

Maritime Decarbonization Monthly

November 2023

Thought of the Month:

“Zero emission fuels still in the pre-final investment decision (FID) phase.”

The Big Picture

On the sidelines of **COP28**, a significant development unfolded with the signing of a \$1.1 billion memorandum of understanding for **green bunkering in Egypt**. This agreement focuses on granting a license for ships' bunkering activities with green fuel in **East Port Said** to Scatec, a Norwegian renewable energy solutions provider. Anticipated production capacity is set to reach 100,000 tons per year of green methanol by 2027, facilitated by an electrolyzer with a power capacity of 190 MW. This power is derived from a combination of 317 MW of wind power and 140 MW of solar power, aligning with a sustainable energy approach.

What's New

The **Sea Cargo Charter**, an international framework dedicated to evaluating and revealing the environmental compatibility of chartering activities in the maritime sector, is set to **revamp its reporting structure**. This revision aims to synchronize its course with the updated greenhouse gas strategy by the International Maritime Organization (IMO), which was endorsed in July. Additionally, the charter intends to broaden its current scope to encompass shipowners. The framework will realign itself with the IMO's ambitious target of achieving net-zero greenhouse gas emissions in the shipping industry around 2050. This endeavor includes interim milestones in 2030 and 2040, employing a comprehensive lifecycle approach from well to wake. This strategic shift underscores a dedicated **commitment to aiding charterers and shipowners during the transitional phase**.

Our View

The imperative for **sustainable decision-making** in the maritime industry is already at hand, prompting shipowners to navigate and establish viable solutions concerning fuel selection and vessel design. In this pivotal moment, it becomes **crucial for industry stakeholders to engage with a design partner** capable of providing effective consultation on these challenges and allocating the necessary resources. The maritime sector is currently undergoing a profound transformation towards decarbonization, with both the European Union and the IMO demonstrating steadfast commitment to environmental preservation, elevating decarbonization as a paramount objective. Considering forthcoming regulations, carbon pricing, and Carbon Intensity Indicator (CII) ratings, ship owners and operators must conscientiously factor these considerations into their commercial strategies. Thus, the **need for support in devising innovative and sustainable solutions** to adhere to these increasingly stringent regulations becomes a necessity.

Industry Trends

Fuels

A recent report by the **World Economic Forum** and **Boston Consulting Group** reveals that over 95% of projects aimed at developing zero-emission fuels for maritime shipping are still in the pre-final investment decision (FID) phase. To meet the maritime industry's goal of a 15% reduction in emissions by 2030 compared to 2022 levels, and to align with net-zero scenarios by 2050, the adoption of zero-emission fuels is considered essential. The report emphasizes that the existing 180+ dual fuel vessels on order by carriers do not provide a sufficiently clear demand signal for fuel producers, highlighting the need for long-term offtake agreements to incentivize final investment decisions.

LNG bunkering

For the first time in Korea, simultaneous operations (SIMOPs) of ship-to-ship LNG bunkering were conducted for a coal-carrying bulk carrier at the **POSCO** raw material dock, Gwangyang port. As informed, the ship-to-ship LNG bunkering was carried out on October 28, 2023. South Korea is said to boast world-class shipbuilding capabilities for LNG carriers and bunkering vessels. However, due to safety concerns, ship-to-ship LNG bunkering has never been carried out at the loading docks of its trading ports.

Green Partnerships

During COP28, **APM Terminals** and **DP World**, two prominent global terminal operators, officially established the Zero Emission Port Alliance (ZEPA). The primary goal of this alliance is to collaboratively facilitate the affordability, accessibility, and attractiveness of battery-electric container handling equipment within the next decade.

