



The following subjects are addressed in this report:

- **An assessment of commodity polymer production using feedstocks derived from renewable resources comprising of:**
 - Renewable feedstocks such as corn and sugarcane
 - Current available monomer and polymer technologies
 - Analysis of the competitive cash cost of production versus conventional petrochemical routes
- **Technology, economic and commercial evaluation**
- **Economics from feedstocks to commodity polymers along with a comparison to conventional petrochemical routes**

Plants to Plastics - Can Nature Compete in Commodity Polymers?

With today's growing concern about carbon footprint and sustainability, and with oil prices rising above \$100 per barrel, some of the world's bigger players in the chemical industry are seeking new feedstocks and products from renewable sources. Under the right circumstances, in markets where end-users will pay a premium, commodity polymers from renewable sources are already making inroads. Some of the world's largest packaging companies may accelerate this trend as they set new standards and initiatives for "Green" renewable materials, such as bio-based PE, PP, Polyethylene Terephthalate (PET). Will the strong interest in bio-based commodity plastics continue; can bio-based polymers really compete economically with petrochemical-derived materials, and if so, how bright is the future of this renewable industry?

Nexant's new multi-client report analyzes the available technologies for the production of commodity polymers via renewable resources, investigates alternative feedstock routes and feedstock sources, and provides an economic comparison of conventional and alternative routes to commodity polymers.

This report, **"Plants to Plastics – Can Nature Compete in Commodity Polymers?"** is a comprehensive study which investigates, evaluates and compares the following technologies:

- **Conventional and Bio-Based Monomer Technologies:**
 - Ethylene
 - Propylene
 - *para*-Xylene
 - Ethylene glycol
 - Purified terephthalic acid

■ Polymer Production Economics:

- Conventional and bio-based ethylene to polyethylene
- Conventional and bio-based propylene to polypropylene
- Conventional and bio-based MEG and purified terephthalic acid to polyethylene terephthalate

The study investigates renewable feedstocks, such as corn, sugarcane, and other types of biomass, which could provide an alternative to the traditional petrochemical feedstocks that are currently driving the polymer industry.

Nexant's multi-client report will be of interest to those seeking to move into the world of renewables, as well as those who may be looking for alternative uses of renewable resources. This report will evaluate the technology, economics, and cost competitiveness of such processes compared to conventional petrochemical routes.

"Plants to Plastics – Can Nature Compete in Commodity Polymers?" provides an independent, unbiased assessment on such technologies. These judgments are critical to polymers producers and investors seeking to enhance their business by incorporating technologies based on renewable resources and feedstocks.

Plants to Plastics - Can Nature Compete in Commodity Polymers? - Subscription

The **"Plants to Plastics - Can Nature Compete in Commodity Polymers"** report was published in December 2011 and is available immediately for US\$20,000. Please contact ChemSystems@nexant.com for a subscription form.

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