produced by GTL processes was $1.8 billion in 2011. This value should reach $1.9 billion in 2012 and $2.7 billion in 2017, a CAGR of 7.3% between 2012 and 2017.

The market value of products produced by CTL processes is expected to increase from $2.6 billion in 2012 to $4 billion in 2017, a CAGR of 9%.

REPORT SCOPE

INTRODUCTION

STUDY GOALs AND OBJECTIVES

Worldwide, natural gas reserves far exceed oil reserves. Indeed, at current consumption rates, the earth has about a 45-year supply of oil, compared with a nearly 1,000-year supply of natural gas. In many locales, though, natural gas is â€œstrandedâ€• and thus suppliers have limited markets. A key objective of gas suppliers is the development of processing and conversion technologies, such as gas to liquids, that would enable entry to the multitrillion-dollar market for chemicals and liquid fuels. http://www.bharatbook.com/market-research-reports/energy-market-research-report/gas-to-liquids-processes-for-chemicals-and-energy-production.html

The gas-to-liquids (GTL) business is involved in the chemical conversion of stranded natural gas feedstocks to liquid products such as transportation fuels and chemicals. Insofar as beneficial processing of the worldâ€™s huge resource base of stranded natural gas is concerned, GTL processing is a relatively recent research and development (R&D) focus of the petrochemical industry. Development of commercial-scale GTL plants, utilizing stranded natural gas, is a relatively recent development, too. Hence, the need for this BCC Research report. market research reports

Liquid GTL products are primarily transportation fuels (and are defined as synthetic fuels, or synthetic fuels) and chemical feedstocks such as methanol, hydrogen, and other petrochemicals. As the terms are presently used in the petrochemical industry, â€œGTLâ€• and â€œGTL productsâ€• refer ma the output of plants (or refineries) that utilize stranded natural gas as feedstock. For that reason, conventional production of chemicals, including high-volume methanol, typically via steam methane reforming (SMR) of nonstranded natural gas, is not a principal focus of this report.

The objective of this BCC Research report is to provide an up-to-date and critical evaluation of the most dynamic and pathbreaking aspects of GTL technology and describe how recent breakthroughs in conversion technology have made GTL products competitive with products refined from crude oil. This report discusses the use of GTL processes to produce ultraclean diesel fuels and high-quality chemical products such as waxes. BCC assesses the role of GTL as an enabling technology for the production of clean transportation fuels.

A principal focus of the report is individual company initiatives and their R&D focus. Discussed as well is the status of all major GTL projects around the world that utilize stranded gas. Included are descriptions of technologies and products, and a forecast of the GTL market through 2017. The report quantifies demand for GTL by type of output, application, and production technology. A significant component of this report analyzes competitive synfuel concepts, as the commercial success of competitive synfuel concepts will weigh heavily on the ultimate trajectory of the GTL business. These competitive fuels include those derived from coal-to-liquids (CTL) and biomass-to-liquids (BTL).

REASONS FOR DOING THE STUDY

A significant amount of the worldâ€™s natural gas resources are stranded, far from existing markets. In the U.S. market, the recent substantial increase in natural gas reserves creates a technical and market opportunity for lower cost conversion to liquid fuels and chemicals. GTL technologies can economically convert these resources into high-quality, ultra-low sulfur diesel (ULSD) fuels that can be transported to consumers or used in remote locations.

Fischer-Tropsch (FT) processing of synthesis gas (synthesis gas) has undergone significant improvements in reactor design and product recovery and is no longer limited to large-scale commercial demonstrations. The process creates liquid fuel from synthesis gas, either gasified from hydrocarbon sources or natural gas, but not crude oil. FT processing has allowed South Africa, for instance, to reduce its dependency on foreign crude after World War II.

Technically, GTL fuel production is in a relatively advanced stage of development, with commercial production well demonstrated in, for example, Qatar, Malaysia, and South Africa. Although synthetic fuels can be produced from a range of feedstocksâ€”biomass, coal, and natural gasâ€”the GTL process is at the most advanced stage of commercial development. In addition, GTL utilizes gas resources that are either flared or currently unmarketable. Synfuel production via GTL processing of stranded gas is approximately 100 mbbl/d (thousand barrels per day), and it is estimated that as many as 10 large-scale GTL plants will be in operation over the next decade, producing as much as 300 mbbl/d of GTL products.

Many major oil companies have announced plans to investigate producing synthetic diesel fuel via a GTL process. However, a handful of companies, such as established GTL companies Sasol, Shell, Syntroleum and Rentech, are the dominant producers. As discussed in this report, though, there are numerous â€œsecond-tierâ€• companies that have sizable GTL support operations in engineering, design, plant construction, ancillaries, and related activities. Generally, R&D is improving the efficiency and economics of GTL production as well as quantifying the costs and benefits of production and use of GTL fuel in vehicles.

GTL-derived fuels do have competition in the alternatives market, and these competitors include low-grade and synthetic petroleum (e.g., from tar sands in Canada), compressed natural gas (CNG), CTL, biofuels, electric vehicles (EVs), and hydrogen. Although liquid fuels could be increasingly supplied by low-quality and synthetic petroleum, such as tar sands, due to the sheer size of readily accessible resources and the available technologies to turn such resources into liquid fuel, those fuels have much higher greenhouse gas (GHG) emissions than conventional petroleum, as well as GTL. BCC predicts this will be a highly significant negative factor in terms of product demand. Currently, production capacity for fossil-based â€œalternativeâ€• fuels is about 2.5 mbbl/d, of which the largest portion is tar sands and extra-heavy oil production. This, of course, far exceeds present GTL output.

These fossil-based alternative fuels now account for only 3% of global oil production but could double within the next five years. However, environmental mandates could be a significant force behind growing utilization of GTL for chemical and energy production. Higher-purity transportation fuels, such as ULSD, will become mandatory in most jurisdictions. GTL will offer both petroleum refiners and automakers flexibility to meet international agreements. In addition, GTL-derived fuel may have a slight GHG emission advantage.

INTENDED AUDIENCE

With its broad scope and in-depth analyses, this study will prove to be a valuable resource, particularly for anyone involved with or interested in the synthetic transportation fuels market. It will be particularly useful for researchers; laboratory and government personnel working in research or company settings; as well as business professionals, such as marketing managers, strategic planners, forecasters, and new product and business developers, who are involved with most aspects of the liquids fuels industry. It also will be of value to potential investors and members of the general public who are interested in acquiring a business-oriented view of GTL and the synthetic fuels business. The projections, forecasts, and trend analyses found in this report will provide readers with the necessary data and information for decision making.

For more information kindly visit :

Gas-to-Liquids Processes for Chemicals and Energy Production

Or

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