

Maritime Decarbonization Monthly

October 2022

Thought of the Month:

"All-hands-on-deck to support the transition to low-carbon shipping"

The Big Picture

Decarbonization remains a difficult process for the shipping industry, with **many uncertainties regarding the future fuel and emissions landscape**. Clean fuel infrastructure and future fleet composition are major unknowns. Vessel tracking technology appears to be a critical issue that can lead to a smoother and faster transition. Many regulatory guidelines and programs have been proposed to push shipowners, operators, and charterers to 'do the right thing'. As many watch the transition unsure how it will change the future of shipping, the one thing that cannot be ignored is that the process is rapidly evolving. There are two major events to pay attention to as 2022 concludes: **COP27**, taking place from November 6-18, and the IMO's **79th Marine Environment Protection Committee (MEPC79)**, which will meet online and in London from December 12-16. Stay tuned.

What's New

The International Chamber of Shipping (ICS) has proposed a "**fund and reward system**" to encourage the adoption of clean alternative fuels, which are currently two to three times more expensive than conventional marine fuels. The new ICS proposal combines elements of several multi-government proposals with a past ICS/INTERTANKO proposal. The program would be funded by a **mandatory flat-rate contribution per ton of CO₂**. According to the industry association, the "fund and reward system" could be **introduced by 2024** if governments can agree on the legal framework within the IMO.

Our View

During the second *IMO Symposium on Low and Zero Carbon Fuels for Shipping*, the IMO Secretary-General noted that the shipping industry must overcome global barriers to accessing clean marine fuels, particularly in terms of demand, price, and scale. Creating an efficient market for clean marine fuels is a complicated task that will require regulations to guide the **commercialization of clean fuel infrastructure and technology**. There has been widespread public support by IMO members for more aggressive emissions regulations, however efforts to create the necessary governing regulations have been fruitless. Last year's 77th session of the IMO's Maritime Environment Protection Committee (MEPC77) saw members fail to agree on a strategy to eliminate climate emissions from ships by 2050. Despite best efforts this year, MEPC78 Members fell short yet again on agreeing to new decarbonization targets for the industry. Without guidelines in place there is a risk that industry stakeholders will be more likely to watch from the sidelines, creating a **missed opportunity for a rapid and pragmatic transition**.

Industry Trends

Fuels

Lloyd's Register (LR), in partnership with marine innovation consultancy Thetius, has published a new report on technology and regulatory trends titled "Testing Times - The vital role of ship fuel oil testing and quantity verification in an uncertain era." The report estimates that more than one million tons of off-specification or non-compliant fuel are discovered each year, costing ship operators between \$27,000 and \$50,000 per incident.

Biofuels

ExxonMobil: In the ARA region (Amsterdam, Rotterdam, Antwerp), ExxonMobil is moving from the experimental stage to a full commercial offering of drop-in biofuels for customers. ExxonMobil is also working to launch **marine biofuels in Italy**, likely early next year, and has conducted some trials of B25 in Singapore.

Trials: Marubeni's world-first ethylene voyage using biofuel was completed on September 21. The ethylene carrier GasChem Dollart was supplied with B25 marine biofuel in Vlissingen. On September 26, Singapore-based **Tata NYK Shipping** deployed its Sagar series bulk carrier vessel, MV Sagar Moti. The ship is currently carrying salt from India to Vietnam and received ExxonMobil's marine biofuel via a ship-to-ship transfer in Singaporean waters.

Regulations

European Parliament is pushing for the use of alternative marine fuels by adopting a position to mandate a **2% cut in GHG emissions by 2025, 20% by 2035, and 80% by 2050** compared to 2020 levels. The European Parliament will now begin negotiations for implementation of the mandate with individual EU member states.

New Vessel Designs

BV granted AiP to DSME ammonia-fueled very large ammonia carrier design: The vessel design is 230m in length, 36.6m wide, and 22.5m in height and will have four prismatic-type cargo tanks with a combined carrying capacity of 86,000 cbm. **Ammonia** has the potential to be a **leading zero-carbon fuel** in the maritime industry.

German engine manufacturer **MAN Energy Solutions** received a 'major order' to deliver dual-fuel methanol engines for six 17,000 TEU containerships being built for Danish integrated logistics company A.P. Moller – Maersk.

