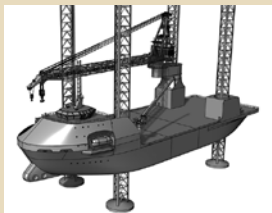


26 June 2020



Join wind port party, New Jersey tells supply chain

New Jersey has called for the offshore wind supply chain to be part of its new plan for a major marshalling and manufacturing port. **p2**



Hometown push for SuperFeeder jack-up

US vessel company 2nd Wind Marine and compatriot naval architect MINO Marine have taken the wraps off a so-called SuperFeeder jack-up to serve the east coast offshore wind industry. **p3**

Vessels a tall order in US offshore wind sector

Experts from shipbroker Clarksons Platou examine a key problem facing the industry given the likely high demand for Jones Act-compliant vessels. **p5**

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Dominion demo drives ambitions

Dominion Energy is looking at doubling offshore wind ambitions in Virginia and believes imminent completion of a two-turbine demonstrator will give it the know-how to build at scale.

The electricity utility told IPF Livestream it is exploring a 2.6GW third phase on top of an already-planned 2.6GW build in federal waters close to the current 12MW project.

Director of generation projects GT Hollet said the new array could be delivered by 2034 on the back of state legislation supporting the build-out of 5.2GW. The company would need to secure more lease area, said VP of generation construction Mark Mitchell.

However, Dominion reckons it now has the experience to deliver the project after permitting and delivering the Coastal Virginia demo.

Installation of the second Siemens Gamesa 6MW turbine at the pilot project, the first in US federal waters, will be completed shortly.

Development work on the first 2.6GW complex is meanwhile hitting top gear.



ONE UP: Jan De Nul jack-up Vole au Vent installed the first Siemens Gamesa 6MW turbine at Coastal Virginia last week. First power is expected late summer or early fall.

Photo: Dominion Energy

Five vessels are currently on-site and sixth will go out in the next week or so to help carry out surveys and geotechnical analysis, said Mitchell.

A construction and operations plan will be submitted to the Bureau of Ocean Energy Management later this year. The company is expecting a consent decision in early 2023.

"From our experience on the pilot project, we will be working with BOEM collaboratively to fairly quickly get in design and installation reports asking for their approval," added Hollet.

The aim would then be

to start installation in May 2024, deliver first power the following year and complete the project in 2026, he added.

Mitchell also addressed wider industry challenges during the IPF20 session, including the need for a more predictable permitting process and lack of a US-flagged installation vessel.

However, Dominion is planning to build a vessel that could be used on its large Virginia projects. "We think that is an important piece of the puzzle to help offshore wind grow in the US and we are intent on making that happen."

TRENDING ON reNEWS.BIZ

US offshore leaseholders welcome Vineyard study

New England offshore leaseholders Equinor, Mayflower Wind, Orsted/Eversource and Vineyard have hailed BOEM's supplemental environmental impact statement for the Vineyard Wind project as a "significant milestone" for the sector.

[Click here](#)

US offshore industry talks up supply chain prospects

A domestic supply chain for tier-one components will emerge to deliver hardware to east coast offshore wind farms in the near to medium term, according to RWE Renewables COO of EU and new markets Sven Utermohlen.

[Click here](#)

Haliade-X gains provisional type certificate from DNV GL

GE Renewable Energy has secured a provisional type certification from DNV GL for the Haliade-X 12MW prototype turbine. CEO John Lavelle said the milestone confirms the "robustness" of the design.

[Click here](#)

New Jersey plots major offshore wind port

NJ Governor Phil Murphy has unveiled plans to create a new marshalling and manufacturing port in the Garden State.

[Click here](#)

Join wind port party, New Jersey tells supply chain

New Jersey has called for the offshore wind supply chain to be part of its new plan for a major marshalling and manufacturing port.

The state's Economic Development Authority senior VP of economic transformation Brian Sabina told IPF Livestream the agency is ready to discuss options with would-be tenants for the Lower Alloways Creek site in Salem County.

Governor Phil Murphy unveiled plans to create the \$300m to \$400m New Jersey Wind Port last week.

Sabina told delegates the state has already been working with turbine manufacturers and developers for 18 to 24 months.

"There will be more engagement to make sure that folks are interested in

locating at the site and that they reach out to us," he said.

"It also means that we are committed to working as a partner with our local authorities, with our state authorities and federal authorities to make sure we are delivering this project in the best way we possibly can."

He added: "We have a team of folks working on this project who would love to have a conversation with you."

