PRESS CLIPPINGS



Capital Link Decarbonization in Shipping Forum Wednesday & Thursday April 14 & 15, 2021 Digital Conference

MOVING FROM DISCUSSION TO DELIVERY

2 Days – 14 Virtual Sessions – 78 speakers – 70 Presenting Companies

Capital Link's Decarbonization in Shipping Forum took place with great success and participation on Wednesday & Thursday, April 14 - 15, 2021 as a digital conference, opening it to a global audience and making this approach highly relevant and effective, and featured a series of LIVE interactive panel discussions.

The event took place over the course of two days, with 14 virtual sessions, and 78 speakers with 70 companies participating on the discussion panels. Top executives from major companies and organizations from the shipping industry, discussed how the industry will meet the regulations, the costs and risks involved and the solutions that are available.

The theme of the Forum was "Decarbonization", which is the next frontier for the industry to conquer adhering to specific objectives and timeframes.

STEERING COMMITTEE

The agenda topics were carefully designed and selected by the Steering Committee comprised of leading experts in the Maritime Industry.

- Dr Grahaeme Henderson OBE, Senior Vice President, Shipping & Maritime Shell International Trading and Shipping Company Limited
- Michael Parker, Chairman, Global Shipping Logistics & Offshore Citi
- Esben Poulsson, Chairman International Chamber of Shipping, Executive Chairman Enesel PTE. Ltd
- Dr. Nikolas P. Tsakos, Founder and Chief Executive Officer TEN LTD; Chairman INTERTANKO (2014-2018)
- Charles (Bud) Darr, Executive Vice President, Maritime Policy and Government Affairs MSC Group

The Forum also received extensive coverage from multiple media outlets. Select the article of interest in the following page. The articles appear in chronological order. We hope it will be of interest to you as it was to us.

Thank you, Capital Link Team

Articles

- Ports can play a vital role in decarbonization Lloyd's List
- <u>Rotor sail demand set to outstrip supply but Anemoi has a solution</u> TradeWinds
- <u>Shipping majors bet on different paths in decarbonizing shipping</u> Shipping Watch
- Shipping needs \$3.4tm investment to meet 2050 decarbonisation target, Stopford says

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- <u>What the plethora of green partnerships has overlooked</u> Lloyd's List
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Click on the hyperlink to read article. Articles are in chronological order

Ports can play a vital role in decarbonisation

Carbon-free shipping is not confined to the oceans

• 20 Apr 2021

ANALYSIS

James Baker@JamesBakerCI james.baker@informa.com

Ports can use their role as the interface between land and sea to act as hubs for energy transition. But they are calling for a level playing field and regulatory support



*EschCollection / Getty Images*PORTS, SUCH AS ROTTERDAM ABOVE, SAY THEY OFFER OPPORTUNITIES TO HELP DECARBONISING SHIPPING.

PORTS can play a pivotal role in the decarbonisation of shipping by using their position in the industrial and energy supply chains to encourage the transition to green energy.

"Ports are a perfect nucleus to start the energy transition," Hamburg Port Authority chairman Jens Meier told a Capital Link webinar. "We have to keep in mind that ports are the knots that tie the supply chains and energy grids together."

Not only would this be a "win-win" result for economies, but it was also a requirement if city ports such as Hamburg wanted to maintain their "social licence" to operate.

"I believe that as port authorities we should put in place some real examples using these technologies," said Mr Meier.

Hamburg is one of the largest contiguous industrial areas in Germany and has a goal of becoming climate neutral by 2040.

"Our smart port strategy included logistics and energy pillars," said Mr Meier. "In logistics we want to get rid of the old forms of energy consumption and move to renewables.

"We want to get rid of unnecessary steps in the supply chain, such as having empty trucks in the port, and getting to the point where transport has as little pollution as possible."

Decarbonising shipping would be difficult but should not be seen as any more difficult than for other industries, said Port of Rotterdam chief executive Allard Castelein.

Rotterdam's industrial cluster already accounts for 16% of the Netherlands' emissions from large energy and chemicals producers.

"I do not think shipping's challenge is any harder than theirs," he said. "We believe we can make a difference. The disruption associated with the energy transition should deliver opportunities rather than threats."

That hypothesis is built on the port's experience gained form embracing liquefied natural gas as a bunker fuel, but how energy transition evolves remains uncertain, he said.

