Massachusetts go for offshore in US

The result of Massachusetts’ maiden call for up to 800MW of offshore wind will be a pivotal moment for the nascent US industry, said sector experts. Officials are due to confirm the result by 23 April but it could be announced sooner.

Liz Burdock, executive director of IPF 2018 host the Business Network for Offshore Wind, said this month’s auction result is of “critical significance”.

“After the Massachusetts announcement, there will be no looking back or slowing down, only rapid growth forward with developers and supply chain companies making more investments, local residents being trained and underutilized ports bustling with new activity,” she said ahead of this week’s event in New Jersey.

“Offshore wind will no longer be considered expensive and a European industry. Instead it will be fully embraced by the US as an economic engine and an accepted element of the US new energy mix.”

The Massachusetts deal will be another part of the US offshore wind “storyline” but is also a significant milestone for the supply chain, according to Jason Folsom, Siemens Gamesa Americas offshore wind commercial chief. “I think when that project goes off you will see another layer of optimism and subsequent commitments from the supply chain based on that,” he said.

The tender is the first step in the state’s plan to solicit 1.6GW of offshore wind by 2027 with a second round due in 2019.

Danish developer Orsted and local utility Eversource have bid 400MW and 800MW projects into the process from their Bay State Wind site. Iberdrola-owned Avangrid and COP are behind two bids of the same sizes from their 3GW Vineyard Wind project.

Deepwater Wind is chasing 200MW and 400MW chunks from its up to 400MW Revolution project. Proposed commissioning dates are between 2021 and 2023 with the earliest construction start lined up for 2019 at the Vineyard zone.
Steep learning curve ahead for hometown supply chain

European heavyweights are likely to secure the bulk of the big supply chain contracts from the first batch of US offshore wind farms as domestic players need time to get up to speed, IPF 2018 will hear.

Recent analysis of existing fabrication and waterfront facilities in the east and north-east have been a “bit of an eye-opener” for hopes of a ready-made US industry, according to Ramboll environment and health senior managing consultant Jay Borkland.

“The assumption was that similar to Europe there would be old facilities that could be converted without too much reworking and there would be public money available to assist with that process,” he said ahead of IPF.

“What offshore wind is finding is very little if any public money, and that facilities on the waterfront that are available... are not in any shape or form ready for components and shipping that offshore wind needs.”

Many US companies are also “hesitant” about making big investments to enter the sector as project timelines remain uncertain, he added.

However, European big guns seeking long-term success in the US are already looking to team up with local companies to offer a “hybrid” approach to project developers that will spark a standalone US supply chain in the long term.

Borkland said foundations could be built in Europe before being floated to the US where local companies could carry out final fit-out. “That creates local supply chain demand and local content in terms of labor,” he said.

US hopefuls will face a tough induction but can “learn by others’ mistakes”, he added. “I fully expect that there are going to be some folks that stub their toes. We are making sausage here and it is going to be messy.”

Jay Borkland is chairing two sessions during IPF 2018. The Logistics and Port Infrastructure panel is on Wednesday at 1pm and Industry Perspectives on a Co-ordinated Offshore Wind Pipeline and Supply Chain is on Thursday at 11.15am.

Domestic and overseas fabricators are running the rule over several sites in the US north-east with a view to setting up manufacturing bases for the offshore wind sector.

Michigan-based company Ventower and Gulf Island Fabrication of Louisiana are both mulling options for new facilities closer to the offshore wind action, according to sources.

“Much of the domestic steel (industry) is not close enough to where the projects are so there is interest in new facilities,” said a source.

Several major European fabrication outfits are also examining new sites as well as tie-ups with local companies, said sources.

Commitments to further leasing rounds and off-take agreements are likely to unlock significant supply chain investment, they added.
Windcarrier and Falcon in US two-one deal

Norwegian company Fred Olsen Windcarrier and US specialist contractor Falcon Global are joining forces to provide vessels and crews for the offshore wind sector in America.