Sabina said work on the project, which could create up to 1500 jobs, is expected to start next year.

The first phase is due to be completed by 2023 and will feature a 29.6-acre plot for marshalling and 25 acres for manufacturing.

A second stage will kick off in 2024 and add 160 acres of space including new berths, additional marshalling and



FUTURE VISION: how the New Jersey Wind Port could look via webcam when in operation and (right) Brian Sabina

Screengrabs: reNEWS



manufacturing space by 2026. "This is going to be a great economic stimulus coming out of Covid for Lower Alloways Creek and Salem

County and south Jersey," said Sabina.

Companies can reach out to the authority to register an interest [here](#).

Autonomous wind vessels on steep road

Autonomous ships face several hurdles before becoming common in the offshore wind sector, IPF Livestream delegates were told.

Royal IHC offshore wind market director Stefan Lettink highlighted the technological challenge of bringing hardware and software together.

Regulatory issues are also a factor, he said, adding autonomous systems sometimes conflict with conventions of the International Maritime Organization, the UN agency responsible for safety and security of shipping.

"I think it will take some time for IMO to ultimately develop regulations that make clear how to develop these systems," Lettink said.

The other main issue will be cyber-security.

"The more data used for decision-making and more connections being made online, the more vulnerable the systems will become for hackers."

Lettink added that autonomous systems will help crews make more informed decisions and improve efficiency.

"Given the size of offshore wind farms, over 500 square kilometres, (and) the increased parameters and data that have an impact on operations, it will be more difficult for human brains to make the right decisions to get the highest yield," he said.

Competing demands between SOV specifications and costs

The US could boast between six and eight Jones Act-compliant offshore wind service operation vessels in the next five or six years, according to Vard Marine US

vice president Darren Truelock (left).

The total could rise to between 10 and 12 over the next 10 to 15 years given potential project development plans, he told IPF Livestream. There are currently no such US-flagged

vessels. Truelock, however, warned one issue slowing vessel development is that each SOV is usually a one-off, specifically tailored to operator specifications.

"There's not a coalition or collaboration on the requirements," he said.

If charterers, owners and shipyards were to unify around one or two designs that could be serially produced, this would bring down the costs of building vessels, Truelock noted.

Also, given it can take up

to four years for a ship to move from design through to operation, it is important the vessel is not outdated as soon as it hits the water.

Price is likely to be an issue in the US, which has higher labor costs than other parts of the world, he added. Shipyard capacity is another potential bottleneck as a government program for 355 Navy ships has filled order books.

MHI Vestas marine operations and vessel manager Graham Tyson said SOVs have to be optimised

in every way as a charterer must live with the results for 15 years.

The turbine manufacturer has a number of design considerations when choosing an SOV and also an eye on future trends, he added.

The unit has to be exactly the right size for the project in question and usually needs to be a newbuild to optimise technician workflow.

The company also has a focus on energy efficiency, both in terms of fuel costs and emissions.



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Hometown push for SuperFeeder jack-up

US vessel company 2nd Wind Marine and compatriot naval architect MiNO Marine have taken the wraps off a so-called SuperFeeder jack-up (right) to serve the east coast offshore wind industry, writes *Eleanore Robinson*.

The partners are currently in negotiations with three US shipyards to build two 124.5-metre long, 40-metre wide Jones Act-compliant vessels that will be able transport a complete set of next-generation turbine components from a domestic port to a project site.

2nd Wind Marine business and technology developer Joseph Orgeron told reNEWS the plan is to "work as diligently as humanly possible" to complete detailed design work and secure approval from US regulators before the fall for the ships, which will cost \$200m apiece.

Investment is not yet

in place but Orgeron is confident the funding will be found. He said: "There is an enthusiastic market to finance these vessels but they need to be assured that they have work."

There has been interest from some of the primary developers with around 30 different projects on the east coast, he added.

Orgeron added: "We are currently trying to get the work commitments... something like three solid projects or three consecutive years is what we feel is going to be needed at the minimum to release the means necessary to make this whole project move forward."

If successful, both jack-ups could enter construction before spring 2021.

The SuperFeeders have been designed to deliver turbines to a non-US jack-up in the field and will have the

capacity to jack up with a 4000-tonne cargo.