"We've decided not to aim for a single solution but to embrace several innovations that may be associated. It may be hydrogen, carbon capture and storage or ammonia. There are many opportunities."

But there would be no one "silver bullet" solution, added Mr Castelein.

"We are in an era where various alternatives will emerge and some will emerge that we didn't think of some years ago," he said. "I am astounded by the exponential growth of hydrogen initiatives."

There would be a period where combustion engine technology would be replaced by several other competing technologies, any one of which could end up becoming dominant.

"You need to set the prerequisites right for technology to flourish and then enable the facilities that are necessary along that supply chain," he said. "My simplest advice would be not to invent the wheel yourself. There is a huge array of solutions being offered.

"It may look daunting but if you start taking small steps you will get there. There is no one big leap that will solve it."

Nevertheless, proper regulation on a regional or global basis, similar to that imposed on SOx emissions, would be necessary to help ports develop carbon-neutral solutions.

"It needs to have a level playing field to avoid the waterbed effect that moves volumes away," he said. "This will create demand and if you created demand there will be supply."

Mr Meier sees hydrogen as "the next logical step" but has also called for a better regulatory framework.

"We want to be successful in the big change coming from the new forms of fuels, but we would like to see some regulation for the scale up phases from the EU to support that," he added.

Source: <u>https://lloydslist.maritimeintelligence.informa.com/LL1136523/Ports-can-play-a-vital-role-in-decarbonisation</u>



Capital Link Decarbonisation in Shipping forum participants discuss the ship propulsion of the future. Photo: Capital Link

Rotor sail demand set to outstrip supply but Anemoi has a solution

UK manufacturer giving owners the option of drydocking for prepatory work before kit becomes available

16 April 2021 10:35 GMT *UPDATED* 16 April 2021 10:35 GMT By Gary Dixon

UK manufacturer Anemoi Marine believes supply of rotor sails for ships will soon exceed supply, but the company has come up with a stop-gap solution.

Chief executive Kim Diederichsen told a CapitalLink shipping decarbonisation forum that demand for the carbon-cutting technology is increasing, with late 2021 and 2022 set to be very busy.

He said the industry needs different kinds of roll-out to meet demand.

Anemoi is offering clients the opportunity to be "wind-ready", which means docking a ship now to do preparatory work.

Then, when the rotor kit becomes available, it can be fitted quickly and easily.

"Everything besides the physical installation of the rotors can be done now," the CEO added.

"Right now there is a production limitation of rotor sails," he said.

Diederichsen argues that rotor systems are 10 times more efficient than conventional sails, despite using energy to spin them around.

Time to consider nuclear option

The online forum also heard from Mikal Boe, CEO of Core Power, which is aiming to develop floating nuclear power plants to generate zero-emissions fuels before the end of the decade.

He said the small-scale molten salt reactor system is a truly emission-free energy source.

"It's a new energy system," he added. This will open up new economies and new products, and the chance for shipping players to deploy capital in areas outside traditional maritime activities, Boe believes.

Geir Bjorkeli, CEO of Corvus Energy, made the case for battery power.

He said this technology is available for all vessels.

"For old vessels the business case is not quite so good, but there is a huge fleet of modern diesel-electric vessels already out there," he added.

Corvus is busy pioneering the use of batteries on bulkers, and has recently fitted a 10MW system on a cruiseship.

Bjorkeli said batteries are attractive to cruiseship owners because they are quiet and meet requirements to have zero emissions in port.(Copyright)

Source: https://www.tradewindsnews.com/news/rotor-sail-demand-set-to-outstrip-supply-but-anemoi-hasa-solution/2-1-996330

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Shipping majors bet on different paths in decarbonizing shipping

Hydrogen, LNG, ammonia, electricity and then there is methanol and LPG – the bids are many and so are the answers when you ask big shipping companies such as Maersk, Ardmore, Exmar and Shell about the fuel solution of the future. What they do agree on, however, is that the time to act is now.

The answers vary greatly when you ask shipping executives around the world which fuel and technology one should invest in to lower the industry's large climate footprint.

The multitude of answer became clear Thursday this week during the Capital Link conference where large shipping companies including Maersk, Ardmore, Exmar and Shell presented their bids for what fuel will be the one for the future.

While the answers vary greatly in the industry, depending on who you ask, the word "mix" looks to become essential going forward, as a "silver bullet option" capable of covering every segment does not seem to exist.

What is clear, however, is that it is better to move forward now rather than to stay on the fence and wait for someone else to make the decision.

