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Argus White Paper:

What is IMO 2020? Summarizing the impact on the aviation fuel market

On October 2016, the International Maritime Organization (IMO) enacted a new regulation for sulphur content in marine fuels requiring sulphur content to be reduced from 3.5% to 0.5%.The implementation date for this change is effective January 1, 2020. This regulation is typically referred to as MARPOL VI.

Who will be affected?

Ship owners, as they decide on how best to comply with the new rules.

Bunker fuel blenders, as they adapt to new blending requirements.

Refiners, as they find ways to supply new compliant bunker fuel.

Crude oil producers, as price differentials for sweet and sour crudes diverge.

Airlines, as refiners' efforts to produce new bunker products pushes up the price of jet fuel.

What strategies are ship owners considering?

Using compliant fuels, which include low-sulphur marine gas oil (MGO) and 0.5% sulphur-compliant fuel oil blends.

Installing scrubbers to be able to burn high-sulphur fuel oil. Argus compiles a database that lists global marine fuels scrubber installations, including the name of vessel and the year the scrubber will be commissioned. The total number of vessels already outfitted with scrubbers and scheduled to be outfitted was 1,829 as of the end of February 2019. Tankers accounted for highest amount (515), followed by containerships (395) and bulk carriers (380).

Using alternative fuels, such as liquefied natural gas (LNG) or methanol for bunkering fuel are a possibility, but are still in the development phase and unlikely to have any real impact in the near term. Global infrastructure for loading LNG or methanol is limited, and only a small percentage of the global fleet is currently capable of utilizing these fuels.

Avoiding the mandate via waivers or non-compliance. Given the wide spread between HSFO and MGO/0.5% LSFO there will be big incentive for some shippers operating off the main sea-lanes to continue to burn HSFO regardless.

What will refiners do?

- Making marine bunkers is a blending operation, normally focused on achieving appropriate viscosity. Now it will be a question of blending to achieve a tight sulphur specification.

- Refiners have a range of blending options available to make 0.5% sulphur fuel oil but all will involve replacing a significant proportion of residue content with middle distillate.

- Refiners will also be asked to increase supply of MGO to shippers unable to continue to use HSFO but unwilling to switch to a new 0.5% fuel oil.

- The result is that a significant amount of material originally intended to meet demand for automotive diesel, heating oil and jet fuel will be diverted to the marine bunker pool.

- Sophisticated refineries may opt to pay a premium for low-sulphur crude since they can be used to produce a high proportion of compliant bunker fuel or bunker blend stock.

How will aviation fuel prices be affected?

- Stronger demand for MGO and product for blending into 0.5% fuel oil will temporarily tighten middle distillate markets and put upward pressure on prices.

- For 2 to 3 years, prices for gas/diesel oil and jet fuel will be stronger than normal.

- The evolving market situation means that future pricing is more than ever uncertain but jet fuel prices could be 10-30pc higher than currently, which represents an added cost of around $150/t, 2019 (or $15.50/bbl).

- In a worst case scenario prices could spike as aggressively as in 2008, which would represent a further added cost of at least $100/t to today's pricing.

What are market participants saying?

Refiners have stated they may sell jet fuel or gasoline producing feedstock to blend into the marine fuel market, depending on economics. Jet fuel prices should rise with diesel demand as it is a candidate for marine fuel blending. And, thin gasoline margins already have encouraged refiners to consider redirecting low-sulphur vacuum gas oil from gasoline-producing fluid catalytic cracking (FCC) units into marine fuel supply.

Commodity and banking analysts forecast the International Maritime Organisation (IMO) regulation to negatively impact airlines' earnings before interest and taxes (Ebit) from next year citing the introduction of a global cap on marine sulphur emissions in 2020 will increase diesel demand for mixing with low-sulphur fuel oil (LSFO), which will eat into jet fuel production.

How can the aviation fuel market effectively manage exposure to this risk?

The Argus jet fuel prices and crack spread forecasts contained in the Crude Oil and Refined Products Outlook can be used to keep on top of latest market developments. The use of these forecasting tools will provide an ability to plan more effectively for sourcing future supply on a global basis.

In addition, the monitoring of daily jet prices found in the Argus Daily Jet Report will help market participants keep abreast of price signals, manage fuel more efficiently and improve efficiencies of tinkering.

While the market continues to absorb these changes, ongoing information and price assessments produced by Argus can be used as a market reference to judge what the next steps should be in planning fuel requirements.

About Argus

Argus is an independent media organisation with almost 950 staff. It is headquartered in London and has 21 offices in the world's principal commodity trading and production centres. Argus produces price assessments and analysis of international energy and other commodity markets, and offers bespoke consulting services and industry-leading conferences.

Companies in 140 countries around the world use Argus data to index physical trade and as benchmarks in financial derivative markets as well as for analysis and planning purposes. Argus was founded in 1970 and is a privately held UK-registered company. It is owned by employee shareholders and global growth equity firm General Atlantic.

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