

How the IMO got the sulphur cap so wrong

An opinion piece written earlier this month for Splash247.com on the inherently-flawed IMO 2020 regulations, which featured IMO bureaucratic self-delusion over the commercial realities of the refining sector. Some views are now emerging that argue that the oil price impact will not be that large, but price is a function of non-compliance, which will need to be widespread to avoid economic damage. Unfortunately, the IMO is not willing to accept this... yet.

Amidst the wave of content on the IMO's 2020 implementation for 0.5% sulphur bunkers, most shipping commentators are either missing or deliberately evading one point -- the IMO screwed up massively.

Although the IMO works hard to promote a safer maritime industry and cleaner environment, the IMO 2020 decision at MEPC 70 was an abject fail. As of October 2016, the refining industry was never going to be ready for a January 2020 implementation. Given existing capacity and anticipated projects -- sufficient upgrading, desulphurisation and support capacity would not be available to eliminate 2-3 mbpd of the higher-sulphur resid streams and to provide sufficient distillate for 0.5% sulphur fuel blending.

The refining industry knew this, but the IMO had its own agenda. Unsurprisingly, their paid consultants provided a report that told the agency exactly what it wanted to hear (sufficient 0.5% sulphur fuel would be available), so that it could pursue its desired policy direction. Not leaving things to chance, the IMO came equipped with an August 2016 study from the Finnish Metrological Institute that suggested that a delayed 2025 implementation would cause 570,000 premature deaths. Regulatory job done.

Meanwhile, back in the commercial world, market participants are struggling to adjust to these regulations, exploring new fuel blends that could meet the 0.5% spec from expected blendstock availability. Although refiners can meet much of the demand from increased gasoil and vacuum gasoil volumes, and by using lower-sulphur resid streams, a view is emerging that 0.5% supply would fall short by 1.0-1.5 mbpd initially (including from the IEA and Wood Mackenzie). This volume of higher-sulphur resid would remain stranded, while additional gasoil would be unavailable to meet this shortfall.

Available at a cost, of course, yet the oil price commentary remains anodyne, suggesting that after some initial confusion, the markets will adapt and reach a suitable equilibrium. Of course, that equilibrium mechanism is price, and strict enforcement of IMO 2020 would require a massive auction process to price other mid-distillate users out of the market -- trucking companies, airlines, home heating oil consumers, farmers, railroads and industrial users.

Auction processes are messy, clouding the oil price picture. The IEA has suggested a jump in gasoil prices of 20-30% in 2020, while Morgan Stanley has argued similarly for US\$850/tonne gasoil and US\$90/bbl Brent prices. Veteran oil analyst, Philip K. Verleger, sees a dire outcome from IMO 2020, with crude oil prices exceeding US\$200/bbl. His message may seem alarmist, but he has assessed the impact of a full implementation. The other analyses are balancing lower compliance rates with the price levels required to destroy enough onshore distillate demand.

Oil market participants are aware of this, and thanks to the July testimony of oil analysts before the U.S. Senate, IMO 2020 is now firmly on Washington DC's radar. The unpleasant response to IMO 2020 signalled that incumbent politicians are unlikely to tolerate this sort of economic disruption during an election year. In fact, the Senate tasked the US Environmental Protection Agency with studying the financial impact of IMO 2020, just days after those hearings.

Meanwhile, the IMO has become increasingly combative on the subject, with officials insisting on no delay and that "excuses are thin". They cite the long timeline to amend the regulations for their inability to defer the timing, yet have rushed through tougher enforcement rules. The IMO is set to adopt MARPOL amendments to prohibit the carriage of non-compliant fuels on vessels without scrubbers at MEPC 73 this October, so that they can enter into force by March 2020. Nothing signals a bureaucratic organisation so wildly out of touch with reality, as one pushing tougher enforcement of a condition that cannot exist. The IMO should concentrate on accommodating the growing view that non-compliance will be widespread and may represent 30% of current HSFO bunker usage. This redirected focus, however, would require the IMO to admit their regulatory failure at MEPC 70, which is unlikely. The stakeholders at risk from IMO 2020 have limited time remaining to force greater realism at MEPC 73.

