



TECH 2022-8: Acetic Acid

Acetic Acid is one in a series of reports published as part of NexantECA's 2022 Technoeconomics – Energy & Chemicals (TECH) program.

Overview

The radical evolution of the acetic acid sector over the past 30 years continues unabated as technology development, competitive pressures and downstream market development drives change. Acetic acid faces new challenges as continued growth in capacity has collided with the long hangover of the COVID-19 pandemic and continuing competitive pressures. While the groundbreaking technology ferment of the past decade is over, new pressures from policy initiatives like the European Green Deal now shine a spotlight on the sector's future in a decarbonized economy and cast future strategy in a new light. In such a dynamic sector, the overwhelming question remains: how can businesses compete?

This report focuses on the following major issues:

- What is the competitive situation for world scale market entrants in the acetic acid sector, particularly for the key regions of North America and China?
- What major technologies are available for acetic acid, and how to these technologies differ?
- What major innovations have acetic acid manufacturers developed and what have their key areas of focus been over the past decade?
- What is the competitive potential of newer technologies for acetic acid production compared to the dominant methanol carbonylation technologies?
- What will the economic and market effects of decarbonization efforts be on the acetic acid sector?

Commercial Technologies

This report extensively covers 11 different commercial or near-commercial technologies for acetic acid production, including all modern on-purpose production technologies in use, as well as discussing proposed or obsolete alternative routes. Major technologies covered include those developed by Celanese, BP, LyondellBasell, SABIC, Chiyoda, and Showa Denko, and include both methanol carbonylation as well as a detailed exploration of recently developed alternatives.

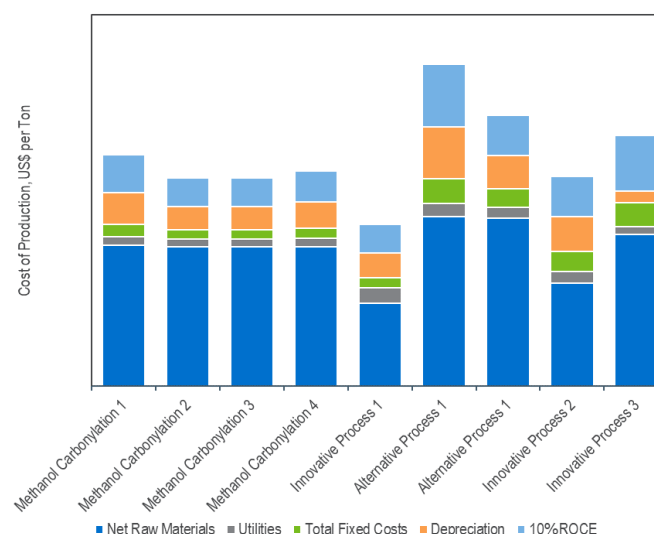
Process Economics

This report includes detailed cost of production estimates for nine different production processes on the basis of a newly built world-scale acetic acid plant. Economics are provided regionally for China, the Middle East, United States, and Western Europe for Q1 2022. NexantECA additionally fully models several key underlying intermediate costs regionally.

Commercial Overview

This report provides a high-level overview of acetic acid utilization, production, and demand, covering major short-term forecasts of market data. Coverage includes discussion of the recent supply rationalization and post-2018 expansion in China as well as the major effects of the COVID-19 pandemic on the sector, and provides a market outlook to 2025, including applications and their drivers.

Cost of Production for Key Technologies



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The TECH program (formerly known as PERP) is globally recognized as the industry standard source of process evaluations of existing, new and emerging technologies of interest to the energy and chemical industries.

TECH's comprehensive studies include detailed technology analyses, process economics, as well as commercial overviews and industry trends. Reports typically cover:

- Trends in chemical technology
- Strategic/business overviews
- Process Technology:
- Chemistry
- Process flow diagrams and descriptions of established/conventional, new and emerging processes
- Process economics – comparative costs of production estimates for different technologies across various geographic regions
- Overview of product applications and markets for new as well as established products
- Regional supply and demand balances for product, including capacity tables of plants in each region
- Regulatory and environmental issues where relevant

Subscription Options

A subscription to TECH comprises:

- PDF reports including detailed technology analyses, process economics, as well as commercial overviews and industry trends
- Cost of production tables in spreadsheet format
- Consultation time with the project team

An annual subscription to TECH includes twenty reports published in a given program year. Reports can also be purchased on an individual basis, including reports from previous program years.

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Technology and Costs comprises the Technoeconomics – Energy & Chemicals (TECH) program, 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.

NexantECA serves its clients from over 10 offices located throughout the Americas, Europe, the Middle East, Africa, and Asia.

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