

BUNKERSPOT

FIRST IMPRESSIONS

MEETING IMO 2020'S CHALLENGES



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The first of January 2020 marked a new year, a new decade and a new era for the global bunker industry as the 0.50% global sulphur cap came into force. Unsurprisingly, IMO 2020 dominated the *Bunkerspot* New Year, New Outlook Survey but – as **Ian Taylor** reports – our respondents were also keeping a weather eye on geopolitical events and planning ahead for shipping's 2050 decarbonisation goals

For this year's *Bunkerspot* New Year, New Outlook Survey, we devised 20 questions for 2020 to put to our panel of industry experts, commentators and analysts and there was never any doubt which topic would top the list.

IMO 2020 IMPLEMENTATION

This is very clearly the year of the sulphur cap, so we began by asking our respondents whether they believed the International Maritime Organization (IMO) and the Member States' own regulatory bodies have been doing a good job of implementing and promoting the new regime. A clear majority of them said 'Yes' – but it was not a unanimous verdict and no one judged the change-over an unqualified success. Nicholas Woo, for example, felt that 'good job' was a 'loaded' term, but did 'acknowledge that they have been working hard at implementing and promoting the new regime'.

Tim Cosulich answered Yes, but he felt that 'more could have been done in terms of clarifying how enforcement will be guaranteed'. Harry Theochari recognised that the IMO has had to deal with an immense amount of political pressure: 'This has been a very difficult period with many attempts being made to amend the provisions and/or delay implementation of Maritime 2020. The IMO has proved resolute in holding firm under what I am sure will have been tremendous pressure from some owners/Member States.'

Adrian Tolson said: 'Yes, I guess so.' But he then pointed out: 'Time will tell, when we find the cheats.' Draffin gave an answer in two parts: 'IMO: yes. But most Member States are not in a position to implement.'

Alessio Sbraga also flagged up the dichotomy: 'IMO has produced detailed guidance throughout 2019 to assist Members States and the shipping community achieve the consistent implementation of the key elements of the new regime. However, the response from Members States to date has been varied. As matters stand, there is an overall lack of transparency on implementation, enforcement, reporting and availability of compliant fuel required to comply with IMO 2020 (for vessels not fitted with scrubbers) which are key drivers behind the consistent application of the rules. I suspect that, as 2020 progresses, the position of Member States will become clearer.'

Marie Cabbia Hubatova explained why she had concerns: 'While the shipping industry's switch to fuels with a lower sulphur content was an important development, action should have been taken earlier and in conjunction with looking at other climate solutions.

This regulation took over a decade to implement and put into practice. The IMO and Member States cannot afford to replicate such a lengthy process for decarbonisation of the shipping sector. The science is clear that we must act quickly if we are to avert the worst of the climate crisis and shipping must play its part in supporting the global effort to meet the Paris Agreement temperature goal.'

John Kerr was to the point: 'The fact that the industry does not have an agreed specification to replace the ISO 8217 to deal with the new blended fuels being delivered today and are unlikely to have one until 2023 earliest speaks volumes.'

We then asked our respondents if they believed the authorities are well placed to monitor the industry's compliance with the new regulations, and also penalise non-compliance.

'The approach is not very coordinated,' said Tolson, 'but I think it will come together.' He certainly believed that the pressure from the public will not let up: 'It seems the majority of the world's population thinks that HSFO marine fuel was generally bad and is fairly anxious to get rid of it, which proves we are all human and are worried about our kids' future.'

'There might be some initial hiccups,' warned Rahul Sharan. 'But eventually they should be able to handle this.' Cosulich spoke for many with his reply: 'Yes, but not everywhere.' Woo took a similar view: 'No doubt some port authorities are better placed than others to monitor compliance.' Paul Millar also foresaw some divergence: 'One assumes the major bunkering hubs and ports in countries who understand and support the objective of lowering sulphur emissions will do a good monitoring job and take a firm line against those don't comply. But this will not apply in all ports/countries.' Draffin went to the heart of the matter: 'Very few Member States have translated the regulations into national law so will not be able to use law to prosecute non-compliance.' And Chrystel Bassett-Simmonds informed us that her own country – South Africa – was one of those which hadn't yet incorporated the new rules.

Sbraga gave the most in-depth response: 'Detailed IMO guidance means that the Members States have a relatively good reference point for monitoring and enforcing compliance with IMO 2020, and various Members States have confirmed they will be following this. However, there still exist complicating factors. First, not all members states have ratified MARPOL Annex VI into their national law. Secondly, only a limited number of members states have experience of applying sulphur content controls and others may have limited resources at



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Harry Theochari,
Norton Rose Fulbright

their disposal to monitor and enforce compliance and/or supply sufficient quantities of compliant fuel. Thirdly, there is no uniform approach to the nature and level of penalties imposed for non-compliance leading to conflicting results. Fourthly, there still exist key fuel supplying countries which are not party to MARPOL which could have an impact on the effectiveness of the sulphur cap. Fifthly, IMO guidance – whilst very useful – could be open to different interpretations by port state controls and could lead to different results from state to state. Lastly, and most importantly, robust implementation and consistent enforcement will be required across the board from all Member States, and this relies on transparency and effective reporting between members states.