Now, I'm not saying that we're here to solve everyone's immediate problem. But what I am saying is that the technology is available, methanol is available and water is available.

MARK CAMERON, CHIEF OPERATING OFFICER AT ARDMORE.

"The way we choose to view this, is (that, -ed.) the time for sort of 'wait and see' is now entering the phase of 'do and act'," said Mark Cameron, Chief Operating Officer at Ardmore, during the debate.

Cameron thinks it is better to start today and to start small by looking at the current options, even if alternative green fuels are not available in the broader markets. His and Ardmore's view is to start looking at generators.

Betting on hydrogen

<u>Earlier this week</u>, ShippingWatch reported that Finnish engine producer Wärtsilä does not believe that hydrogen will play a significant role in shipping going forward.

But tanker shipping company Ardmore likely does not share that same opinion, seeing as the carrier recently launched a big project focusing on hydrogen.

"Our view is that every ship is fitted with generators, and each ship has a very different characteristic for the amount of fuel that's drawn on board for that. And by using a technology that is based on methanol, using methanol as the hydrogen carrier, you're able to generate electricity with significantly reduced emissions today," said Cameron, before adding:

"Now, I'm not saying that we're here to solve everyone's immediate problem. But what I am saying is that the technology is available, methanol is available and water is available."

The only tangible solution you have today, apart from methanol, is LPG or LNG. JENS ISMAR, EXECUTIVE DIRECTOR AT EXMAR

Wärtsilä's stance on hydrogen is that it hydrogen's low intensity per volume makes it a less practical option as it will require a lot of room for storage aboard ships.

At oil company Shell however, the company "certainly does see a role for hydrogen in a deep sea environment," says Claire Wright, General Manager for Commercial & Shipping at Shell Shipping & Trading, before adding:

"We also see the potential for fuel cells in a deep sea environment. But that reflects the fact that obviously, we are a deep sea operator of vessels. But fundamentally, I think our view is that the future fuel of shipping is a hydrogen-based fuel and efficiency is critically important. And we shouldn't ever forget that."

Jens Ismar, Executive Director at Exmar, conversely believes the only viable option today to use either LNG or LPG.



"The only tangible solution you have today is, apart from methanol, is LPG or LNG," said Exmar CEO Jens Ismar. | Photo: Western Bulk

Companies such as Hapag-Lloyd and CMA CGM are also investing in the natural gas that regard as a transitional fuel and the best option currently available to reduce CO2 emissions. Critics, however, point to high emissions of greenhouse gas methane as a downside to using natural gas.

"The only tangible solution you have today, apart from methanol, is LPG or LNG. I think 170 ships are on order now with dual fuel with LPG or LNG. There are multiple solutions and that's why it's a difficult choice, what to build. When you look at the all the options today," Ismar says.

Waiting on scalability

Over at A.P. Møller-Maersk, Berit Hinnemann, Senior Innovation Project Manager – Decarbonization, says Maersk already uses biofuels but that the company pursues several pathways towards carbon neutrality. This focus includes biofuels, but also hunting down solutions using ammonia and methanol.

"For methanol, the technical feasibility is already there, since (there are, ed.) vessels operating on methanol as a fuel out there. There is no green methanol available at large quantities, but there is potential for the development of that. So, this is something that we are pursuing," says Hinnemann and adds:

"And we also pursue ammonia, where the scalability-potential is very interesting. But where today, the technical feasibility for the vessel is not yet there."

Maersk has previously outlined that it will steer its focus on four types of fuel, these being ammonia, methanol, biodiesel and lignin. Maersk has also announced earlier this year that the company aims to have its first CO2-neutral container ship in operation in 2023.

Source: https://shippingwatch.com/regulation/article12904731.ece



Clarksons Research non-executive president Martin Stopford is a leading maritime economist. Photo: Marine Money

Shipping needs \$3.4trn investment to meet 2050 decarbonisation target, Stopford says

Renowned economist says shipowners should work with charterers to finance new types of vessels

15 April 2021 13:34 GMT UPDATED 15 April 2021 13:58 GMT By Max Tingyao Lin

in London

The shipping industry will need to invest more than \$3trn in low-emission vessels over the next 30 years to meet the International Maritime Organization's decarbonisation target, a leading maritime researcher has estimated.

The IMO has aimed to halve greenhouse gas emissions from international shipping by 2050 to combat climate change, but ship technologies required to meet the goal are still under development.

