

*The Sixteenth Biannual Edition*



# **INTELLIGENCE REPORT**

**BUSINESS SHIFTS IN THE GLOBAL  
CATALYTIC PROCESS INDUSTRIES  
2015-2021**

**STUDY PRESENTATION**

**(Completed May 2016)**

## The Sixteenth Biannual Edition



# INTELLIGENCE REPORT

## BUSINESS SHIFTS IN THE GLOBAL CATALYTIC PROCESS INDUSTRIES 2015-2021

...Leading-edge Analyses and Guidance for Opportunity  
Identification and Strategic Investment...

The catalyst industry has always exceeded global economic GDP growth! In this report, between 2015-2021 it is forecast to grow at +5.1% p.a. Catalysis drives the progress and innovation across our modern global society, producing over \$15 trillion annually, from gasoline to aspirin. It is therefore of vital strategic importance to your business development, opportunity and planning for success. It is at the heart of new product/process manufacturing, energy efficiency, productivity and profits!

TCGR has completed the 16<sup>th</sup> edition of our biannual update, "***The Intelligence Report. Business Shifts in the Global Catalytic Process Industries, 2015-2021.***" Considered the industry "gold standard," TCGR's report goes beyond statistics and benchmarks to provide competitive insight and analysis vital to end users in the refining, petrochemical/ chemical, polymer, specialty/fine chemicals and environmental markets. This edition, completed in May 2016, builds on this tradition, as we have since the first biannual report was completed back in 1986!

The chemical, plastics and environmental protection industries will lead growth over the next five (5) years. However within each industry segment, different opportunities abound because the suppliers and technologies are constantly evolving (change is constant). The global merchant catalyst market is forecast to grow from \$27.7 BIL/yr in 2015 to reach \$36.1 BIL/yr by 2021. If you were to include licensing and other direct services, the current market approaches \$40 BIL/yr.

Among the most significant events noted for the industry over the forecast period to 2021 are:

- The refining industry's growth is being driven by hydrocracking advances and revamps along with environmental regulations and shifting transport fuels demand (from gasoline to diesel). New technology to improve the use of changing feedstocks (e.g. LTO, shale gas) producing fuels with zero sulfur and other mandated changes means the industry's opportunity is recovering margins through new products/price increases.
- The petrochemical/chemical industries continue to invest in the revolution as a result of the international shale/tight oil windfall, while capturing significant new innovations that are changing its competitive landscape, notably in aromatics (e.g. BTX) and oxidation processes (EO).
- The thermoplastics industries are benefitting from polyester and niche value-added product advances (mPOs), capturing margins through new applications and catalyst improvements.
- The environmental protection industries are deploying new combined systems and catalysis to meet ever more stringent fuel and emission mandates, spreading globally. New GHG/CO<sub>2</sub> regulations are driving innovations for improved energy efficiency, new CO<sub>2</sub> products and trends toward biochemical/biopolymers.

Full of opportunities and profit generating technologies, repeat clients within the refining, petrochemical/chemicals, plastics, specialty chemicals, environmental segments have returned to subscribe to each biannual edition because the unique source provides clarity beyond the macro-views that limit other reports.

*The Intelligence Report: Business Shifts in the Global Catalytic Process Industries, 2015-2021*

## Back by Popular Demand in 2016!

In order to increase the report’s utility to senior management and executives, TCGR continues to offer a companion deliverable designed to complement the report contents, highlighting the key findings and making them more actionable. In a set of PowerPoint slides entitled, “**Intelligence Report 2016 - Exec Deck,**” TCGR has extracted the critical statistical data as well as technical, market and competitive/strategic insights, and deliver a presentation-style document. TCGR’s team of experts is then available to present these to subscriber audiences or they can be used to generate internal documents for strategic/competitive pursuits. The “Exec Deck,” and resultant Q&A during the presentation sessions, provides additional subscriber-specific value.