'As matters stand, there is no clear structure for reporting and information sharing. Unfortunately, GISIS (Global Integrated Shipping Information System maintained by IMO) is unlikely to be a viable platform, and careful thought needs to be given as to how this can be improved in the short to medium term.'

COMPLIANT FUEL AVAILABILITY

For our third question, we asked if the supply side of the bunkering industry has done a good job of preparing for IMO 2020 – and whether there will be sufficient fuel availability. More respondents answered Yes than No, but the majority chose to stay on the fence. Sbraga told us: ‘I think the supply side has prepared as best as they can for IMO 2020 in circumstances where the shipping market (as a whole) was slow in identifying its preferred (common) method of compliance. Now that it appears that the most common method will be by burning very low sulphur fuel oil (VLSFO) the bunkering industry has reacted to that, although I suspect that there will be insufficient supply of compliant fuel in either the more remote ports/non-MARPOL flagged ports, at least in the first six months of 2020.’

Bassett-Simmonds pointed out that in South Africa: ‘VLSFO has been in the market since October 2019.’ Draffin felt that in general the suppliers have done well but ‘some countries and some suppliers are still unprepared’. On the subject of availability, he believed: ‘There will be sufficient product but not always in the right places.’ Tolson considered that the suppliers have so far done ‘better than we all thought (or better than the shipping industry wanted to admit)’ but cautioned that we are not yet in a position to judge ‘if there is enough availability or if the quality is going to be an issue’. Kerr said: ‘Time will tell on the availability of compliant fuels.’ Edward Yang Liu also felt that it was ‘too early to say’ if the suppliers had passed the test (do bear in mind that our respondents had to make their snap-judgements just two weeks after implementation) – but he added: ‘So far I understand that the low sulphur fuel has caused quite a number of engine problems.’ Woo also had concerns: ‘There have been a few reports of insufficient compliant fuel being available. What is more disturbing are the reports that the VLSFO being sold may have high TSP.’

Millar suspected that ‘some suppliers might have misjudged their customers’ needs and were maybe ill-prepared in the run-up to 2020’, but ‘generally speaking’ he thought ‘the industry responded well to the changes’. He assumed that ‘there will be sufficient availability of most fuels in the main hubs’, but thought ‘smaller and less visited ports will not have the range’. Sharan offered a positive forecast: ‘No doubt there will challenges in the beginning, but I don’t think there should be any supply issue in the long run.’

Respondents who answered this question with a No included Cosulich – and he explained why: ‘A few months ago I would



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Marie Cabbia Hubatova,
Environmental Defense Fund Europe

have answered Yes, but the reality now is that availability is scarce and prices are going crazy high.’ Theochari was forthright: ‘The position as to the availability of sufficient fuel has been as clear as mud. I fear some were/are looking to profit from what will inevitably be a difficult period.’

SHIPOWNERS’ PREPARATIONS

We then asked if shipowners/ bunker buyers had done their prep for IMO 2020, and if ships’ crews are fully aware of the new requirements and familiar with all operational aspects of using the new fuels. Kerr was positive: ‘A lot of good work has been done by many shipowners in close collaboration with managers in preparing for this piece of legislation, both in preparation of the vessels and training of the crews.’ Tolson was cautiously optimistic: ‘I am waiting to hear lots of bad stories... but so far there are few.’

Woo gave a mixed review: ‘Some shipowners/bunker buyers have no doubt been preparing intensively for IMO 2020 while others less so – hoping to do the least they can get away with at the cheapest cost.’ Cosulich also saw a ‘very high degree of variability in terms of preparation’. Albert Leyson

felt the shipping companies were generally well-prepared but added: ‘Certain operators may have underestimated certain risks such as instability and the increase in fuel wax content.’ Draffin judged that ‘large operators are well prepared, their crews are informed and have procedures for coping with most contingencies’, but warned that ‘many small operators are still unprepared’. Millar took a similar view (with a nod to personal experience and a little product placement): ‘I can only base this on Bomin’s experience: our customers have managed this transition period well in my judgement. Guessing that smaller owners/buyers have been less informed and will have been playing catch-up.’ Theochari answered: ‘No, with respect to shipowners / bunker buyers doing a good job in preparing for IMO 2020, and Yes to crews being fully aware of the new requirements. This has been the hot topic for quite some while now and there is simply no excuse for shipowners / bunker buyers not being prepared and not having trained crews properly.’

