



*The **Technology and Costs Programs** examine the impact of new, emerging and improved industrial technologies on the comparative economics of different process routes in various geographic regions, as well as the cost competitiveness of individual production plants.*





The **Technology and Costs** programs provide technology analyses, comparative economics and costs curves for a broad range of sectors including energy, chemicals and biorenewables.

## Technoeconomics – Energy & Chemicals (TECH) Biorenewable Insights (BI)

TECH issues twenty reports per program year, including eight petrochemical updates (building blocks, intermediates and polymers) and twelve special topics covering areas such as specialty/performance materials, refinery products, energy technologies, and engineering know-how.

TECH reports involve detailed reviews of the available literature, extensive liaison with technology licensors, producers, and EPC contractors, as well as Nexant know-how.

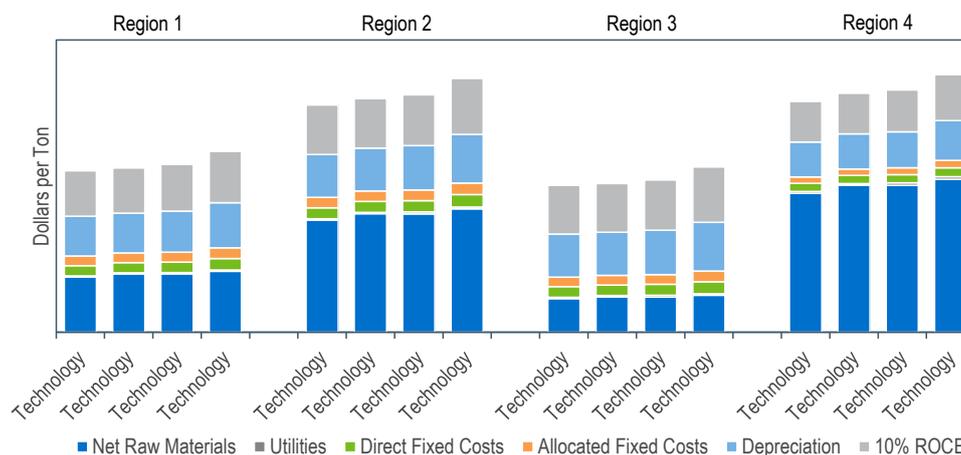
Reports cover:

- Trends in chemical technology
- Strategy/business overview
- Process technology
  - Chemistry
  - Process flow diagrams and technology descriptions
- Process economics – comparative cost of production estimates for different technologies/process routes across different geographic regions
- Overview of product applications and markets for new as well as established products
- Regional supply and demand balances, including capacity tables of plants in each region
- Regulatory and environmental issues where relevant

Biorenewable Insights (BI), provides in-depth evaluations and reliable data on the technology, cost competitiveness and business developments of biorenewable chemicals and fuels. BI issues ten reports per program year. Reports typically cover:

- Technology descriptions
  - Chemistry
  - Process flow diagrams and process descriptions
  - Company profiles
- Capacity analysis
  - Announced projects
  - Project-by-project analysis
  - Risk-adjusted project capacities
- Process economics – cost of production technologies for biorenewable technologies
  - Multi-regional cost of production estimates
  - Comparison to the conventional technology
- Implications for the conventional industry
  - Upstream and downstream implications
  - Scales and market sizes
  - Cost, price, margins, and return

### Sample Process Flow Diagram





## Sector Technology Analysis

In addition to the TECH and BI reports, Nexant issues regularly a series of reports focusing on the technology developments and comparative economics within a particular industry sector.

The Polyolefins Technology Report, formerly known as the POPS Technology Report, is published on a bi-annual schedule and provides technology analysis for all polyethylene resins (LDPE, LLDPE and HDPE) and polypropylene in a single study. The report includes comparative process economics for all major licensed technologies, as well as technologies not licensed but important to the polyolefins industry. Factors within the industry and the external market that shape technology development and competitive positioning are also examined.

Additional Sector Technology Reports for other industry segments will be coming soon.