The co-operation agreement is focused on a combination of installation jack-ups and feeder vessels and builds on a relationship formed during construction of Deepwater's 30MW Block Island demo off Rhode Island.

Windcarrier has two turbine installation vessels while Seacor Marine Holdings business Falcon has one of the largest existing US flagged and Jones Act compliant liftboats in the US.

“The combination will create a marine spread capable of installing the largest turbines in the market,” said the partners. Falcon can supply a feeder solution of up to four vessels depending on installation parameters.

Seacor chief executive John Gellert said: “This agreement is not only the first significant announcement for our investment in Falcon Global but also a major milestone for Seacor as we continue to implement our strategy of diversifying our customer base outside of oil and gas markets, and expanding in wind farm services where we already have a substantial presence with Windcat Workboats.”

Fred Olsen vice president Ketil Arvesen said: “This unique combination of available assets and experience will enable installation of multi-megawatt offshore turbines in the US, bringing business case certainty to the developers.”

Orsted, Eversource pitch Connecticut project

Danish developer Orsted and New England utility Eversource have bid a 200MW wind farm into Connecticut's inaugural offshore wind auction.

The Constitution wind farm is located 100km off New London in federal waters and is located 100km off New Bedford, Fall River and Somerset.

Orsted will develop and construct offshore elements while Eversource will tackle the onshore transmission system. The partners said they will commit $4m to a state program for low income families and invest $600,000 in scholarships.

Bidding in the maiden offshore wind round for the state closed 2 April. Winners will be named in June.

Developers wary of what lies beneath

Offshore wind developers in the US are exploring different methods and foundation technologies to deal with challenging seabed conditions in the northwest.

The presence of glacial till, a sand and gravel mixture which can mask boulders hidden beneath the surface, is among the complications.

PanGeo Subsea deployed acoustic survey technology to help Deepwater Wind avoid subsea obstacles during construction of the 30MW Block Island project.

PanGeo president Moya Cahill said the problems were identified in planned pin pile locations for the four-legged jackets. “Deepwater Wind was able to shift the piles to eliminate any boulder risk,” said Cahill.

Developers are mulling various methods for monopile installation and suction bucket foundations are also under consideration to cope with seabed conditions.
Strong cable defenses a must to avoid big check

US developers must make the right choices when installing and managing cables to avoid costly repairs that could have long-term income complications for projects.

An IPF 2018 subsea cable risk session on Thursday at 2pm will hear from industry experts on the lessons learned from Europe, where wire failures are responsible for up to 80% of insurance claims in the sector. Putting in place adequate protection measures is “imperative” to ensure cables are not damaged by fishing, shipping or dredging activities, according to Ed Jones, a senior engineer with international consultancy Cathie Associates.

Jones is one of the session panelists and will tell delegates “understanding the whole life cost of the system including installation cost, insurance, cable repairs or loss of revenue is essential for development decisions”.

Jones will discuss cable burial methods and detail the company’s work with the Carbon Trust in developing guidelines in the area.

“As installation of power cables in a cost-effective manner is now essential for the future of wind farm developments, optimized cable burial with respect to risk has become the preferred protection technique,” added Cathie Associates US vice president Sean McDonald.

A UK manufacturer Scour Prevention Systems has been granted a full US patent for its scour prevention mattresses, which is designed to protect offshore structures, cables and pipelines using end-of-life vehicle tyres.

O&M crew will have to dig deep

Operations and maintenance providers will face a series of challenges to secure service contracts at future US offshore wind farms, according to experts.

Logistical, legal and geographical hurdles await companies keen to grab a slice of the action, said Natural Power operations and asset management director Euan Fenelon.

Fenelon is speaking during Operating an Offshore Wind Farm at 2.30pm on Wednesday and will tell IPF 2018 delegates that O&M providers may need to make substantial investments in the US to play a role.

The Jones Act will further force the hand of O&M companies, which will need to build and deploy US-flagged crew transfer and service operations vessels, Fenelon said ahead of the event.