SCRUBBERS

For our fifth question, we asked if shipowners using scrubbers in order to comply with the IMO 2020 regulations has been a positive development. ‘Time will tell on this one,’ said Tolson. ‘I think they will hit headwinds trying to find consistent supply, but they should make some extra money. A necessary development, but not altogether positive.’ Bassett-Simmonds noted that the initial uptake was slow, but there has since been an increase in numbers. ‘Looking at the price differential,’ said Millar, ‘it has been thus far very positive for owners who fitted scrubbers – and this gives them a competitive advantage.’ Drawing on his knowledge of the different shipping sectors, Sharan ventured: ‘In some cases, such as tankers, where the rates are very high, installing scrubbers will get paid back in a short span of time.’ Cosulich believed the current high/low sulphur spread makes scrubbers an attractive option for a wide range of vessels. ‘For owners and operators with large vessels,’ explained Cosulich, ‘it was always clear that there was a strong case for scrubbers. Current market prices, however, suggest that scrubbers would be a good option for smaller vessels too (at this specific time).’ Draffin also believed scrubbers seemed to offer a good return: ‘Most exhaust gas cleaning systems (EGCS) are going on large consumers, that will reduce the demand for VLSFO in the short/medium term. Even if the regulations change after a few years, they will have all recovered their investment costs.’

Theochari was less convinced by the scrubber argument: 'The debate has been a hot one and as a maritime business professional, I am not sufficiently qualified to make a judgement but what I would say is that the increasing restrictions on the use of open loop scrubbers will likely make operations difficult for those that have fitted them.'

Sbraga urged us to look beyond the current price differential and focus on the longer-term consequences: 'Whilst the decision to fit scrubbers makes commercial sense for those parties with capital to invest, and it creates diversity in the market place when it comes to the method of compliance, scrubbers are unlikely to be a sustainable model for the shipping market going forward, especially as the ultimate aim is decarbonisation. To a certain extent, it creates an unfair advantage to those larger shipowners who are likely to see a ROI in a short period of time, especially if the bunker price spread between VLSFO and HSHFO stays healthy and as long as there remains perceived uncertainty over the quality, stability and compatibility of (new) VLSFO coming onto the market. However, there may be some geographical areas / ports where there may be limited availability of HSHFO (i.e. where bunker suppliers have taken a commercial decision to supply only VLSFO to meet the largest demand in the market) and this will create problems for scrubber fitted vessels.'

Cabbia Hubatova objected to scrubbers on environmental grounds: 'Scrubbers are expensive and may cause adverse effects to the environment such as through release of the wash water. The industry was aware of the 2020 regulation well in advance and therefore, from an environmental perspective, it should have looked to solutions that do not create other environmental impacts whilst reducing sulphur.'

As a follow-up, we then asked our respondents if they expected to see a growing demand for scrubbers in 2020 – or if they thought the restrictions on the use of open loop scrubbers by a number of maritime authorities could act as a disincentive. Cosulich predicted a growing demand for scrubbers 'mostly due to some buyers with large vessels who did not prepare in time, and also some other players who are getting scared by the current market prices of VLSFO'. Millar also expected to see growing demand – but his view was tinged with some trepidation: 'Now that owners can see a real financial advantage to having scrubbers, they will be sorely tempted to have more fitted – but with the nagging fear that environmental concerns about the technology will increase.' Draffin pointed out that our question was rather confused – because 'the demand



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Alessio Sbraga, HFW

for scrubbers could be for any type, therefore unaffected by the open loop port restrictions' – before saying: 'For deep sea large consumers (the majority of EGCS so far) it will make little difference; for smaller consumers and tramp shipping the best option will be hybrid.' Leyson also reminded us that: 'We mustn't forget about hybrid scrubbers.' Woo predicted: 'Demand should increase beyond 2020 albeit not for open loop scrubbers'. But he added a caveat: 'The popularity of scrubbers will depend, I suspect, in a large part, on how the ancillary services develop around the use of scrubbers especially in respect of cost-effective disposal of the waste arising from the use of the said scrubbers.' Liu expected to see less demand for scrubbers, but he thought this would be due not so much to restrictions on open loop scrubbers, but a reduction in the availability of high sulphur product.

Sbraga thought demand for scrubbers would increase, but he also felt a future reduction in high sulphur product could be a factor: 'As long as the bunker price spread between HSHFO and VLSFO remains strong (i.e. in excess of \$150) then yes [there will be more scrubber demand], at least initially, because the ROI is likely to be there. However, as the bunker price spread narrows and the

availability of HSHFO reduces (most likely due to the fact that it is predicted that over 70% of the market is seeking to comply by burning VLSFO), then demand is likely to drop.