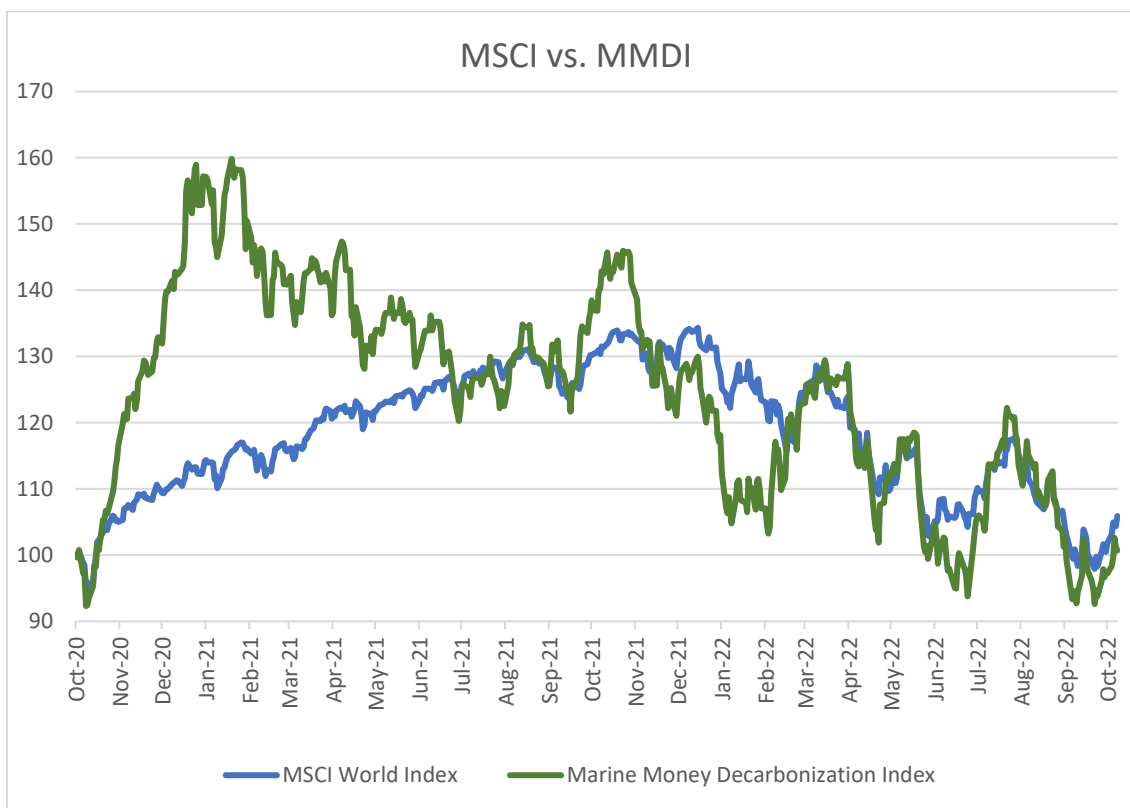
Thai state-owned oil and gas company **PTT** and **AET** signed an MOU for the development and construction of two zero-emission Aframaxes to be powered by **green ammonia** with delivery to PTT for long-term charters in Q4 2025 and Q1 2026 respectively.

Technology

A practical guide to selecting energy efficiency technologies for ships has been published by the **Global Industry Alliance to Support Low Carbon Shipping** as part of the IMO-Norway GreenVoyage2050 project. The guide provides a simple but flexible methodology for pre-selecting technologies based on a set of eight evaluation criteria: similarity, plausibility, accuracy, total and specific order volume, repeat orders, consistency, and compatibility.

Green Ships

The **world's first bulk carrier** powered in part by **wind**, the Shofu Maru, has entered the Port of Newcastle on its maiden voyage. The 100,422-tonne bulk carrier, owned by Japanese shipping company Mitsui O.S.K. Lines (MOL), was delivered on October 7, 2022. The ship is the first of its kind and heralds a new era in modern shipping as wind propulsion marks its return as a sustainable energy source.



Relevant Prices

Fuel Prices

	Price	YOY
Crude Oil, Brent	94.59 \$/bbl	12.1%
Natural Gas, Henry Hub	6.30 \$/MMbtu	16.2%
LNG, Korea/Japan	30.16 \$/MMbtu	-5.8%
Coal, Rotterdam	243 \$/mt	37.4%
VLSFO, Rotterdam	635 \$/mt	7.5%
Methanol, China	36.05 \$/mt	-6.3%
Palm Oil, Malaysia	32.65 \$/mt	-28.6%

Stock Indices

Marine Money Decarbonization Index	309	-29.4%
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Carbon Emission Allowances

EU Emission Allowances	78.65 \$/kt	35.2%
UK Emission Allowances	89.62 \$/kt	52.9%

Note: All prices as of last closing prior to the report; Sources: Bloomberg and Breakwave Advisors

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