

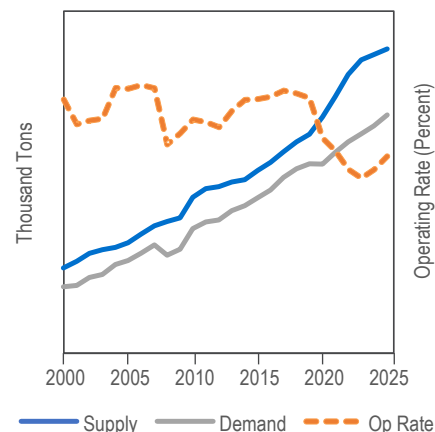
Cost Curves and the Evaluation of Petrochemicals Cost Competitiveness and Investment Attractiveness



Background

Over the last decade, the petrochemical industry has added close to 1 billion tons of annual capacity for products in the major petrochemical value chains such as ethylene, propylene, butadiene, aromatics, and derivatives to meet burgeoning product demand. In the next few years, more than 300 million tons more of petrochemicals capacity is expected, outpacing demand in some sectors, and potentially driving down operating rates, margins, and return on investment in the near term. Demand inevitably catches up with supply and new capacity will be needed. Knowing when to add capacity is critical.

Cost curves are often used to understand the competitiveness of new projects by comparing production costs with those of industry peers to quantify strategic advantages of feedstock, technology, and location selection. When coupled with offtake options, price and market forecasts, and capital investment, cost curve analysis can provide further insight into producer margins, profitability, and return on investment.



Objective

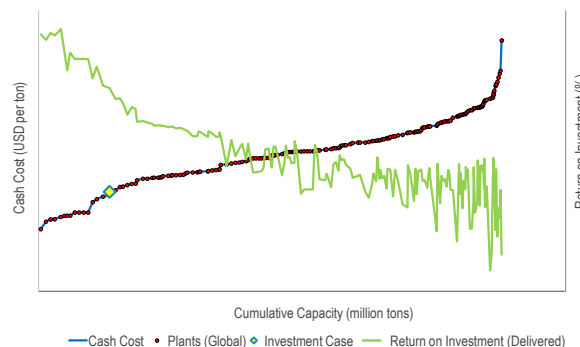
This report uses features of NexantECA's Cost Curve Analysis and Markets and Profitability programs to understand when petrochemicals investments will be needed following the large volume of capacity addition currently in progress and assesses investment options to determine which will provide the most attractive returns.

Product coverage includes:

- Ethylene and derivatives (HDPE, LLDPE, LDPE, MEG, EDC, VCM, and PVC)
- Propylene and derivatives (polypropylene, propylene oxide, acrylonitrile, acrylic acid)
- Butadiene and derivatives (butadiene rubber, SBR, ABS)
- Aromatics and derivatives (benzene, styrene, PS, EPS, cumene, phenol, acetone, bisphenol A, polycarbonate, para-xylene, PTA, PET)

What is Included in the Report?

- **Market Dynamics:** global supply and demand trends and operating rate forecasts for major petrochemicals are used to identify future capacity addition needs and to prioritize potential investment opportunities
- **Cost Curves:** plant gate and delivered cost analysis for global producers and investment opportunities to understand process selection and regional production and price impacts on investment returns. Cost competitiveness is performed under NexantECA's three oil scenarios to highlight the impact of oil price and how it may influence investment decisions
- **Value Chain Analysis:** the impact of intermediate chemicals transfer pricing along the value chain is examined to understand how it influences derivatives profitability and return on investment under NexantECA oil scenarios



For more information. please contact
Technology@NexantECA.com or www.NexantECA.com

Cost Curves and the Evaluation of Petrochemicals Cost Competitiveness and Investment Attractiveness



Table of Contents

The table of contents for the Special Report is shown below.

- 1 Executive Summary
- 2 Introduction
- 3 Products Overview
- 4 Investment Considerations
- 5 Cost of Production Basis
- 6 Global Cost Curves 2021
- 7 Global Cost Curves 2027
- 8 Investment Scenario Strategic Conclusions

For more information, please contact
Technology@NexantECA.com or www.NexantECA.com



NexantECA Subscriptions & 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, NexantECA provides solutions that our clients have relied upon for over 50 years.

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.

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

Americas
Tel: +1 914 609 0300
44 S Broadway,
5th Floor White Plains
NY 10601-4425
USA

Europe, Middle East & Africa
Tel: +44 20 7950 1600
110 Cannon Street
London EC4N 6EU
United Kingdom

Asia Pacific
Tel: +662 793 4600
22nd Floor, Rasa Tower I
555 Phahonyothin Road
Kwaeng Chatuchak
Khet Chatuchak
Bangkok 10900
Thailand

For more information. please contact
Technology@NexantECA.com or www.NexantECA.com