'However,' continued Sbraga, 'I do not see that the restrictions on open loop scrubbers will have any appreciable effect because the biggest cost saving will be on ocean going voyages (where vessels consume their most fuel) and provided the bunker price spread between VLSFO and HSHFO stays healthy. Those open-loop scrubber fitted vessels that have reserve fuel on board / sufficient VLSFO when calling to restricted waters will also be well placed.'

Sharan expected to see less demand for scrubbers, adding the succinct comment: 'I think the use of VLSFO will dominate over the use of scrubbers.'

FEELING THE PINCH

For our seventh question, we asked if some shipowners may go out of business because of the higher fuel bills they will have to pay as a result of IMO 2020? This was a split decision, with Yes just about edging the vote. Cosulich warned that 'Credit will be tight', while Draffin said this was 'a simple consequence of the fragile financial condition in many markets'. Millar said there was 'no doubt' there would be casualties because 'higher costs that cannot be passed on means lower (or negative) margins and if your competitor has scrubbers fitted, he immediately has a competitive advantage'. Woo prefaced his judgement with the qualifier that it will 'depend on the business models employed by the shipowners', and then said: 'Generally, I would expect the higher fuel bills will feed into the hire/freight rates. We will see more shipowners/operators go out of business if these rates do not rise sufficiently to compensate for the higher fuel bills.' Theochari reminded us that the shipping industry 'has been going through, for the most part, the longest recession in living memory dating back to 2008', and then predicted: 'Higher fuel costs when coupled with the continuing difficult economic climate and the lack of funding could well signal the end for some shipowners.'

After pointing out that 'most shipowners do not buy the fuels, this being done through charterers', Kerr said that 'If the owner is buying fuel and has not hedged or built in caveats in their contracts to cater for fuel increases', then it could face financial difficulties.

Sbraga gave a carefully balanced answer: 'Those shipowners who are able to pass the cost of higher fuel bills down the transport chain under contractual arrangements

(i.e. to charterers under time charters, via bunker escalation clauses / bunker adjustment factors to counterparties under voyage charters / COAs and via fuel surcharges to shippers) are unlikely to go out of business. Shipowners who may be exposed by IMO 2020, however, will be those who own older ships which may require more extensive and costly fuel system cleaning in the first place or cannot afford a scrubber (which is required to compete on rates with competitors). The consequences of non-compliance may also have a bearing on the financial standing of shipowners who do not have adequate protection under their contractual arrangements to minimise their exposure.'

Gavin Allwright considered we will see some 'consolidation', but felt the pressures of IMO 2020 'rather than being the major cause, could be the straw that breaks the camel's back for companies already struggling'. Tolson felt some shipowners may go out of business but he said this will 'not be because of price – they may use it as an excuse, but it will mainly be because they made poor decisions regarding compliance'.

We next asked if some bunker suppliers may go out of business or exit the market because of the increased difficulty and associated costs of sourcing IMO 2020 compliant fuel, compounded by the growing

'influence' of the 'oil majors'/integrated oil companies across the full fuel supply chain.

Tolson believed that there will be independents that will go out of business, or see their business shrink. Cosulich said: 'It could happen, but I think it will be mostly related to how prudent they have been in terms of credit management.' Draffin warned: 'Small suppliers in bigger ports, Smaller traders with limited finance – both will be vulnerable.' Millar took a similar view: 'Assumed higher claims leading to delayed payments from buyers will hurt cash flow (particularly for those smaller players with limited working capital in the first place). And with the higher prices today, this could be highly damaging for the less well financed players.' Woo, however, did not see a major shift: 'There will always be bunker suppliers (major as well as less major names) who come and go. I do not believe the new regulations will change this dynamic significantly.'

MASS FLOW METERS

For question nine, we took a brief detour to ask our respondents if they expected to see further industry uptake of mass flow meters (MFM) to improve transparency in fuel deliveries – or if they thought that the cases of meter 'tampering' seen in Singapore may have knocked industry confidence in the technology?

Peter Sand said 'Yes' to the first part (more uptake) and 'Don't know' to the second (the fall-out from tampering in Singapore). Draffin also divided up his answer: 'Yes to part one, no to part two.' Tolson considered that: 'As we see a change in the type of suppliers in the industry we will see more MFMs...or perhaps we will not because the newer suppliers will not be so keen to cheat?' Woo cautioned: 'Tampering is an inherent risk in fuel deliveries. Vigilance is always necessary.' For Cosulich, MFM is 'definitely the way to go'. He pointed out the Singapore suppliers involved in the meter tampering had been caught and had their licences revoked, whereas 'in most other ports worldwide short supplying is still ongoing'. Cosulich also predicted that: 'MFM will at some point be adopted in most main ports.'