It is claimed the feeders will be able to deliver turbines in rougher weather than floaters and will be capable of carrying more food and fuel, meaning supply boats will not be needed and the scope of the European installation

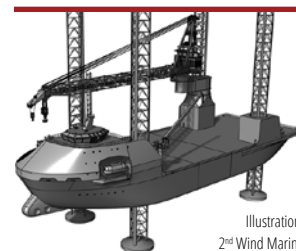


Illustration: 2nd Wind Marine

vessel will be reduced, all leading to savings. A Liebherr-designed crane capable of lifting turbine nacelles, towers and blades will be fitted. An extended boom variant will also allow for blade exchange at projects.

LEEDco make-or-break appeal

Lake Erie Energy Development Corporation (LEEDCo) has appealed a decision by state authorities to impose dusk-to-dawn restrictions on turbine operations at the 21MW Icebreaker wind farm on Lake Erie.

President Dave Karpinski said there is no guarantee the bid to overturn last month's ruling by the Ohio Power Siting Board will be successful.

"I would say we have a really strong argument but we thought we had a strong legal case going in," he told

reNEWS. Karpinski described the limitations as a "project killer", saying it would reduce revenue by a third.

The wind farm could not enter operations in the hope the restrictions would be lifted at "sometime in the future", he added.

He also said bird data is already available, despite the board ruling it does not know enough about the risk to migrating species. If the appeal is unsuccessful, LEEDCo will have 60 days to take its case to the Ohio Supreme Court.

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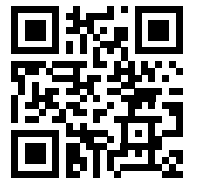
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Vessels a tall order in US offshore

The US offshore wind industry is facing a key problem given the likely high demand for Jones Act-compliant vessels.

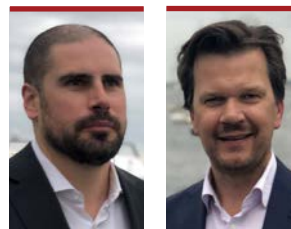
Based on state capacity commitments, all types of installation and support units will be needed from 2023 but the industry is nowhere near equipped on the supply side to cater for this.

To build the current pipeline of wind farms due online by 2030, domestic turbine installation vessels are required. Currently there is no way to install a turbine without a jack-up but, despite the US having pioneered the liftboat, today there is no such vessel in the US capable of working at the required heights.

The industry also needs 30 to 50 crew transfer vessels where currently there is one with a further five on order. Up to eight service operations vessels could be required but right now there are none.

There are plenty of

Industry has long way to go to assemble the fleet America needs, write **Michael Braid** (left) and **Frederik Colban-Andersen** of shipbroker **Clarksons Platou**



while others are looking at feeder solutions.

CTVs are low cost so some should be built on a speculative basis while SOVs, which are more expensive and built to specification, could come after projects hit key financing milestones.

In the support sector, owners of oil and gas units should be investing in the modifications we know are needed, such as high-spec single cabins, gangways and 3-D motion-compensated topside cranes.

However, progress must happen at pace as right now we are fast approaching an under-supplied sector to cater for the projects currently on the launch pad.

We have seen recently a large number of the oil and gas supermajors begin their journeys to diversify and decarbonise towards a greener balance sheet. It is time for US vessel companies to follow their lead in offshore wind. ■

construction support vessels in the oil and gas sector but they will need significant modifications before moving into offshore wind.

The hunt is most certainly on for transport, support and installation solutions. However, it will not be plain sailing.

Over the past 10 years the US oil and gas vessel industry has grown accustomed to being part of an oversupplied, underutilised sector with prolonged periods of depression and little newbuilding. This should remain a headache for fossil fuel players but there will also be knock-on effects on the emerging offshore wind sector.

Among the challenges

in wind is the fast pace of technology development that can make designing vessels difficult due to fears they can be obsolete before mortgages are paid off. Meanwhile, numerous permitting and regulatory delays are adding weight of risk to owners and investors.

In addition, many US vessel owners have been, or currently are, bankrupt or in negative equity and renegotiating terms with their lenders.

The traditional private and industrial investors have all made huge losses in the marine sector and reinvesting in the same owners for a different sector will not be easy. Equally, new and

emerging owners do not have the experience of vessel operations in the US.

All of this means that underwriters financing any newbuilds are requesting that long-term contracts are in place for vessel deployment. There is no shortage of funders but they are keen to de-risk their investments.

Offshore wind developers are more familiar with short-term charters and even if they went the long-term route they could only sign deals once projects reach financial close, leaving insufficient build time to get vessels on the water.

There is some hope for the US market. Dominion Energy and a group of backers are pursuing a Jones Act jack-up

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