



Capital Link Decarbonization in Shipping Forum

"Moving from Discussion to Delivery"

Digital Conference

Wednesday & Thursday, April 14 & 15, 2021

Looking Ahead To 2050 Zero Emission Alternative Energy Fuels: Ammonia - Hydrogen - Methanol - Biofuels



Jesse presented the findings from the second edition of the Getting to Zero Coalition's Mapping of Zero Emission Pilots and Demonstrations. The Mapping covered 106 projects focusing on zero emission pathways for the maritime industry, including ship technologies, fuel production and bunkering / recharging. The presentation showed that significant work is underway on a range of fuels and technologies, with an increasing focus on hydrogen-based fuels overall.

Ammonia and methanol have been the focus for large ship applications and hydrogen and batteries, often in combination, mostly closely associated with smaller vessels. The second edition included a larger number of projects in Asia, with vessel technologies and ammonia-powered shipping a big part of the picture in the region. The Mapping also suggested that earlier projects are being extended, scaled up and expanded in scope, indicated increasing confidence in the relevance of zero-emission shipping technologies.

Jesse Fahnestock

Project Director

Getting to zero Coalition -
Global Maritime Forum



Berit Hinnemann

Senior Innovation Project
Manager – Decarbonization
A.P. Møller Maersk

Our ambition is to lead the way in decarbonising global logistics and our customers expect us to help them decarbonise their global supply chains. Today, 90 of our top 200 customers have set or are in the process of setting ambitious science-based or zero carbon targets. Therefore, we are embracing the challenge, working on solving the practical, technical and safety challenges inherent in the carbon neutral fuels we need in the future.

Back in 2018, we announced our ambition to have a carbon-neutral fleet in 2050, at the time this was considered a moonshot. Today we see it as a challenging, yet achievable target to reach, fast tracked by advances in technology and increasing customer demand. We continue to explore several carbon neutral fuel pathways, with methanol (e-methanol and bio-methanol), alcohol-lignin blends and ammonia as the primary fuel candidates for the future, along with the use of biofuels. There is no single silver bullet solution and we expect multiple fuel solutions to exist alongside each other in the future.



Mark Cameron

Chief Operating Officer
Ardmore

The future will clearly see more than one fuel type being deployed and it is likely that the big, predictable consumers (i.e. liner trades) will influence tramp trades by way of setting up bunker supply logistics chains.

“At Ardmore, we have conducted an in-depth review leading to the establishment of our Energy Transition Plan. This led to our recent investment in Element 1 and the formation of ‘e1 Marine’ with the tag line ‘Getting Hydrogen to Work’.

The emission reduction challenge must, rightfully, put the operational safety of crew high on the agenda. This is why we believe the technology that e1 Marine brings to the market is safe, cost effective and reliable as it produces low pressure, high purity hydrogen ‘on demand’ for use with a fuel cell from a methanol and water mix.

“Methanol is already in use as a fuel source today and we believe that by investing in this technology, we are able to use our relationship and standing within the maritime community to demonstrate commitment to finding practical solutions that work.”