Additional IMO 2020 Topics for Discussion

The procrastination defence – The IMO is becoming increasingly petulant about those questioning its regulatory wisdom, and its preferred defence mechanism is to accuse both shipowners and refiners for procrastinating since the 2008 adoption of the 0.5% sulphur standard. Unlike earlier product specification changes, for which refiners were fully responsible, the MEPC58 decision plunged refiners and ship owners into a tricky game theory loop. Refiners would be unwilling to make investments in cokers and hydrotreating units if they thought that owners would adopt scrubbers and LNG over time, while owners would not invest in scrubbers if they thought that sufficient compliant fuel would be available from refiners. Unsurprisingly, both parties remained locked in this stasis until the IMO timing decision in 2016, but their behaviour was perfectly rational, an outcome that the IMO never foresaw in its environmental zealotry.

CE Delft Report – The IMO used the CE Delft report to validate their 2020 timing decision. It was never clear how a firm whose tag line is "CE Delft: Committed to the Environment" was ever going to write a balanced report, but it certainly served the IMO's needs. The team of consultants made a diligent effort, but many of the assumptions about available refinery resid conversion capacity and regional fuel oil blending were too optimistic, producing the IMO-preferred outcome that sufficient 0.5% sulphur fuel would be available.

How to produce 0.5% sulphur bunkers – Refiners will be able to produce 0.5% bunkers by using the lower-sulphur resid streams and by creating more VGO-based blends that would allow easier sulphur blending. This would involve higher crude runs to make additional distillate and VGO, by routing less VGO and more resid to crackers (as catalysts will allow), and by running cokers harder. Unfortunately, refiners will not have sufficient resid conversion capacity – not to mention desulphurisation and sulphur recovery capacity – to remove the 2 mbpd of the higher-sulphur resid streams by 2020.

Consensus forming on non-compliance – This volume of higher-sulphur resid – that cannot be converted and is too high in sulphur to blend into 0.5% bunkers – is becoming more evident to the oil analyst community. Most analysts, including the IEA, Wood Mackenzie and Goldman Sachs see about 1.5 mbpd of HSFO bunker demand in 2020. After all, full compliance in 2020 was never possible without severe price shocks, and the IMO needs to recognise that their enforcement plan is not going to work. The IMO needs to develop a framework for regional non-compliance on a wide scale, since their current vision of tough enforcement with spotty FONAR (fuel oil non-availability report) exceptions is unrealistic.

Lack of Visibility & Information Asymmetry – The key issue haunting IMO 2020 is the lack of visibility on a global and regional level as to actual 0.5% fuel availability. A number of major refiners are currently touting their 0.5% fuels, which gives the impression that the situation is manageable, but the vast majority are remaining silent. Any market signalling depends upon refinery sophistication & workable crude slates, the ability to offload excess naphtha/mogas, VGO desulphurisation capacity and other refinery factors – basically, relative positioning. Well-situated refiners have a huge incentive to say "ready, no problem", in an effort to keep IMO 2020 moving forward, so that they can reap the resulting margin benefits later.

Scrubber count-a-thon – Oil analysts are now generating their own scrubber adoption forecasts, in order to forecast the amount of scrubbed HSFO consumption from 2020 onwards, that would lessen the strain on the refining system. Still, examining some of the analyses, the forecast number of vessels with scrubbers is translating into some very-odd fuel oil consumption figures (e.g., Goldman Sachs), considering there should be consistency between vessel size, power, speed, utilisation, energy load and fuel consumption.

Work we are doing – The consultants who completed the all of the studies on this topic did so on a regional basis. When we replicate and update the work on the country and refinery level, some interesting results emerge. We are not convinced that IMO 2020 will create the trade flow bonanza that many product tanker owners are exalting, although vessel speeds will slow some, reducing capacity. We are also taking a critical look at scrubber adoption on a more-granular level, in order to better assess HSFO bunker demand. We will continue to develop our modelling framework and report periodically with our findings.

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