DECARBONISATION

Moving the debate forward from the immediate, SOx-reducing aims of IMO 2020, we asked if the new regulations could be seen as an important step forward in shipping's overall journey towards decarbonisation and becoming a zero-emissions industry. Cosulich judged that it was – but bemoaned: 'We are still very far from even talking about zero emission in our industry'. Draffin judged

that it is 'step two on a 10-step journey', adding: 'We will not reach carbon neutral until after 2050 and we will not be zero emissions until after 2075. Remember that there is more to emissions than SOx, NOx and CO₂'.

'Change had to come,' said Millar, 'and sooner rather than later, given how the planet is heating up. So even though the implementation of IMO 2020 has been a little bumpy, it makes sense to get on with it.'

Sand reminded us that: 'Sulphur and CO₂ are two different journeys!' Kerr took a similar view: 'CO₂ emissions have increased for those installing scrubbers and a reduction in sulphur does nothing for decarbonisation or a strategy on zero emissions.'

There was a broad consensus that the low-emissions journey must not be delayed. 'The environment can no longer be ignored and shipping must step up and do (and be seen to be doing) all that it possibly can to protect our world,' said Theochari. Woo said that 'decarbonisation' and 'zero-emissions' are 'politically correct terms for which I am not sure anyone fully appreciates the meaning and consequences of' but agreed that: 'The shipping industry should certainly play its part – within the constraints of commercial reality – in trying to reduce its carbon footprint.'

Diane Gilpin told us: 'There are important lessons that the industry can learn from for the zero-emissions transition. 1. Don't leave it until the last minute, the IMO won't change its mind, because there is too much external political pressure. 2. Reduce your dependency on fuel-supply systems which create uncertainty in terms of price, availability and quality.' Gilpin also advised the shipping industry to 'improve fuel efficiency' by using technologies such as wind propulsion and hull coatings – indeed 'any solution that reduces overall use of bunkers [and] decouples your business from the fuel option uncertainties ahead'.

Allwright was mostly positive about IMO 2020, but he did make a plea for more joined-up thinking: 'I feel that the piecemeal approach that has been adopted to deal with emissions has diverted attention, policy capacity and significant funding away from the drive to decarbonisation.'

'That said, IMO 2020 has created a number of positives – of course lowering sulphur emissions needs to be applauded. The fact that the industry has been able to navigate this very substantial and historic change in fuel type/operation will increase the understanding and capacity to deal with the much more transformational decarbonisation of the industry.'

'Zero-emissions of course means all emissions whether to air or water, and the ongoing dispute over open loop



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Nicholas Woo, Birketts

scrubber discharge water and the need to involve all stakeholders (including ports) in the development of all new technologies and operational approaches is vital.'

FUTURE FUELS

Next we asked if residual fuel oil will continue to be the main fuel option for the shipping industry throughout the 2020s. Gilpin believed that it would because 'developing, scaling and transitioning portside infrastructure to accommodate new zero-emission fuels will take a decade'. Tolson replied: 'If you mean VLSFO as opposed to HSFO, then Yes, it will be the most important fuel for the 2020s.' Draffin also tightened up our terminology: 'Will the fuel contain residue? Yes. Will residual fuel be the main fuel option till 2030? Probably not'. Woo was enthusiastic: 'It is noteworthy and indeed heartening to see that research is increasing into alternative fuels and designing of new engines for these alternative fuels, for the shipping industry. I find some delicious irony that we have moved full circle in looking at wind power again as a possible "fuel" option for the industry.'

Kerr took a feet-on-the-ground approach: 'At this time there are no alternatives for existing tonnage and very limited access to new technology for new tonnage. LNG

can only be seen as a transitional step to zero emissions.' This segued neatly into our next question, which asked respondents whether they expected to see a significant increase in the take-up of LNG as a marine fuel over the next decade.

In Kerr's view, there is 'already an increase in the number of new builds with LNG', but he was unsure if this could be 'seen as significant across the global fleet'. Sand expected the LNG take-up to grow 'from little to more' but added 'in absolute terms – insignificant'. Tolson said: 'Yes, I fully expect 10%-15% by end of decade.' Theochari predicted more LNG growth but added: 'I believe this to be an interim measure while appropriate non-carbon drive trains are developed.'

Allwright answered both Yes and No: 'Yes, in the sense that we will see more vessels coming into the fleet that use LNG and investment will be attracted by that growing momentum. There is also a perception that there are no ready to use alternatives at present and that LNG is a much cleaner burning fuel. Infrastructure investment is underway, thus locking in increased development, and the possibility of that infrastructure being used for bio-gas or hydrogen bunkering is an important one.'

'No, as I feel that carbon restrictions and pricing will hit all fossil fuels within the decade, and the risk of significantly higher prices and potential for stranded assets could turn off a lot of shipowners by the middle of the decade.'