## Cost Curve Analysis: NEW!

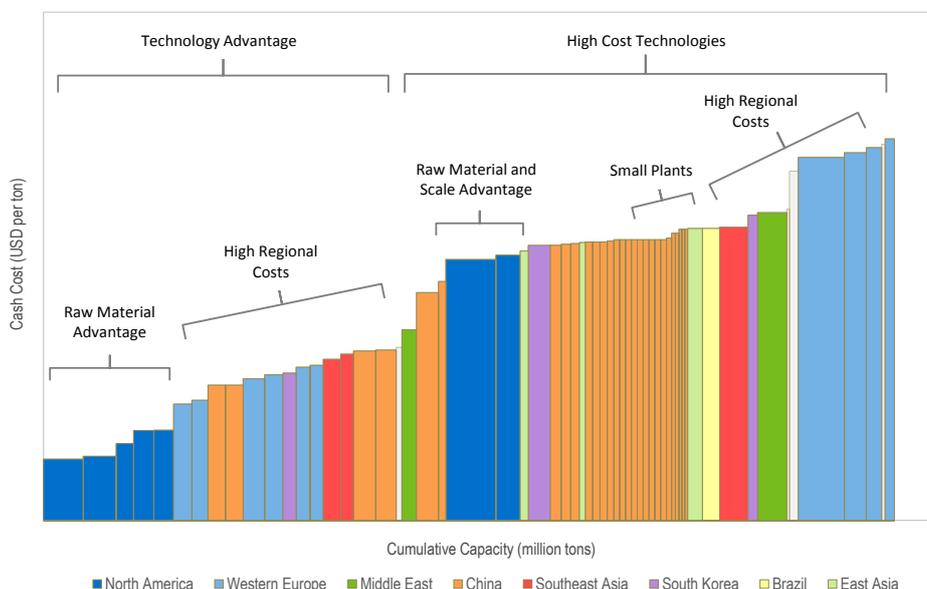
The new Cost Curve Analysis program will provide comparative cost positions of individual players in a given value chain within the global chemical and fertilizers industry. Cost curves will be developed on both current and projected bases, under different crude oil scenarios, and for both global and individual regional analysis.

The Cost Curve Analysis reports will cover global operating plants in Nexant’s database including new plant capacity that is expected to come on line in the future. Operating plants on each product cost curve are positioned based on their individual cash costs of production, which are derived from plant capacity, technology used, level of integration and representative operating rates in the plant region. In addition to PDF reports containing the analyses, an interactive Excel-based cost curve model will also be available to allow users to run their own custom evaluations.

These reports and the interactive cost curve model will be a valuable resource for chemical and fertilizer companies and investors considering investment decisions and future market development for various industry chains.

Nexant will introduce the first Cost Curve Analysis report and model later in 2018 covering olefins and polyolefins.

## Sample Cost Curve



**Nexant Subscriptions and Reports** provide clients with comprehensive analytics, forecasts and insights for the chemicals, polymers, energy and cleantech industries. Using a combination of business and technical expertise, with deep and broad understanding of markets, technologies and economics, Nexant provides solutions that our clients have relied upon for over 50 years.



**Markets and Profitability** comprises the former Petroleum and Petrochemical Economics (PPE), PolyOlefins Planning Service (POPS), Strategic Business Analysis (SBA) and World Gas Analytics (WGAS) and provides market analysis and profitability and pricing analysis with long term forecasts.

Contact us at [Markets&Profitability@nexant.com](mailto:Markets&Profitability@nexant.com)



**Technology and Costs** comprises the Technoeconomics – Energy & Chemicals (TECH) program (formerly known as PERP), the Biorenewable Insights program (BI), and the new Cost Curve Analysis. These programs provide comparative economics of different process routes and technologies in various geographic regions.

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The **Special Reports** analyze issues of topical importance to the energy and chemicals industry. Each special report explores the subject matter in detail to provide an up-to-date and thorough understanding of the related issue allowing investment decisions and new business strategy to be formulated.

Contact us at [SpecialReports@nexant.com](mailto:SpecialReports@nexant.com)



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