

Maritime Decarbonization Monthly

September 2022

Thought of the Month:

“The development of green fuels is becoming more widespread for the energy transition”

The Big Picture

Maritime sector representatives have officially launched an **initiative** to catalyze the supply of clean fuels to support the **global energy transition**. The International Chamber of Shipping (ICS) and the International Association of Ports and Harbors (IAPH), along with the CEO-led Clean Energy Maritime Taskforce, recently unveiled the Clean Energy Marine Hubs Initiative at the Clean Energy Ministerial (CEM) in Pittsburgh. The governments of **Canada** and the United Arab Emirates (**UAE**) confirmed during the CEM meeting in Pittsburgh that they **will be among the first countries** to support this important initiative to accelerate **the global transition to green fuels and technologies**. The original concept for creating green marine centers was announced earlier this year as a forum to enable policymakers and industry stakeholders to rapidly deploy clean energy. This **announcement** represents the **next step** in the development of an initiative that will help unlock the potential for **zero-emission fuel deployment** worldwide.

What's New

Ten companies have joined the Cargo Owners for Zero Emission Vessels (coZEV) initiative, launched by cargo owners who want to **transition all their ocean freight to ships powered by zero-carbon fuels by 2040**. Recent signatories to the platform include Beiersdorf, Dupont, Electrolux, ETTLI Coffee, Moose Toys, Ohana Beverage Company, Philips, REI Co-op, Sisley, and Target. They join Amazon, Brooks Running, Frog Bikes, IKEA, Inditex, Michelin, Patagonia, Tchibo, and Unilever, bringing to 19 the number of companies committed to decarbonizing the maritime value chain.

Our View

Green hydrogen has an important role to play in decarbonizing shipping. New plans by several **Middle East-based** green hydrogen projects are fueling hopes that the region could become a **key player** in the development of the global renewable energy industry. Last month, a survey conducted by Siemens identified a total of 46 potential green hydrogen projects in the Middle East and Africa worth \$92 billion. **Maersk** had recently placed an **order** in South Korea for a series of container ships powered by **methanol** and announced that it will **produce methanol** by first producing green hydrogen from renewable energy and then methanol from bio-CO₂. Overall, we see developments in Middle Eastern ports, with countries like Saudi Arabia announcing massive investments in hydrogen. Dubai and Qatar are already investing in hydrogen and solar panels, which in turn are prerequisites for green hydrogen production.

Industry Trends

Fuels

As the shipping industry moves toward wider adoption of **methanol** as an alternative fuel, supply and procurement, concerns remain. California-based startup WaterFuel, which counts Maersk and NetJets among its investors, has developed a **new technology** module for converting **municipal solid waste into low-carbon fuels**. The technology can be efficiently deployed where waste is generated and scale production efficiently and quickly to meet the shipping industry's growing demand for green methanol.

Biofuels Tests

Cruise: The US-based cruise line Holland America Line, part of Carnival Corporation, has completed the cruise industry's first multiweek test of biofuels onboard Volendam at the Port of Rotterdam in the Netherlands.

Container: TotalEnergies Marine Fuels has completed the refueling of a CMA CGM containership in Singapore with sustainable marine biofuel, a major milestone for the company as it seeks to become a key biofuel bunker supplier across strategic bunker hubs by 2030.

Regulations

A broad coalition of 35 shipping companies, supported by transport and environmental non-governmental organizations (NGOs), is calling on European co-legislators to include ships under 5,000 GT, including offshore and service vessels, in EU regulations to decarbonize the shipping industry.

Shipping Finance

The leading banks that finance the shipping industry, along with the marine insurers participating in the Poseidon Principals initiative, have agreed to increase the standards by which they measure climate alignment in the maritime industry.

New Vessel Designs

LCO2 Carriers: Lloyd's Register (LR) and Liberian International Ship and Corporate Registry (LISCR) have awarded Design Approval to Hyundai Mipo Dockyard (HMD) for the development of the world's first 30k cbm liquefied carbon dioxide carrier. The next generation ultra large, liquefied carbon dioxide (LCO2) carrier 74k cbm for Hyundai Heavy Industries Group (HHI) and Hyundai Glovis has received approval in principle (AIP) at Gastech from ABS and the Republic of the Marshall Islands (RMI) Maritime Administrator.