During Capital Link's Decarbonisation in Shipping online forum on Thursday, Clarksons Research nonexecutive president Martin Stopford said total investment required could amount to \$3.43tm based on his rough estimates.

"Building ships with the new technology...is going to cost a lot of money," Stopford said. "The new, high-tech ships could easily cost a lot more than the existing ones."

Billions needed

Stopford's figures show the industry will need to spend \$518bn in containerships, \$509bn in bulk carriers, \$395bn in gas carriers and \$357bn in cruiseships.

Just \$214bn investment in oil tankers and \$319bn in offshore vessels are required, as their fleet expansions are expected to be curbed by peaking oil demand.

But \$919bn is needed to decarbonise small cargo and non-cargo vessels, such as tugs, fishing boats and mini bulkers operating in coastal waters.

"[Different segments] have very different roles in the shipping market and will require different technologies and levels of investment," Stopford said.

With shipowners historically relying on spot earnings for cash flows, Stopford suggested many could struggle to finance such massive spendings.

"There is barely enough money here to pay for the capital involved," he said. "The traditional banks have pulled back. The sums of money are going to be very big."

Stopford believes that shipowners will need to work with their clients to map the decarbonisation routes as new technologies develop.

Charterers step-up

Major charterers, such as Shell and BHP, have been offering long-term charters to shipowners willing to build LNG-fuelled tanker and bulkers in recent quarters. Those ships emit less CO2 than vessels powered by conventional engines.

"The obvious starting point is to work with the charterers...In a sense, the charterers have to take the lead in deciding what sort of technology they want," Stopford said.

To meet operational requirements for new types of vessels, he also reiterated his calls on shipping companies to develop new organisational structures rather than simply pursue new technologies.

Such structures probably need to have more "horizontal" design and "teams of people working together based on information management systems", he added.

"Packing ships with telematic equipment is not necessarily a guarantee that you will be able to make it work," Stopford said.

"The owners have to take the lead in building the organisations that can give the charterers the security to believe that they're going to get value for their money." (Copyright)

Source: <u>https://www.tradewindsnews.com/technology/shipping-needs-3-4trn-investment-to-meet-2050-decarbonisation-target-stopford-says/2-1-996341</u>

What the plethora of green partnerships has overlooked

There's nothing wrong in joining one of two alliances pushing for shipping's decarbonisation. However, when it gets to five or six, leaders should be wondering whether something is missing

- 15 Apr 2021
- OPINION

Richard Clayton@rjbclayton richard.clayton@informa.com

Alliances are the zeitgeist. But when they are competing for human expertise and research and development funding, alliances will inevitably miss the gaps. It's time for an overview of shipping's decarbonisation journey



*Richard Clayton / Lloyd's List*SHIPPING'S DRIVE FOR DECARBONISATION IS PLACING A SPOTLIGHT ON FUELS SUCH AS LNG.

"DON'T we have enough alliances already?" asked the moderator of a Capital Link session this week. Far from it, responded one of the panellists. "We need more."

Shipping's drive for decarbonisation has been the momentum behind a plethora of partnerships, a multitude of alliances, and a collection of collaborations. No European bank, charterer, shipowner, class society, or technology provider can be seen to shun an invitation to become a partner.

If this particular panel reflects the current state of the industry, every player is now a member of five or six initiatives, each focusing on the 'E' in ESG. There is skin in the game, at long last. It shows deep commitment to the cause.

Or does it?

How many initiatives can any stakeholder meaningfully join before human resourcing becomes stretched for no real purpose? The sheer size and complexity of shipping's decarbonisation challenge suggests that — to borrow from a parallel crisis — no company is green until all companies are green.

So any business leader who has signed up the Poseidon Principles, become a partner at the Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping or joined the Getting to Zero Coalition, and is filling the time before the next Global Maritime Forum by setting up discussions with the Smart Green Shipping alliance... should beware burn-out.

There is a danger that too many coalitions will compromise all the good intentions.

When the Capital Link session moderator asked about the criteria each panellist used to decide which alliance they would join, the list sounded reasonable. They join alliances that are well-structured, have the right level of ambition, and have already signed up senior industry leaders.

But the consequence must be that well-run alliances compete for research and development resources and investment funding in a race to be first to a solution. It's traditional maritime fragmentation that leads to duplication of effort, hardly the best use of our time.

