

Offshore Energy Magazine

CONNECTING THE MARITIME & OFFSHORE WORLD
FOR SUSTAINABLE SOLUTIONS



GUEST COLUMN
Kees van der Staaij:
Envoy for the maritime
manufacturing sector

ARTICLE
Three factors
impacting shipping's
net-zero journey

ARTICLE
WindEurope warns
against negative
bidding


ARTICLE
Launch of Europe's first
green methanol-powered
feeder network



A new wind is blowing.



Introducing the Damen SOV 7017 E, a fully electric Service Operations Vessel for the offshore wind industry of tomorrow. With its revolutionary offshore charging capabilities, the SOV E takes a significant step towards zero emissions maintenance of offshore wind farms. Connecting to a turbine offshore, the vessel is able to safely and efficiently charge without manual intervention – making the generation of green energy even more sustainable and providing a solution fit for the future.

Pictured here:
**Service Operations
Vessel 7017 Electric** 

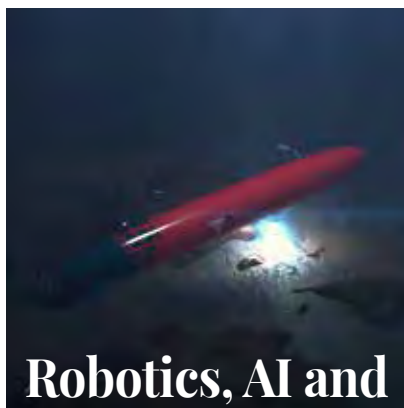


Find out more on [Damen.com](https://www.damen.com)

DAMEN
OCEANS OF POSSIBILITIES



table of contents



Robotics, AI and cloud systems shaping survey and inspection industry

page 34

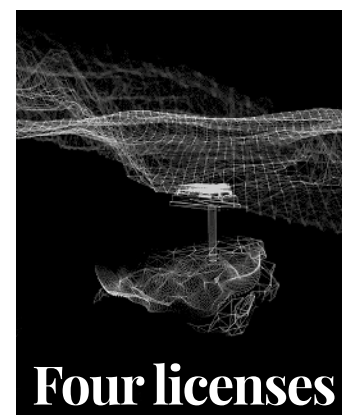
WindEurope warns against negative bidding in offshore wind (again)

page 28



Three factors impacting shipping's net-zero journey by 2050

page 6



Four licenses awarded in Norway's call for CCS

page 26

- | | | | | | |
|-----------|--|-----------|--|-----------|---|
| 3 | Editor's Note | 18 | Five European countries go for cross-border CO ₂ storage | 38 | X-Press Feeders launches Europe's first green methanol-powered feeder network |
| 5 | Guest Column: Kees van der Staaij | 22 | UK Marine Energy Council sets five key asks | 40 | OEEC 2024 spotlights need for offshore energy sector to work in harmony |
| 6 | Three factors impacting shipping's net-zero journey by 2050 | 26 | Four licenses awarded in Norway's sixth call for CO ₂ storage | 44 | Heavy-duty solutions for wind farm operations and maintenance vessels |
| 8 | Navigating overlapping oil & gas, offshore wind and CCS areas | 28 | WindEurope warns against negative bidding in offshore wind (again) | 48 | The next step in crew transfer vessels |
| 12 | Carbon storage levy to be introduced once market is self-sustainable | 32 | Europe's first hybrid electricity interconnector for three countries | 53 | What Is Happening |
| 14 | TotalEnergies greenlights solar-powered gas project | 34 | Robotics, AI and cloud systems shaping survey and inspection industry | 64 | Colofon |
| 16 | Urgent political alignment needed for 'fair' energy transition | | | 64 | Advertisers Index |

VOLVO PENTA

From power to superpower

Introducing the all-new Volvo Penta IPS Experience



Unmatched maneuverability

Our fully integrated Volvo Penta Inboard Performance System (IPS) packages are there for you, for excellence in all conditions.

Enjoy unrivalled maneuverability, high productivity and low fuel consumption. Maximum power, maximum precision.

volvopenta.com

**OUR
MISSION
IS YOURS**

Special transport | www.vanderwees.nl

Editor's note

In the midst of an evolving global energy landscape, the offshore energy sector stands at a critical juncture. The transition to more sustainable energy sources is not just an environmental issue but a necessity for ensuring long-term energy security. As the industry pivots towards renewable resources, transparency and collaboration emerge as indispensable pillars supporting this transformation.

It unlocks the potential for cross-market innovation. By fostering partnerships between oil and gas companies, renewable energy firms, technology providers, and research institutions, the industry can leverage diverse expertise and resources. Collaborative ventures can lead to groundbreaking advancements in areas such as offshore wind, hydrogen production, and carbon capture and storage.

Furthermore, the integration of energy markets is essential for enhancing energy security. A diversified and interconnected energy system reduces dependence on single energy sources and mitigates risks associated with supply disruptions. Cross-border cooperation and regional energy strategies can help stabilize markets, optimize resource utilization, and ensure a reliable energy supply.

At Offshore Energy Magazine, we are committed to highlighting these vital themes. We aim to showcase how transparency and collaboration are driving the offshore energy sector towards a sustainable and secure future. By embracing these principles, the industry can not only meet the growing energy demands but also contribute positively to the global fight against climate change.

The editorial team

Looking for a BWT unit with the lowest OPEX?

reikon.nl
0181 61 44 66

LFSS
(Methanol Fuel
Supply System)

CCSU
(Carbon Capturing
and Storage)

BWTU
(lowest power
consuming BWT)

© Scheepswerf Ferus Smit



Look no further!

With Headway's BWTU, Reikon supplies one of the lowest power consumers available. Add that to Headway's 'single treatment' solution and you can save thousands of euros on fuel costs on an annual basis compared to other BWT solutions. And did we mention that in ten years time, we haven't replaced a single core treatment element?

REIKON 
IT'S THE INSIDE THAT COUNTS.


HEADWAY

LEMANS
NEDERLAND B.V.

winches | capstans
fairleads | warping-rollers
multipurpose chocks
towing | mooring
deck & quay equipment

www.lemans-nederland.nl



Bezoekadres: Canadaweg 8, 4661 PZ Halsteren
Postbus: Box 527, 4600 AM Bergen op Zoom, Nederland
t 0164 68 00 97, info@lemans-nederland.eu

Sailing forward together

**The future of offshore energy?
The future of the maritime manufacturing industry?
There is a key word that will take us forward. That word is: collaboration!**



What do we need in order to realise our ambitions for generating energy at sea? How can we achieve the energy transition as quickly as possible in the Netherlands and Europe as a whole? What will help us to reduce our energy dependency on a distant and uncertain foreign country? And, if we are to look increasingly to the sea to fulfil our energy requirements, how do we protect our vital infrastructure in the water?

These are all big questions. There is, however, one answer that comes up repeatedly in all the answers: we need a strong maritime sector. If we want to solve the challenges of our time, we need good quality, smart ships. And we need to be able to design, build and maintain them ourselves. This is why our maritime manufacturing industry is so strategically important.

The world of offshore energy is an important factor in this interaction. The considerable demand for wind farms at sea alone poses challenges for the maritime sector. How can we use our ships to respond cleverly and in a competitive manner to all transport, construction, security, and maintenance requirements? Offshore energy also offers plenty of opportunities for the maritime sector for growth and innovation. And that is why we need each other.

Our maritime manufacturing industry has an outstanding history and an excellent track record. During my countless visits

to our shipyards and their suppliers, I have been very impressed by the resilience, the passion for the profession, and the craftsmanship.

And yes, there are plenty of opportunities. Many workboats, dredgers and all kinds of specialist vessels are needed for us to progress towards the energy transition, to provide protection against the water, as well as for our vital infrastructure at sea. Furthermore, global insecurity and the threat of conflict is also providing a considerable boost to our naval shipbuilding sector. But how can we seize all those opportunities? It will not happen automatically. It is not always a bed of roses. The maritime manufacturing industry is faced with fierce competition internationally. The sector is capital-intensive and risky. And in times of staff shortages, it is certainly also a challenge for the maritime sector to attract enough people.

What is needed to meet these challenges? Once again, the answer is: work together! That is also the gist of the maritime manufacturing sector agenda: No guts, no Holland's Glory! The agenda offers a fresh approach: tailor-made industrial policy. The strength of this sector agenda is that it is a product of the collaboration between government and industry. Working together on concrete action lines and pioneering projects such as the Maritime Master Plan and the shipyard of the future.

But for both the sector and the government, it is necessary to strengthen the collaboration within their own ranks. With an every-man-for-himself approach, the ship of the future will inevitably run aground. Companies must work together smartly and know how to find each other when responding to new questions from the market and government. And governmental department must join forces, both within the central government and at the diverse administrative levels.

Over the past year, significant steps have been taken in this direction. The establishment of the governmental body (Rijksregieburea) for the maritime manufacturing industry is a good example of this: knowledge and expertise on the government side are collated, the implementation of the sector agenda is managed, and there is one clear point of contact for the maritime manufacturing industry.

Collaboration is a key word. But there is another that goes with it. That is: perseverance. Preventing great plans and good projects from coming to a standstill when the inevitable headwind or other difficult obstacles arise. There is no success without perseverance. Sailing forward together is the road to the future!

Kees van der Staaij

Envoy for the maritime manufacturing sector agenda in the Netherlands 🇳🇱



ABS reveals three factors impacting shipping's net-zero journey by 2050



Geopolitical instability, scalability of fuel production and retrofits to existing vessels are key factors impacting the shipping industry's journey to net zero by 2050, according to the latest research published by classification society ABS.

The 2024 outlook, 'Beyond the Horizon, Carbon Neutral Fuel Pathways and Transformational Technologies', investigates carbon-neutral fuel pathways and transformative technologies and features an update of ABS' long-term energy forecast that explores the constraints and opportunities in the evolving global trade dynamics that will shape the future of shipping.

"The 2024 outlook delivers unprecedented visibility into the 'ecosystem' of shipping underscoring the collaborative efforts required to retrofit existing fleets and to enhance the capacity of shipyards for new, greener vessels to deliver the scale and pace of change that we will need," Christopher J. Wiernicki, ABS Chairman and CEO, commented.

"As we look to the future, achieving the industry's commitment to a sustainable transformation will require continued diligence, innovation and global cooperation to effectively overcome the technical and economic challenges highlighted in this report."

The ABS research further stresses an active shift in the composition of the



global fleet toward more sustainable energy sources, with about 50% of the current orderbook (in gross tonnage), featuring dual-fuel engines and a shift to a more diversified set of fuels, particularly LNG, methanol and ammonia, in the orderbook.

Continuous transition

The fuel mix forecast for this year and through 2050 underscores a substantial and continuous transition in the maritime sector towards cleaner alternative fuels such as methanol, ammonia, and LNG.

The market share of traditional fossil fuels is anticipated to decline to 15% by the year 2050. The utilization of methanol gradually rises to 42 percent by 2050. Utilization of ammonia is anticipated to increase by 33 percent by 2050. Both methanol and ammonia are likely favored in later years due to their potential to reduce Well-to-wake (WtW) greenhouse gas (GHG) emissions when produced from renewable sources.

As regulatory pressures increase, the adoption of energy efficiency tech-

nologies and alternative fuels is also anticipated to increase, according to ABS.

In order to meet the 2040 IMO checkpoint, the annual greenhouse gas (GHG) total must be reduced by 70% and at least one-third of the tonnage will need to use alternative fuels, the paper said.

Yard capacity

Capacity at major shipyards is expected to moderately increase by about 5% until 2035. Due to additional shipbuilding demand, new builders are anticipated to emerge from India, the Middle East, the Philippines and Vietnam.

What is more, current repair yard capacity is expected to meet demand through 2027, however, demand for retrofits will continue to increase through 2035, which will require additional repair yard capacity to support fuel conversions.

According to ABS' GHG abatement cost methodology and current fuel prices, biofuels and blue fuels will have lower carbon abatement cost compared to others.

In terms of regulations, FuelEU Maritime requirements and similar requirements expected from the IMO introduce new complexities and will require stakeholders to consider how they can pool credits for compliance.

By Naida Hakirevic Prevljak ■

Embracing key tools to navigate overlapping oil & gas, offshore wind, and carbon storage areas

As energy transition pursuits are imbued with more vigor, co-location conflicts between oil and gas projects, offshore wind farm developments, and carbon capture and storage (CCS) undertakings have emerged as an issue in the United Kingdom (UK). However, Westwood Global Energy, an energy market research and consultancy firm, has pinpointed strategic planning and cooperation between players engaged in these endeavors as the main pieces required to put things to rights in this offshore energy puzzle.

In the wake of the third tranche of the UK's 33rd oil and gas licensing round, which offered 31 more licenses made up of 88 blocks/part blocks in the Central North Sea, East Irish Sea, and Southern North Sea, Claire Coutinho, Britain's Secretary of State for Energy Security and Net Zero, confirmed that multiple licenses have direct overlaps with, or come within 500 meters of, areas already under agreement for offshore wind development.

Coutinho emphasized: *"Oil and gas developments and offshore wind developments already co-exist and my expectation is that they will continue to do so. Oil and gas developers and offshore wind developers are already expected, through their respective consenting and stewardship processes, to take account of other projects when planning their developments."*

According to the UK's Secretary of State for Energy Security and Net Zero, the North Sea Transition Authority (NSTA) has unveiled a new clause, known

as *'Relationship with Windfarms,'* in relevant licenses following discussions with the Crown Estate and Crown Estate Scotland, intending to promote co-existence and reassure affected offshore wind developers that oil and gas licensees will take into account their developments.

"The new clause will require the oil or gas licensee to have a co-location agreement with the affected offshore wind developer in place before any operational activity can take place in that licence area, which includes seismic surveying, drilling exploratory wells or installing subsea or surface infrastructure," explained Coutinho.

"Co-location agreements will be the way forward for resolving any issues arising from overlaps and I expect all parties to engage constructively, to act in good faith and to behave reasonably when approaching discussions on co-location. Where there are difficulties in reaching a suitable co-location agreement, the parties should first

seek independent mediation or discuss a way forward with the North Sea Transition Authority and the Crown Estate or Crown Estate Scotland."

Planning and cooperation

While acknowledging that the recent licensing round has spotlighted a critical issue in the UK's offshore energy sector, Bahzad Ayoub, Westwood's Senior Analyst - Offshore Wind, has highlighted the essential role strategic planning and cooperation have in advancing the UK's energy goals, minimizing conflicts, and maximizing the benefits of shared marine resources.

Ayoub notes that the NSTA's batch of 31 new offshore petroleum licenses, which entails 23 in the Southern North Sea (SNS) and two in the East Irish Sea (EIS), increases congestion and necessitates new co-location agreements in the SNS and EIS, which is confirmed by operators that identify co-location as one of the issues holding up the awards.



Photo by Westwood

Furthermore, Westwood's Senior Analyst is adamant that these oil and gas licenses add to the overall congestion issue, creating additional competition for the seabed, as the SNS and EIS were already congested due to carbon storage licenses lying near offshore wind farms or overlapping such sites.

Ayoub explained: *"Although the addition of this clause is a good first step, further legislation will be required to ensure that overlapping projects do not delay each other. In total, 31 offshore wind projects are overlapping or near either carbon storage or O&G licences in the SNS and EIS.*

"A breakdown of the current status of offshore wind projects in the SNS shows that 11 offshore wind projects are operational, three projects have a status of EPCI and eight have a status of planning. The makeup of projects in the EIS are six operational wind farms and three projects that have a status of planning."

Tackling co-location woes

For Westwood's Senior Analyst, the wind farms with a status of planning are the primary projects that will need to

maneuver potential issues arising from co-location, as site assessments and construction activities at these wind farm areas carry the possibility of clashes with planned activity at the awarded oil, gas, and carbon storage sites.

Based on Ayoub's assessment, the potential for conflict stems from the drilling equipment and pipelines that may interfere with the placement and operation of wind turbines. Westwood's list of examples of such overlaps encompasses the Dogger Bank South wind farm being planned in the north of the INEOS-operated Greater Pegasus area, and the Outer Dowsing project, which overlaps with the Perenco-operated Olympus discovery, where a firm well is planned.

Aside from these, the energy market research and consultancy player mentions the Norfolk Boreas wind farm, which overlaps the Orcadian-operated blocks that include the 50/26b-6 Earlham discovery, which is planned to be developed as a gas-to-wire project, connected to the wind farm.

"We have already witnessed a dispute over an overlapping zone in the SNS between the BP-led Northern

Endurance carbon capture, usage and storage project and Ørsted's Hornsea Project Four wind farm, which took two years for the two parties to resolve," reminded Westwood's Senior Analyst – Offshore Wind.

