## U.S. BECOMING A LEADING EXPORTER OF PETROLEUM PRODUCTS

Cynthia B. Foreso, Office of Industries (cynthia.foreso@usitc.gov, 202-205-3348)

U.S. exports of petroleum products<sup>1</sup> have accounted for an increasing share of the global (non-U.S.) market for these products, rising from 8 percent in 2009 to 15 percent in 2013. Global demand for distillate fuel oils has risen faster than for other primary petroleum products, prompting U.S. refiners to increase their yield of fuel oils at a time when U.S. demand has remained stagnant.

## Strong increase in both the volume and value of U.S. petroleum products exports

In 2011, for the first time in over 60 years, the United States became a net exporter of petroleum products. The majority of the exports are from the U.S. Gulf Coast where some of the world's most sophisticated refining capacity is concentrated. During 2011-13, the quantity of U.S. exports rose by 18 percent to 1.3 billion barrels (figure 1). This increase has continued into 2014 and industry experts agree that these exports will continue to rise in the foreseeable future.



Figure 1 Increased U.S. production and declining U.S. consumption have led to rising exports

Source: Official statistics of the U.S. Department of Energy.

Most of the increase in the quantity of U.S. exports of petroleum products is attributable to (1) reduced domestic demand for motor fuels, due in part to a lagging economy, more fuel-efficient cars, and high gasoline prices; (2) increased U.S. production of crude petroleum (feedstock for petroleum products), particularly from shale sources in North Dakota's Bakken formation and Eagle Ford in Texas;<sup>2</sup> (3) refineries operating at record levels; and (4) high demand for fuel oils on the world market.

The value of U.S. exports showed a more dramatic increase. This trend was primarily due to the rise in the refiner acquisition cost of a barrel of crude petroleum from \$29 in 2003 to over \$100 in 2013. Also, the product mix of these exports can impact the value since refineries produce a variety of products from a barrel of crude.

<sup>&</sup>lt;sup>1</sup> Petroleum products are produced in refineries from crude petroleum and include distillate and residual fuel oils, motor fuels (including gasoline and jet fuels), naphtha, lubricants, and greases as well as many other products.

<sup>&</sup>lt;sup>2</sup> Hydraulic fracturing accounts for about 25 percent of total U.S. crude production and is used in shale operations as well as other petroleum-bearing formations with low permeability.

## U.S. role as a global trader of petroleum products

Petroleum products are traded globally, and the United States has a long history of exporting certain petroleum products and importing others to balance refinery outputs and to satisfy global demand. For example, U.S. refiners have tended to export diesel to Europe (where diesel demand is stronger), while European refiners have tended to export gasoline to the U.S. market (where gasoline demand is stronger). Distillate and residual fuel oils, used to produce diesel fuel or fuel used for space heating and other industrial purposes, have been the major U.S. export products (figure 2).

Due to the strong growth in U.S. exports, the U.S. share of global exports of petroleum products, by volume, nearly doubled during 2009-13 from 8 percent to 15 percent. The United States became the fourth largest world exporter in 2013, following the European Union (EU) (30%), Canada (16%), and Russia (15%).



Figure 2 Growing U.S. exports of fuel oils have boosted the U.S. share of global exports

Source: Official statistics of the U.S. Department of Energy.

## Demand for U.S. exports of distillate fuel oils

Global demand for distillate fuel oils rose faster than for other primary petroleum products prompting U.S. refiners to increase their yield of these fuel oils (a barrel of crude in U.S. refineries currently yields an average of 31 percent distillate fuel). Moreover, exports of fuel oils tended to have higher profit margins for U.S. refiners than gasoline.

U.S. exports of distillate fuel oils have increased significantly since 2011. This trend is expected to continue as U.S. demand remains flat, U.S. production continues to grow, and refinery investments and upgrades in the EU and Latin America are delayed, keeping production there stagnant. In recent years, U.S. export growth has been strongest to Latin America (not including Mexico) and the EU. Latin America's share of U.S. exports rose from 21 percent in 2009 to 28 percent in 2013, while the EU's share rose from 17 percent in 2009 to 20 percent in 2013. Together, Canada and Mexico continue to account for about 27 percent of U.S. exports of petroleum products.

*Sources:* Official statistics of the U.S. Department of Energy; *Oil and Gas Journal*, Western Europe Leads Global Refining Contraction," December 2, 2013; staff telephone interviews with industry sources.

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