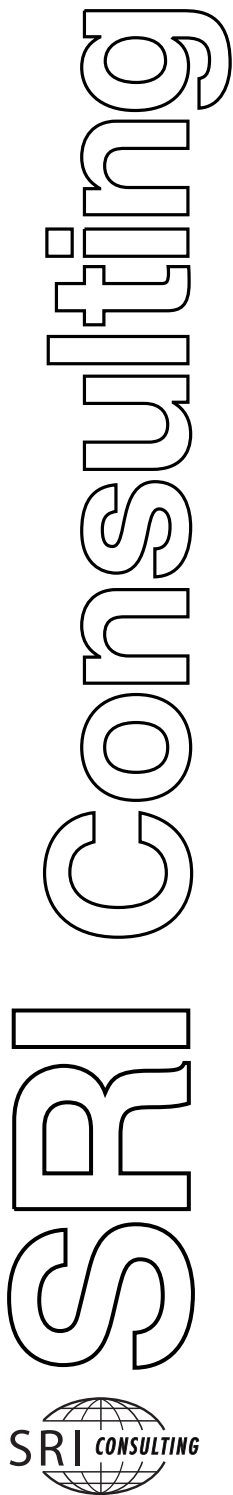


Abstract
Process Economics Program Report 178A
PROPYLENE INDUSTRY OUTLOOK
(June 2001)

Propylene demand is expected to grow faster than that for ethylene and is expected to nearly double in the next ten years, reaching more than 91 million tons worldwide by 2010. Propylene demand is also expected to grow faster than demand for petroleum-based fuels. Since propylene is produced almost exclusively as a by-product of either ethylene manufacture or petroleum refining there has been concern that supplies of propylene will be tight in the coming years.

In this report we have evaluated the potential production economics for propylene from ethylene steam cracker plants, from extraction for chemical use from refinery streams and by two intentional direct production routes (metathesis and propane dehydrogenation). For ethylene steam crackers the amount of propylene is heavily dependent on the feedstock. In refineries, where logistics permit (i.e. nearby uses for chemical or polymer grade propylene), extraction of propylene for chemical use will remain the most attractive disposition for refinery based propylene even with the expected changes in gasoline reformulation that could increase the driving force for its use in fuels as alkylate or dimate. Intentional direct production routes such as metathesis or propane dehydrogenation will remain more expensive than the byproduct routes and will continue to provide only marginal production volumes in niche circumstances.



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PROPYLENE INDUSTRY OUTLOOK

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