"The developers of the two projects had entered into an Interface Agreement in 2013, to 'regulate and co-ordinate their activities with a view to managing potential and resolving actual conflicts', however the dispute still occurred. It resulted in a five-month delay to the Development Consent Order (DCO) for the wind farm, further highlighting that reliance upon an agreement between parties may not go far enough."

With operations and maintenance (O&M) activity on an operational wind farm leaving room for more co-location clashes due to marine space being required for vessels to navigate around the infrastructure that is put in place for oil, gas, and carbon storage projects, Ayoub is adamant that careful marine planning guidance will be key to ensure all projects can operate without hindrance, reducing the risk of disputes that can delay project development timelines.

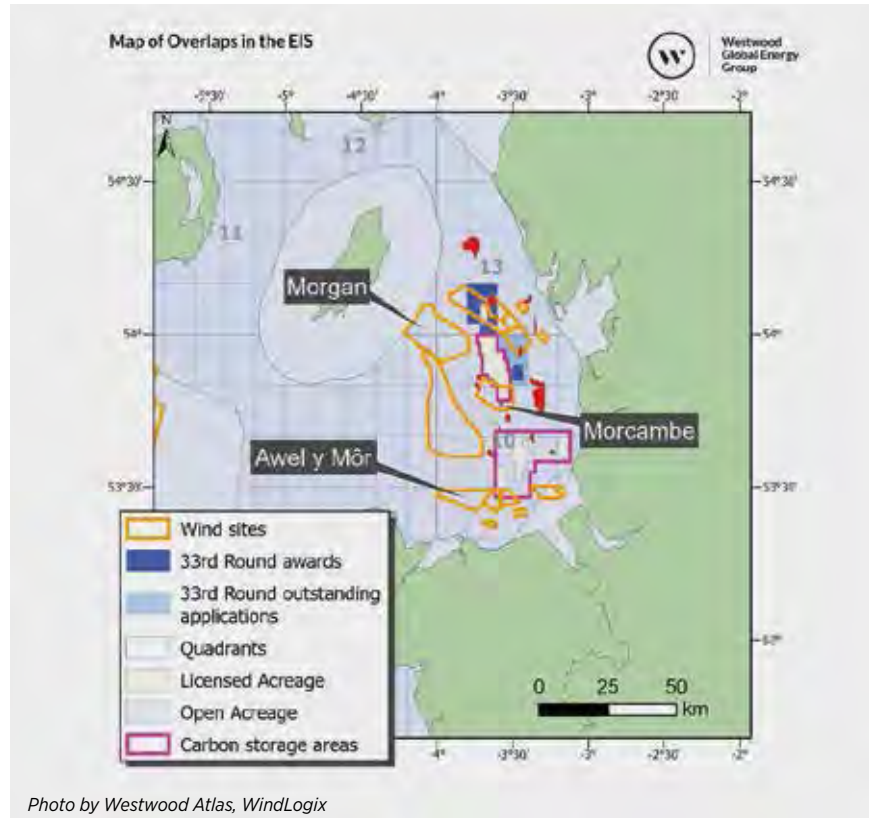


Thriving amidst change

Even though the spatial overlap in the SNS and EIS poses considerable operational challenges in Ayoub's view, he also believes it opens avenues for innovation and collaboration. In line with this, Westwood's Senior Analyst sees the potential for electrification of platforms via wind farms on shared sites as an alternative route to market for offshore wind projects.

Therefore, the developers could seek to strike a deal with the oil and gas license holder, supplying power to their infrastructure via the wind farms instead of constructing export cables to shore and waiting for grid upgrades to connect wind farms. The oil and gas developers are set to benefit from this approach since power from these wind farms would help them slash production costs alongside emissions.

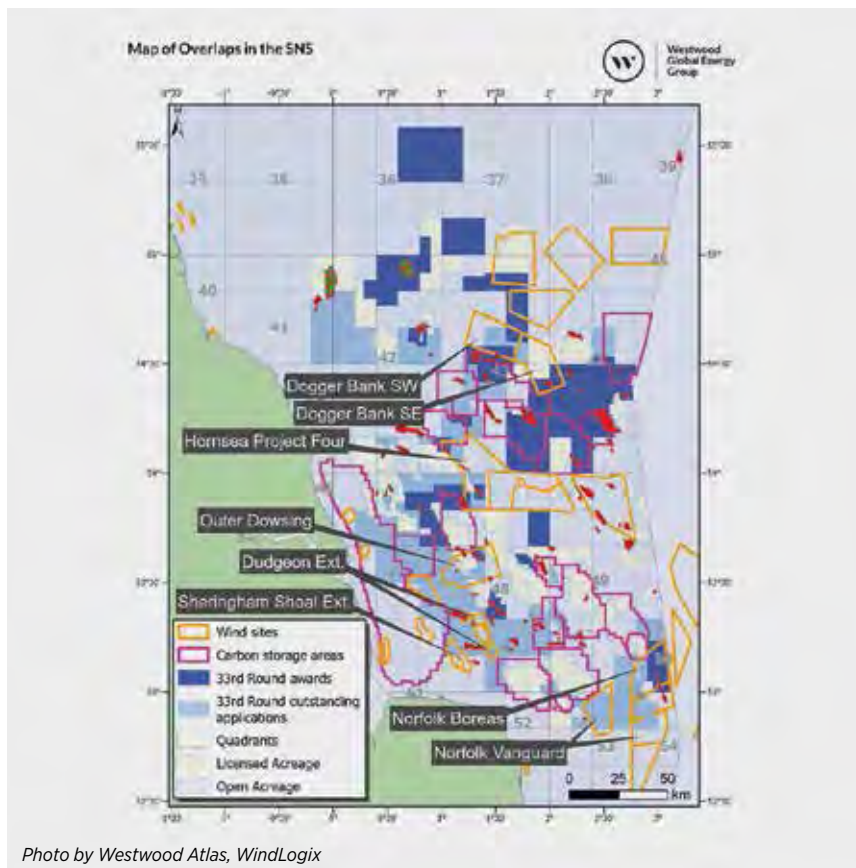
"Collaboration between project developers across the overlapping areas could take place by sharing data on the characteristics of the site and potentially utilising the same supply chain companies for similar activities. Geological and geophysical surveys as well as environmental assessments are required for all three types of projects,



creating a potential area for these synergies," Ayoub noted.

Westwood's Senior Analyst points out that wind and oil and gas projects utilize similar components, such as

foundations, topsides, and power cables, creating an additional area in which they could co-ordinate on timings for installation activity, contracting the same company to undertake installations for both types of projects across the shared site.



Coming to grips with overlaps

Given the dispute risk the overlapping use of marine space in the SNS and EIS brings to the fore, Westwood is convinced that comprehensive marine spatial planning and enforcing stricter regulations beyond the recently introduced clause will be crucial to mitigating such issues.

Ayoub concluded: *"Promoting collaboration between offshore wind, O&G and carbon storage project developers can enhance efficiency, reduce emissions and streamline operations through shared infrastructure and data.*

"These solutions can ensure that the development of these essential projects proceeds smoothly and without unnecessary delays. In turn, this can help the UK to meet its energy goals while minimising conflicts and maximising the benefits of shared marine resources."

By Melisa Čavčić

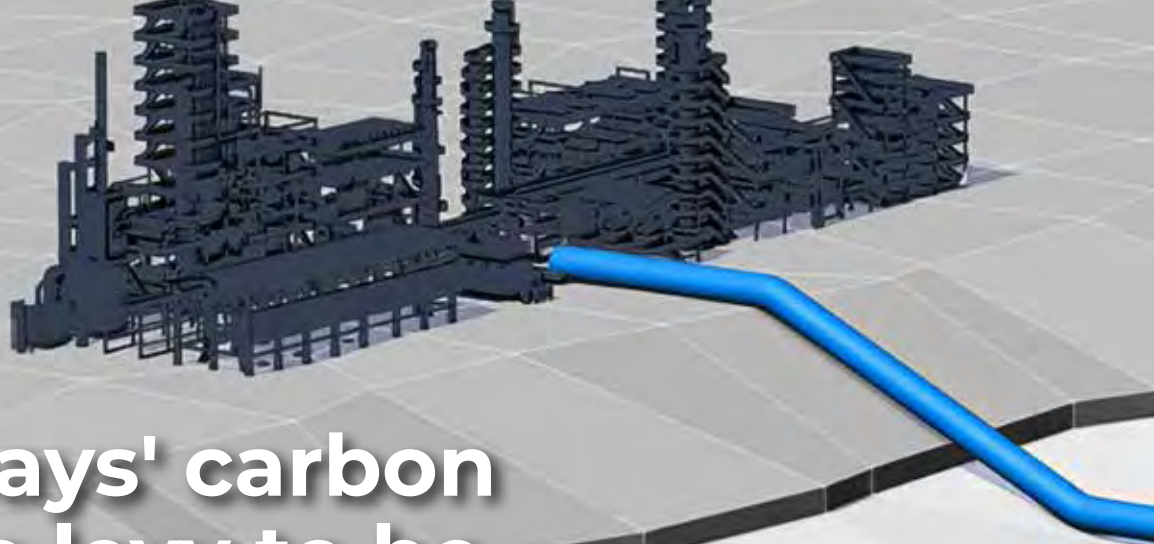
The collective KIVI membership



Your employees up to date



Good employership starts with happy employees, who are motivated, challenged and up-to-date. In our present time with technological developments at top speed, innovations and transformations professional agility is paramount. Would you, as an employer like to make a structural contribution to the technical development of your employees? Consider a collective membership at the Royal Netherlands Society of Engineers (KIVI: Koninklijk Instituut Van Ingenieurs). Sign up ten (or more) of your top engineers and they can immediately benefit from all advantages the largest engineering platform in the Netherlands has to offer.



'User pays' carbon storage levy to be introduced in UK once market is self-sustainable

The UK's North Sea Transition Authority (NSTA) has revealed its intention to introduce a levy on carbon storage licenses in the future, once the carbon capture and storage (CCS) industry begins operating on a more self-sustaining basis.

The NSTA ran a call for evidence between December 4, 2023, and January 26, 2024, on the potential principles, design and timing of a possible future levy on UK carbon storage licenses, which will help inform thinking about how the industry could, in the long term, move towards a "user pays" model for the services the authority provides.

After reviewing the submissions, the NSTA stated that it intends, unless there are major external developments, to introduce a carbon storage levy once the CCS industry is on a more self-sustaining footing.

Support from the industry

BP, Athena Exploration, Spirit Energy Limited, Carbon Capture and Storage Association (CCSA), Mineral Products Association (MPA), OEUK, Scottish Government, Subsurface Taskforce,

and Summit Energy Evolution Ltd. (SEEL) responded to the call, of which the vast majority supported the concept of a carbon storage levy, in line with the "user pays" principle.

The respondents were supportive of any levy being informed by clear principles and generally agreed that the broad principles for the NSTA's existing petroleum levy - "user pays", reflecting actual costs and providing funding certainty - should also be used to inform a potential carbon storage levy, but this should happen when the CCS industry is operating on a more self-sustaining basis, rather than immediately.

It was also recognized that the UK's CCS industry has a different business model from the petroleum industry and the government's wider policy framework for CCS is still evolving.

Design and categories

The NSTA identified and sought views on several levy design options, including a single levy rate for all carbon storage licenses, differing levy rates for different categories of license holders, combined single levy for petroleum licenses and carbon storage licenses, as well as potential carbon storage levy based on acreage or amount of CO₂ stored.

The respondents generally supported different levy rates for different project phases, recognizing differences in cost and income between a project before and during carbon injection. There was little support for a single levy rate for all users, recognizing the likely disadvantage to license holders at an early stage of project development, while some respondents expressed preference for a combined carbon storage and petroleum levy, to



The North Sea Transition Authority

support certainty of funding, and others considered such a combined levy could be perceived as one sector subsidizing the other.

The participants further made several suggestions on possible categories of eligible licensees, including in particular, different rates based on whether or not carbon dioxide injection is occurring.

The NSTA notes that the UK CCS industry is currently in its infancy, and determining when the industry might be sufficiently mature or established for a potential levy requires careful consideration, depending on a range of factors, including the overall policy and regulatory framework and how well established the industry can be considered.

Timeframe

The respondents had broad agreement that the timing of any levy introduction would need to align with the market-based transition of the CCS industry. In terms of determining when this could be, there were suggestions

around linking it to the injection rate or to developments in the UK Emissions Trading Scheme (ETS) price. Several respondents suggested the introduction of any future carbon storage levy should align with the timeframes for market transition set out in the government's CCUS Vision, published December 2023 - which states the creation of a CCS market is expected this decade - to establish a competitive market for CCUS.

The NSTA said it would continue monitoring the commercial and regulatory developments in the CCS industry and will ensure that the industry is given sufficient notice before introducing a future levy. It is intended that any levy would follow the principles outlined in the call for evidence, though the design and timing of introduction require further consideration. Any future levy would be preceded by formal consultation.

In the absence of a carbon storage levy, the NSTA's work on carbon storage will remain funded through existing fees and a government grant.

Therefore, there are no new impacts at this time.

The UK Government last year set out its vision for the carbon storage industry pledging up to £20 billion investment and suggesting that it has the potential to store the carbon equivalent of taking 6 million cars off the road, and support 50,000 jobs, by 2050.

In 2023, a number of steps were made in developing the UK's CO₂ transportation and storage industry, including the award of 21 licenses following the UK's first-ever carbon storage licensing round, the establishment of a dedicated NSTA carbon storage development team to work with operators in the sector, significant progress made by the Track 1 and 2 projects on permit applications with decisions on four Track 1 applications expected to be taken this year, as well as a consultation to determine what carbon storage data should be shared and to what timescales is also underway and will assist the development of future sites.

By Nadja Skopljak ■



TotalEnergies greenlights solar-powered gas project envisioned as Middle East's first LNG bunkering hub

France's energy giant TotalEnergies has made a final investment decision (FID) for a liquefied natural gas (LNG) project in Oman, designed to run on solar power and serve as the first LNG bunkering hub in the Middle East. This gas project showcases the French player's multi-energy strategy in action, combining fossil fuel production with renewable energy generation, enabling LNG and solar to tie the knot.

The FID for the Marsa LNG project was revealed during a visit to Muscat on April 21 by TotalEnergies' Chairman and CEO and Mulham Basheer Al Jarf, Chairman of OQ, Oman's national oil company (NOC). During this visit, the French oil major's CEO met with Sultan Haitham bin Tariq Al Said and Salim bin Nasser Al Afi, Oman's Minister of Energy and Minerals.

Aside from signing a sale and purchase agreement (SPA) with Oman LNG to offtake 0.8 Mtpa of LNG for ten years from 2025, TotalEnergies (49%) and OQ Alternative Energy (51%), the national renewable energy champion, confirmed being at an ad-

vanced stage of discussions to jointly develop a portfolio of up to 800 MW, including the 300 MWp solar project that will supply Marsa LNG.

Through their joint company, Marsa Liquefied Natural Gas (Marsa), TotalEnergies (80%) and OQ (20%) sanctioned the integrated Marsa LNG project which combines upstream gas production, downstream gas liquefaction, and renewable power generation.

In line with this, 150 Mcf/d of natural gas, coming from the 33.19% interest held by Marsa in the Mabrouk North-East field on onshore Block 10 will provide the required feedstock for the

LNG plant. While Block 10 production started in January 2023 and reached a plateau in April 2024, the FID allows Marsa LNG to extend its rights in Block 10 until 2050.

Powering marine fuel market

Furthermore, a 1 Mt/y capacity LNG liquefaction plant will be built in the port of Sohar, with the LNG production start-up anticipated by 1Q 2028.

This LNG is primarily intended to serve the marine fuel market in the Gulf while the quantities not sold as bunker fuel will be off-taken by TotalEnergies and OQ. In addition, a dedicated 300 MWp PV solar plant will be built to

'Combining fossil fuel production with renewable energy generation'



Marsa LNG, photo by Technip Energies

cover 100% of the annual power consumption of the LNG plant.

TotalEnergies believes that this enables a significant reduction in greenhouse gas emissions, as the Marsa LNG plant will be 100% electrically driven and supplied with solar power, positioning the site as one of the lowest GHG emissions intensity LNG plants ever built worldwide, with a GHG intensity below 3 kg CO₂e/boe. As the average emission intensity of LNG plants is around 35 kg CO₂e/boe, this project represents a reduction in emissions of more than 90%.

Moreover, the main engineering, procurement, and construction contracts have been awarded to Technip Energies for the LNG plant and CB&I for the 165,000 m³ LNG tank. The operator claims that the Marsa LNG project is set to generate long-term employ-

ment opportunities and significant socio-economic benefits for the city of Sohar and the region.