'From an environmental point of view,' continued Allwright, 'the use of fossil gas will also be increasingly challenged by policy makers as we approach environmental tipping points in this decade. LNG taken in its full production cycle has a very similar carbon footprint to all other fossil fuels. The 20%-25% lower carbon figure seems to be generated from a bunker to funnel assessment rather than a well-funnel assessment. There is also the issue that methane has a 50-80x CO₂ impact if taken over a Global Warming Potential (GWP) of 20 years, rather than the 20-30x if taken over a GWP 100 year, which is a three-fold difference and critical as numerous environmental tipping points will be potentially reached within that 20 year period.'

Gilpin thought we will see more LNG-powered ships – but it is not a development that she welcomed. 'It is a worrying trend,' said Gilpin, 'LNG is a fossil fuel that contributes more dangerous GHG emissions than HFO.'

Cabbia Hubatova set out her reservations in more detail: 'While LNG is better for air pollution than some other shipping fuels, it is still far from being a clean fuel. When LNG escapes in the atmosphere unburnt, which

happens throughout the production chain and also on board, it releases methane. Methane is a much more potent greenhouse gas than carbon dioxide (its 20-year warming potential is 72 times greater than CO₂). Shipping must look at the air pollution and climate impacts of fuel production and consumption in conjunction and not as separate issues. Emissions from whole life cycle of a fuel have to be taken into account in order to choose the most sustainable and climate-friendly solution.'

LNG is often described as a 'transition' fuel that will bridge the gap between traditional bunker fuel and the 'clean energy' solutions, so we next asked if there is going to be a significant increase in the take-up of alternative fuels and technologies such as biofuels, ammonia, hydrogen, fuel cells, wind, solar and nuclear over the coming decades. We also invited our respondents to pick out the most promising contenders.

Tolson focused on the time frame: 'Decades yes; decade no. There is a lot of work to be done by 2035 and beyond.' Sand expected to see 'very little' growth in terms of absolute volumes for the new fuels and technologies, but judged 'the percentage change will be large' because we are starting from a low base. Marc van Peteghem commented: 'There are three ways to decarbonise the shipping industry which can of course be simultaneous: reduce speed; clean the emissions or use cleaner fuel; and minimise the power need from the engines. In this last solution using the wind power is the only two-digit technical offer. The future is a combination of those three fields.' Gilpin also believed that shipping should reap the wind, but warned that the industry will have to change its investment model to harness the full potential: 'Wind is nearest to market and, like many new technologies, is being held back by a "broken" investment market. This is not a complaint but an observation, the market is behaving perfectly rationally within its commercial constraints. The scale and speed needed for society to address climate change needs an investment redesign.'

Focusing on the most likely contenders among the new energy options, Sean Puchalski said that fuel cells and ammonia are 'the most promising'. Biofuels also have potential, Puchalski feels they are 'in short supply'. Draffin differentiated his tips by timescale: 'Short term (five to 10 years): biofuels, LPG fuels, methanol (in fuel cells) – mostly small vessels; medium term (10 to 20 years): methanol, ammonia, plus wind assistance, solar assistance and fuel cell assistance in larger vessels; long term (over 20 years): hydrogen.'



'From an environmental point of view, the use of fossil gas will also be increasingly challenged by policy makers as we approach environmental tipping points in this decade'

Gavin Allwright,
International Windship Association

'Zero-carbon fuels are the most promising solution to decarbonise the shipping sector,' according to Cabbia Hubatova. 'At the Environmental Defense Fund, we believe that especially electrofuels such as green ammonia and hydrogen are the best way forward. Though some issues remain, such as safety concerns in the case of ammonia or bigger on-board space requirements by hydrogen, these fuels have a huge potential. If manufactured properly, i.e. with untapped renewable energy, they can not only decarbonise international shipping but also drive clean development, especially in lower income countries that often have abundant renewable resources.'

Allwright predicted that shipping will take a hybrid approach: wind propulsion and 'some form of H2 carrier derived ultimately from renewable sourced power' for large blue ocean vessels; wind and biofuels/fuel cells/batteries for shortsea shipping and ferries; and fuel cells/batteries and 'possibly wind' for inland and coastal vessels. Biofuels, added Allwright, 'are available now, though supply is currently limited by the feedstock'. Allwright also pointed out that not all biofuels are equal. 'First generation biofuel (grown for biofuel) will not be more than peripheral,' said Allwright, 'but could be significant in some developing countries/islands. Second generation (waste derived) will be part of the fuel mix, but is limited by enough feedstock being available. Also, there is always competition from airlines and land-based users that will pay premium prices. Third generation (algae or other biochemistry) is possibly "the holy grail", but it is not available at any significant manufacturing levels and it is costly.' With regard to ammonia, hydrogen and fuel cells, Allwright said there was a lot of R&D going on and developments are moving quickly – but added: 'The critical issues will be around fuel storage space, availability, price and the availability of large amounts of zero-carbon produced electricity. This will also require large infrastructure investment and a 2-3 decade roll out strategy (similar to the challenges with LNG roll out).'