Contractors likely to offload legal risk, developers warned

Developers of US offshore wind farms are facing a larger slice of contracting risk for major components as suppliers learn the lessons from the European sector, according to legal experts.

Watson Farley & Williams dispute resolution partner Joshua Sohn said contractors will try to limit their exposure in line with a landmark UK legal ruling last year at the 174MW Robin Rigg wind farm (pictured).

In August, the UK Supreme Court found Danish contractor MT Hojgaard liable for historic grouting issues at the Solway Firth site. The ruling set a precedent requiring contractors to ensure they deliver components that exceed, not just meet, best-practice fabrication guidelines, according to lawyers.

Construction contracts in many US states active in offshore wind typically include disclaimers about warranties or fitness to purpose provisions not expressly stated in contracts, Sohn said.

Many US courts also “do what they can to enforce contracts as written” but contractors are still likely to offload as much risk as possible on early projects.

“The UK ruling underscores the importance of making sure the contract works,” added Sohn.

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Floating wind could be buoyant with subsidies

US authorities must provide policy clarity and financial support schemes to kickstart growth in floating offshore wind, IPF 2018 will hear. The sector could develop commercial-scale projects by 2025 if the right subsidies are put in place, according to Luis Gonzalez-Pinto, chief operations officer at floating foundation designer Saitec Offshore Technologies.

Gonzalez-Pinto is speaking during the Friends of Floating: The Road to Commercialization session at 4pm on Thursday at IPF 2018. Saitec is in early discussions with an unspecified developer about deploying its Sath floating foundation at a site off the US west coast. “The cost of developing projects can fall rapidly but we need to ensure a certain volume of work before we can justify making long-term investments,” he said.

The session will also hear from Ideol chief sales and marketing officer Bruno Geschier and Principle Power chief technology officer Dominique Roddier. Speakers will discuss overcoming technical and commercial hurdles for floating to compete with fixed-bottom offshore wind.

“Floating foundations are needed to access up to 80% of the available wind resource. Floating becomes a much more competitive solution as turbines get larger,” added Gonzalez-Pinto.

Testing of floating foundation models is “crucial” to reduce risks before full-scale deployment, according to Fons Huijs, hydrodynamics technology coordinator at GustoMSC. Huijs will address a session on testing at 4pm on Tuesday at IPF 2018.

California Energy Commission has identified six potential zones for floating offshore wind deployment off the central and south coast. CEC’s Scott Flint said sites will now be examined for potential constraints.

The areas stretch from north of Morro Bay to Point Conception, with a single site farther south to the north of the Channel Islands National Park off Santa Barbara. Up to 3.5GW of grid interconnection is available nearby via the offline Morro Bay gas plant and the Diablo Canyon nuclear power facility, which is scheduled to shut down in the mid-2020s.

Flint said locations were chosen after analysis of wind speeds and water depths, as well as fisheries, biological, ecological, shipping and Department of Defense data. Trident Winds and Statoil are already vying for a tract along the state’s central coast. The former is eyeing an up to 765MW project. A Renewable Energy Task Force meeting is planned for the summer and the Bureau of Ocean Energy Management is mulling a future leasing round.

US outfit Quest Offshore Resources has set up a unit to analyse the floating offshore wind industry. Quest Floating Wind Energy will provide information to assist “better decision making”.

Partner roster for 150MW Humboldt project

The Redwood Coast Energy Authority has selected partners for a proposed 150MW floating wind project off Humboldt County in northern California.

Principle Power, EDPR Offshore North America, Aker Solutions, HT Harvey & Associates and Herrera Environmental Consultants were chosen following a request for qualifications. The resulting public-private partnership will drive forward an up to 15-turbine wind farm featuring WindFloat technology at a site between 32km and 48km from shore. RCEA said it hopes a lease application will be submitted later this spring and it is aiming to have a project commissioned by 2025.

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