

LSLC/BIMCO's Webinar – Shipping and Decarbonisation

Carbon tide receding, new fuels tide coming in

To play its part in tackling climate change and global warming, the shipping industry must make massive inroads into its annual output of over one billion tonnes of CO₂. Without a concerted international effort, the increase in shipping movements stemming from the inexorable growth in world trade, marine carbon emissions would not decline as required. However, the industry and the regulators are tackling the problem on many fronts.

This was the context for a London Shipping Law Centre webinar, organised in association with BIMCO on April 21st. Part of the LSLC's Global Webinar Series, it attracted some 230 professionals from the UK and around the world, with sizeable contingents from Norway, Greece, Germany, Singapore and South Africa.

Chairman Grant Hunter, Head of Contracts and Clauses for BIMCO, highlighted the main questions for the industry. How does an industry heavily reliant on fossil fuel transition to being cleaner and greener? Will the change be driven by regulators, stakeholders or by all concerned? Where do the challenges and opportunities lay? How might relationships be adjusted to accommodate change?

This necessitated a rigorous focus on current, planned and proposed steps by the industry's owners, charterers and regulators in "navigating the fast developing landscape of regulation and action."

Mr Hunter recognised that decarbonisation might entail costly conversions to different fuel types, the addition of equipment and technology and substantial operational revisions.

Rachel Hoyland, Senior Associate, Hill Dickinson, set decarbonisation in a context of global warming and climate change. Shipping, involved in the carriage of 90% of world trade, had to find a way to operate without producing carbon dioxide emissions---and to do so as trade increased. "In unprecedented times, when human activities have wrought extensive changes on the planet, we need a multitude of innovative and collaborative responses to the problems now faced."

"We are well past the stage at which business as usual will produce a climate as usual. The political mandate to halt our damaging impact on the environment already exists

at the highest level. We are confronted by a crisis but this is also a time rich in opportunities. If we can collaborate swiftly and effectively enough, and if all stakeholders play their part, the industry can rise to the challenge.”

Roel Hoenders, Head of Air Pollution and Energy Efficiency in the Marine Environment Division at IMO, said total shipping emissions in 2018 were 1,056 metric tonnes of CO₂e, up by 9.6% from 2012. Over these six years, shipping’s share of world carbon output had risen to 2.89%, up from 2.76%.

This underlined the need to introduce stringent and co-ordinated measures if gradual and steady improvements in reductions were to be achieved. Depending on economic development and associated trade volumes, emissions could be 10% lower than 2008 levels or 30% above them by 2050.

Mr Hoenders reminded his audience of a series of amendments to MARPOL’s Annex VI to reduce emissions and promote energy efficiency. A reduction from 3.50% to 0.50% in sulphur content in bunker fuels, brought into force at the beginning of last year, had already resulted in a 77% drop in total SO_x emissions by international shipping. This reflected excellent co-operation from IMO member states, ports, the shipping industry and fuel providers.

From 2013, every ship has been required to keep a Ship Energy Efficiency Management Plan (SEEMP) on board. In 2015, the first phase of the Energy Efficiency Design Index (EEDI) took effect, with increasingly stringent efficiency improvements for new builds under subsequent EEDI phases. Targets had been laid down for a.o. bulk carriers, gas carriers, tankers and container ships through to 2025.

In April 2018, IMO had adopted an initial strategy for reducing GHG emissions from ships as a step towards their complete phasing out. This involved:

- *strengthening energy efficient design requirements for new builds with improvement percentage targets for main ship types.

- *reducing carbon intensity of the fleet overall by at least 40% by 2030, compared to 2008, and then by 70% by 2050.

- *reducing total GHG emissions by at least 50% by 2050, compared with 2008.

Up to 2023, improvements would mean further refinements to EEDI and SEEMP; establishing an International Maritime Research Board; further technical and operational energy efficiency measures; and developing life cycle GHG/carbon intensity guidelines.

The mid term (2023-30), should see an emphasis on innovative emission reduction mechanisms, perhaps incentivised by market-based measures. Beyond 2030, there would be a growing focus on the pursuit, development and provision of zero carbon or fossil free fuels.

In 2019, fuel consumption data for 27,221 ships over 5,000 gross tonnes was received from 107 administrations---invaluable information for regulatory discussions on decarbonisation planning.

