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## Special Report - Biobutanol and Downstream Markets: Will You be Buying Bio?

### Report Overview

#### Subjects addressed:

- Economics and technical feasibility of biobutanol via:
  - Conventional fermentation feedstocks
  - Biobutanol via biomass-based production
    - Cellulosic fermentation
    - Thermochemical
- Economic comparisons to OXO route
- Commercial status of major players and industry Developments
- Valuation of downstream chemicals opportunities

Biobutanols can be converted to a multitude of chemical and polymer products, as well as supplying the large existing petrochemical butanols markets. Concerns are mounting about the economic costs and environmental sustainability of the world's reliance on non-renewable resources.

Consequently, some of the world's biggest players in the energy and petrochemical industries seek to develop new feedstocks and products derived from bio-based materials. In fact, two of them have teamed up, namely BP and DuPont, to form Butamax for the production of biobutanol. There are also many smaller start-ups involved in biobutanol development.

Following the paradigm shift that has been seen with many other bioprocesses lately, chemical markets are being sized-up as primary targets, while fuel markets are being demoted to secondary targets. This is due to the fact that chemical prices are generally at least twice that of fuels for equal masses of material, allowing for increased revenues, and the potential for increased profitability.

Important recent developments have been focused on the development of bio-replacements, both fungible and functional replacements—with fungible products being the ultimate goal, as they have a lower hurdle for market acceptance. The potential for the development of breakthrough bio-based technologies is driving many established global firms to invest in R&D in this area to ensure that they are not left out of such developments. Similarly, the rapidly growing movement to label products as “green” is an important driver for durable goods manufacturers, who are keen to discover ways to utilize growing volumes of renewable materials.

Reflecting these trends, many fossil-based chemical producers have been diversifying into bio-based technologies through investments, partnerships and acquisitions.

This report, **“Biobutanol and Downstream Markets: Will You Be Buying Bio?”**, will assess the technical, commercial and economic status of producing bio-butanols as well as the downstream chemical and fuel markets and answer the questions:

- Will biobutanol be economically competitive?
- What chemicals products can be produced from biobutanol?
- What impact, if any, could biobutanol and derivatives have on petrochemical-based butanol markets?
- Who are the players and what is their status of development?
- What is the potential threat for the petrochemical players?
- What are the potential opportunities for the bio-developers?

The planned study will give subscribers a solid grasp of the markets for biobutanols, with an emphasis on the economics of their development in industrial applications, including but going beyond the fuel markets. The study will also address the broader technical and commercial implications such as feedstocks use and siting locations. Nexant will evaluate the potential markets for biobutanol technologies, using the OXO process (hydroformylation) as a benchmark conventional technology against the emerging biologically based routes.

Nexant's multi-client report will be useful to those firms considering shifting toward renewables or to anyone who needs a comprehensive overview of progress in biobutanols, potential market implications, and product potentials.

For information regarding the **“Biobutanol and Downstream Markets: Will You Be Buying Bio?”** report, please contact [STMC@nexant.com](mailto:STMC@nexant.com).

# NexantThinking™

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