A second concern is that these well-run, well-supported alliances will inevitably focus on what can be achieved, not on where the gaps lie between projects.

These gaps are significant. The success of the industry's push for decarbonisation depends on identifying obstacles, barriers, and missing links. Finding the gaps and bridging them can only be done by way of a global overview.

Alliances will not see the gaps because they are not looking for them. On the basis that this industry will only be green when all parts are green, it's surely time for a global audit of shipping's decarbonisation journey. The alternative, competitive approach will only end in tiers.

Source: <u>https://lloydslist.maritimeintelligence.informa.com/LL1136477/What-the-plethora-of-green-partnerships-has-overlooked</u>

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Shipping executives takes part in Capital Link's Decarbonisation in Shipping Forum on 14 April, 2021.Photo: Capital Link

EEXI already 'yesterday's news' but will still boost ship demand

Frontline and Oldendorff executives talk efficiency as IMO gears up to finalise index

14 April 2021 13:56 GMT *UPDATED* 15 April 2021 10:19 GMT By Gary Dixon

New vessel energy efficiency requirements will create a need for more vessels on the water, leading shipowners have said.

Speakers at Capital Link's Decarbonisation in Shipping online forum welcomed the International Maritime Organization's Energy Efficiency Existing Ship Index (EEXI).

The intention is to force vessels to match the design efficiency of new ships.

Lars Pedersen, chief technical officer at Frontline Management, said EEXI is a welcome move to a greener and cleaner approach. And he added that most of Frontline's tankers already meet EEXI targets, owing to its relatively young and efficient fleet.

Older ships will need to fit energy-saving devices, limit power or slow down, the executive said.

More ships required

"This may very well mean that more vessels will be required on the water to transport the same cargo, as each voyage will take a longer time," he added.

"This can also turn into a really positive thing for business development in shipping, linked to supply and demand."

Scott Bergeron, director of business development and strategy at Oldendorff Carriers, is expecting final IMO guidelines on the measure in June. But he said: "It's already yesterday's news."

Bergeron added: "This is the first time where I see acceptance from the charterers to recognise that we're in this together."

He explained that in the past, over issues like ballast water and IMO 2020, questions from the charterer might have been along the lines of "how are you going to deal with this?"

In it together

Today the conversations now feature charterers asking "how are we going to deal with this?"

"That's really a big step. To use a pandemic phrase, in the war on carbon, we are truly all in this together," the executive said.

Bergeron told the panel that older ships are "going to have to do something" about EEXI.

He believes the best way to address the problem at source is to fit engine-power limiters, which he said are inexpensive.

"Over the last 18 months there's been a huge call to reduce speeds," Bergeron added.

For Oldendorff, he said, there will have to be a power reduction of between zero and "the mid 30 per cents" for some of the group's older ships.

In terms of speed, the reductions will be in the single digits.

Tonnage taken out?

Moderator Andrew McKeran, Lloyd's Register's maritime performance services director, said EEXI measures could "take out tonnage if there's not a return on investment".

Dmitris Vastarouchas, deputy chief operating officer and technical director at Danaos Shipping, said EEXI is a useful tool for the company, but he does not see any serious effect on its fleet of efficient boxships.

He added that some factors are out of shipowners' control, however.

"Who will pay for the carbon tax? Nobody knows," he said. "How will banks take into consideration ... the various bench-markings?" He concluded: "EEXI is welcome and we need to comply with it."(Copyright)

Source: <u>https://www.tradewindsnews.com/regulation/eexi-already-yesterdays-news-but-will-still-boost-ship-demand/2-1-995556</u>



Shell International Trading and Shipping Co senior vice president for shipping and maritime Grahaeme Henderson, seen here at a Global Maritime Forum summit, says shipping now needs to move into the delivery phase on decarbonisation.Photo: Global Maritime Forum

Shell to team up on LNG-powered fuel cell trial

Energy major is joining a consortium to test this technology for deepsea shipping

14 April 2021 10:29 GMT *UPDATED* 15 April 2021 9:40 GMT By Lucy Hine

Energy major Shell is joining a consortium of companies that will trial the use of LNG-powered fuel cells for deepsea shipping.

Speaking at the start of Capital Link's two-day Decarbonisation in Shipping Forum, Shell International Trading and Shipping Co senior vice president for shipping and maritime Grahaeme Henderson said the trial will initially use LNG to power the fuel cell.