Patrick Pouyanné, Chairman and CEO of TotalEnergies, commented: *"We are proud to open a new chapter in our history in the Sultanate of Oman with the launch of the Marsa LNG project, together with our partner OQ, demonstrating our long-term commitment to the country. We are especially pleased to deploy the two pillars of our transition strategy, LNG and renewables, and thus support the Sultanate on a new scale in the sustainable development of its energy resources."*

"This very innovative project illustrates our pioneer spirit and showcases the relevance of our integrated multi-energy strategy, with the ambition of being a responsible player in the energy transition. By paving the way for the next generation of very low emission LNG plants, Marsa LNG is contributing to making gas a long-term transition energy."

Middle East's first bunkering hub

With the ambition of the Marsa LNG project to serve as the first LNG bunkering hub in the Middle East, TotalEnergies highlights that this spotlights an available and competitive alternative marine fuel to reduce the shipping industry's emissions. The firm underlines that LNG helps to cut greenhouse gas emissions by up to 23%, nitrogen oxide emissions by up to 85%, sulfur emissions by 99%, and fine particle emissions by 99%, compared to conventional marine fuel.

During 1Q 2024, TotalEnergies' production in Oman was 61 kboe/d. The company produces oil in Block 6 (4%), natural gas in Block 10 (26.55% via Marsa

LNG LLC) as well as LNG through its participation in the Oman LNG (5.54%)/Qalhat LNG (2.04% via Oman LNG) liquefaction complex with an overall capacity of 11.4 Mtpa. The French giant is also conducting exploration activities in Block 12 (50%, operator), and is appraising Block 11 (22.5%).

With a global portfolio of 44 Mt/y in 2023, TotalEnergies is believed to be the world's third-largest LNG player and its ambition is to increase the share of natural gas in its sales mix to 50% by 2030 to curb carbon emissions and eliminate methane emissions associated with the gas value chain while promoting the transition from coal to natural gas.

"Marine LNG sharply reduces emissions from ships and significantly improves air quality, in particular when at berth, for the benefit of port cities and communities in coastal areas. Used as a marine fuel, LNG helps to cut greenhouse gas emissions by up to 23% compared to conventional marine fuel and has the potential to reduce emissions significantly more if bio or synthetic LNG is used. As such, marine LNG is a sustainable, affordable and immediately available way of reducing emissions in the shipping sector," elaborated TotalEnergies.

The company has actively invested in LNG bunkering infrastructure to support its shipping customers' adoption of LNG as a marine fuel, deploying three LNG bunker vessels: the Gas Agility at the Port of Rotterdam, Netherlands, the Gas Vitality at the Port of Marseille-Fos, France, and the Brassavola at the Port of Singapore.

By Melisa Čavčić ■

Urgent political alignment needed for UK to achieve 'just and fair' energy transition by 2030

The UK will fail to achieve a "just and fair" energy transition by 2030 unless there is urgent alignment across the political spectrum to sustain offshore energy industry jobs, supply chain investments and the economic contribution of the workforce, a new report by Robert Gordon University (RGU) states.

The "Delivering our energy future" report analyzed over 6,560 pathways for the UK offshore energy industry between now and 2030 of which fewer than 15 or <0.3% meet the "just and fair" transition principles, concluding that UK and Scottish political decisions, rather than energy market economics, will determine the size of the workforce and supply chain.

To note, the United Nations defines "just transition" as the one that "ensures that environmentally sustainable economies are promoted in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind" and "aims to ensure that the transition to net-zero emissions and climate resilience is orderly, inclusive and just."

Investment and pricing

According to RGU, even these limited scenarios require the renewables sector to achieve higher levels of ambition through billions of pounds of additional investment in the next six years and the ongoing decline in the oil and gas industry needs to be offset much faster by greater levels of activity and higher UK content in renewables if any pathways



Robert Gordon University

to a just and fair transition are to remain open.

If this does not occur, interim steps will need to be taken to address the decline in activities, including oil and gas production, currently expected to decline by more than 40% by 2030.

Professor Paul de Leeuw, Director of RGU's Energy Transition Institute, stated that the UK also needs more flexible electricity pricing mechanisms to avoid project delays or cancellations and a proactive focus on building UK content.

"The UK still has a unique opportunity to create a new energy future. Accelerating the re-purposing of the North Sea as a world-class, multi-energy basin will ensure the sector can power the country for decades to come. The prize for the UK to get this right is enormous. But to deliver this requires action and urgency, which means faster planning and consenting and access to the grid," De Leeuw said.

"While there is consensus across all stakeholders including governments, politicians, industry organisations and economic development bodies that we need to realise a 'just and fair' transition, a far more agile and joined up approach is required to address how the country can best secure its energy ambitions, while addressing the cost-of-living crisis, managing energy security and delivering on the net zero agenda."

To achieve this outcome, the UK offshore energy sector needs to deliver on spend of up to £200 billion over the remainder of this decade across offshore wind, hydrogen, carbon capture and storage (CCS) and oil and gas projects, De Leeuw noted.

Workforce

The report finds that in order to sustain the offshore energy workforce at 2023 levels, the UK has to deliver almost 40 GW of installed offshore wind capacity - compared to around 15 GW cumulative capacity in 2023 - and up to 40% of the investment needed to achieve this to be spent in the UK.

If unsuccessful in delivering this ambition and content targets by 2030, the UK is unlikely to be able to retain the offshore energy workforce without progressing additional activities, including oil and gas.

Significant levels of new operational capacity and capability will be required to deliver on the ambition of up to 40% UK capex content for new offshore wind projects and up to 50% for oil and gas decommissioning activities by 2030.

Each additional 10% of UK capex content for offshore wind is estimated to yield between 3,000 and 12,500 jobs by 2030. RGU analysis highlights that every 10% salary differential between oil and renewables may require up to 7% more people to maintain economic contribution.

Currently, 1 out of 30 of the working population in Scotland is employed in or supports the offshore energy industry, versus 1 in 220 across the UK. According to RGU, if Scotland fails to capture a significant share of future renewables activities, selective oil and gas activities may need to be sustained until 2030 to retain the Scotland-based offshore energy workforce, skills, supply chain and economic contribution.

"The Scottish Government is determined to play its role in maximising these benefits - and negotiating the challenges - not least through the publication of our Energy Strategy and Just Transition Plan, which will set out our vision for a future energy system that delivers affordable, secure, clean energy and delivers economic benefits to every part of the country," said Cabinet Secretary for Net Zero & Energy Mairi McAllan.

"We will continue to work closely with industry, communities and other key partners to deliver this vision and ensure a just transition for our energy workforce and for everyone in Scotland."

By Nadja Skopljak ■



Five European countries open their doors to cross-border CO₂ storage

Five northern European countries – Denmark, Norway, Belgium, the Netherlands, and Sweden – have laid the foundations for Europe’s carbon capture and storage (CCS) infrastructure by joining forces to conclude arrangements on the transport and storage of carbon across borders.

As the ability to move CO₂ across borders is perceived to be essential in the quest to create Europe-wide access to a portfolio of potential storage sites, the arrangements between Denmark, Norway, Belgium, the Netherlands, and Sweden, made on April 15, pave the way for cross-border transport and geological storage of captured CO₂.

While Denmark, Belgium, the Netherlands, and Sweden have each established an arrangement on the cross-border transport of CO₂ with

Norway, Sweden and Denmark have also made a similar arrangement. These agreements allow for the removal of some of the obstacles on the way to a well-functioning carbon capture and storage market in the wide North Sea region.

Vast arsenal for carbon storage

Terje Aasland, Norway’s Minister of Energy, commented: *“Norway has great potential to store CO₂ and I am pleased that other countries will store CO₂ in Norwegian storage sites. The capacity is enormous. The climate*

challenge transcends borders, and it is crucial that we put in place solutions for transport of CO₂ across national borders. This is an important day for the climate, for our industries and for the first full-scale European CCS project Longship.”

Northern Lights, which is part of the full-scale Longship CCS project that entails the transportation, receipt, and permanent storage of CO₂ in a reservoir in the northern North Sea, has welcomed the bilateral agreements Norway signed with



Courtesy of the European Commission
Photo by Mauro Bottaro

Belgium, Denmark, the Netherlands, and Sweden to enable cross-border CO₂ storage, as a “very encouraging” development.

This CCS project demonstrates Norway’s efforts to develop a full-scale carbon capture and storage value chain. Owned by Equinor, Shell, and TotalEnergies, Phase 1 with a capacity to inject up to 1.5 million tons of CO₂ per year is scheduled to be ready for operation in 2024.

The captured and liquefied CO₂ from European emitters will be loaded and delivered to the receiving terminal in Øygarden on board two LNG-powered, wind-assisted CO₂ transportation ships.

Denmark as carbon storage trailblazer

Jacob K. Clasen, Deputy CEO of Danish Shipping, noted: *“When it comes to capturing and storing CO₂ underground, Denmark is right at the forefront. It’s very positive that the Danish government is also proactive in establishing agreements with our neighboring countries, which can contribute to scaling up the entire CO₂ sector and establish the necessary infrastructure. At Danish Shipping, we have members ready with the ships that will help transport CO₂. All this can help make Denmark an important European CO₂ hub.”*

Danish Shipping, which sees Scandinavian CO₂ cooperation as a “crucial” step in establishing European CO₂ infrastructure, has underlined that the new agreements with Norway and Sweden enable the transport of CO₂ across Scandinavia for underground storage. The company believes that CCUS has the potential to become “a new Danish industrial adventure.”

Paul Van Tigchelt, Belgian Minister of the North Sea, remarked: *“Developing new methods to reduce CO₂ emissions is crucial for the future of our planet. This is a promising climate technology. The sea can play a key role in this regard. Not only has it always been of great importance in regulating our climate, but it also offers opportunities for carbon capture and storage. Over the past 2 years, we have already concluded agreements with the Netherlands and Denmark. Today, we are taking another important step with Norway to store captured CO₂ in their depleted oil and gas fields.”*

CCS - EU’s tool for 2050 decarbonization race

Alongside renewable energy and energy efficiency measures, the rollout of CCS is seen as the right move to curb the greenhouse gas emissions footprint. In line with this, Zuhair Demir, Flemish Minister for Justice and Enforcement, Environment, Energy and Tourism, is convinced that the cooperation between Flanders and Norway will serve as a boost for the future development of the CCUS-value chain since Norway’s “great potential” turns the country into fertile ground for the storage of CO₂.

Romina Pourmokhtari, Sweden’s Minister for Climate and Environment, outlined: *“Beside extensive mitigation, the capture and storage of CO₂ will be necessary to curb the climate crisis. CCS and BECCS will play a key role towards EU’s 2050 objective for climate neutrality and negative emissions thereafter. Sweden has a great potential for BECCS and we already have projects underway. These agreements are essential for Sweden and its industry in realizing a fossil free future.”*

The agreements come after Denmark, France, Germany, Sweden, and the Netherlands took steps to bolster cooperation within the European Union (EU) on carbon capture and storage with a declaration that paints carbon capture, utilization, and storage as a key climate tool.

Moreover, Norway and the Netherlands inked an arrangement for energy cooperation around the North Sea in 2021, including carbon capture and



storage. Similar arrangements were put in place between Norway and Belgium in 2022 and Denmark in 2023, along with a joint declaration with Sweden in 2022. Aside from this, Denmark, Belgium, and the Netherlands penned arrangements for the cross-border transport and storage of captured carbon in 2022 and 2023.

Europe pursuing carbon neutrality

Lars Aagaard, Danish Minister for Climate, Energy and Utilities, emphasized: *"In order to decarbonize hard-to-abate sectors, we need carbon capture and storage. In order to reach climate neutrality by 2050 in Europe, we need carbon capture and storage in a larger, international scale. Today's*

arrangements are two great steps in the right direction. It's all hands on deck - and I'm glad to see both Norway and Sweden joining our work towards an international industry for carbon capture and storage."

While multiple decarbonization tools are available, CCS is seen as a tool that can capture some of the emissions that are very difficult to prevent. However, getting rid of those emissions by capturing and storing them is considered necessary to reach Europe's climate goals, thus, this makes carbon capture and storage "an essential climate tool," according to the Dutch government.

"Storage of CO₂ is a cost-effective means of reducing emissions on time to reach the EU climate targets. This cooperation between Norway and the Netherlands on cross-border CO₂ transport, is an important step in the development of an open European CCS market," underlined former Rob Jetten, Minister for Climate and Energy of the Netherlands.

"It contributes to the EU climate goals and economic development. I am hopeful that this declaration will soon be followed by concrete project between the Netherlands and Norway."

By Melisa Čavčić ■





WE DESIGN
MANUFACTURE
CUSTOMIZE

LIFTING AND HANDLING EQUIPMENT

Made in Italy | info@cimolai.tech | www.cimolaithechnology.com | Ph. +39 049 940 4539

WIND PES

THE SOURCE OF WIND ENERGY NEWS



FIND OUT MORE

WIND ENERGY'S
ESSENTIAL
MEDIA
DESTINATION

EXTENSIVE
NETWORK
AROUND
THE GLOBE

UNRIVALLED, REACH THROUGH PRINT,
ONLINE, DIGITAL & SOCIAL MEDIA PLATFORMS,
WITH ACCESS TO OVER 300,000 READERS &
FOLLOWERS BIG NAME INTERVIEWS

NEWS, VIEWS AND
ANALYSIS UNMISSABLE
FEATURES AND AGENDA-
SETTING COMMENT

www.peswind.com



Marine Energy Council sets five key asks for UK government

The UK Marine Energy Council (MEC) has outlined five key asks for the Government to realize the potential of wave and tidal energy and embed UK content into projects deployed domestically and internationally

According to MEC, the UK possesses more than 30 GW of unused tidal stream and wave energy capacity, which would be sufficient to supply over one-third of its electricity needs. UK's trajectory aims for over 100 MW of tidal stream capacity in the country's waters by 2028, with projects contributing over 80% to the UK supply chain content spend, fostering green jobs in coastal communities and beyond.

The parliament, which is to run from 2024 to 2029, holds importance for the UK's journey towards achieving net zero

emissions. The next Government can make use of the UK's maritime expertise and indigenous natural resources by implementing the following five actions:

- Increase the tidal stream ringfence to £30 million (approximately \$38 million) in this year's renewable auction (Allocation Round 6),
- Set a 1 GW tidal stream target by 2035,
- Set a 300 MW wave energy target by 2035,
- Streamline and prioritize the consenting of marine energy projects,
- Introduce innovation support for marine energy.

Increase the tidal stream ringfence to £30m in Allocation Round 6

In the previous two renewable auctions, the UK Government secured 90 MW of contracted tidal stream capacity. According to MEC, the current £10 million (approximately \$12,7 million) ringfence will secure an additional 13 MW of capacity.

Increasing the ringfence to £30 million could potentially secure over 40 MW for the next Government, sustaining momentum and industry expansion while reinforcing the UK's international leadership in this sector.



CorPower and EMEC microgrid at EMEC Scapa Flow test site
Photo by Colin Keldie, courtesy of WES

Set a 300 MW wave energy target by 2035

Marine energy holds the potential to contribute up to £41 billion (approximately \$52 billion) gross value added (GVA) to the UK economy by 2050 and generate £1 billion (approximately \$1.2 billion) in annual energy system cost savings, said MEC. By achieving 1 GW of deployment, tidal stream energy is projected to decrease to £78 (approximately \$99) per MWh by 2035 and drop below £50 (approximately \$63) per MWh by 2050.

Moreover, there is an opportunity to 'co-locate' wave energy converters with offshore wind farms in the future, potentially reducing overall costs by 12% for both technologies.

Setting clear targets for marine energy will enhance investor confidence and send a strong market signal that the UK is dedicated to fostering the growth of the sector, said MEC. Like other offshore renewable energies, having defined targets is crucial for scaling up commercial growth in both technologies and projects.

Streamline and prioritize the consenting of marine energy projects

Offshore renewable projects exceeding 1 MW necessitate a marine license under the Marine and Coastal Access Act (2009) and Section 36 consent under the Electricity Act (1989).

This approval procedure, which can extend for over four years, is a

requirement for projects to participate in the UK's renewable auctions.

MEC said that the next Government should collaborate with industry and statutory consultees to simplify this process, endorse site monitoring to demonstrate the minimal impact of marine energy and adopt a balanced approach to marine energy deployment.

Introduce innovation funding for marine energy

Research conducted by the LSE's Grantham Institute indicates that the UK is a "specialized innovator" in marine energy technologies, surpassing its performance in other sectors such as offshore wind, nuclear, and carbon capture, usage, and storage.

With the absence of European Union (EU) funding, the Government must sustain the UK's position as an innovation leader, attracting investment to generate employment, foster economic growth, and capitalize on opportunities to export innovation and expertise globally.

MEC's new partners

MEC has welcomed 13 new companies as lead partners, set to support the council's work in realizing the UK's marine energy potential.

MEC's lead partners, described as "industry leaders" in tidal stream and wave energy, represent the innovative companies and organizations driving the UK's 30 GW+ marine energy potential. They will join the MEC Board ►



*Mocean Blue X at EMEC Scaapa Flow test site
Photo by Colin Keldie*

and provide strategic direction for future activities.

