

Maritime Decarbonization Monthly

December 2022

Thought of the Month:

“Decarbonization cannot be placed solely on the shoulders of the ship operator at the end of the line – it is a challenge that must be dealt with holistically by the entire shipping industry”

The Big Picture

The **International Maritime Organization (IMO)** did not adopt a target date for full **decarbonization** during the Marine Environment Protection Committee (MEPC 79) meeting in mid-December, even though a clear majority of IMO member states (32 countries) supported the goal of zero emissions by 2050. The IMO is currently negotiating measures to reduce emissions from ships in the medium term, including a carbon tax and a fuel standard measuring well-to-wake emissions. A combination of an ambitious fuel standard and a global carbon levy could contribute to rapid emissions reduction.

What's New

The Mediterranean Sea was designated as an Emission Control Area (ECA) for sulphur oxides and particulate matter during MEPC 79. The designation means that ships will have to use marine fuels with reduced sulphur content starting **May 1, 2025**. The allowable sulphur content will drop from the current limit of 0.5% to 0.1%. The designation is expected to reduce emissions of sulphur oxides by nearly 80% and emissions of harmful particulate matter by almost 25%, generating significant benefits for human health and the environment. The initiative was developed by the Mediterranean countries and the EU under the Barcelona Convention and jointly submitted to the IMO.

Our View

There is increased concern about the new emissions metrics regulations going into effect next year. Under the **CII classification system**, scheduled to take effect in 2023, ships will be assigned classifications based on their efficiency level. It is true that the new measures will allow shipowners to make critical decisions about the operation of the aging fleet, however **Intercargo** members have stated that the CII **will not achieve the intended decarbonization goals** it was developed for under real-world operating conditions.

Shipowners argue the CII will not deliver accurate nor transparent emissions ratings as it **will largely depend on how a vessel is used by the vessel's charterer**. As a result, the rating system has come under massive fire, as factors beyond the control of shipowners can have a significant negative impact on a ship's CII rating. These include adverse weather conditions, voyage distance, waiting times in ports, port infrastructure, and charterers' arrangements.

Industry Trends

Fuels

French energy major **TotalEnergies** has become the eighth member of the Castor Initiative, a multinational coalition of shipping industry stakeholders committed to the development and construction of ammonia-powered tankers.

Danish container shipping major **Maersk** is resuming its partnership-building strategy aimed at securing the supply of green fuels for its new ships. Namely, the company has signed a Memorandum of Cooperation (MoC) with the alternative energy business unit of OQ, Asyad Group, and Sumitomo. The feasibility study is expected to be divided into two stages, focusing on the exploitation of existing port infrastructure and the selection of the best type of fuel based on its commerciality.

Carbon Capture and Storage

Japanese conglomerate **Mitsui O.S.K. Lines (MOL)** has signed a memorandum of understanding with its compatriot The Kansai Electric Power Co. (KEPCO) for a marine transportation study to develop a **carbon capture and storage (CCS)** value chain. MOL and KEPCO will collaborate on the development of a CCS value chain consisting of capture, sequestration, transport, injection, and storage of CO₂ emitted from KEPCO's thermal power plants.

Regulations

The **EU Council** and the **European Parliament** have reached a preliminary political agreement on the legislative proposals of the 'Fit for 55' package, which aim to further reduce emissions and address their social impacts. The 'Fit for 55' package aims to enable the European Union to reduce its net greenhouse gas emissions by at least 55% from 1990 levels by 2030 and achieve climate neutrality in 2050. The agreement still needs to be formally adopted by both institutions.

New Vessel Designs

South Korean shipping major **HMM** is preparing an order for new containerships powered by alternative fuels as part of its future growth strategy. The strategy was announced in July this year with HMM assigning \$11.3 billion for future investments, including expansion of its eco-friendly ships from 820,000 TEU to 1.2 million TEU by 2026.

