FUELS

US Diesel Export Trends
Unconventional Crudes
2020 0.50% Sulfur Regulation
Global Diesel Demand
As we look out to 2040, global oil demand is expected to continue growing with the largest volumes, going to the road transport sector where the increase in vehicle ownership is the key driver for growth.

Demand from developing countries is also expected to increase significantly over this period, driven by an expanding middle class, high population growth rates and stronger economic growth with India out in front. However, closer to 2040, in most regions, oil demand will slow, with moderately rising oil prices, slower economic growth, efficiency improvements and the switch to alternative fuels all playing a part in this trend.
In terms of refined products, we expect growth through 2040, with regional variations. Gasoline will see increased demand from developing countries. However, the acceptance of electric vehicles, ever increasing car efficiency and uptake of renewables, bring a level of uncertainty.

In developing economies, diesel demand will be driven by the growing population of diesel trucks, buses and light vehicles. However, in mature markets a decline is expected as diesel cars lose popularity in Europe and demand slows in the trucking and power generation sectors.
But, in the shorter term, one of the biggest factors influencing product demand and causing a shake up in the refining, fuels, and shipping industries, is the International Maritime Organization's regulation that sets a new limit for sulphur in fuel oil used on-board ships from January 1st, 2020.
While it’s unclear which route the shipping industry will take to comply with the IMO sulfur regulation, we can expect low Sulphur Fuels to be a large part of the solution.

This option will have the biggest impact on refineries and given the large volumes involved, shifts in trade flows of low sulphur fuels could be significant. And, as the pull for low sulfur heavy distillate and heavy fuel volumes grows, we could see an impact on crude markets in the coming years.

Fuel producers, traders and blenders will have to address key issues with these low sulfur fuels: Blend stability, fuel compatibility, and the handling of more waxy components and finished fuels. In addition, the lower viscosity of these new fuels could result in higher fuel system component wear and the use of more heavy cracked components may lead to poorer combustibility. Fuel additives will be increasingly important to ensure the production of fit for purpose fuels.
At the global level, the forecast for diesel fuel looks strong. Growth expected from developing economies and the Marine sector will more than offset the falling demand, in mature markets.

In our view, the need for low sulfur distillates will impact crude choice, refinery utilization, and fuel blending at refineries, as the barrel demand split evolves.

Trade flows will continue to create opportunities for refiners. Those looking to increase exports, particularly of diesel fuel, will need to react quickly to changing market demand patterns.
U.S. diesel exports continue to rise and distillate fuels remain the most exported U.S. petroleum product. Almost ¾ of these exports were to South and Central American countries and demand was up significantly in 2017 from Brazil and Mexico.

Exports to Europe softened a little in 2017, with France and the Netherlands the main importers.

Currently, only small volumes go to Asia Pacific and Africa, where trade with both Singapore and Morocco has increased. Treating diesel fuels so that they can meet a broad set of industry approvals, operability targets and quality specifications will give refiners additional product flexibility, as they look for lucrative export markets.
The global appetite for energy, of all fuels other than coal, looks set to grow well into the future and in response, the production of shale and oil sands crudes in North America, is expected to surge over the next decade.
While greater use of these advantaged crudes adds value at the refinery, crude slate variability and the pressure to improve economics throughout the value chain, are driving continued technical challenges for upstream, midstream and downstream markets.
The efficient transport and conversion of unconventional, inherently variable crudes, is growing in importance to producers and refiners, who are looking for cost effective solutions to help resolve several key issues, for example:

Preventing wax build up on vessel walls, which reduces the volume of product delivered to the end customer. Controlling wax and asphaltene deposits, which can otherwise lead to problems during oil production and transportation.

And improving Asphaltene stability to prevent issues in blending operations at the refinery and to reduce heat exchanger fouling. To address these challenges, fuel additives must be carefully matched to the characteristics of the crude so that they can keep the wax mobile and improve asphaltene deposit control.
Before we close, sustainability is driving some OEMs to explore renewable fuels. Joining us again is Roger Gault of the EMA to tell us more.

Roger Gault: “Engine manufacturers are looking at hydrocarbon renewable diesel. Generally speaking, it's a clean fuel, high in cetane number; it's only drawback being it's lower in density. “From what I understand from speaking with members about renewable hydrocarbon diesel fuel, the primary advantage that they see is that if it's properly isomerized, it can have extremely good cold flow properties. So, it works well as a blend stock in cold regions where historical number one petroleum diesel fuel has been extremely hard to come by.”
Industry trends continue to drive technical challenges in the fuels and crudes markets, particularly with the rise of Low Sulphur Marine Fuels, the opportunities for increased export to meet demand from developing economies, and from the changing crude slate, including the rise in production of advantaged crudes.
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