GREEN FINANCE

Of course, embarking on the zero-emission journey will not be cheap. A new study from UMAS and the Energy Transitions Commission for the Getting to Zero Coalition suggests that cutting shipping's greenhouse gas emissions by 50% by 2050 (from a 2008 baseline) could require capital investment of around \$1-1.4 trillion – and full decarbonisation could push up the cost to as much as \$1.9 trillion. However, the pressure for shipping companies and their suppliers to get onboard

is likely to be overwhelming. We asked if finance/investment in shipping and bunkering will increasingly be linked to, or made conditional upon, efforts to increase sustainability and the adoption of greener energy.

Puchalski was certain: 'As society demands action, capital providers would be foolish to invest in outmoded business plans.' Woo took a similar view: 'The push towards environmentally friendly fuels is inexorable and indeed necessary. No-one, including (and it could be said, least of all) the shipping industry, is excluded. Finance and investment is a key pillar towards this push.' Millar told us: 'The drive will probably come from the larger shipping companies.'

Theochari said the momentum was already building with the initiatives such as the Poseidon Principles and the Equator Principles. Allwright agreed that the Poseidon Principles are 'an important milestone' and he believed that many investors will be



'The larger and financially secure physical suppliers will do well – and the large bunker trading houses will grow market share and hopefully thrive. My concern is at the end of the market where cash flow is tight and where defaults or disruption to cash flow due to slower paying customers could lead to a critical situation'

Paul Millar, Bomin

'increasingly wary of the potential for stranded assets, higher carbon levies and increased pressure from customers'. However, he warned 'this will take time to filter into the industry', because 'sustainable returns have always trumped sustainability in the past'.

Allwright continued: 'The designation of "green" is very ill-defined in shipping and the principles need to be applied with a wide view on the full lifecycle of the asset or fuel being invested in. Upstream and downstream emissions must be factored in and also the opportunity impact or cost also need to be incorporated into these assessments. For example, if we are investing in long-term e-fuel development, we are not investing in wind propulsion systems that give immediate effect and lower future e-fuel demand.'

'There are also other areas of resilience that need to be factored in, for example; will costly zero-emissions fuels and equipment be available and affordable to least developed countries or smaller ship operators, thus creating a two, three or more tier industry, with the lowest tier tied into progressively more expensive fossil cycle.'

Gilpin also picked up on the manner in which the word 'green' can be bandied about. The Poseidon Principles are a very welcome development,' said Gilpin, 'But we are seeing many announcements about "green" investment whilst in reality we are seeing these investors committing to, for instance, LNG. There is a need for a focus on relatively small amounts of R&I funding – these big investors are not really set-up for that risk profile.' Tolson was laconic: 'There is a difference between window dressing and real change. I may be more sceptical on real change.'

TRADE & INDUSTRY

We then stepped away from speculating on shipping's energy transition to focus on some more immediate commercial concerns. For question 15, we asked if the tension between the US and China could impact global trade – and therefore activity in the shipping and oil industries – in 2020.

Sharan judged that we have already felt the effects of US/China tension in 2019, and he did not foresee further impact. Woo offered two very different scenarios: 'This will depend on how much worse the tension gets. On one end of the scale, there will be an immediate impact if war breaks out. On the other end, any impact should be minimal as the market adjusts to changing trade flows. Indeed, if the tensions are resolved, we could see an upsurge in global trade and in the shipping industry as a result. This is as much a

possibility as the ongoing tension.' Millar predicted that mutual self-interest would calm the waters: 'I guess a compromise solution will come soon as it is not in the interest of the US (especially in an election year) or China to carry on without a deal.' Cosulich also felt that: 'In an election year Mr Trump will do whatever he can to please the markets and the economy – hence the trade deal negotiations.'

With questions 16 and 17 we asked whether the economic problems of Latin America and political tensions of the Middle East were likely to have a significant impact on the shipping, oil and bunkering industries. Most of our respondents were fairly non-committal on Latin America, but Tolson flagged up that: 'Venezuela has a potential to hugely impact the oil markets and so bunkering.' They were more voluble on the Middle East. Millar mused: 'Tension is inevitable and the chance of conflict a real possibility unless Iran and the US in particular start meaningful dialogue.' Bassett-Simmonds said there will 'definitely' consequences 'if the tensions move forward more aggressively'. Woo said that 'it remains to be seen if the problem with Iran will escalate' – and also suggested we should have asked about 'the increased risk of piracy and the warnings of terrorism linked activities (and vessels being hijacked or used for terrorism)'. Tolson pointed out that – for shipping and bunkering – the Middle East tension has 'already created alternative supply sources locally and promoted safer Arabian Gulf ports'.