The newly joined lead partners are Swedish wave energy company CorPower Ocean, the European Marine Energy Centre (EMEC), French tidal stream company HydroQuest, tidal energy company HydroWing, international marine contractors Lease Marine, Spanish tidal stream company Magallanes Renovables, and tidal stream kite company Minesto.

The companies that also joined MEC are tidal stream energy project Morlais, marine energy company Nova Innovation, Offshore Renewable Energy Catapult (ORE Catapult), tidal developer Spiralis Energy, Scottish Renewables, and Wave Energy Scotland (WES).

EMEC's key goals for ocean energy growth

EMEC outlined a set of manifesto asks to unlock green growth opportunities in ocean energy arenas in the UK waters.

The manifesto asks, which EMEC described as "key" ones, have been designed to cover areas enabling Britain to unleash its full renewable and marine energy potential, lending a helping hand on the UK's journey to net zero.

The steps the country should take to strengthen its energy security and bolster its sustainability efforts entail wave and tidal energy innovation support and developing a national floating wind test centre in the UK.

EMEC has come up with plans for an £88 million national floating wind test site west of Orkney, creating 4,160 jobs and adding £690 million to the UK economy in the process. This is in line with the target of deploying over 23 GW of floating wind in Scottish waters over the next two decades.

EMEC highlights that it supports industry asks through the UK Marine Energy Council. In light of this, the European Marine Energy Centre points out that the government needs to commit to ensuring continuity of innovation support to capture energy security, economic, and system benefits in the absence of access to EU funding streams.

By Zerina Maksumić ■



The UK Marine Energy Council (MEC)



PTR HOLLAND® GROUP

ROTTERDAM - SINGAPORE - HOUSTON - NEWCASTLE - PIRAEUS

PILOT LADDERS

ISO: 799-1/2019-MED

ISO: 799-2

ISO: 799-3



APPROVED BY DNV AND USCG



EMBARKATION LADDERS

ISO 5489 MED UP TO 80 METERS APPROVED

- TAILOR MADE ACCOMMODATION LADDERS AND WHARF LADDERS
- IACS CLASS APPROVED
- WORK/TRANSFER BASKET



For protection of life and property at sea

+31 (0)10.714.4945 info@ptrholland.com

WWW.PTRHOLLAND.COM



MARINE STEEL

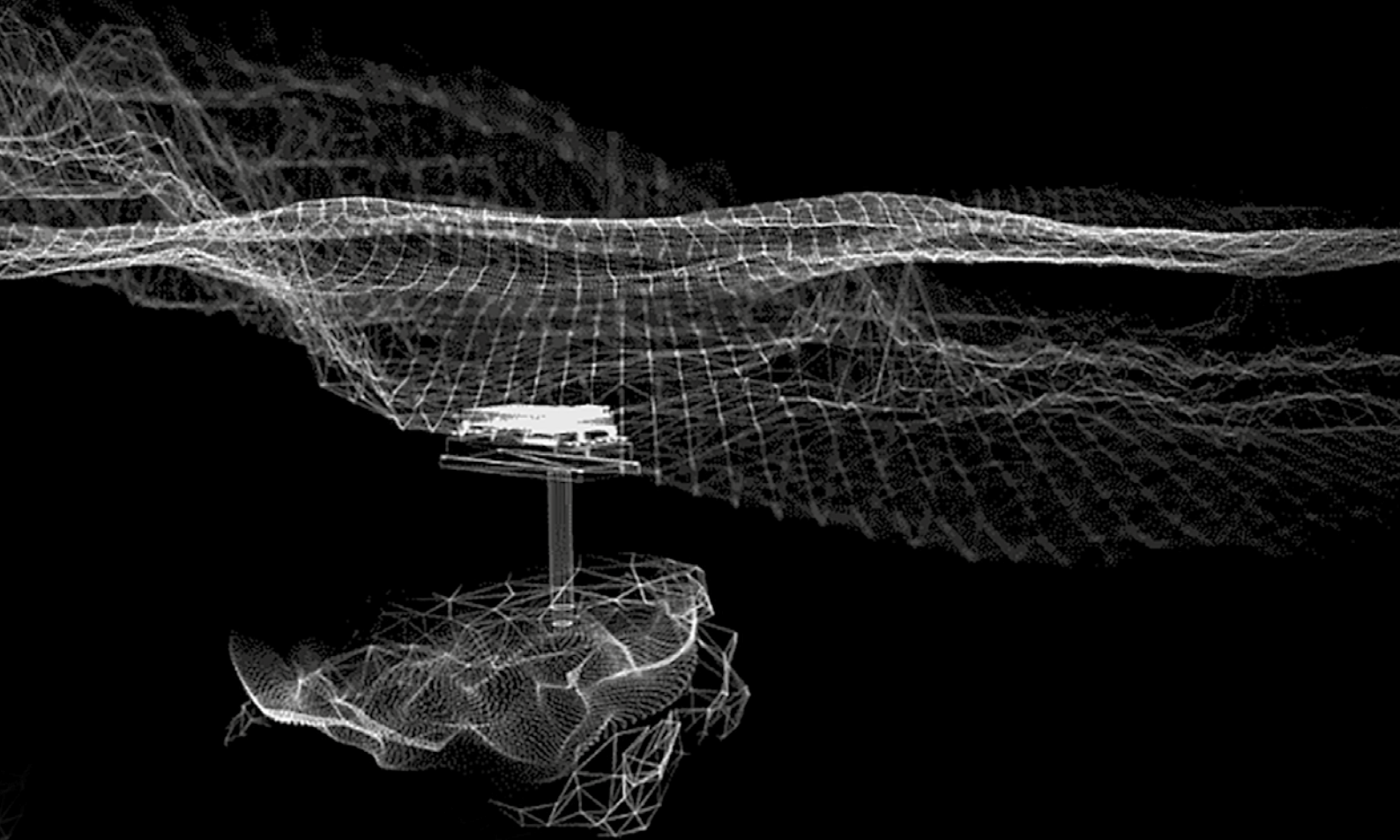
WORKS & SUPPLY BV - ROTTERDAM

FERROUS & NON FERROUS WHOLESALER



+31 (0)10.820.8905 info@marinesteel.nl

WWW.MARINESTEEL.NL



Four licenses awarded in Norway's sixth call for CO₂ storage

The Norwegian Ministry of Energy has awarded four new exploration licenses related to CO₂ storage on the Norwegian Continental Shelf (NCS) to six companies as part of the sixth call for CO₂ storage on the NCS.

The exploration licenses are located in the North Sea, with two offered to Equinor, one to a group consisting of Vår Energi, OMV (Norge) and Lime Petroleum, and one license offered to a group consisting of Aker BP and PGNiG Upstream Norway.

The authorities reviewed applications from eight companies following the announcement of two suitable acreages in March.

The licenses are offered with a binding work program which includes mileposts that ensure fast and efficient progress or return of the areas if the licenses do not carry out the storage project.

"The awards are given to companies that have matured good, industrial plans. The interest for new storage space by several players in the industry, makes me optimistic for the future

work of making CO₂ storage one part of the solution to the worlds' climate challenges," said Norway's Minister of Energy Terje Aasland.

According to Hilde Braut, Assistant Director for New Industries, this is the highest number of offers that have been sent out simultaneously.

Commercial markets

Equinor's two licenses are referred to



Source: Norwegian Ministry of Energy

as Albondigas and Kinno, and are each expected to have the capacity to store around 5 million tons of CO₂ per year when in operation, with the estimate further determined in the exploration phase.

The Norwegian company said it was expecting 4-8% real base project returns for its early phase CO₂ storage business, and further value uplift potential when commercial markets are developed.

In terms of other efforts, Equinor is maturing a ship-based solution as well as a large pipeline to connect industrial

emissions in Europe with storage opportunities on the NCS. The planned pipeline named CO₂ Highway Europe will have the capacity to transport 25-35 million tons of CO₂ per year from Belgium and France.

The Smeaheia storage license, awarded in 2022, is the anchor storage for this pipeline development and Albondigas and Kinno will be additional storage opportunities that can be connected.

Equinor is also about to complete the first phase of the Northern Lights CO₂ transport and storage facility together with Shell and Total Energies, which will be ready to receive CO₂ by the second half of this year.

"We see that demand for CO₂ storage is increasing in several countries, and it is crucial to bring forward new CO₂ storages quickly, so that we can offer industrial solutions that can support large scale decarbonisation of hard-to-abate industries in Europe," said Grete Tveit, Senior Vice President for Low Carbon Solutions at Equinor.

"Scale-up of CO₂ transport and storage is essential to meet the interest and demand for this type of services. Gaining access to more CO₂ storage capacity aligns well with our ambition of having 30 to 50 million tons of CO₂ transport and storage capacity per year by 2035."

The Iroko area

In the second awarded license, named Iroko, Vår Energi holds 40%, and OMV Norge and Lime Petroleum each hold a 30% share. The Iroko area has the potential to store up to 7.5 million tons of CO₂ annually for at least 30 years, a total of approximately 215 million tons.

The license is located northeast of the Vår Energi-operated Balder field and about 130 kilometers west of the coast from Haugesund.

Aker BP and PGNiG Upstream Norway Aker BP and PGNiG's storage license, named Atlas, is located near the Yggdrasil area, where Aker BP operates the Yggdrasil field development project. The firm explained that it is looking into CO₂ storage options on the NCS as a potential new business venture and part of its decarbonization agenda.

The Norwegian player is set to be the operator with an 80% interest, with the remaining 20% going to PGNiG, which also has a stake in Yggdrasil. The license entails a work program that includes re-processing 3D seismic data, performing geological studies, and making a drill-or-drop decision after two years.

CO₂ storage off Norway

Before this, seven licenses were awarded for CO₂ storage offshore Norway, six in the North Sea and one in the Barents Sea. Sval Energi, Storegga Norway and Neptune Energy Norway secured an exploration permit located east of the Sleipner Øst field in what was the fifth time acreage was awarded. Sval Energi will be the operator, holding a 40% stake, while Storegga and Neptune Energy will each hold a 30% stake.

The Norwegian Ministry of Energy announced on June 6 that three new areas for CO₂ storage are up for grabs, representing the seventh time acreage is being announced for CO₂ storage on the NCS. The deadline for submitting applications was August 29.

By Dragana Nikše and Nadja Skopljak ■



WindEurope warns against negative bidding in offshore wind (again)

European wind energy industry organization, WindEurope, has warned that the negative bidding approach will lead to the bid costs falling onto the supply chain and/or electricity consumers after Germany and the Netherlands closed their latest offshore wind tenders, securing nearly €4 billion in total through winning bids.

In both countries, the offshore wind projects awarded through the tenders in 2024 will be built without subsidies.

However, the bidding costs will become part of the project costs and the consumers could end up paying these. Developers will have to pass on these either to the supply chain which is still

recovering from disruptions and cost increases, and/or to electricity consumers in the form of higher electricity prices, WindEurope says.

First warning

This is the second time WindEurope has voiced concerns over negative bidding.

In 2023, the organization called on the German government to avoid this approach in future auctions after bp and TotalEnergies secured four sites offshore Germany in the summer of 2023 by offering a total of €12.6 billion.

This was a result of the “dynamic bidding” round of the auction through



*Hollandse Kust Zuid offshore wind farm
Photo by Vattenfall, Ties van der Horst*

which the developers competed only in financial bids after each of the four sites had more than one developer proposing to build a wind farm without subsidies.

The 2024 offshore wind tender in Germany wound up with a dynamic bidding round too since nine bids with a bid value of zero cents per kilowatt hour were submitted for area N-11.2 and seven for area N-12.3 by the bidding deadline.

A project company called Offshore Wind One GmbH, owned by TotalEnergies, secured rights for the 1.5 GW site N-11.2 with a bid of approximately €1.96 billion and EnBW secured the 1 GW area N-12.3 at a price of €1.065 billion. In the Netherlands, the winning bids in the IJmuiden Ver Alpha and Beta tender were filed by the Noordzeker consortium, comprising SSE Renewables and AGP (the asset manager for Dutch pension fund ABP), and the joint venture between Vattenfall and

'The negative bidding amounts are a straight add-on to the costs of developing an offshore wind farm'

Copenhagen Infrastructure Partners, named Zeevonk.

The two developers are set to pay a total of €21 million per year for 40 years and also cover the environmental impact assessment costs. Noordzeker will pay €1 million a year and Zeevonk €20 million a year for their sites which totals €840 million for the State.

As per the tender requirements, IJmuiden Ver Alpha, the 2 GW area secured by the Noordzeker consortium, is focused on making a positive contribution to nature, for which the developer proposed several nature-positive measures, including a bird protection solution and artificial reefs for marine wildlife.

The area secured by the Zeevonk joint venture, the 2 GW IJmuiden Ver Beta, will house an offshore wind farm which will be integrated with a large-scale floating solar plant offshore and a large-scale electrolyser on land.

Burdening consumers

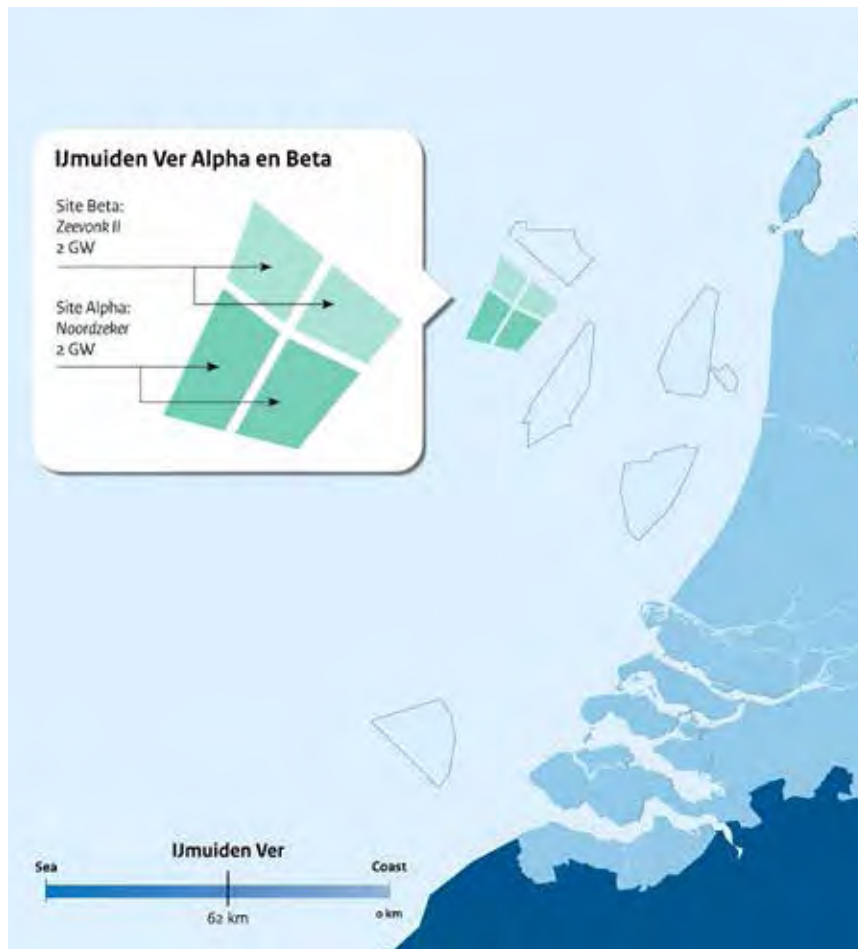
WindEurope pointed out that both Germany and the Netherlands already used negative bidding in their previous offshore wind auctions, with the Netherlands previously having a cap on the bids which equated to €70,000/MW but which is higher now, while Germany does not apply a cap. ▶

“Negative bidding increases the costs of offshore wind. Costs that have to be passed on to consumers and the wind energy supply chain. It may be a short-term gain for finance ministries. But it’s a long-term cost for society,” said Giles Dickson, WindEurope’s CEO.

For the Dutch tender, WindEurope noted that it made “extensive use of non-price criteria” as the Dutch qualitative criteria included biodiversity solutions for the IJmuiden Alpha site and system integration proposals for IJmuiden Beta.

“The Dutch auction shows the European wind industry has a great offering on ecology and system integration. We are building new wind farms and creating lasting value for Europe’s environment and energy system,” Giles Dickson said.

In Germany, 90 per cent of the money raised from negative bidding will be used to reduce the grid levies and 10 per cent is earmarked to support maritime biodiversity and sustainable fishing practices.



OK. But building these wind farms requires a strengthening of Germany’s offshore wind supply chain and an expansion of port capacity. The German Government should consider putting some of the money into that as well,”

WindEurope stated in a press release on 25 June.

