



A Yokogawa Company

# IMO 2020 MARINE FUEL SULPHUR CAP

## IDENTIFYING THE BEST RESPONSE FOR YOUR REFINERY

**The decision by the International Maritime Organization (IMO) to implement a global sulphur limit of 0.5% in the fuel oil used by ships from 1st January 2020 is the most disruptive regulation change to impact the oil industry in the last 30 years. It affects the majority of global waters and is a fundamental shift in fuel production, that moves bunker fuel from a by-product status to an on-purpose, on-specification fuel. The decision presents challenges and opportunities for both the shipping industry and the oil industry.**

### How Stakeholders Might Respond

Maritime transport is essential to the world's economy. Over 90% of the world's trade is carried by sea, and it is by far the most cost-effective way to collectively move goods and raw materials around the world. The IMO regulation pushes the shipping industry to clean its emissions. However, the shipping, bunkering, and refining industries are all interlinked with respect to the change in sulphur specification, and the response by one industry will affect the decisions of others.

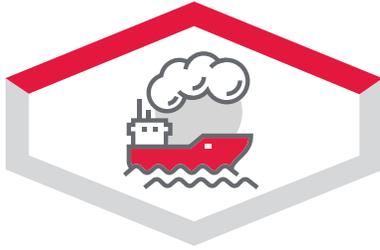
With the change of the IMO emissions target starting in 2020, there is the probability that more than two million barrels per day of high sulphur fuel oil (HSFO) will be stranded in the market. The shipping industry is looking for history to repeat itself, just as when Emission Control Area (ECA) fuels were mandated and the refining industry adjusted to produce the compliant fuels.

The shipping industry today is burdened with over capacity and historically low margins and freight rates. In addition, shippers are facing a complex array of regulatory issues, such as ballast water controls, future CO<sub>2</sub> emissions targets, mandatory stack monitoring and insurability. The shipping industry could opt to invest in the removal of sulphur from exhaust fumes through the installation of approved emission abatement equipment, such as scrubbers, as an alternative to switching to low sulphur marine fuel. However, the shipping industry is not convinced that scrubbers along with the sludge collection and retention are worth the investment.

Scrubber installations are costly (\$6-10 million per ship) and with the added cost through sludge retention and disposal, the complexity of fuel switching has the shipping industry severely hesitating on the next step. We believe the majority of shippers will opt to move to low sulphur fuel oil or use other fuels with lower environmental impact such as diesel, Liquefied Natural Gas (LNG) or gasoil.



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What incentivizes a shipper with low fuel cost, decreases margin to the refiner to the point of survival. Refiners are battling many issues which make focusing on the IMO ruling more challenging and impacts their ability to make sustainable margin moving forward, including:

- Crude oil pricing
- Demand balances
- The additional refining and production capacity in the Middle East and Asia
- Government adjustments in the allowance of 'free' market movements
- Ever-changing political fault lines
- Potentials in carbon taxation

The decision has left refiners wondering what impact this will have on their profitability, and what they can realistically achieve by 2020.

## A wait-and-see approach is costly for all

The options for refiners are limited and time is short. We believe that extending a wait-and-see approach will prove to be a costly option for all. There is a need to make a decision quickly to adapt to this change or risk going out of business permanently.

Wherever your refinery stands, now is the time to complete the analysis proactively and understand these future restrictions.

## Identify the best option for your refinery

**Partner with KBC to help you decide how you will respond by booking a 1-day on-site IMO 2020 Action Plan Workshop with a KBC expert and the key stakeholders from your refinery.**

KBC is the leading independent technology-driven consulting company. We have the tools, data and industry expert consultants to analyze your refinery's unique situation. As a result of the workshop, you will have a clear action plan outlining the potential operational changes and capital investments you should make to remain competitive.

### The workshop includes:

- Summary of the IMO 2020 regulation and KBC's detailed assessment of the market impacts specific to your region and your refinery.
- Review of plans you may have already formulated in response to the regulation and any plans for your refinery which may need to be reconsidered in light of the regulation.
- Assessment of your potential degree of economic exposure
- Robust model-based approach of your refinery using the world's most detailed and accurate modelling platform
- Discussion of the various potential responses to the threats and opportunities presented by the regulation available to your refinery
- A proposed action plan and, following more detailed analysis, KBC can prepare a detailed project plan together with a timeline, cost estimate and calculated Return on Capital Employed.

Find Out More: [www.kbcat.com/info/imo2020](http://www.kbcat.com/info/imo2020)