Next up, we asked for some predictions on how the different shipping sectors would fare in 2020. Millar gave a running forecast: 'I assume that the tanker sector will generally perform well, and we will be paying more attention to companies in the dry bulk sector. There is every chance that the liner

sector will see some consolidation or even casualties.' Sharan offered this information-rich summary: 'Compared to average rates in 2019: Dry bulk-up, Container-up, LPG-up, Crude-up, LNG-volatile.'

For our penultimate question, we canvassed opinion on whether the oil industry was going to make significant changes to its production processes and energy offerings over the next five years in response to the political pressure for decarbonisation. Our respondents gave an overwhelming, but not unanimous, Yes. Theochari maintained that: 'Public opinion and pressure will allow nothing less.' Gilpin was adamant that we 'need to transition away from fossil fuels to new energy solutions'. Bassett-Simmonds expected to see more investment but felt that in some cases it could depend – amongst other things – on 'whether governments will contribute'. Kerr certainly believed that a financial push is necessary because 'heavy investments in refineries and blending processes will be required going forward'. Tolson said that he 'would like to think' that there will be more investment in the energy transition but feared that 'we will see more window dressing' because there is still a lot of fossil fuel around and it is a major asset. Wood foresaw a chain reaction: 'The political pressure bleeds into commercial pressure from the shipping industry which then feeds into commercial pressure on the oil industry.'

A GOOD YEAR AHEAD?

Hoping to round off the survey on a high note, we asked if 2020 would be a 'good year' for the bunker industry. Leyson was the most whole-heartedly enthusiastic (and perhaps with good reason, in this year of the fuel

switchover): 'From an additive supplier's perspective, absolutely!' Kerr was the voice of the many: 'I would say that it will be a "challenging year". Whether it is a good or bad year, time will tell.' Cosulich was galvanised by the challenges of 2020 (and IMO 2020): 'After years of talking and getting ready we are finally there. Those who have prepared in a professional way will be rewarded and this will benefit the industry. Opportunities will be there for those who will be able to identify them and seize them. Overall I expect the more professional and higher quality players to benefit from the changes.'

In the main, our respondents felt 2020 is shaping up to be the kind of year where you can win – and lose – in a big way. Tolson felt that, for some, 2020 could be 'the most profitable year ever due to massive disruption' and a 'spread of \$100 a tonne between wholesale and retail', but bankruptcy could loom for those 'on the wrong side of a position or contract.' Draffin expected 'lots of opportunities for profit and lots of business for maritime lawyers' but 'difficult times for smaller ship operators, suppliers and traders'.

Millar also felt the outlook for 2020 'depends who you are', as he explained: 'It could be a spectacular year for the oil majors. I think the larger and financially secure physical suppliers will do well – and the large bunker trading houses will grow market share and hopefully thrive. My concern is at the end of the market where cash flow is tight and where defaults or disruption to cash flow due to slower paying customers (in part due to expected higher claims) could lead to a critical situation.'

So there we have it: a year of profit and loss, challenges and opportunities, familiar problems and new solutions. More of the same – only more so.

Our pool of contributors for the *Bunkerspot* 2020 New Year, New Outlook survey represented a cross section of bunker suppliers, shipping associations, consultants, analysts and service providers as well as legal and environmental experts. Some participants answered the survey questions but chose not to make their comments public and we have, of course, respected their wishes. We thank everyone for their contributions – and we are especially grateful to the following:

Gavin Allwright, Secretary,
International Windship Association

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Nigel Draffin, Consultant

Timothy Cosulich,
Fratelli Cosulich Group of Companies

Marie Cabbia Hubatova, Manager,
International Climate, Environmental
Defense Fund Europe

Diane Gilpin, CEO,
Smart Green Shipping Alliance

John Kerr, Global Head of Technical,
V.Ships

Albert Leyson, Marketing Director,
Drew Marine USA

Edward Yang Liu, Counsel,
Hill Dickinson

Paul Millar, Head of Global Credit,
Bomin Group

Marc van Peteghem, Co-founder, VPLP

Sean Puchalski, Executive Vice
President, Strategy & Business Planning,
Corvus Energy

Peter Sand, Chief Shipping Analyst,
BIMCO

Alessio Sbraga, Partner, HFW

Rahul Sharan, Lead Research Analyst,
Dry Bulk, Drewry

Harry Theochari, Partner – Global Head
of Transport, Norton Rose Fulbright LLP

Adrian Tolson, Lead, BLUE Insight

Nicholas Woo, Partner, Shipping and
International Trade Team, Birketts LLP