It was heartening that the number of low and zero carbon fuel technology projects from around the world noted by IMO had increased from 66 in August 2020 to 106 in March 2021.

In November 2020, an amendment to Annex VI, applying to all merchant ships above 5,000 GT and aiming to reduce carbon intensity overall by 40% by 2030, was approved. This goal-based measure includes both a technical and an operational approach, giving shipowners and operators considerable flexibility in how they go about each measure.

The operational approach relies on a carbon intensity indicator which measures a ship's annual fuel consumption against deadweight ton miles travelled. It is rated A to E by comparing its performance with the ship type/size average. Any vessel rated E or D for three consecutive years has to develop a corrective action to bring its performance back to at least C level. This level would be tightened each year. plan.

The amendments on the short term GHG reduction should come into force in January 2023. IMO's Marine Environment Protection Committee will further consider the International Maritime Research and Development Board proposal for a US\$2 fuel levy; and a global market-based measure based on a US\$100 carbon levy proposed by the Marshall Islands and the Solomon Islands.

Also high on the IMO agenda are life cycle GHG assessment guidelines for alternative marine fuels to ensure a uniform regulatory framework that will promote investment in and uptake of promising low carbon fuels.

IMO was working with banks to establish partnerships and innovative financial instruments to bridge investment gaps and to enhance technical co-operation to “ensure no country is left behind in the transition to low carbon shipping.”

IMO’s initial strategy will be revised with a view to adopting a final strategy in 2023.

Rasmus Bach Nielsen, Global Head of Fuel Decarbonisation, Trafigura, said that “the current regulatory framework does not provide sufficient opportunity for the industry to decarbonise sooner rather than later. A global carbon levy must be introduced to cost neutralise the use of low and zero carbon fuels.”

Trafigura has released a proposal for a ‘partial feebate’ proposal. At the end of each voyage, owners, operators or charterers would submit the amount of fuel consumed by that vessel to IMO for carbon profiling and benchmarking.

A levy of US\$250-300 per metric tonne of CO₂ equivalent would be imposed on carbon intensive fuels while low and zero carbon fuels would be subsidised as necessary to close the competitive gap.

A smaller part of the levy would fund R&D into alternative fuels. Some monies would go to Small Island Developing States to help them manage the impact of climate change and energy transition. The industry should strive hard to use hydrogen-based fuels, especially green ammonia and green methanol, due to their attractive CO₂ emissions profiles. “We are very, very firm on this levy.”

Mr Nielsen appreciated that the switch to low and zero carbon fuels could only occur at a pace that owners and operators could afford. He felt attitudes to new fuels in the industry were shifting in the right direction but clear and comprehensive regulation remained essential. “It is an historical challenge and opportunity. We all want it and we all need it.”

Lars Robert Pedersen, BIMCO’s Deputy Secretary-General, agreed that the ever increasing volume of world trade and the associated shipping movements provided an exceptionally challenging context for efficient energy usage and reductions in carbon

emissions. However, measures had to be carefully chosen, co-ordinated and enforced.

He acknowledged that the uneven recovery in shipping movements and the relative stability of emission levels since 2018 should not obscure the longer term picture. Efficiency improvement could only have a limited effect on reductions. “A five per cent improvement in efficiency gets us nowhere in terms of overall targets.”

Bulkers would continue to account for the most sea miles steamed with containerships and tankers still making up nearly all the remainder. However, much needed to be done to enhance fuel efficiency and reduce carbon emissions to meet the IMO target of a 50 per cent reduction by 2050. “Perhaps we can do a bit more; perhaps a lot more,” added Mr. Pedersen. The need to press towards zero emission fuel as soon as possible was inescapable. However, countries’ differing political priorities could present “a political minefield.”

The shipping industry had proposed its own R&D fund---the International maritime Research & Development Board---to advance fuels and technology development. It had also asked IMO to progress market-based measures. The technology needed to reduce emissions substantially was not yet widely available but there was scope for preparatory work.

“Transition must make sense for business. If the price of new and low carbon fuels is two or three times what operators pay now, there will be little incentive to go down this road. Transition will have to take place ship by ship, perhaps over one or even two decades. Ships with old technologies will trade side by side with those with new technologies. We need the market to facilitate this in an economically sustainable manner. It can only happen when commercial realities cater for the sustainable option rather than the fossil option,” concluded Mr. Pedersen.

Martin Rowland

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