

Twentieth Biennial Edition

INTELLIGENCE REPORT:

**Business Shifts in the Global Catalytic
Process Industries, 2023-2029**

STUDY PRESENTATION

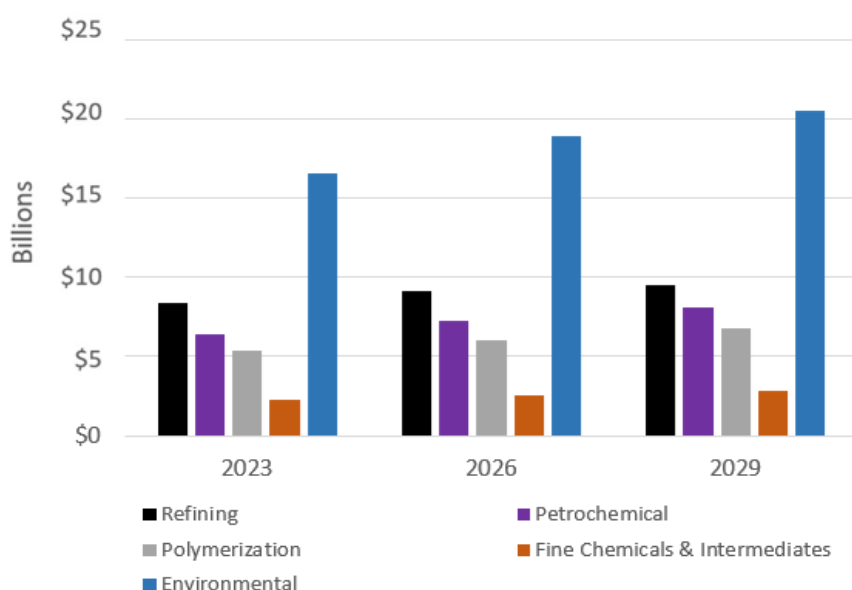
October 2023

INTELLIGENCE REPORT:

Business Shifts in the Global Catalytic Process Industries, 2023-2029

TCGR's newest edition, *"The Intelligence Report: Business Shifts in the Global Catalytic Process Industries, 2023-2029,"* builds on decades of solid foundations in evaluating and quantifying the catalyst industry. The in-depth analyses and actionable insights support subscribers in making informed, data-backed decisions to achieve business development goals and success. In addition, readers can leverage our thorough perspective of the competitive landscape, opening opportunities to gain competitive advantage.

Our estimate of today's catalyst industry is nearly \$39BIL, growing to almost \$48BIL by 2029, a CAGR of 3.5%. This is supported by continued growth for fuels, plastics, pharmaceuticals, food and agriculture products, textiles, building materials and vehicles, all end-use segments for chemical products produced with catalysts. The fastest growing sectors include bio-derived fuels, chemicals and plastics, green hydrogen and other syngas derivatives and fine/specialty chemicals.



Global Catalyst Market Value, 2023-2029 (\$BIL)

The central technological achievements and strategic R&D options are highlighted, while capturing catalyst market shares in sub-segments including FCC and hydroprocessing, polyolefins and environmental catalysts, rendering a holistic evaluation of the catalyst industry.



Special Feature – Critical Materials for Catalysts in the Energy Transition

Catalysis is set to play a key role in producing chemicals which function as energy carriers, including hydrogen, methanol, ammonia, liquid hydrocarbons and fuel ethers.

Crucial concerns surrounding supply/demand and criticality point to new catalysts that can reduce quantities of metals, extend lifetimes and be regenerable/recyclable.

Use the Special Feature to:

- Understand how catalysis delivers on energy transition and emissions reduction goals.
- Examine emerging markets including water and wastewater treatment.
- Quantify the demand for new products and technologies.
- Assess which metals and materials are of the highest criticality concerns.
- Develop strategies and technologies which reduce metal usage and extend their lifetime.

STUDY FEATURES

Macro Trends:

- Estimated +18-25% energy demand by 2050.
- Decarbonization needs are driving energy diversification (less coal, more NG and electricity).
- Key priorities: reducing CAPEX/OPEX for modern technologies and supply chain management for critical raw materials.
- Significant demand for energy, energy products and chemicals in APAC, Middle East and Africa.

Refining:

- Decarbonized refining push means more processes utilizing biomass, renewables and waste, with greater SAF/RD demand, hydrogen and CCS, e-fuels and continued OtC push.
- Slower EV penetration than once projected is extending “peak oil demand” into 2030s, providing >2% CAGR for refining catalysts in the 2020s.

Petrochemicals/Chemicals:

- Chemicals/monomers to support consumer pull for bio-polymers.
- Decarbonization achievement through CCS, hydrogen economy, ammonia, GTL, methanol and derivatives.
- Expect growth above GDP, notably in supply chains for polyolefins, PET, fine and specialty chemicals, and low-carbon alternatives.
- Global investments focused on APAC, Middle East, South America and Africa.

Polymerization:

- Annual market growth 4.5%, with PE/PP and PET being main drivers.
- Critical market differentiator is technology development for processes and catalysts.
- Impacts of mechanical recycling realized on virgin resin production, with cost improvement needed throughout value chain.

Environmental:

- New regulations propel annual environmental catalyst growth to 3.7%, despite slowed demand for ICE vehicles and Energy Transition impacts.
- Profound impact on all mobile segments and power and stationary backup electricity systems based on interplay with available low CI transportation fuel developments and energy trilemma supply/demand.

40

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INTELLIGENCE REPORT: Business Shifts in the Global Catalytic Process Industries, 2023 – 2029

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