The industry organization emphasized that most other countries in Europe use Contract for Difference (CfD) auctions.

With negative bidding, the owner/developer’s revenue will be whatever is the wholesale market price of electricity and the revenue with CfDs will be whatever the developer bid in the auction, and if the market prices are higher than the agreed strike price, the difference is paid to the State.

“The negative bidding amounts are a straight add-on to the costs of developing an offshore wind farm. It’s extra money the developer has to pay which they don’t pay in a CfD auction.”

Project developers have to pass on these costs. Either to the wind energy supply chain which is still recovering from supply disruptions and cost increases. And/or to electricity consumers in the form of higher electricity prices,” WindEurope said.

By Adrijana Buljan



WindEurope CEO Giles Dickson, September 2018
Photo by WindEurope



WindEnergy Hamburg

The global on & offshore event

24 ————— 27
September 2024

Buy
your ticket
now!

Driving the energy transition. *Together!*

Be sure to take part in the world's biggest and most important business platform for the onshore and offshore wind industry!

- Meet up with 1,500 exhibiting companies from 40 countries across 10 halls
- Get in touch with the key decision makers of the international wind energy sector
- Visit the first-rate conference programme on 4 stages in the halls free of charge
- Two days dedicated to recruiting – for career starters, specialists and career changers

windenergyhamburg.com



Organised by:



Global Partner:



European Partner:



Partners:





Plan unveiled for Europe's first hybrid electricity interconnector between three countries



Belgium, Ireland and the UK have signed a joint statement to increase their cooperation on renewables and interconnection opportunities, as well as a letter of agreement on the development of what is said to be Europe's first planned hybrid electricity interconnector between three countries.

The joint statement is set to allow for closer cooperation in offshore wind energy between the three countries and builds on the ambition declared at the North Sea Summit, held last year in Ostend, Belgium, to accelerate the development of offshore wind in the North Seas, including the Irish Sea, Celtic Sea and the Atlantic Ocean.

Irish Minister for the Environment, Climate and Communications Eamon Ryan, Belgian Minister of Energy Tinne

van der Straeten, and UK Minister for Nuclear and Networks Andrew Bowie signed the joint statement in Bruges, Belgium, on May 15.

Ryan spoke about how a multilateral approach is the only way to address Europe's collective climate responsibilities.

For Ireland specifically, the Irish minister stated that the most effective way to take advantage of the country's offshore wind energy potential over

the coming decades is to put in place the infrastructure that allows access to other markets.

Ireland's interconnection ambitions

To remind, the Irish government in the summer of 2023 approved a new policy statement on electricity interconnections which will see the country explore new interconnection opportunities with Spain, Belgium, and the Netherlands, as well as further connections to Great Britain and France.



Minister Eamon Ryan/ Twitter

The key aspects of the new policy include specifically supporting a further connection to Great Britain by 2030 beyond the completion of the Greenlink interconnector, as well as providing consideration to the second connection with France beyond the Celtic Interconnector, a connection to Spain, a further connection to Great Britain beyond 2030 and a connection to Belgium or the Netherlands.

There is also a commitment to develop an offshore transmission strategy and to explore the potential for multipurpose interconnectors in order to maximize export opportunities and facilitate offshore renewable energy development. Consideration will also

be given to further interconnection required to support the export of renewable electricity in the context of other uses, such as green hydrogen.

"Increased electricity interconnection is key as we continue to grow our use of renewable energy. One of the best characteristics of renewable energy is that it is, firstly, home grown and accessible to every country. A second key characteristic is that it works best if it can be shared. When we have excess offshore wind capacity in Ireland, for example, it makes sense that we utilise and store what we need but that we can also share our surplus supply with our neighbours through international cooperation and interconnection," Ryan said.

"We need to work together to address our collective climate responsibilities, ensuring energy security and price stability, and that is why I am delighted to sign this agreement with the energy ministers in Belgium and the UK to assertively address the need to increase interconnection corridors between our three countries."

Ostend Declaration

Together, nine countries involved in the Ostend Declaration have set offshore wind targets of about 120 GW by 2030 and 300 GW by 2050 in the North Seas, which today has a combined capacity of less than 30 GW.

This renewed cooperation between Belgium, Ireland and the UK will also see the establishment of a working group that will produce a report on the shared challenges, opportunities and

solutions to developing offshore renewable energy infrastructure.

As part of this, Irish transmission system operator (TSO) EirGrid, in line with Ireland's own interconnection policy, and as part of the development of the country's forward-looking transmission strategy, will engage with its counterparts in Belgium and UK and will report back to their respective ministries with options for trilateral arrangements between the three countries including any challenges related to these options. It is expected that this work will be completed in the first half of 2025.

The joint statement was signed on the sidelines of a Ministerial Meeting on offshore wind energy organized by the Belgian Energy Ministers under the Belgian Presidency.

"With this partnership, Ireland, the UK and Belgium are realising the ambitions set out at the North Sea Summit in Ostend a year ago: to make the North Sea the largest sustainable power plant in Europe. The key now is to implement the actions to follow through on those ambitions and power our green future," said Minister Van der Straeten.

"Thanks to this Joint Statement, we can explore a promising opportunity for interconnection between our three countries. This is a valuable addition to the interconnections Belgium is already exploring, such as with the UK, Norway and Denmark, after which we will be able to select the best options for our country."

By Nadja Skopljak ■



(Autonomous) robotics, AI and cloud systems shaping new offshore survey and inspection industry



Amid the global energy transition, offshore survey and inspection companies are working on decarbonizing – but the industry is also going through a transition of its own, and it's robotic.

Bureau Veritas, Terradepth and Sulmara are among a number of offshore survey companies that are increasingly using autonomous or remotely operated robotics, cloud systems and artificial intelligence (AI) to deliver projects faster, cheaper and in a more environmentally friendly way.

"If you look at the traditional way subsea geophysical data is collected, it hasn't pivoted very much in the last 50 years. Sailing a ship out into the ocean and towing a sensor. It is a very expensive approach, it is not very nimble. On top

of that, there is also the matter of safety, the impact on marine mammals and other environmental factors," Kris Rydberg, Chief Operating Officer at Terradepth said in an interview.

Cue remote/autonomous survey and inspection vehicles and cloud-based data – all of which are at the forefront of services offered to the offshore wind industry by the U.S.-headquartered Terradepth, the UK company Sulmara, and the France-based global testing, inspection, certification, and advisory services organization Bureau Veritas.

What all three companies emphasized as game changers are the faster processing and delivery of data and the ability to perform continuous or regular surveys where that would typically be a costly and time-consuming endeavor.

With the addition of AI, the companies are further streamlining operations, primarily using the technology for target recognition and data processing.

Bureau Veritas

"Drone technology and artificial intelligence (AI) are developing at a

structural defects and then maps those detected anomalies in the 3D cloud model with associated photos.

“This technology is coming out of the marine industry where we have been developing the tool which allows doing a survey without sending a person inside the ballast tank, where they are exposed to risks while performing the inspection. It is an advantage from a safety point of view, as well as the financial as traditional methods can be seriously time-consuming and costly,” Hiram Mechling said.

Augmented Surveyor

The software can be launched in real-time during the survey or after processing and can speed up the process of identifying areas that need repair since it automatically detects anomalies.

Mechling also pointed out that the Augmented Surveyor software is easy to use, where the user opens a model to view the points where the AI detected defects and then clicks to get the information such as the location and the images. In offshore wind, the tool can be adapted to inspect various components, including foundations.

“We want to expand the capabilities of the software to detect cracks. For instance, just as it can measure the thickness of the wall of the ballast tanks, it can be deployed inside a monopile. Here, it could measure what the actual thickness is with corrosion, detect all the different anodes and how many there are within an enclosed space, and even the depletion of those particular anodes,” Bureau Veritas’ Hiram Mechling said.

Terradepth

“The world changes and so does the landscape underneath the oceans – and in some places, it is changing dramatically. On the west coast of California, as an example, there are a lot of tectonic plates shifting and a lot of runoff and drainage into the ocean from surface land. Relying on a data set that was captured one time

can impact a project since the developer is not getting that data over time,” Kris Rydberg, Chief Operating Officer (COO) at Terradepth.

From identifying an offshore wind site to the design and construction phases, and all the way through to operations and maintenance could take several years. Working off one data set that was captured several years ago, as it is with the traditional survey methods as they are expensive, can bring many unknowns, according to Terradepth.

The U.S. company, which recently carried out a project for Italian transmission system operator (TSO) Terna and is eyeing the European offshore wind market, has developed an autonomous underwater vehicle (AUV) that can be easily deployed and retrieved.

Terradepth’s system also allows for near-real-time data access and processing. Once the battery-powered AUV returns to the vessel it was deployed off to recharge, the company’s remote processors can log in directly to the ship via Starlink. Once the data is processed, they can upload the information in the cloud so the end customer can access it either through their self-hosted platform, or AWS or Google Cloud.

Enabling recurring surveys

The company’s COO highlighted the efficiency of having this setup, especially with using a smaller and less intrusive AUV, in opting for regular surveys to always have the most recent data.

“What Terradepth focuses on is bringing in new technology and doing that from a vertical integration approach. Our aim is to drive the data acquisition cost down to the point where the frequency and the number of surveys can increase without additional project costs so nobody works off an old data set. With higher intervals of offshore surveys, developers can start capturing that change data as well,” Rydberg said. ►

mind-blowing pace. The use of remote surveys and inspections will become more and more commonplace,” says Hiram Mechling, Vice President of Offshore Wind at Bureau Veritas North America.

Bureau Veritas is leveraging its experience in surveys of ships, where the company is using its Augmented Surveyor tool to detect corrosion within empty ballast tanks.

The tool, which combines an aerial drone with AI, can be employed in the offshore wind industry as well to inspect offshore wind farm components, from wind turbines to offshore substations, according to the company. Using AI models, the Augmented Surveyor pattern-recognition software automatically detects

Terradept's AUV is lightweight and, being battery-powered, environmentally friendly, according to the company.

The AUV has the ability to auto-detect any objects that may interfere with its path and if it does come across something of that kind, it defaults to floating back up again instead of continuing its underwater journey.

Still, the difference the U.S. company is trying to bring to the offshore wind market is not just having an AUV but the full vertical solution, Rydberg pointed out, saying that the other part of this solution is the company's purpose-built cloud data platform Absolute Ocean that uses visualized data sets and is built to be as intuitive as possible.

Sulmara

The UK headquartered company Sulmara has already been involved in several offshore wind projects and recently chartered the emergency response rescue vessel (ERRV) Ocean Marlin which the company will refit to add survey equipment, a subsea crane with active heave compensation, and extra bed space.

Sulmara, which also operates uncrewed subsea vehicles (USV), plans to grow its USV fleet as the geophysical survey market is growing with more offshore wind projects worldwide. For the UK offshore survey specialist, the transition to USVs and similar technology still includes using survey vessels since some projects currently go beyond the capabilities of a USV.

"If we are talking about a transition from a conventional vessel to a USV, what we find is that once a higher complexity of tasks presents, human intervention and/or a typical survey vessel are, for the time being, still required. However, while USVs currently do not have the capacity to do all the types of tasks that a conventional vessel might - such as cable route preparation- Sulmara is concentrating primarily on conducting survey operations from a USV platform, mainly geophysical surveys," says Andy Doggett, Chief Technology Officer (CTO) at Sulmara.

The company currently has USVs deployed in Taiwan, where it plans to have a more advanced platform by the end of the year. Sulmara also has upcoming projects in Europe and is currently operating in the U.S. as well. According to Doggett, the company is growing its fleet both in terms of the numbers, geographical location, and in terms of advanced capability of the USV - and is also working on an AUV.

For Sulmara too, lowering the carbon footprint and allowing for easy and fast collection and delivery of data are on the top of the list for adding robotic, and cloud, capabilities to its offering.

Data quality paramount

Here, Andy Doggett highlighted that the quality of data was paramount and that the company, which is also using cloud processing, was focused on ensuring the processing was sophisticated enough to deliver the highest quality data.

"From a real-time data delivery point of view, we are also developing a portal which will allow real-time access to vessel activities of both crewed and uncrewed vessels. Through the portal, a user - either Sulmara personnel or the client's team - will be able to see the live progress of a vessel, including some of the data. They can also see the metocean data, the weather, survey progress in percentage, etc.," Sulmara's Andy Doggett said.

Speaking about the use of AI at Sulmara, Doggett said that the company was also employing AI where the technology can assist while keeping the quality of data in check.

"Using AI falls within our ambition to reduce the time from the data acquisition to delivery. First, we make sure we have got the best quality data offshore and then we upload it to the cloud - and once data is there, we use AI to reduce processing time," Andy Doggett said.

"We are employing AI for target identification in particular because we need to get certain information into our clients' hands as fast as possible. If we are doing a UXO survey at an offshore wind farm and there are many targets, one of the most time-consuming activities is verifying those targets and using an AI model can do, at least the preliminary work, much quicker."

By Adrijana Buljan. ■



JOIN OUR OFFSHORE ENERGY NETWORK

- + OFFSHORE WIND
- + OIL AND GAS
- + NEW ENERGY SOURCES
- + CONVERSION & COMMISSIONING
- + DECOMMISSIONING
- + LABOUR MARKET

What we do for and with our members:

- + We encourage cooperation, synergy, trade and knowledge exchange among members.
- + We promote the region as the ideal location for companies in offshore energy.
- + We organise member events and visit and participate in (international) exhibitions.
- + We provide access to a regional network of governments and training institutions.



+ FOLLOW US ON LINKEDIN



AMSTERDAM IJMUIDEN OFFSHORE PORTS

Members 2024:

- + Abeko
- + Aggreko
- + Alphasat Marine
- + Atlas Professionals
- + BD Containers
- + Beansters
- + Biardo Survival Suits
- + Bilfinger
- + BK Ingenieurs
- + Blue Offshore
- + Bluestream
- + Boskalis
- + Bota Transport
- + Braspenning Group
- + Breman Offshore
- + Building Careers
- + Bureau Veritas
- + Bus Industrial Tools
- + Cargostore
- + CBOX Containers
- + Conbit
- + CHC Helicopters
- + Clarkson Port Services
- + Damen Shiprepair Amsterdam
- + Damen Shiprepair Oranjerwerf
- + Deep - Hydrography & Geophysics
- + DEME Environmental Nederland
- + Den Helder Airport
- + Deutsche Windtechnik
- + Dexis Netherlands
- + DigitaalLeon
- + Dutch Marine Contractors
- + Dutch Marine Energy Centre
- + Eager.one
- + ELA Container Offshore
- + EMR European Metal Recycling
- + Eneco
- + Equans
- + eWorks
- + Facta Rotating
- + FMTC Safety
- + FON Energy Services NL
- + Gemba Service
- + Gemeente Amsterdam
- + Gemeente Beverwijk
- + Gemeente Velsen
- + Gemeente Zaanstad
- + Gezamenlijke Brandweer Amsterdam
- + Gibb Safety & Survival
- + Hogeschool van Amsterdam
- + Hydac
- + Industrieel Klimmen
- + INTRAMAR Insurances
- + Isolatie Combinatie Beverwijk
- + ITUS Global
- + Iv-Consult
- + KenzFiguee
- + KH Engineering
- + Knowledge Insight
- + KNRM
- + Koole Contractors
- + Kuhlman Repko Shipping
- + KVSA
- + LiftWerx
- + Loodswezen - regio Amsterdam-IJmond
- + Lowland International
- + Lubbers Logistics Group
- + Mammoet Nederland
- + MBO College Airport
- + Meemaken
- + Middle Point
- + Navingo
- + Neptune Energy
- + NoordWest Services&Security
- + NorthCmedia
- + Nova College
- + Oceanwide
- + Otos LMR systems
- + OV IJmond
- + Passer Lars
- + Pentacon Engineering
- + Peterson Energy Logistics
- + Point B
- + Port of Amsterdam
- + Rabobank MRA
- + Reym
- + Reynard High Voltage Solutions
- + Rietlanden Terminal
- + Roodenberg Staalkabels
- + Rusch Offshore Services
- + Schouten Energy
- + Seafox
- + SeaRenergy
- + Selmers
- + SEW Energy
- + Shiptron
- + SolarDuck
- + Spliethoff Transport
- + Stichting Vrienden Technisch en Maritiem vmbv Velsen
- + Strohm
- + Symphony Wave Power
- + Tata Steel
- + Techport
- + TechRent
- + TenneT
- + TMA Logistics
- + Topshore
- + TOS
- + Tschudi Ship Management
- + Unique Lights
- + Van der Valk Taxishervice
- + Van Gool hef- en hijstechniek
- + Van Laar Maritime
- + Van Leeuwen Zwanenburg Sloopwerken
- + Van Oord Offshore Wind
- + Vattenfall
- + VCK Travel
- + Venus & de Waard
- + Vestas Offshore Service
- + Wind Cable Services
- + Windcat Workboats
- + WinSys IT Solutions
- + WorldEmp
- + Zbridge
- + Zeehaven IJmuiden NV

WANT TO LEARN MORE? VISIT OUR WEBSITE.