New Vessel Designs

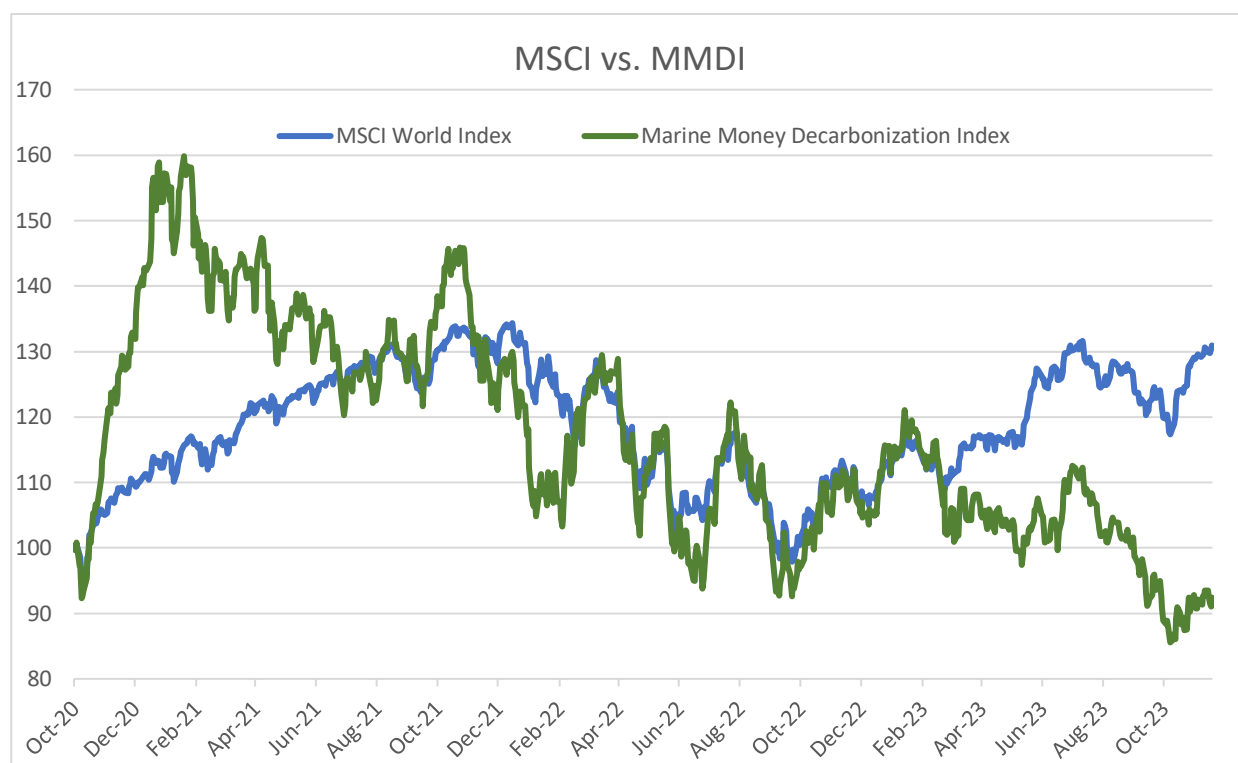
Classification society **Bureau Veritas** (BV) has published its first classification Rules for hydrogen-fueled ships to support the safe development of hydrogen propulsion in the maritime sector. The rules outline technical requirements for the safe bunkering, storage, preparation, distribution, and use of hydrogen as a fuel for power generation on board. The rules also cover monitoring and control systems, addressing specific safety challenges relating to the transport and use of hydrogen on ships.

Shipping Finance

A recent research paper from the **UCL Energy Institute**, published in the Journal of Environmental Innovation and Societal Transitions, delves into the potential role of ship financiers in steering the shipping industry towards zero-emission fuels. The study introduces a unique theoretical framework, classifying financiers into five categories, either enabling or hindering the transition. The findings indicate that many financiers express a willingness to support established shipowners as loyal enablers during the transition, primarily influenced by existing corporate relationships.

Green Ships

Vale, the Brazilian mining powerhouse, has enlisted the services of the world's largest ore carrier for wind-assisted propulsion. The Sohar Max, a 2012-built 400,000 deadweight tonnage (dwt) valemax vessel under the ownership of Oman's Asyad and subject to a long-term charter with Vale, is set to undergo a significant upgrade.



Relevant Prices

Fuel Prices

	Price	YOY
Crude Oil, Brent	75.79 \$/bbl	-2.8%
Natural Gas, Henry Hub	2.37 \$/MMbtu	-62.0%
LNG, Korea/Japan	15.98 \$/MMbtu	-53.4%
Coal, Rotterdam	117 \$/mt	-42.5%
VLSFO, Rotterdam	566 \$/mt	13.4%
Methanol, China	33.96 \$/mt	-5.2%
Palm Oil, Malaysia	30.79 \$/mt	-8.1%

Stock Indices

Marine Money Decarbonization Index	283	-15.7%
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Carbon Emission Allowances

EU Emission Allowances	71.80 \$/kt	-24.0%
UK Emission Allowances	41.27 \$/kt	-56.0%

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

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