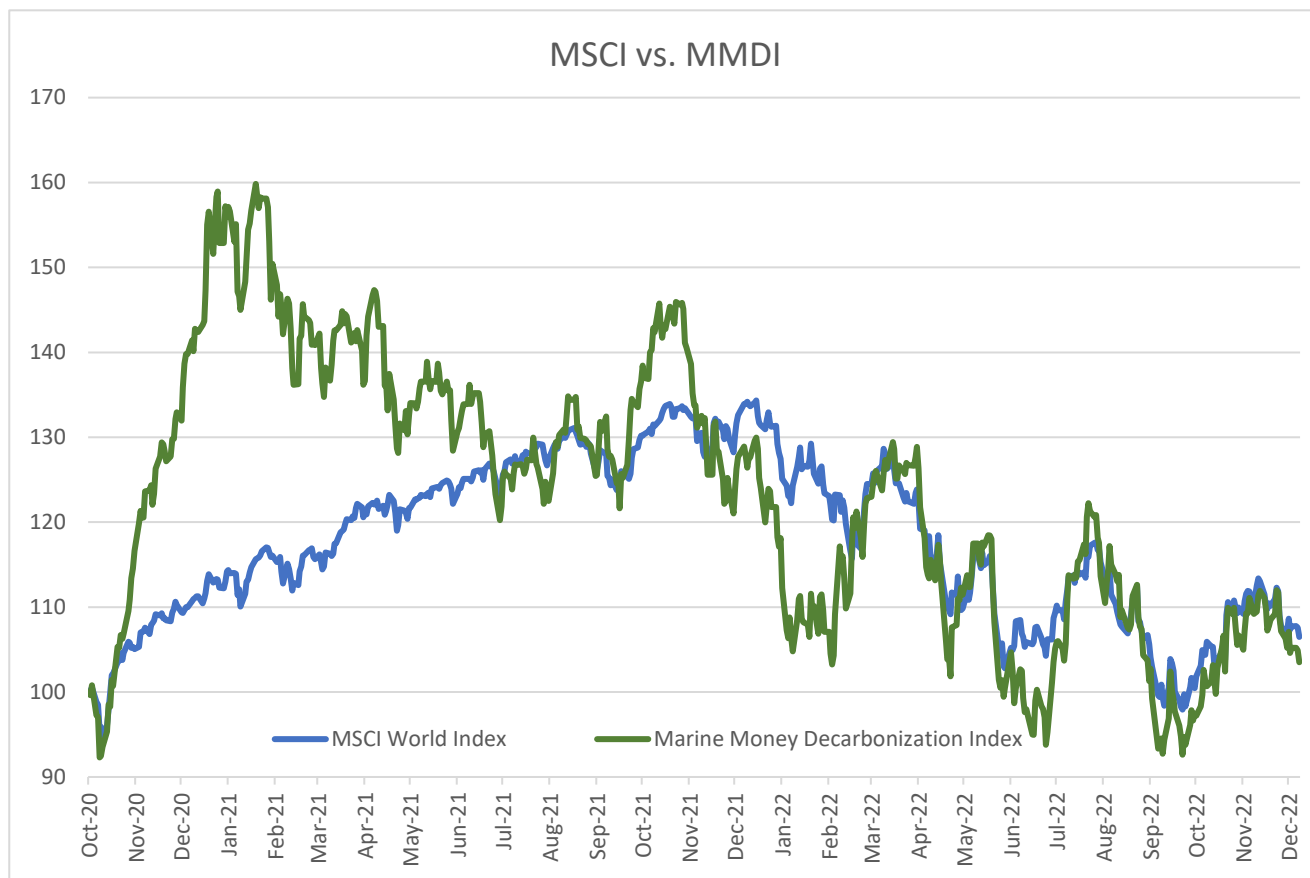
Jiangsu New Yangzi Shipbuilding Co., a subsidiary of Chinese Yangzijiang Shipbuilding, has delivered a new eco-friendly 3,500 TEU boxship Maersk Acadia. The ship is the first in the series of 10 newbuilds being built for Japanese shipowner Lepta Shipping, a joint venture between Japanese Nissen Kaiun and trading house Mitsui & Co.

Technology

China Classification Society (CCS) has issued approval in principle (AiP) for an 85,000-ton methanol dual-fuel dry bulk carrier developed by Huangpu Wenchong Shipping, a subsidiary of China State Shipbuilding Corporation (CSSC). The vessel design has a length of 225 meters, a width of 36 meters, and a depth of 20.15 meters. The ship has a draft of 14 meters and a cargo capacity of up to 85,000 tons. It is propelled by a 9,000-kilowatt methanol dual-fuel engine and can achieve life-cycle low-carbon emission reduction.

Green Ships

Shanghai Waigaoqiao Shipbuilding Co., a subsidiary of China State Shipbuilding Corporation, has delivered a 190k dwt dual-fuel LNG bulk carrier Ubuntu Harmony to Taiwanese bulk carrier company U-Ming Marine. The giant vessel is the first of the planned four LNG-powered ships to be completed by the shipyard. According to the company, the delivery comes one-and-a-half months ahead of schedule.



Relevant Prices

Fuel Prices

	Price	YOY
Crude Oil, Brent	82.13 \$/bbl	3.7%
Natural Gas, Henry Hub	4.47 \$/MMbtu	11.1%
LNG, Korea/Japan	28.51 \$/MMbtu	-28.6%
Coal, Rotterdam	190 \$/mt	22.7%
VLSFO, Rotterdam	543 \$/mt	-3.2%
Methanol, China	36.73 \$/mt	0.2%
Palm Oil, Malaysia	36.91 \$/mt	-20.8%

Stock Indices

Marine Money Decarbonization Index	324	-16.5%
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Carbon Emission Allowances

EU Emission Allowances	87.82 \$/kt	3.0%
UK Emission Allowances	83.16 \$/kt	35.6%

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

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Contact:

Breakwave Advisors LLC
17 State Street, 40th floor
New York, NY 10004
Tel: +(1) 646 775 2898
Email: research@breakwaveadvisors.com