AYOP.COM





X-Press Feeders launches Europe's first green methanol-powered feeder network

Independent common carrier X-Press Feeders has started Europe's first scheduled feeder network serviced by green methanol-powered vessels. At the same time, the company has held a naming and christening ceremony for its first dual-fuel methanol-powered containership.

The launch of Europe's first green methanol-fueled network took place on July 9, 2024, and it starts with Rotterdam and Antwerp Bruges to Finland and the Baltics.

The network will enable companies in Europe to have a regularly scheduled network that can ship goods in a way that has less impact on the environment, and helping them to better

achieve their sustainability goals, said X-Press Feeders Chief Operating Officer, Francis Goh. This industry milestone is a result of X-Press Feeders' collaboration with several partners,



*X-Press Feeders' first methanol dual-fuel vessel Eco Maestro.
Courtesy of X-Press Feeders*

such as ports of Antwerp Bruges, HaminaKotka, Helsinki, Klaipeda, Riga, and Tallinn.

X-Press Feeders' new green feeder routes include the Green Baltic X-PRESS (GBX) and Green Finland X-PRESS (GFX). The routes are:

- Green Baltic X-PRESS (GBX): Rotterdam > Antwerp-Bruges > Klaipeda > Riga > Rotterdam
- Green Finland X-PRESS (GFX): Rotterdam > Antwerp-Bruges > Helsinki > Tallinn > HaminaKotka > Rotterdam.
- According to Goh, X-Press Feeders chose northern Europe for the first routes in the network because it found that customers in this part of Europe were most receptive to the company's plans for sustainable shipping.

'The first of 14 dual-fuel vessels X-Press Feeders has on order'

The company selected the Port of Rotterdam as the base for Europe's first feeder network powered by green methanol because "Rotterdam is Europe's largest port and is fully equipped to handle green methanol refueling".

X-Press Feeders added it will use green methanol that is independently certified in Europe under International Sustainability and Carbon Certification (ISCC).

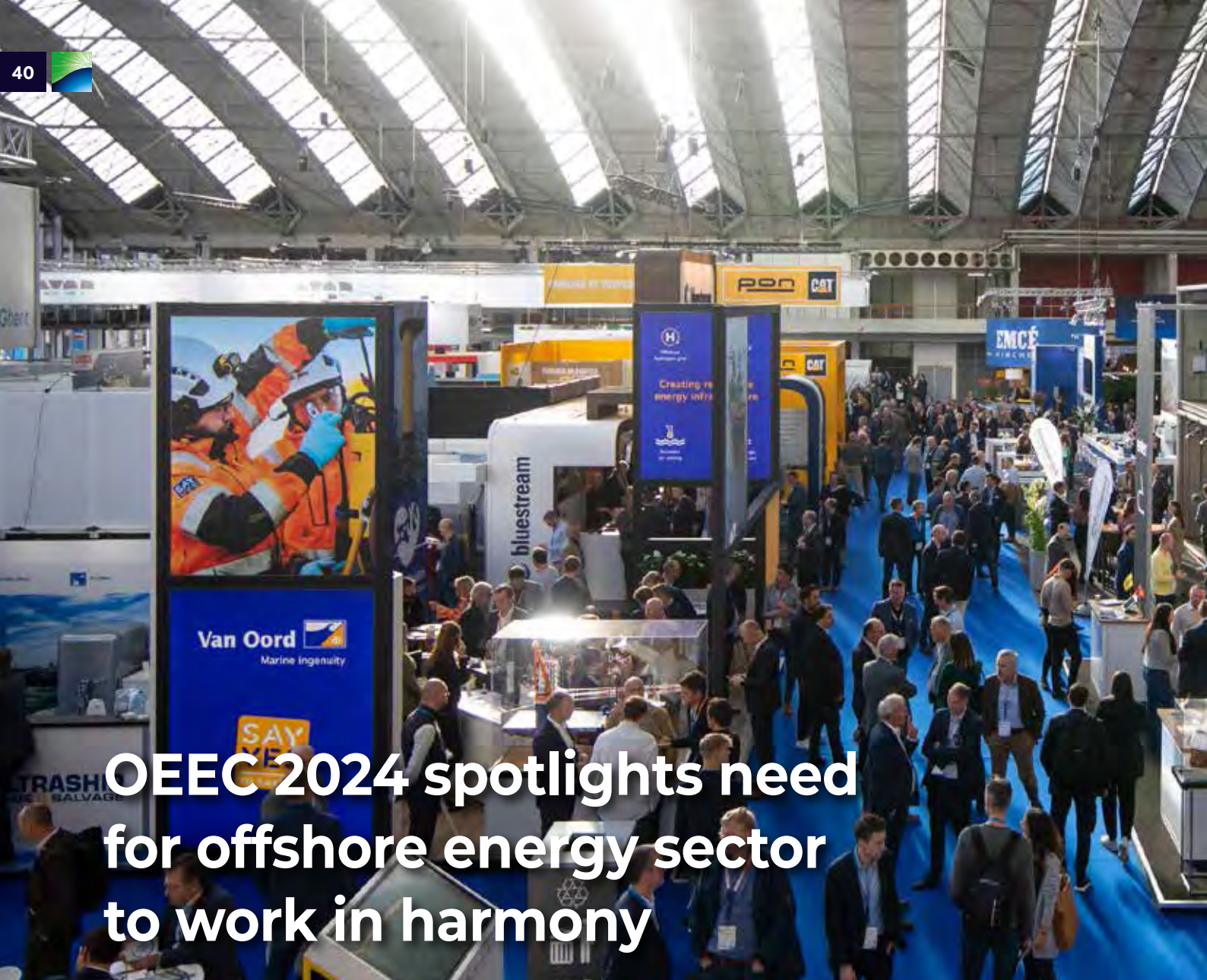
The start of Europe's first green methanol-powered feeder network coincided with the naming and christening ceremony for X-Press Feeders' first methanol dual-fuel vessel in Rotterdam.

The 1,260 TEU vessel named Eco Maestro was built and delivered by Chinese shipbuilder Yangzijiang Shipbuilding Group on May 16, 2024. The ship was the first to dock and refuel with green methanol in the Port of Singapore on its maiden voyage from Shanghai to Rotterdam.

It is the first of 14 dual-fuel vessels X-Press Feeders has on order. The company plans to deploy these vessels mostly on routes in Europe.

The second dual-fuel vessel is scheduled for delivery in the third quarter of 2024.

By Ajša Habibić ■



OEEC 2024 spotlights need for offshore energy sector to work in harmony

The global energy system is changing, but not fast enough. While there is already a vast amount of renewable energy capacity feeding into the grids and the alternative fuel industry is growing, we cannot yet fully escape the warm hugs of gas heating and fossil fuel-powered cars. To reach the point where we can fully rely on clean electrons and molecules faster, the offshore energy sector and all its moving parts need to work not only alongside each other or with each other – but in harmony.

The road to net zero is a long and cumbersome one as there is no magic switch that can shift our energy and fuel infrastructure to a brand-new setting overnight.

All that we can do is speed up the progress and this is only achievable by planning and building clean energy infrastructure faster and more efficiently, decarbonizing the hydrocarbons sector, and continuing to innovate to bring the most efficient

solutions to market and open new frontiers. All this needs to be done in sync with nature and with great consideration of the biodiversity while building and operating new infrastructure.

Furthermore, all this then needs to be done on a global level. Limiting global warming is not an impossible task in the hands of several select countries – it is a fully reachable joint goal of all the governments in the world.

For the energy transition to bear fruit in the near term and to reach the long-term objective, it is no longer enough for the offshore energy sector and its stakeholders to work alongside each other, or with each other. It is essential that every moving part works in harmony.

Throughout the past few editions of the Offshore Energy Exhibition & Conference, we have witnessed the off-



shore energy industries, public and private sectors, environmental organizations and other stakeholders moving closer together each year to plan the next steps and tackle the barriers within the energy transition.

The cooperation between the different industries in the offshore energy arena and the stakeholders is now stronger than it has ever been, with everyone gathered around one goal. Still, there is a noticeable need for all these different parts working on our energy future to become more synchronized.

Therefore, Navingo, the organizer of the Offshore Energy Exhibition &

Conference, has decided to focus the Offshore Energy Exhibition & Conference 2024 (OEEC 2024) on one main theme: Harmony.

Harmony Between Offshore Energy Verticals

The offshore energy sector comes in many forms, from offshore wind energy, marine energy (including wave, tidal and floating solar energies), hydrogen, to fossil fuels (oil and gas and LNG), and is further supported by big industries such as green marine (clean and alternative fuel-powered vessels). We are convinced that a close-knit sector, encompassing all the verticals and their supporting industries, and harmo-

ny in the energy mix are key to reaching net zero.

OEEC 2024 will reflect this harmony by providing space for the entire industry to discuss the latest burning questions at the Offshore Energy Conference, with dedicated conference sessions for offshore wind, hydrogen, and topics that concern the offshore energy sector as a whole.

On the exhibition floor, we will once again set up the Innovators' Dock, and the entire exhibition will lend itself to bringing the multiple offshore energy verticals and their related industries closer together.

In Harmony with the Environment

Even the cleanest sources of energy come with a concern for nature protection, especially as the infrastructure such as the one in offshore wind, is getting bigger by the day. With climate change being the focal point of all of the sector's efforts, decarbonizing oil and gas assets is also high on the list. The industry, together with the public sector and environmental organizations, is now taking things further with nature-positive and nature-inclusive projects.

At OEEC 2024, the conference program will, once again, provide room for discussions on how we could move forward with massive renewable energy targets and absorb the existing fossil fuel capacities while keeping in check our approach to nature and biodiversity.

On the OEEC floor, the industry will have the opportunity to see and learn first-hand about environmentally friendly solutions from different areas of the sector. ►



Harmony on an International Level

All of the above requires an international approach to create the most disruptive innovation, set the best standards for moving forward and for the world as a whole to reap the benefits of what the offshore energy sector, with support from the policymakers and environmental organizations, is working on.

One of the areas where OEEC is highlighting the international aspect is floating wind, a technology that is not planned to be installed in the Dutch North Sea waters, but which gathers

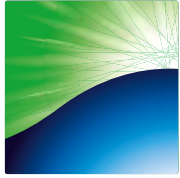
a large group of the industries within offshore energy sector, including the Dutch supply chain companies, that are working on moving floating wind towards industry maturity. In this year's edition, OEEC will keep emphasizing internationalization, as well as innovation, which we deem crucial for achieving global objectives.

"This year's event theme Harmony encompasses a range of aspects, including environmental protection, stakeholder collaboration, technological integration, safety, and international

cooperation. Achieving harmony in these areas is crucial for the successful and sustainable innovative development of offshore renewable energy resources," said Jaap Proost, Conference Program Manager at Navingo.

Ahead of the Offshore Energy Exhibition & Conference 2024, we have also launched a dedicated website for the event: [OEEC.biz](https://oeeec.biz). With a website solely revolving around OEEC, our exhibitors, visitors and interested parties now have a one-stop-shop that caters to all their event planning needs. ■





OFFSHORE ENERGY24

EXHIBITION & CONFERENCE
26 & 27 NOVEMBER 2024
AMSTERDAM | THE NETHERLANDS

Buy
your
ticket

Join the continent's foremost
exhibition & conference for the
offshore energy industry



OEEC.BIZ

Created and produced by



NAVINGO



Heavy-duty solutions for wind farm operations and maintenance



With offshore wind maturing rapidly, so are the Operations & Maintenance (O&M) requirements to keep offshore wind farms operating efficiently. While O&M is common in the industry, the rapid expansion and maturity of installed wind farms in recent years have increased the need for heavy O&M and main component exchange or replacement. Consequently, the demand for vessels supporting these activities is increasing and is expected to continue growing.

To meet this demand safely and efficiently, GustoMSC has been developing specific solutions for these activ-

ities. There are jack-ups and vessels dedicated to heavy O&M operating at the moment; however, most heavy

O&M has been carried out by “jack-ups and vessels of opportunity” in the past, both in main component replacement



and activities such as cable repair. With high demand for both the construction of wind farms and increasing demand on the O&M side, this is expected to become more challenging.

Additionally, the capacity requirements for these activities are increas-

ing. With increasing turbine capacities, the weights and required lifting heights for main component replacement are also increasing. Cable failure is a recognized challenge for the industry and needs robust and timely solutions. Furthermore, deeper waters and more remote locations impose their unique requirements.

GustoMSC has developed solutions to meet these expanding challenges based on its proven range of self-propelled jack-up designs and its expanding range of vessel-based solutions.

Jack-ups for main component replacement

With increasing lifting heights and tight tolerances for main component replacement, jack-ups are the primary tools in an O&M strategy for this work. Dedicated self-propelled heavy-lift jack-up designs can be more efficient to operate in this market than the large Wind Turbine Installation Vessels (WTIVs) which have been employed as vessels of opportunity. They can be designed more compactly, and therefore more affordable and less expensive to operate.

For the current range of turbines operating or being installed, GustoMSC jack-up designs like the NG-3750C, as recently built for Penta Ocean, and the NG-5500X, of which one unit was built as the Apollo for DEME, are used as the basis for O&M-specific jack-ups. For the next generation of turbines, the capable NG-8000X design has all required capabilities. These designs offer stable and highly efficient crane platforms able to work in the challeng-

ing conditions and increasing water depths where today's wind farms are installed and planned.

These jack-up designs benefit from GustoMSC's telescopic leg cranes and digital solutions. Combining a compact jack-up platform with cranes of increased lifting height and capacity, the telescopic leg crane offers maximum utilization of deck space and improved seakeeping and maneuvering characteristics in the wind farm, as well as easier boom storage between lift operations. This is complemented by digital solutions that enhance jacking operations and allow safe and efficient lifting operations.

Beyond the CSOV

A wide range and quickly expanding fleet of Service Operations Vessels (SOVs) and Construction Service Operations Vessels (CSOVs) are serving the O&M market to meet its demand for regular maintenance and maintenance support by providing walk-to-work services and the ability to transfer smaller items to and from a turbine.

Heavier maintenance, specifically including balance-of-plant scope such as cable repair and activities involving heavier lifts, are outside the capabilities of these vessels. To meet this demand, GustoMSC has launched its MSOV concept, based on its Enhydra vessel design series.

The MSOV is designed to be quickly mobilized for cable repairs. It offers heavier, motion-compensated lifting capabilities in the wind farm that also allow for secondary steel repairs and ►



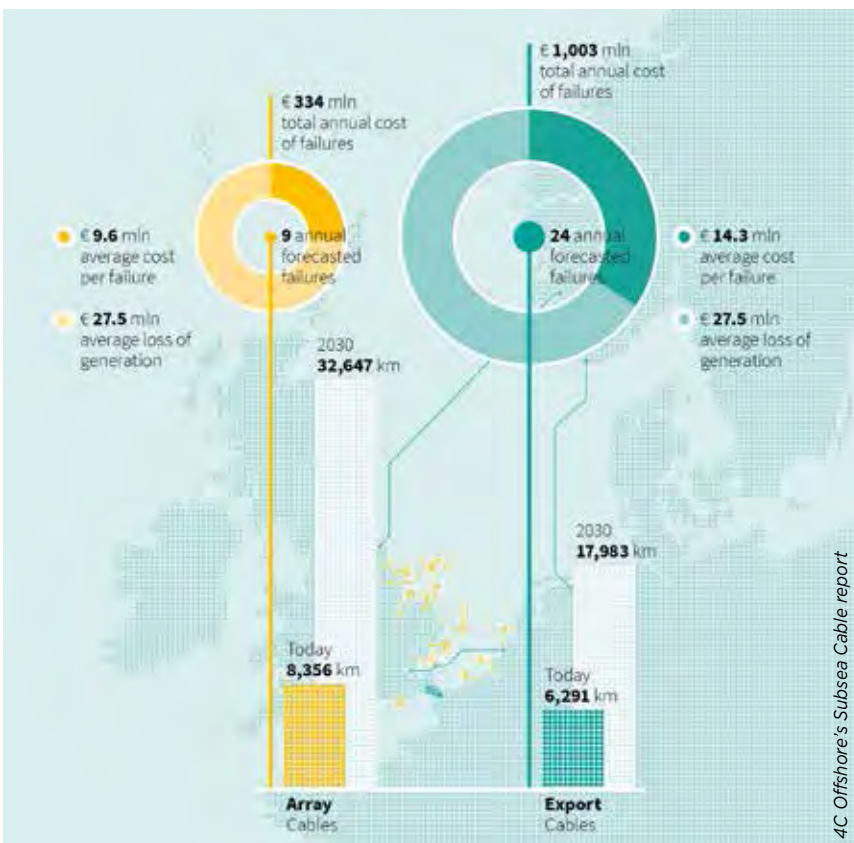
incorporates the capability to perform subsea inspections. This capability is offered while maintaining the typical SOV capabilities such as walk-to-work, high-end accommodation, and incorporated daughter craft, combined with

excellent seakeeping and Dynamic Positioning (DP) capability.