## “Special Feature” Section

In order to add value/perspective(s) beyond industry statistics and commentary, the 2016 edition includes a **Special Feature** section (Section VII; see ToFC on pages 4-19) addressing “Out of the Box” catalytic products, markets and applications. For the first time, TCGR documents these new developing areas of importance for innovation and growth! **The objective is to help subscribers evaluate new expansion areas and show end-users in the petroleum and chemicals industries new technologies they should be considering for deployment within the next five years to diversify their portfolios, improve their energy efficiencies, and reduce their cost(s) for regulatory compliance.** As usual, TCGR provides insights for the industry by the industry, that are valuable enough to constitute, in effect, a report within a report.

## *The Catalyst Industry’s “Gold Standard:” The Intelligence Report 2016*

As the “**Intelligence Report**” has done in the past, it provides new business and technology perspectives, including:

- Comprehensive, concise and detailed industry statistics on adjusted catalyst volumes and values, including forecasts
- Producer-and user-specific developments in production and technology, including alliances, ventures and acquisitions/divestitures
- Identification of new growth opportunities across the value chain (raw materials, licensing, services, technology, etc.)
- Assessment of geographical, technological and competitive gaps
- Analysis and recommendations leading to specific actionable items



*The Intelligence Report has evolved from documenting technological and commercial statistical progress into a tool for identifying strategic business opportunities and providing major investment guidance...*

The report’s actual Table of Contents appears on pages 4-18 and an order form appears on page 3. Further information is available at: <http://www.catalystgrp.com/php/articledetail.php?Intel-Report-2016-90> or by contacting John J. Murphy at [john.j.murphy@catalystgrp.com](mailto:john.j.murphy@catalystgrp.com) or +1.215.628.4447.

## A Review of Some of Our Past Analyses and Predictions ...

The fifteenth edition (2014) predicted that the chemical, plastics and environmental protection segments would lead growth over the forecast period, with the outlook for the refining segment less optimistic. Each industry segment was characterized by particular opportunities, such as the deployment of new zeolites in HDD catalytic systems and the new "ALPHA II" MMA plant in Saudi Arabia. The global merchant catalyst market was forecast to grow from \$25.3 BIL/yr in 2013 to reach \$33.5 BIL/yr by 2019. If you were to include licensing and other direct services, the market approaches \$35 BIL/yr.

\* \* \* \* \*

The fourteenth edition (2012) highlighted the structure, competition and factors for success in the catalytic process industries beyond the report's other sections (namely, Section III on industry market size/growth and Section IV on new catalyst products and processes). The section looked at technical/commercial value chains and market dynamics which depict the past and current competitive landscapes. In its "Special Feature" section (Section VII), the report addressed the increasingly important geographic regions of China and Latin America in catalyst technology development and commercial/market presence. As these regions become more self-sufficient, and as they increase their focus outside of their domestic requirements, the implications on global suppliers cannot be overlooked.

\* \* \* \* \*

The thirteenth edition (2010) highlighted the role of catalytic and membrane technologies in addressing the challenges of CO<sub>2</sub> and greenhouse gas (GHG), specifically noting the technological developments and commercial activities directed towards two key areas: 1) CO<sub>2</sub> capture and clean-up via membranes; and 2) CO<sub>2</sub> conversion to products via catalysis.

**All previous editions of the "Intelligence Report" series are available for purchase.  
Please visit: [http://www.catalystgrp.com/php/tcgr\\_chemicals.php](http://www.catalystgrp.com/php/tcgr_chemicals.php)**

## Order Form and Secrecy Agreement

\_\_\_\_\_ Please enter our order for "**Intelligence Report: Business Shifts in the Global Catalytic Process Industries, 2015-2021**" (completed May 2016). We understand that we will receive two (2) copies of the report. The cost of the report is US\$22,000.

\_\_\_\_\_ Please send \_\_\_\_\_ additional corporate copies @ US\$250 each

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