

## **Policy Brief:**

### IMO 2020 Rule Primer: Background and Potential Impacts





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#### Introduction

The International Maritime Organization (IMO) has adopted new low sulfur fuel standards for cargo ships beginning in 2020. The rule requires ships to reduce the maximum sulfur content of their fuels to 0.5%, from the 3.5% standard currently in place. While on its face, the rule seems obscure and not relevant to day-to-day life, it could actually impact the cost of every product Americans buy and use. In short, the regulations will increase demand for diesel fuels (or similar fuels) by between 7-8% globally, displacing heavier dirtier fuels, which will send ripple effects throughout fuel and crude oil supply chains.

#### State of Play

Under the rule as originally adopted, ship owners would be required to burn compliant lowsulfur fuels no later than January 1, 2020. In theory, shippers could instead reduce sulfur emissions by installing scrubbers on their smoke stacks. Ships with scrubbers can burn high sulfur bunker fuel and the technology can extract the sulfur from the ship's engine exhaust, but realistically, emissions gains will by and large be met by burning compliant fuels. As the compliance date approaches, many analysts have questioned whether countries, including the U.S. will comply with the standards, and how the new standards will actually be enforced. Many countries, again including the U.S., commented to IMO expressing support for the rule, but requesting a more lenient phase-in date to minimize fuel market impacts. Had IMO accepted these recommendations, enforcement would not have been much of an issue since all parties would have complied by choice.

Instead, IMO rebuffed the commenters and IMO went further by banning regulated ships from carrying any non-compliant fuels onboard as a way to guard against their use out at sea, where regulators would be unable to monitor emissions. Ships can only be checked at port, so if carriage of non-compliant fuels were allowed, cargo shippers could easily switch from burning compliant fuels to non-compliant fuels once they cleared their check and departed port.

More important to the average American, diesel prices could increase significantly, which would be reflected in the price of almost everything you buy

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As a legal matter though, Port States have limited authority to enforce rules on ships with Flag States outside their jurisdiction. Many Flag States, i.e. those states that can enforce fuel regulations on ships, lack the resources for enforcement, possess questionable commitment to enforcement (especially after IMO denied requests for delay), and/or have penalties too lenient to motivate compliance. As a result, enforcement efficacy - including enforcement of the new prohibition against carrying non-compliant fuels - is still in question.

### Early Projected Impacts

Assuming the rule goes into effect as planned and can be effectively enforced, it's worth examining how its implementation could impact global energy markets.

#### Oil Markets

The IMO ship-fuel regulations are expected to displace roughly 3 million barrels per day (mbpd) of high sulfur bunker fuel. This ultimately means that low sulfur crude oils, including Brent Crude, WTI, and other crude sourced from Europe and parts of the Middle East will trade at a premium compared to current prices. Conversely, sour, high sulfur crudes, like Mayan Heavy produced in Mexico, Venezuelan crude, and Canadian crude will likely trade at a strong discount to their low sulfur counterparts, even when compared to current price differentials.

#### **Refining Sector**

Oil refineries make bunker fuel (the fuel currently used in most transcontinental shipping) when they lack the technology to convert that part of crude oil into higher valued middle distillate products like gasoline, jet fuel, or diesel. The increase in sweet crude prices paired with reduced demand for bottom-of-the-barrel refined products will likely force some of the world's simplest refineries to reduce output. On the other hand, complex refineries optimized to process sour crudes and maximize output of middle distillates will operate at a large competitive advantage. These refiners will experience lower crude feedstock costs (i.e. heavy sour crudes trading at a discount), allowing for exceptionally high margins.

This is good news for complex plants, including some of the biggest on the U.S. Gulf Coast. More than 80% of U.S. Gulf Coast refineries have coking units that can create transport fuels from the residual fuel oil from heavy crude. Refiners who already produce high ratios of distillates to dirty fuel oil will stand to benefit. The opposite is true for refineries that will face increased competition for low sulfur crudes in global oil markets and only have limited capacity to churn out middle distillates.

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#### **Fuel Markets**

The changes are expected to create an oversupply of high-sulfur fuel oil while sparking demand for IMOcompliant products, putting pressure on the refining industry to produce more of the latter fuels. Middle distillate markets are already showing signs of tightness. Diesel and gasoil stockpiles in key storage hubs in Europe, the U.S. and Asia are below their five-year seasonal averages. A significant spike in diesel prices will likely match the surge in demand. In short, all middle distillate fuels, including the diesel fuel currently used in most long haul trucks and other industrial consumers and shippers in the U.S. will increase in price - potentially significantly.

#### Conclusion

The IMO 2020 fuel standards will have significant impacts across global oil, refining, and fuel markets. More important to the average American, diesel prices could increase significantly, which would be reflected in the price of almost everything you buy since nearly every product sold in the U.S. was shipped from a foreign country on a large cargo ship or domestically on a truck, both of which will cost more in 2020. Those costs will almost certainly be passed through to you.

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