He said Shell has done modelling around this which shows that a ship using high efficiency LNG fuel cells and adopting energy efficient technologies could reduce greenhouse gas emissions by up to 80% versus the 2008 baseline.

He said other zero-emission fuels, including hydrogen, could also be tested as they become available and scaled up in an effort to achieve 100% reduction.

Details awaited

Henderson said Shell will be making an announcement on its tie-up shortly.

"LNG is lowest emission fuel available at scale today and into the foreseeable future," Henderson said. "So we should be widely using LNG and doing the very best we can now."

But he added that the key to unlocking zero-emission fuels is fuel cell technology.

"Our modelling shows that the fastest way to get to net zero with the lowest total emissions is one that includes the accelerated adoption of LNG, combined with the widespread use of energy-efficient technologies and with fuel cells ready to transition directly to zero-emission fuels at some time in the future."

Angelicoussis tribute

Henderson was speaking alongside Citi chairman for global shipping logistics & offshore Michael Parker who spoke about the importance of having a clear road map for shipping's decarbonisation.

Parker opened with a tribute to John Angelicoussis, who died in Athens on Saturday.

He described Angelicoussis as a "great man" with a "very keen brain".

Parker said Angelicoussis was a quiet man and not someone who stood up and led from the front on some of the big issues facing the industry. But the Citi chief said Angelicoussis, who attended the last Global Maritime Forum in Singapore, was beginning to focus on decarbonisation.

"I am very confident that Maria [Angelicoussis] will continue that thinking and that work," he said. (Copyright)

Source: <u>https://www.tradewindsnews.com/tankers/shell-to-team-up-on-lng-powered-fuel-cell-trial/2-1-995417</u>



Shell manager Tahir Faruqui is an advocate of LNG as a fuel.Photo: Shell

'Unacceptable' not to choose LNG for newbuildings, Shell says

Capital Link panelists declare themselves 'baffled' on the fuelling choices being made today

14 April 2021 16:09 GMT *UPDATED* 14 April 2021 16:09 GMT By Lucy Hine

LNG as a fuel offers the best choice for newbuildings today, according to AET, International Seaways, NYK Line, Shell and Wartsila.

Shell manager of downstream LNG Tahir Faruqui told Capital Link's Decarbonisation in Shipping online forum today that even with methane slip factored in, LNG offers a 21% to 25% improvement in emissions.

He said that while it costs more to build a dual-fuelled ship, LNG as a fuel is cheaper, so over the lifetime of the asset the economics make sense.

No-brainer

Faruqui said that for people and the planet it is "absolutely unacceptable" not to choose LNG for building a new vessel.

He acknowledged, however, that it does not work for existing ships and is not a zero- footprint fuel.

Faruqui described LNG as a "no-brainer" and a "zero-risk investment choice" because regulators will eventually penalise ship's CO2 footprints.

"It baffles me that the world is still not moving to LNG," he said.

International Seaways chief executive Lois Zabrocky said her company is in the early days of its dual-fuel project to build three VLCCs for charter to Shell.

We need to do something. If you stand still in today's world you simply move backwards

Svein Steimler

But she said these vessels, which deliver in 2023, will be 40% more efficient than a 10-year-old VLCC in today's global 800-ship fleet.

She described this as "a step change" on her company's road to decarbonisation.

AET global director for business development & joint venture management Peter Liew said his company has four LNG dual-fuelled vessels in operation and five more under construction.

"We believe in LNG," he said. We can continue to wait for the perfect fuel but when will it be available? As owners, we feel we have the obligation to act."

Bandwagon

NYK Group Europe president & chief executive Svein Steimler said that throughout history many shipping players have simply acted too late.

Steimler said he is "baffled" as well that people are not "getting on the LNG bandwagon" when other technologies like ammonia and hydrogen are not fully developed.

"Why don't we grab what we can take today and then move on to other areas when the time is right? he asked."

NYK is planning to build another 50 vessels with LNG dual-fuel propulsion and will add battery technology, Steimler said.

"We need to do something. If you stand still in today's world you simply move backwards."

Next steps

Farid Trad, CMA CGM vice president for bunkering & energy transition, said his company will have 32 LNG-fuelled vessels in operation by 2022.

LNG offers the most balanced choice today for the environment, health, economic viability and operational efficiency, Trad said.

There are also next steps for LNG in biomethane, bio-LNG and synthetic-LNG, he added.