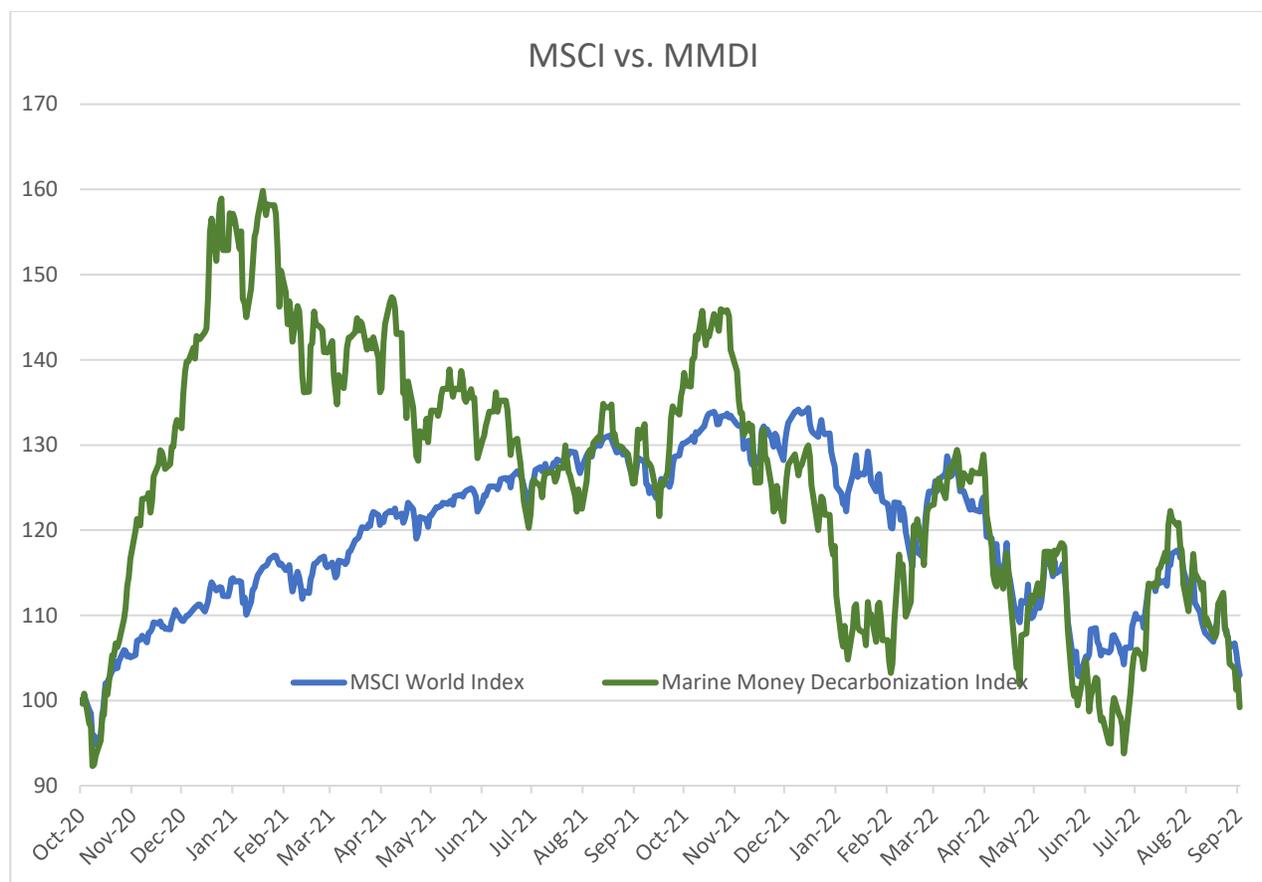
Methanol: American Bureau of Shipping (ABS) has granted approval in principle (AIP) to CSSC Qingdao Beihai Shipbuilding CO., LTD and China Ship Design & Research Center Co., Ltd (CSDC) for the world's first methanol-powered Newcastlemax bulk carrier.

Technology

German engine manufacturer **MAN Energy Solutions** (MAN ES) is driving the development of methanol-capable engines for the marine industry to meet the growing demand for methanol as one of the marine fuels of the future. The company has received type certification from DNV for its four-stroke medium-speed 32/44CR engine.

Green Ships

CMA CGM has confirmed the order of seven new container vessels, powered by biogas, aiming to upgrade its services to the French West Indies. Four of the new box ships will have a 7,300 TEU capacity and the other three vessels will have a 7,900 TEU capacity, to be delivered gradually as of 2024 and are expected to serve Guadeloupe and Martinique, to routes between the French West Indies, France, and Europe.



Relevant Prices

Fuel Prices

	Price	YOY
Crude Oil, Brent	85.86 \$/bbl	11.1%
Natural Gas, Henry Hub	6.79 \$/MMbtu	36.5%
LNG, Korea/Japan	37.57 \$/MMbtu	40.2%
Coal, Rotterdam	319 \$/mt	91.2%
VLSFO, Rotterdam	631 \$/mt	18.4%
Methanol, China	37.07 \$/mt	-16.3%
Palm Oil, Malaysia	32.10 \$/mt	-21.1%

Stock Indices

Marine Money Decarbonization Index	286	-29.4%
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Carbon Emission Allowances

EU Emission Allowances	63.38 \$/kt	8.2%
UK Emission Allowances	80.53 \$/kt	45.4%

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

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