Looking forward, the capabilities of the MSOV design also make it particularly suitable for O&M operations in

offshore wind. With all the challenges associated with offshore O&M operations further amplified for offshore wind, the larger and capable design makes it a perfect fit for all O&M operations, from walk-to-work to executing tow-in tow-out operations, including re-mooring and hooking up to the dynamic cable of the floater when arriving back in the wind farm.

In addition to their core capabilities, these new designs, both jack-up and vessel-based, offer further advantages compared to vessels of opportunity. Lower operating costs resulting from a fit-for-purpose design, but notably also a lower environmental footprint as the latest in battery-hybrid operations and future fuels have been incorporated into the designs. ■



4C Offshore's Subsea Cable report

Contact

GustoMSC

- E** info.gustomsc@nov.com
- I** www.nov.com/gustomsc

The Industry Contribution is a section in which companies share their business endeavors or market analyses. Please contact us at jp@navingo.com for inquiries.

Where you can find us!



[FULL] SMM 2024

Hamburg,
Germany
3 - 6 September



Yacht Show

Monaco
25 - 28 September



Europort Istanbul

Istanbul,
Turkey
23 - 25 October



Workboat Show

New Orleans,
USA
12 - 14 November



METSTRADE 2024 (Members Only)

Amsterdam,
The Netherlands
19 - 31 November



OFFSHORE ENERGY 2024

Amsterdam,
The Netherlands
26 - 27 November



Scan for all
our events.



NETHERLANDS
MARITIME
TECHNOLOGY



The next step in crew transfer vessels

Damen's FCS 3210 represents the evolution of crew transfer vessels with a step change in alternative and zero emissions propulsion capabilities.

At this year's Seawork trade show in Southampton, Damen announced the further development of its Fast Crew Supplier (FCS) 3210. The company has prepared this revolutionary crew transfer vessel (CTV) to sail fully electric, with offshore and vessel-to-vessel recharging capabilities. Plus, to provide operators with the flexibility required to face future uncertainties, Damen has also prepared a methanol propulsion version.

Continual evolution

The development of Damen's FCS range has been a story of continual evolution. It began in 2011 with the introduction of the FCS 2610 – a game changer in the crew transfer market of which almost 50 vessels were sold.

The vessel drew on a combination of Damen's renowned Axe Bow form and a catamaran design. With this, the FCS offered minimal slamming, cutting ef-

fortlessly through the waves, ensuring comfort for those onboard and a significant reduction in fuel consumption.

In 2018, it was time for the next generation and Damen launched the now iconic FCS 2710. The increased length and tunnel height of the vessel provided a boost to seakeeping capabilities – and uptime – even further, with the vessel able to provide access in waves of up to 2 metres.



The next level

Recently, based on feedback from its clients in the crew transfer sector, Damen identified a demand for a larger vessel, particularly in the North Sea. The FCS 3210 was born.

In developing the vessel, Damen has tried to incorporate as much of the FCS 2710 as possible.

"It makes sense," says Damen Product Manager High Speed Craft Wim Boerma. *"The market has sent a clear signal that the FCS 2710 is answering its demands. The idea here is simply to maintain all the advantages of this proven vessel and take them to the next level."*

Adding comfort, cargo & uptime

From the front at least, at first glance not a lot has changed. The Twin Axe form has been preserved, keeping resistance to a minimum and cutting fuel consumption by as much as 20%. The deck layout, too, remains the same, as does the wheelhouse. Look to the aft, however, and the changes start to take shape.

"Increasing the size of the vessel offers a number of advantages," states Wim. *"For one thing, it offers additional comfort."*

The FCS 2710, with its distinctive Twin Axe hull is already renowned for its outstanding seakeeping capabilities.

The FCS 3210 will be even better. Ultimately, by increasing the size of the vessel, we are offering additional uptime. Plus, with the additional square metres, you have extra deck space, which opens up the possibility of transporting additional cargo to offshore locations. And, of course, you can transport more people."

Moving with the times

As demand has grown for increasingly sustainable performance in recent years, Damen's crew transfer vessels have moved with the times. This can be seen with the first order for the FCS 3210 design. With this, Damen is currently constructing three hybrid versions of the vessel for its client Purus.

These vessels feature a hybrid set-up with battery package that enable them to sail for short periods of time on zero emissions - for example when sailing in residential areas or in harbour. They are also being fitted with Damen's in-house developed Marine NOX Reduction System. This selective catalytic reduction (SCR) system treats exhaust gases, removing a high percentage of NOX emissions and enabling compliance with IMO Tier III.

Increased flexibility

While the FCS 3210 Hybrid features the same battery capacity as the FCS 2710 Hybrid, Damen has adapted the layout of the propulsion to give additional flexibility.

"Instead of having diesel direct with the power on the gearbox, we have electrical motors directly on the propellers," Wim explains. *"And, we are working with four generator sets. The vessels will be able to sail on one, two, three or four sets, or a combination of batteries and generator sets, or just batteries."*



SOV 7017 Electric

Future-ready with methanol

What's more, the increased length of the vessels once more offers benefits; the additional volume has enabled Damen to future proof the FCS 3210 Hybrids, preparing them for operations on methanol in the future. Additionally, together with Bureau Veritas, Damen prepared a class approved methanol ready notation.

"As we approach the challenges of increased sustainability and the maritime energy transition, we are doing a lot of work on alternative fuels. We expect there will not be one type of fuel replacing diesel in the future, but a mix. However, for short sea operations such as those undertaken by a crew transfer vessel, we expect methanol to play a dominant role."

"The additional size of the FCS 3210 enables us to provide the fuel preparation space, and the tanks so that, when the moment comes, the vessel can be quickly, and cost-effectively converted to methanol propulsion."

At the present time, Wim explains, methanol engines are not available for the power range required of such a vessel. When they are, the preparation of the FCS 3210 for methanol means that owners will not be required to rebuild or re-engineer their vessels.

"As soon as the technology is there, we are ready," says Wim.

A step ahead

In the meantime, however, Damen has prepared the FCS 3210 to go one step

further. Using an electrically driven quadruple Volvo Penta IPS system, Damen has developed a fully electric version of the FCS 3210 able to provide emissions free crew transfer services.

"Based on this concept, we can remove all of the generator sets and install batteries," Wim states. *"The vessel would be able to sail at speeds of 25 knots for 1 hour on fully electric propulsion. That is comfortable enough for it to transfer personnel to a nearshore wind park."*

The idea is for the vessel to have offshore charging capabilities. With this it would set off from shore with a full charge, sufficient to get it to its destination, where it would recharge during



FCS 2710 Hybrid



FCS 3210 Electric

disembarkation before its return voyage to shore.”

This is not the first time that Damen has unveiled a fully electric offshore vessel, the electric Service Operations Vessel (SOV E) was introduced last year. Like this vessel, the fully electric FCS 3210 can connect to a suitably equipped turbine or substation offshore to recharge. It would require just a small amount of the energy generated by the wind park to provide the vessel with truly zero emissions energy.

Power sharing

The electric CTV can also, uniquely, be charged directly from a Damen CSOV, whether conventionally or electrically powered. This opens up the possibility of investing today in the technologies of the future, with the necessary charging infrastructure already in existence.

Vessel-to-vessel charging offers further advantages. For one thing, the CSOV is lower than a turbine, providing an easier connection to the CTV. Additionally, the CSOV is able to reposition itself, allowing the CTV to charge in the most suitable, sheltered locations.

Return on investment

Wim accepts that, at the present time, the costs involved in installing batter-



FCS 3210 Methanol

ies to such a vessel does result in a rise in CAPEX. However, he says, even factoring in the unknown rise and fall of diesel and energy costs, lower OPEX will result.

“Of course, a fully electric crew transfer vessel does require increased capital expenditure. However, it’s also fair to say that it will generate a return on investment. It’s hard to predict how quickly this will take place, but considering the current prices of electricity and forthcoming costs of carbon taxation, you could expect payback within 10-15 years, comfortably within the vessel’s total lifecycle.”

Ready when you are

So, the future is coming to offshore

crew transfer operations. But how quickly can we expect to see such vessels in the water?

“The technology is already in place,” Wim concludes. The charging system is ready, and we can build the boats. All we need now are orders and the fully electric FCS 3210 can be sailing within the next 2-3 years.” ■

Contact

www.damen.com

The Industry Contribution is a section in which companies share their business endeavors or market analyses. Please contact us at jp@navingo.com for inquiries.



FCS 3210 Series
(hybrid, electric and hybrid methanol prepared)



smm-hamburg.com

the leading international
maritime trade fair



driving the maritime transition


3 - 6 sept 2024
hamburg

buy a ticket
or redeem
your invitation


[smm-hamburg.com/
ticket](http://smm-hamburg.com/ticket)

 Hamburg
Messe + Congress



 smm-hamburg.com/news

 linkedin.com/company/smmfair

 facebook.com/SMMfair

 youtube.com/SMMfair

What is happening



Heerema Seals Transportation and Installation Deal for Polish Offshore Wind Farms

Heerema Marine Contractors has been awarded contracts for the transportation and installation of monopiles and transition pieces, as well as offshore substation jackets and topsides for Bałtyk II and Bałtyk III offshore wind projects in Poland. The contracts were signed with MFW Bałtyk II Sp. z o.o. and MFW Bałtyk III Sp. z o.o., each a joint venture project owned 50 per cent by Equinor and 50 per cent by Polenergia.

Under the contracts, Heerema Marine Contractors will be responsible for the transportation and installation of 100 monopiles and transition pieces, sourced from European fabrication yards and installed in the Baltic Sea. The monopiles will be provided by the Dutch company Sif, which will also collaborate with its consortium partner Smulders to manufacture the transition pieces. For these operations, the company plans to utilise its heavy lift vessel Thialf.

‘World’s Most Powerful Wind Turbine’ Chosen for German Offshore Wind Farm

German clean energy asset manager, Luxcara, has signed a preferred supplier deal with China’s Mingyang Smart Energy for the supply of wind turbines to the Waterkant offshore wind project in the German North Sea. The reservation agreement covers the supply of 16 of the “world’s most powerful offshore wind turbines” with up to 18.5 MW capacity each, for installation in 2028.

The wind turbines have a rotor diameter of 260 metres, which maximises the production from the site, Luxcara said. The units will be manufactured using 100 per cent renewable energy, the company added. According to Luxcara, the Mingyang wind turbines were selected after an international tender, launched in late 2023, and a due diligence exercise, covering the supply chain, ESG compliance with the EU taxonomy, and cyber security supported by DNV and KPMG.

Noordzeker Consortium, Vattenfall-CIP JV Secure Sites in 4 GW Dutch Offshore Wind Tender

Noordzeker, a consortium comprising SSE Renewables, Dutch pension fund ABP and its asset manager AGP, and a joint venture between Vattenfall and Copenhagen Infrastructure Partners (CIP), Zeevonk II, have been awarded development permits for the IJmuiden Ver Alpha and Beta offshore wind sites in the Netherlands.

Under the tender requirements, the developers will pay special attention to circularity and environmentally friendly solutions in building and operating their projects.

The Dutch Ministry of Economic Affairs and Climate Policy and the Netherlands Enterprise Agency (RVO) announced the tender results, emphasising that with a total capacity of at least 4 GW across the two sites, this is the largest offshore wind tender round in the Netherlands to date. The Noordzeker consortium secured the permit for the 2 GW site IJmuiden Ver Alpha and the Zeevonk II joint venture for the 2 GW site IJmuiden Ver Beta.



OFFSHORE CONNECTS IN ROTTERDAM.



Meet the Offshore Community Rotterdam at Offshore Energy 2024!

November 26 - 27 | RAI Amsterdam | Booth 1.528 • 1.529 • 1.629



Offshore Community Rotterdam is powered by:



UK's first offshore hydrogen production trials kick off in South Wales



After six years of development, sustainability consultancy ERM has launched offshore trials to test its Dolphyn Hydrogen process which combines electrolysis, desalination, and hydrogen production on a floating

wind platform, marking the first time hydrogen has been produced from seawater in a marine environment in the UK. The trials conducted in Pembroke Port, South Wales, through July 2024 are said to represent an impor-

tant step forward in enabling the UK to produce low-carbon hydrogen safely, reliably, and at scale.

In ERM's Dolphyn Hydrogen process, hydrogen is transported to shore via a pipeline and it can be used directly for power generation, transport, industrial purposes, and heating. The development of the Dolphyn Hydrogen process has been supported by the UK Government's Department for Energy Security and Net Zero, through the Low Carbon Hydrogen Supply 2 Competition in the £1 billion (\$1.2 billion) Net Zero Innovation Portfolio (NZIP). It has been awarded funding of over £8 million (\$10.13 million) to date and has also been championed by devolved Governments in Wales and Scotland.

Danish wave energy device nears commercialization

Danish company Crestwing has secured funding from the Den Danske Maritime Fond to support the technical development of Tordenskiold, its wave energy device prototype. With this funding, and support from the Danish government's EUDP (Det Energiteknologiske Udviklings- og Demonstrationsprogram), the device is nearing commercialization.

The prototype device is 30 meters long, 7,5 meters wide, and weighs 65 tons. The device falls under the attenuator type of floating wave energy devices that operate parallel to the wave direction, with a hull designed as that of a ship. These devices capture energy from the relative motion of their two arms as the wave passes them, and according to Crestwing,



the company plans to sell its commercial-scale device to energy production companies at home and abroad.

€2.4M seed funding to boost Equinox Ocean Turbines

Dutch company developing innovative ocean energy technology, Equinox

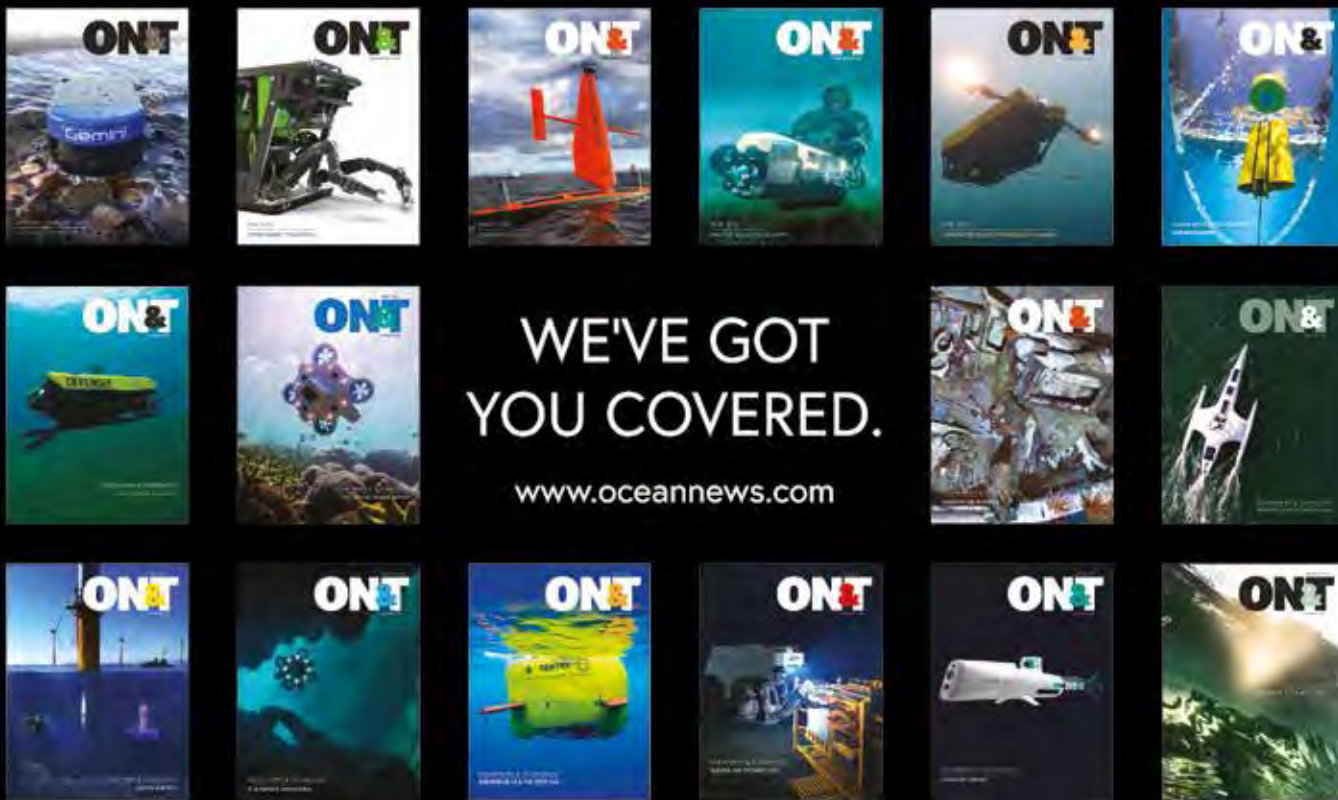
Ocean Turbines, has closed its seed funding round, raising €2.4 million.

