

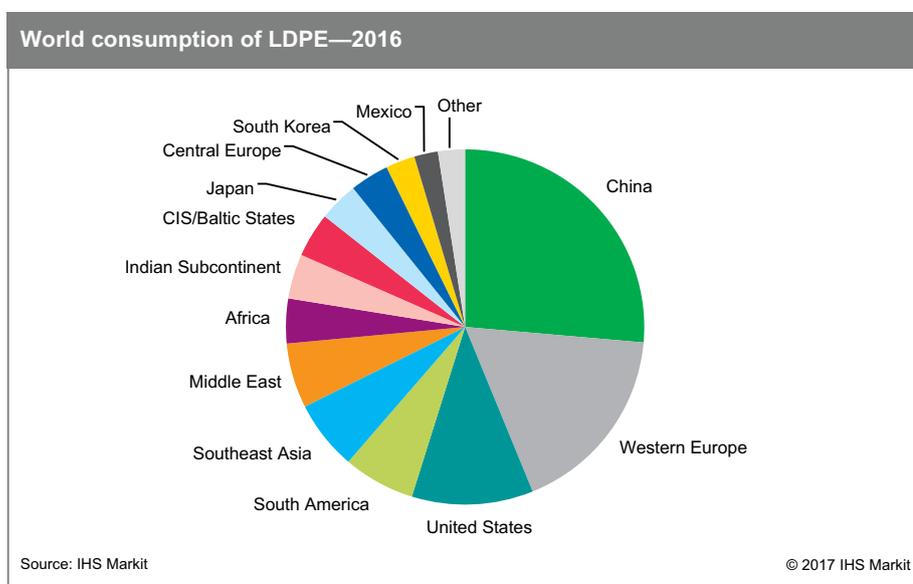
Polyethylene Resins, Low-Density (LDPE)

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Abstract

The global polyethylene (PE) industry can be characterized mainly by a wave of capacity additions in North America, the Middle East, and China (primarily coal based). The shift toward lighter and cost-advantaged feedstock in North America is incentivizing production in the region. The competition in the international market has increased, adding pressure to the high-cost producers, especially in Western Europe. With the dip in oil prices in late 2014, the cost advantages enjoyed by natural gas-based producers declined but were not totally eliminated. Thus, North American capacity and production increases in the coming years will result in increased exports from the region. China is expected to benefit from local production, although its rapid demand growth will continue to depend on imported low-density polyethylene (LDPE) resins. LDPE accounted for 23% of total polyethylene demand in 2016 (LDPE and LLDPE together account for 55% of total polyethylene demand).

The following pie chart shows world consumption of LDPE:



ExxonMobil, LyondellBasell, and Sinopec are the top three producers globally, accounting for a collective share of 18% of the global capacity in 2016. ExxonMobil is the largest producer globally, with almost 7% of the total capacity in 2016.

While the current low-priced-crude environment has given pause to some of the more speculative investment projects in the forecast period, the majority of projects put in place prior to the drop in crude prices beginning in late 2014 are still progressing.

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China is expected to have an above-average annual capacity growth rate of 8.5% between 2016 and 2021. Many of the US capacity investments announced in the recent past owing to the shale boom will come to fruition during this period, and North America will surpass the Middle East and China as the largest producer by 2021.

China will continue to lead world demand for polyethylene. Film and sheet applications continue to be the largest end-use segment in China and globally, accounting for 73% of the demand in 2021. China is short domestically, and the market for LDPE imports will continue to grow.

In contrast, US consumption will grow at a modest average annual rate of 1.5% during 2016–21. With further aggressive expansions, the United States will remain long, and LDPE exports will grow rapidly over the next five years. In Western Europe, growth will be more modest in the next five years.

Film and sheet, injection molding, and extrusion coating applications for LDPE drive overall demand. Demand in the United States and Western Europe is driven by film and sheet and extrusion coating applications, whereas Chinese demand is driven by injection molding as the second-largest application. Countries with large populations and growing economies, such as China, India, and Indonesia, have great growth potential.

Global trade in the next five years will be affected primarily by increased exports from North America and growing self-sufficiency in China. The Middle East will continue to export large volumes in the forecast years.

Global LDPE demand is forecast to grow at an average annual rate of 2.8% during 2016–21.

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