



## **The Catalyst Group Resources**

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### **PRESS RELEASE . . .**

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#### **Gas-to-Liquids: A Clear Choice, but Only for Some...**

Progress continues unabated in the development and implementation of gas-to-liquids (GTL) projects. It is clear that among the alternatives available to energy suppliers for “monetizing” gas reserves, GTL has achieved a distinct level of commitment. Despite the recent events, however, there remains a healthy level of skepticism (even hedging) surrounding some of the characteristics which define GTL. Among the most notable, as documented in The Catalyst Group Resources’ recently completed study entitled **“Gas-to-Liquids (GTL): A Strategic Assessment of the Technologies, Markets and Competitive Landscape”** are:

- The sheer scale of GTL projects may be daunting, but the progress in GTL technology, from both catalytic and reactor process perspectives, is forcing the “majors” which have made commitments (e.g., Sasol Chevron, PetroSA, ConocoPhillips, Shell and ExxonMobil) to continually re-consider the impacts. Third, and even fourth, generation catalysts, plus variations in product slates, are changing anticipated investment returns as well as overall production economics;
- Catalyst companies, including those intimately familiar with GTL technology, continue to seek expanded and deepened roles in advancing Fischer-Tropsch (F-T) technology, thereby assuring their future relationships. Beyond leaders like Engelhard, CRI and Sud-Chemie and Johnson Matthey, companies like Haldor-Topsoe and Albemarle (Akzo Nobel) are working to strengthen capabilities across the syngas-GTL-dewaxing train;
- GTL is not the only solution for monetizing reserves and broadening a portfolio of “alternative energy” sources. Based on regional differences in resource availability and type (e.g., gas vs. coal vs. “other”), companies are funding coal-to-liquids, dimethyl ether (DME) production and biomass-to-liquids. The timetable to commercialization for each affects the projections for GTL differently.

• Issues such as these, and many more, are addressed in detail in TCGR’s study of the GTL industry. Completed in October 2004, TCGR provides critical strategic and competitive insights into this increasingly important, yet complex, industry.

This unique study goes well beyond the standard multi-client report to provide critical analyses of competitive positions, relationships and potential technology evolution. In the report, the major efforts in advancing GTL, on a commercial basis, have been reviewed and analyzed. The projects which are in evaluation or development have been assessed for potential impacts. Critical attention has been given to companies which have not yet made commitments in GTL and the question “why not?” has been asked. In order to provide justification for particular activities in GTL, a section has been dedicated to economic assessments, with differing assumptions for capacity, catalyst activity and product work-ups delineated. TCGR’s study goes beyond those of others by providing forecasts on catalyst usage by the different types of units and discusses potential suppliers of catalysts and process technologies. Despite the fact that this new market has yet to fully develop, we analyze and discuss the evolving competitive landscape for the new and replacement catalyst markets.

The study is available in printed format as well as electronically (as a PDF file), allowing unlimited use/distribution of the report on a site-license basis. A presentation and order form, as well as the report's actual Table of Contents, are attached for your convenience. For more information, see our website at <http://www.catalystgrp.com/GTLstrategicassessment.html> or contact John J. Murphy at 215-628-4447 ([jjm@catalystgrp.com](mailto:jjm@catalystgrp.com)).

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*The Catalyst Group Resources (TCGR), a member of The Catalyst Group, is dedicated to monitoring and analyzing technical and commercial developments in catalysis as they apply to the global refining, petrochemical, fine/specialty chemical, pharmaceutical, polymer/elastomer and environmental industries. The Catalyst Group Resources' assessment is based on information obtained from the public domain as well as internal sources and industry interviews. TCGR's analysis will report factual information, as well as hypotheses/interpretations based on this information, in order to derive a reasonable set of expectations. Factors could cause actual results to differ from our forward-looking statements and The Catalyst Group Resources undertakes no obligation to publicly revise these forward-looking statements to reflect events or circumstances after the date hereof.*