Equinox has secured funding from EIT InnoEnergy, Damen Maritime Ventures, NOM, FOM, Init Power, and two private investors.



Equinox's technology harnesses ocean currents to provide a consistent and reliable power source, said the company, as the design is based on proven elements, techniques, and methods. Equinox also plans to expand its technology development efforts to improve the efficiency of its ocean energy converters.

GOT OCEAN NEWS?



WE'VE GOT YOU COVERED.

www.oceannews.com



News Industry Data Events Subscribe Advertise

Beyond News

Industry updates and market data focused on the Offshore Energy Industry.

OIL & GAS



MARITIME



RENEWABLES



FINANCE



COMPANY UPDATES



BUSINESS WIRE





Sweden prepares to ban use of scrubbers

The Swedish government has decided to go ahead with introducing a scrubber ban within the country's waters. A proposal has been submitted to prohibit discharges from open-loop scrubbers into water within Swedish maritime territory from July 1, 2025. Discharges from all scrubbers into water will be prohibited in Sweden from January 1, 2029, the Government of Sweden said in a statement.

"Reducing emissions into the air by moving pollution to the sea is not a sustainable solution. Therefore, a proposal is now being submitted to ban the scrubbers' discharge into the water. Most Swedish shipowners have already chosen to run on fuel with such a low sulfur content that they stay within the emission requirements without scrubbing. Now we want it to apply to all ships within Swedish maritime territory," Andreas Carlson, Infrastructure and Housing Minister, commented.

Within the EU, there is no uniform legislation that prohibits discharges from scrubbers but many countries and ports have already prohibited scrubber discharges into certain parts of national waters.

Port of Singapore sees spike in green fuels

The Port of Singapore, the world's busiest transshipment hub and largest bunkering port, reported a growing demand for greener fuels in 2023 as it continues streamlining efforts towards a multi-fuel future.

Bunker sales in Singapore reached a record 51.8 million tonnes in 2023, surpassing the previous high, with alternative fuels accounting for 1.2% of the sales, according to MPA.

As a major hub connecting Asia with the Americas, Middle East, Europe and Africa, Singapore witnessed a remarkable year despite significant geopolitical challenges disturbing global maritime trade. Vessel arrival tonnage crossed the three billion gross tonnage (GT) mark for the first time, reaching a record of 3.09 billion GT in 2023.

Damen embarks on a pilot project for circular ship recycling

Damen Shipyards Group is launching a pilot project in which a small tug will be dismantled at Damen Shiprepair Rotterdam's Botlek site in a circular way and entirely in line with EU regulations.

The project will serve as a trial, after which this approach of green ship dismantling and recycling will be made available commercially, and also for larger vessels.

"This pilot project fits in perfectly with our ambitions to become the most sustainable shipbuilder in the world," explained Arnout Damen, the CEO of Damen Shipyards Group.

"The question is not just how we design, build, maintain and refit our ships, but also, and precisely, how we dismantle them at the end of their lifespan and, most importantly: recycling."

After the completion of the pilot project, there will be complete transparency about the amount of dismantled materials and how they have been reused, recycled, or disposed of. An approach has already been drafted with respect to the commercialization and financing of circular ship dismantling projects in the future. Damen Financial Services is working in this area with Off-shore Ship Recycling Rotterdam.



CAPTURING THE ESSENCE



foto & video producties

van der **Kloet** [®]



FULL OFFSHORE CERTIFIED

The Netherlands | phone +31 (0)6 53290596 | +31 (0)6 13158876
www.kloet-foto.nl | info@kloet-foto.nl



Shell opens first self-developed dual-use megawatt charger in Amsterdam

Anglo-Dutch energy major Shell has inaugurated its first self-developed megawatt charger for dual use by both shipping vessels and electric trucks at the Energy Transition Campus Amsterdam (ETCA) in the Netherlands.

Integrated into ETCA's power and hydrogen value chain, the Shell Megawatt Charger provides a crucial additional charging facility for local operators, and facilitates end-to-end testing for high-power charging solutions across marine and road transport sectors. Integrated into a smart grid, it's also proves that innovative electrification solutions can be used to solve complex urban transport needs in grid-congested areas.

The capacity of the megawatt charger corresponds to about three 350 kW. The Megawatt Charging System (MCS) is equipped with two separate charging arms. One rotatable



arm is dedicated to electric vessels, the other arm serves heavy-duty electric trucks and buses.

Australian wave energy prototype gears up for deployment



The Moored MultiModal Multibody (M4) wave energy prototype project by the University of Western Australia (UWA), SMC Marine, and Everett Consulting, funded by local and

national entities, will be deployed for the 2024-2025 summer period in King George Sound, Western Australia.

The project aims to convert wave energy into electricity to provide a constant electrical supply to a coastal microgrid for local customers, said Weld Australia, who visited the M4 prototype in early June 2024.

Over six months, the device will generate electricity from the hinging motion. Data collected will model wave energy's potential for continuous baseload energy and assess the device's performance and survivability in various sea conditions, said Weld Australia. This data will be publicly available in real time to evaluate the feasibility of a full-scale device powering a local microgrid.

Stena Line: Keel laid for first methanol-ready NewMax hybrid ferry

Swedish ferry company Stena Line has held a keel-laying ceremony for its first methanol-ready NewMax hybrid ferry Stena Futura. As disclosed, the event took place at China Merchants Jinling Shipyard in WeiHai, China, on June 28, 2024.

Besides being able to run on methanol, a priority during the construction of the vessels will be to provide built-in technologies that can take advantage of both battery propulsion and shore power, where this is available, according to Stena Line.

"We are dedicated to taking responsibility and to be part of the solution to climate change. Investing in new ships, prepared to run on alternative fuels as well as electricity, is an important part of our strategy of moving towards new sustainable fuels and setting new industry standards," said Niclas Mårtensson, CEO Stena Line.

To remind, Stena Line ordered two new hybrid freight ferries for the Belfast-Heysham route on the Irish Sea. The steel-cutting ceremony for the first ferry was held in January this year. The ship is due to enter service in autumn 2025.



MARITIME
OFFSHORE
ENERGY

NAVINGO
CAREER

Looking for personnel in the maritime, offshore and energy sector?

Post your job vacancies on [NavingoCareer.com](https://www.navingocareer.com) and benefit from:

- ✓ Exposure to 14,000 unique monthly users
- ✓ An average of 5 applications per vacancy
- ✓ Direct access to a highly relevant and specialized audience

Start attracting the best candidates today!

 [NavingoCareer.com](https://www.navingocareer.com)

Van Oord Seals Nordseecluster Foundations Deal

RWE has awarded a contract to Van Oord for the transportation and installation of the monopile foundations for the Nordseecluster offshore wind project in Germany.

Van Oord's scope of work includes the installation of 104 extended monopiles as well as the installation of scour protection. In 2025, there are plans to install 44 monopiles, with the remaining 60 units slated for installation in 2027.

RWE selected China-based Dajin offshore as the preferred foundations supplier for the offshore wind project.

The Nordseecluster is being implemented in two phases, the 660 MW Nordseecluster A and the 900 MW Nordseecluster B, each comprising two offshore wind farms.

The 1.6 GW wind farm cluster is expected to generate enough renewable energy to supply the equivalent of 1.6 million German households.

The Nordseecluster project award is a major milestone for Van Oord because it will be the first project for the brand-new offshore installation vessel Boreas, which is currently under construction, said the company.



Prosafe flotel finds new job with North Sea oil & gas operator

Oslo Stock Exchange-listed semi-submersible accommodation vessel owner and operator Prosafe has secured a letter of award (LoA) with North Sea-focused Ithaca Energy for one of its flotels, which is laid up at Scapa Flow in the UK.

While the final contract award is subject to meeting certain site specific technical criteria, the firm duration of the assignment for the Safe Caledonia vessel, which is slated to start in June 2025, is six months with up to three months of options. This deal will enable the floatel to provide gangway connected accommodation support at the Ithaca-operated Captain field in the North Sea, however, the vessel will undergo its five-yearly special periodic survey and other maintenance works before the start of the contract.

Terntank adds fifth tanker to wind and methanol-ready fleet



Family-owned shipping company Terntank has decided to exercise the option to order the fifth next-generation oil and chemical tanker with wind-assisted propulsion and dual-fuel engine capable of operating on MGO, biofuels, and methanol.

In March 2024, Terntank revealed plans to expand its fleet with an order for 15,000 dwt vessel building on previous orders of three such dual-fuel tankers. On July 5, the company announced it had exercised the option and ordered the additional vessel at China Merchants Jinling Shipyard (Yangzhou).

At the same time, this will be Terntank's eleventh vessel from the Chinese shipyard. Designed by Kongsberg, these ships are part of the company's "Setting Sail For The Future" series.

The ships feature four retractable sails and Terntank's Hybrid Solution, which includes electric power systems, battery packs, and shore power connections. The first ship in this series is under construction and will be delivered in March 2025, with the fifth expected in July 2027.

OFFSHORE FOUNDATION DRILLING (OFD®)



INSTALLING OFFSHORE PILES

Herrenknecht's Offshore Foundation Drilling (OFD®) is an innovative and project-proven technology for the mechanized installation of offshore foundations in all kinds of seabed conditions, including medium and hard rock formations. With OFD, sealife-critical noise emissions are considerably reduced. The drilled installation approach opens up new terrain for offshore wind foundations, e.g. monopiles, jacket and floating structures, bridge foundations and harbor infrastructure.

› www.herrenknecht.com/en/ofd



© DEME

**PIONEERING
UNDERGROUND
TOGETHER**

HERRENKNECHT



Tunnelling Systems

OFD Soft ground Heterogeneous ground Rock



OFD in operation

The number of offshore installations for expanding the use of renewable energy and the construction of coastal infrastructure has grown rapidly in recent years. As a result, demand for economical and environmentally friendly installation technologies for offshore foundations has increased. These

are needed for wind turbines, substations, tidal power plants and bridges as well as for harbor infrastructure such as quay walls, breakwaters and jetties.

The Herrenknecht OFD technology uses a full-face drilling concept and a down drive behind the cutterhead to overcome the limits of conventional methods. This applies in particular to difficult ground conditions unsuitable for pile driving and where established pile driving methods would cause critical noise emissions. As seawater is used to transport the excavated soil to the surface through a slurry circuit, a separation plant on the surface is not required.

The drilling process

In a first step, the foundation pile or casing is installed vertically at the drilling location. A pile gripping unit or a lowering system holds the foundation pile or casing in place to safely control the subsequent drilling process. The drilling process begins after the OFD machine has been lowered into the foundation pile or casing. There it is fixed at drilling level with the help of a locking system to keep the drilling machine in its vertical position.

In the next step, the overcutters of the cutting wheel are extended underneath the foundation pile or casing for underreaming. The drilling process begins with the activation of the slurry circuit needed to transport the excavated/loosened soil to the surface. At the same time, the cutting wheel starts to rotate. All supply lines as well as data cables and the discharge line are permanently connected to the machine.

Depending on the installation method, the vertical advance force is provided e.g. by a lowering system or by using the force of gravity. The lowering of the foundation pile or the casing occurs simultaneously with the advance of the Herrenknecht OFD machine.



Ammonia fuel system design cleared for Eidesvik's offshore vessel

Ammonia fuel system design developed by a consortium co-ordinated by the Norwegian cluster organization NCE Maritime CleanTech as part of a project aiming to install an ammonia-powered fuel cell on an offshore vessel has received preliminary approval.

The approval, which marks a major milestone for the ShipFC H2020 Project, was granted by the Norwegian Maritime Authority, the project developers said in a social media post on July 4.

The ShipFC project set out to retrofit an offshore vessel Viking Energy, which is owned and operated by Norwegian company Eidesvik and on contract to energy major Equinor, with a large 2 MW ammonia fuel cell, allowing it to sail on the clean fuel for up to 3,000 hours annually.

Described as the world's first LNG-fueled cargo vessel, the 2003-built PSV is equipped with four Wärtsilä dual-fuel engines, enabling it to run on LNG and marine diesel oil. The vessel is 94.9 meters long and 20.4 meters wide, with an LNG tank capacity of 220 cubic meters. Just recently, Equinor executed a five-year contract extension with Eidesvik for this platform supply vessel (PSV).

According to the project consortium, this is the first time an ammonia-powered fuel-cell will be installed on a vessel. In 2020, the project won €10 million in backing from the EU's Research and Innovation program Horizon 2020 under its Fuel Cells and Hydrogen Joint Undertaking (FCH JU).



Photo Aker-BP

Allseas has performed another removal task in the North Sea with its giant offshore construction vessel *Pioneering Spirit* for Aker BP, a Norwegian oil and gas player, with the disposal of a steel jacket belonging to the former riser platform 2/4-G on the Ekofisk field.



Colophon

Sales

Ruud Aantjes | ra@navingo.com
 Mariska Jongbloed | mjl@navingo.com
 Cas Teensma | ct@navingo.com
 Lev Bondarevski | lb@navingo.com

Editorial

Adrijana Buljan | abu@navingo.com
 Ajša Habibić | ajha@navingo.com
 Dragana Nikše | drn@navingo.com
 Nadja Skopljak | nsk@navingo.com
 Naida Hakirevic Prevljak | nh@navingo.com
 Melisa Cavcic | mca@navingo.com
 Zerina Maksumic | mak@navingo.com
 Jaap Proost | jp@navingo.com
 Coco Kossmann | ck@navingo.com

Marketing

Marleen Varekamp | mv@navingo.com

Printing

Vanderperk Groep
 www.vanderperk.nl



Cover Photo

Mammoet completes the heavy lift project for GustoMSC by lifting the heaviest component yet.

© 2024 Navingo BV. The entire contents of this publication are protected by copyright. No part of this publication may be reproduced, stored or transmitted in any form or by any means without the permission of the copyright owner. While every care has been taken in the preparation of this publication, neither the publisher nor the editor are responsible for the views and opinions expressed in this publication or for any inaccuracies in the articles. About: Offshore Energy Magazine is a publication by Navingo BV, a maritime multi media company based in the Netherlands.



Jan van Galenstraat 56
 3115 JG Schiedam
 The Netherlands

Tel: +31 (0)10 2092 600
 Email: info@navingo.com
 www.navingo.com

Email: sales@offshore-energy.biz
 www.offshore-energy.biz

Advertisers' index

AYOP (Amsterdam IJmuiden Offshore Ports)	page	37
Cimolai Technology SPA	page	21
Damen Shipyard Group	cover	2
GustoMSC	cover	3
Herrenknecht	page	62
KIVI	page	11
Kooiman Marine Group	cover	4
Lemans Nederland	page	4
Marine Steel	page	25
Navingo Career	page	60
Netherland Maritime Technology	page	47
Oceannews.com	page	56
Offshore Energy Exhibition & Conference	page	43
Offshore Source	page	56
PES Wind	page	21
PTR Holland Group	page	25
Reikon	page	4
Royal Van der Wees	page	2
RPPC / Port of Rotterdam	page	54
SMM Hamburg	page	52
Van der Kloet Foto & Videoproducties	page	58
Volvo Penta	page	2
WindEnergy Hamburg	page	31

Next edition

OUT NOVEMBER 2024

- Offshore Energy
- Collaboration
- Alliances/Consortiums



Innovative jack-up and vessel solutions for offshore wind O&M

Keeping Your Offshore Wind Farm Operational

Operations and Maintenance in the offshore wind market need robust strategies to keep turbines and infrastructure operational. Inspections, preventative maintenance, repairs, and upgrades ensure optimal performance and longevity. Effective O&M minimizes downtime, maximizes energy output, and reduces costs. Our solutions make this possible.

NG-series

Compact and dedicated self-propelled jack-up designs based on GustoMSC's successful NG-series. Combined with our telescopic boom cranes, they handle major component replacement and blade exchange.

Enhydra MSOV series

Highly capable vessel designs for W2W, cable repair and heavy maintenance, serving both bottom-fixed and floating offshore wind needs.

**We will be present at WindEnergy Hamburg
24 – 27 September 2024 | NOV stand no. B7-521**

nov.com/gustomsc

GustoMSC | NOV

SUSTAINABLE INNOVATIONS

ENGINEERING AND CONSTRUCTION OF
TRAILING SUCTION HOPPER DREDGERS

