POTEN TANKER OPINION

Change Is In The Air

IMO decides on marine sulphur emissions implementation

Last week, the International Maritime Organization (IMO) decided on the timing of the sulphur emissions cap for marine bunker fuel. The organization had already decided to reduce global permissible sulphur oxide emissions by 2020 (requiring a reduction of the sulphur content of marine fuel from 3.5% to 0.5% or other emission reducing equipment), but there was still an option to delay the implementation to 2025 if a fuel availability study concluded that not enough low sulphur fuel could be produced. The IMO has now eliminated the uncertainty on the timing of the implementation by deciding not to delay the sulphur cap to 2025. However, question marks on the actual impact remain.

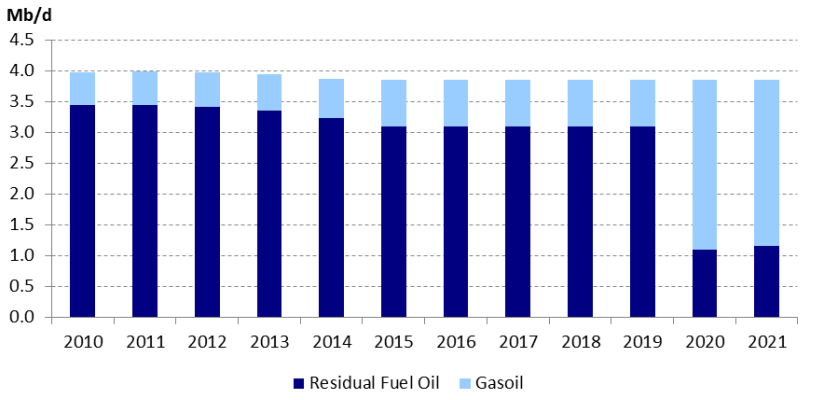
Ship owners have two fundamental options on how to deal with the emissions cap: Burning low sulphur fuel (maximum 0.5% sulphur) or installing Exhaust Gas Cleaning Systems (often called scrubbers). Typically, existing engines can burn low sulphur fuel oil, either lighter gas oil or low sulphur heavy fuel oil. The use of LNG is also an option but this normally requires significant modifications to existing vessels, including the installation of fuel tanks, making it only a viable option for newbuilding tonnage. The worldwide availability of LNG bunkering facilities is also still a limiting factor.

The sulphur cap creates an interesting dilemma for both ship owners and refiners. Ship owners have to decide whether to install scrubbers at an estimated cost of $3 to $6 million, depending on the vessel size and design, or burn higher cost low sulphur fuel. The payback period for a scrubber investment will be relatively short if the price differential between high sulphur and low sulphur fuel remains high or increases further. The spread will be high if there is limited demand for heavy fuel oil (HFO), which happens if not many owners install scrubbers and refiners do not convert significant volumes of residual fuel oil into lower sulphur products.

For refiners, a similar dynamic applies; they have to decide whether to modify their facilities to reduce residual fuel oil output, as the value of this commodity will drop when demand declines. Less sophisticated refineries could increase the use of low sulphur crude grades, to reduce the sulphur content in their output, but such crudes will likely increase in price.

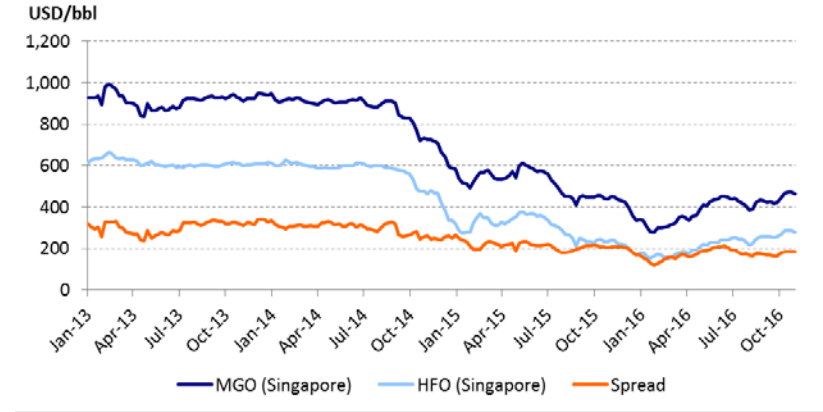
Currently, global residual fuel demand is about 7.3 million barrels per day (Mb/d). The IEA estimates that, in 2014, marine bunker demand accounted for 43% (~3.3 Mb/d) of global residual fuel oil demand. In a market outlook published earlier this year, IEA forecasts that in 2020, about 2 Mb/d of marine HFO demand will convert to MGO (see Figure 1).

Fig. 1: Estimated Oil Based Marine Fuel Consumption In International Trade



Source: IEA

Fig. 2: Historical Bunker Prices: MGO vs HFO



Source: Ship and Bunker

For owners, the decision is driven by the cost of installing scrubbers and the expected spread between HFO and the alternative fuel, either Marine Gas Oil (MGO) or low sulphur fuel oil, which is currently produced in only small quantities. The cost of operating the scrubber system is estimated at about $20-50 per ton of consumption.

Over the last two years, the MGO is on average about $200 per ton more expensive than HFO (see Figure 2). At this price spread, installing a scrubber on a VLCC burning 70 tons of fuel for 250 days per year would have a payback period of about 2 years. The price spread will likely increase further if owners switch from HFO to MGO once the regulations go into effect. However, it is likely that refiners will develop additional low sulphur fuel oil by blending HFO with low sulphur products to create a fuel that meets the required specs at a lower cost than MGO, limiting the impact.

At this point, most ship owners and refiners appear to be sitting on the fence. Relatively few scrubbers have been installed on tankers so far and most owners are likely waiting to see how prices and differentials develop before they make a decision. The overall state of the freight market will be an important factor as well.