

ENERGY MARKETS

Fears of oil price spikes precede new fuel rules

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A Gulf of Mexico oil rig. Chad Teer/Flickr

Less than a year remains before new marine fuel rules take effect, and the world's energy markets may be not ready in time.

On Jan. 1, 2020, the International Maritime Organization — a specialized agency of the United Nations headquartered in London — begins enforcing strict new limits on sulfur content in marine fuel. IMO-regulated marine vessels will only be allowed to burn bunker fuels with 0.5 percent or less sulfur content. It's as steep cut — the current limit is 3.5 percent sulfur content by volume.

Oil tankers and cargo vessels throughout the world will either have to find cleaner fuels to burn, spend millions installing scrubbers to eliminate sulfur emissions from sulfur-heavy fuels, or face stiff fines and even possible blacklisting from ports.

Shipping companies are still scrambling to get ready, and the change may see a rush to dry-docking this year for scrubber installations. Whether refineries will make it on time is an open question. Many are betting that they won't and are predicting a spike in diesel prices globally next year that could raise costs for cargo transport everywhere, possibly hitting everyone's pocketbook to some degree.

Clint Follette, an analyst with the Boston Consulting Group, agrees with the consensus outlook that spikes in diesel fuel prices are coming.

"Absolutely, that's our view as well," he said. "And the reason for that is we see high sulfur fuel oil prices declining substantially. There will be just a much smaller market for that with bunker fuel out of the picture."

To compensate for lost demand in high sulfur bunker fuel, refineries will be compelled to raise prices on fuels that do sell. That and a higher demand for diesel in general as shipping companies rush to low sulfur blends will crimp the diesel market, Follette explained.

"The light products prices will rise to compensate for that, so that on the whole barrel the refinery still breaks even," he said. "Plus on top of that there will be more demand for diesel to backfill for some of the demand in the bunker fuel market. So those two factors will compound to make diesel prices higher for several years."

Not everyone holds this view.

Lucian Pugliaresi, president of the Energy Policy Research Foundation Inc. (EPRINC), argues that diesel price increases may not be as bad as most are assuming. And even if diesel prices move higher, weaker crude oil prices should help the world to adjust, he said.

"I think what's missing in a lot of the discussion is the role of crude prices," said Pugliaresi. "If crude prices remain relatively low, the adjustment will take place and public outcry will be modest. At higher crude prices, upward movement in diesel prices will be both more visible and the cost adjustment will also be higher."

Pugliaresi also thinks the world's refineries will meet the challenge, though not so much for United States and European refining complexes as they have little spare capacity left to help them adjust.

"Most of the changes will occur in Asian and Middle East markets," he explained.

Winners and losers

IMO 2020's forced revolution in refining and shipping is seen producing both winners and losers. Analysts generally agree that the United States will likely come out on top.

The sophisticated refineries of the United States are already tooled to take in heavy sulfur "sour" grade crudes, especially Venezuelan oil, and process it into lighter and low-emissions refined products, making the U.S. refining complex among the world's most efficient and profitable. U.S. refineries have also adjusted to handle lighter crude varieties in response to booming domestic oil production.

All see changing dynamics in the crude oil markets, as well.

The move will likely raise demand for light, low-sulfur "sweet" crude that's easy for less complex refineries to handle. The U.S. shale oil patch is pumping millions of barrels a day of light, sweet crude. More global demand for this oil means higher demand for U.S. crude oil exports.

U.S. fuel imports will probably rise, too, but of heavier grades that will sell for less, while refineries can transform these into lighter products that sell for higher prices, netting a nice return.

Who will be hit most? Analysts say Russia desperately tried to get the IMO to delay the rule by five years, to no avail. Now Russian refineries can expect diminished demand for their heavier, dirtier fuels from 2020 on.

Exporters of heavy crude grades or blends will also likely be hit by IMO 2020, so Venezuela and Canada can expect prices below what they would normally get had the change not occurred.

Saudi Arabia is seen as likely escaping the trap — though the Saudis may face weaker pricing for their heavier crude oil, they and other Middle Eastern nations are expanding refined products and exports at a most opportune time, investing in capacity expansions just ahead of the IMO-induced market shift. Prognosticators see the Middle East tooling their expanding refineries to meet the forthcoming new market demand.

In a briefing for clients, Joel Hancock, an oil analyst with the financial services group Natixis, sees the IMO rule shift compelling higher prices for North Sea-based Brent crude oil and West Texas Intermediate (WTI) crude. Meanwhile, shipping companies will likely meet compliance by either rushing into blends of ultra-low sulfur fuel oil (ULSFO) or marine gas oil, he added.

Or companies will pay a premium to install scrubbers, said Hancock. The cost to do so has been estimated to run up to \$5 million per vessel.

According to a Natixis assessment, the current shipping fuel demand mix is comprised of about 3.8 million barrels a day of heavy sulfur fuel oil (HSFO), 1.3 million barrels a day of marine gas oil and negligible volumes of ULSFO. After 2020, analysts there see the balance shifting to 1.5 million barrels a day in demand for HSFO, a steep drop. Marine gas oil demand may rise to 2.6 million barrels a day, while ULSFO demand could comprise 1 million barrels a day in the market.

"The shift in demand for fuels will cause major dislocations in product pricing relationships," said Hancock. He thinks most of the shift will occur during the second half of this year.

Some are hoping the IMO will ultimately decide to delay implementing the rule or that it may change its mind as diesel prices start to spike and economic disruptions mount. That's just wishful thinking, said Pugliaresi. He said EPRINC has already conferred with folks at IMO and EPA, and there is little indication that the global shipping regulator will hold back or water down the rule.

"It is a done deal," he said. "I don't really see any options for alternative policies, but of course anything is possible if there is a big spike in diesel prices."

Still, he maintains that calm is in order. "I think the alarm many have raised that the regulation will spike diesel prices may be a bit overdone," he said.

U.S. LNG could see a boost

There's another way that IMO 2020 will likely prove beneficial to the United States: It's poised to boost demand for liquefied natural gas, or LNG. U.S. LNG export capacity is slated to expand by an enormous volume this year, just ahead of the entry into force of the IMO's sulfur rule.

But a revolution in the LNG market is not in store, experts are cautioning.

Market watchers have already moved to temper expectations among LNG exporters that IMO 2020 will usher in a new major market for their product. Analysts earlier concluded that LNG as a marine fuel will only play a small role in helping the shipping industry meet the coming challenge, now 11 months away ([Energywire](#), Nov. 5, 2018).

Industry monitors explain that retrofitting an older vessel to run on LNG instead is cost-prohibitive, and would see the vessel losing cargo space, thus becoming less profitable. Scrubbers are a more cost-effective solution.

Shipping concerns also fret about LNG logistics. LNG bunkering ports are expanding, but the fuel may not be available at smaller ports, placing a limit on the routes some LNG-fueled vessels can run. True believers in LNG as a future bunker fuel are in a race to remedy this, but they need much longer than the 11 months left to build enough LNG bunkering capacity to satisfy shipowners.

Follette at BCG remains unconvinced that IMO 2020 will prove a major boon to the rising number of liquefaction and LNG export facilities, either in the United States or beyond.

"You will see LNG adoption really increase, but still, even in our most bullish scenario, it may rise from 3 percent of the total marine fuel demand to 6 or 7 percent," he argued. "LNG is not a solution to this whole problem, but it will increase, and this [IMO] legislation will be of big benefit to LNG suppliers."