Industry's Outlook Depends on Market Changes and Key Environmental Regulations

What GAO Found

Stakeholders GAO contacted and information reviewed by GAO identified the following three major changes that have recently affected the domestic petroleum refining industry:

- **Increased production.** U.S. and Canadian crude oil production have increased, leading to lower costs of crude oil for some refiners. After generally declining for decades, monthly U.S. crude oil production increased over 55 percent compared with average production in 2008.

- **Declining consumption.** Domestic consumption of petroleum products declined by 11 percent from 2005 through 2012, resulting in a smaller domestic market for refiners.

- **Key regulations.** Two key regulations—the Environmental Protection Agency’s (EPA) and Department of Transportation’s (DOT) coordinated fuel economy and greenhouse gas (GHG) vehicle emission standards, as well as EPA's Renewable Fuel Standard (RFS)—have contributed to declining petroleum-based fuel consumption. For some refiners, compliance with the RFS increased costs in the first half of 2013, though costs have since declined to some degree from their peak. According to some stakeholders GAO contacted, this was primarily due to RFS requirements exceeding the capability of the transportation fuel infrastructure to distribute and the fleet of vehicles to use renewable fuels. Moreover, EPA has missed the statutory deadline to issue regulations establishing annual RFS blending standards since 2009. EPA has not systematically identified the underlying causes of these delays or changed its approach in order to avoid them. A late RFS contributes to industry uncertainty, which can increase costs because industry cannot plan and budget effectively, according to some stakeholders.

Stakeholders GAO contacted and information reviewed generally suggested that the U.S. refining industry's outlook depends on the following factors:

- **Domestic consumption.** Future consumption of petroleum products is uncertain, with projections ranging from stable to slightly increasing through 2020 but not returning to consumption levels of the past. Forecasts GAO reviewed suggest higher future refinery production in scenarios with higher domestic consumption.

- **Costs of key regulations.** The extent to which requirements in the key regulations increase costs for refiners will affect the industry's outlook. For example, future costs to comply with RFS may depend on the annual renewable fuel volumes EPA sets and whether EPA issues annual RFS standards on time. In general, increasing costs may be absorbed by refiners (i.e., by reducing their profits), be passed on to consumers through higher prices, or both.

- **Foreign markets.** The U.S. refining industry has increasingly relied on foreign markets. Exports grew from 7 percent of production in 2007 to 17 percent in 2012. The extent to which domestic refiners export their products will depend on the competitiveness of U.S. refiners. Factors that may affect competitiveness include domestic environmental regulations, levels of U.S. and Canadian crude oil production, and the balance between global refining capacity and demand for petroleum products.