Wartsila director of fuel and gas supply systems Mathias Jansson said the LNG and dual-fuel platform with the fuel system correctly designed is perfect for blending in bio and synthetic LNG and then moving into other alternative fuels.

According to Faruqui, there is a need for LNG capability in 15 to 30 ports to supply the deep-sea fleet. Over the next two years, Shell plans to double its investment in LNG infrastructure, he added.

The energy major is also looking at demand for bio-LNG from the marine sector, he said.(Copyright)

Source: https://www.tradewindsnews.com/gas/-unacceptable-not-to-choose-lng-for-newbuildings-shellsays/2-1-995715

Shell to trial fuel cells on deep sea vessels

Oil group's modelling shows its ships can reduce greenhouse gas emissions by 80% if they use fuel cells and energy-efficient technologies

•	14	Apr	2021
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• ANALYSIS

Anastassios Adamopoulos@Anastassios_LL Anastassios.Adamopoulos@informa.com

Shell's Grahaeme Henderson said that the trials would initially use LNG to power the fuel cells, before hydrogen or other zero emissions fuel cells would be adopted



HENDERSON: SHELL WILL BE ANNOUNCING THE CONSORTIUM SOON.

SHELL is to join a consortium that will trial the use of fuel cells on deep sea vessels.

Grahaeme Henderson, the oil company's vice-president for shipping and maritime, said the trial would initially use liquefied natural gas to power the fuel cells and then hydrogen or other zero emissions fuels, with the aim of growing capacity and scale as those fuels become available.

Shell, which has committed to becoming a net zero emissions company by 2050, is a leading producer of LNG and proponent of its use as marine fuel, because of its ample availability and lower carbon dioxide emissions compared to conventional fuel oil.

It has also <u>backed hydrogen and fuel cells</u> as major enablers of the global energy transition in shipping.

Shell has done a lot of modelling that shows that ships using fuel cells and adopting energy efficiency technologies could reduce their greenhouse gas emissions by 80% compared to a 2008 baseline, Mr Henderson said.

"The pathway is there. It is through fuel cells. It is through energy-efficiency technologies. And it starts with LNG and then moves on to other fuels later," he told a Capital Link decarbonisation forum.

He did not disclose the identity of the consortium but said Shell would be announcing it soon.

He also touted the significance of energy-efficiency technologies, which, aside from making ships more efficient, will enable the use of future fuels with lower density, meaning that more quantity will be required to travel the same distance.

"This presents a challenge for us because that could displace cargo space," he said.

While technological advancements will be the practical enablers of shipping's energy transition, political will and action will be crucial factors in how quickly or slowly that transition happens.

Citi's chairman of global shipping, logistics and offshore Michael Parker, speaking at the same virtual event, said political leaders needed to demonstrate genuine commitment to decarbonisation at high-level meetings this year.

Climate action has become a key talking point in almost all governments' agendas in recent years, but he believes there is still a risk that these will not translate into the necessary commitments.

Mr Parker, who has become one of the leading advocates for climate action in shipping, said that the UN climate COP26 conference in November and next week's leaders' climate summit in the US offer the opportunity to do that.

COP26 in particular, Mr Parker said, could give the International Maritime Organization renewed guidance on decarbonisation policy.

"This is an opportunity for the UN through the IMO to accelerate the pace of policy changes in collaboration with the industry," he said.

His views reflect a <u>broader expectation that COP26</u>, considered to be the most important UN climate conference since the 2015 Paris Agreement was signed, will result in greater pressure for the IMO to act on decarbonisation as countries commit to stronger action to reduce their emissions and meet the goals of the Paris Agreement.

The organisation will hold its next environmental committee meeting in June where it is expected to finalise short-term measures for greenhouse gas reductions from ships.

The committee will also need to discuss a proposal for <u>a 100 per tonne of CO2 levy on ships</u>. But a decision on the proposal is not expected given that this will be the first time it is discussed. The priority

will be on finalising short-term measures, and market-based measures remain a politically sensitive subject that will require lengthy deliberation.

Mr Parker also paid tribute to the <u>late John Angelicoussis</u>, Greece's leading shipowner who died on April 10.

He described Mr Angelicoussis, with whom he had worked for years, as a thoughtful person with a very keen mind, who had begun focusing a lot on decarbonisation and the environmental impact of shipping.

Source: https://lloydslist.maritimeintelligence.informa.com/LL1136459/Shell-to-trial-fuel-cells-on-deep-sea-vessels

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