

# Getting to Grips with the US Offshore Wind Permitting Process

In association with the 3rd US Offshore Wind 2018 Conference  
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*Despite encouraging signs of progress in US offshore wind, securing permits for the construction of plants remains a complex and largely untested topic. This paper reviews some of the main variables involved, from environmental risk to Bureau of Ocean Energy Management leasing.*



## Federal Atlantic OCS leasing

State support remains fundamental to the success of the US federal Atlantic offshore continental shelf (OCS) leasing program for wind, experts say. Development of offshore wind in the Great Lakes is currently relying more heavily on the US DOE federal grant program.

“Continued state involvement is a huge part of all of our successes,” says Paul Rich, Director of Project Development at US Wind, which in 2014 was awarded two leases in Maryland and holds the lease for the North Lease Area of New Jersey.

Both states have created roadblocks to offshore wind development. New Jersey, for example, launched an Offshore Wind Economic Development Act with the aim of creating 1.1 GW of offshore capacity in 2010, but never moved forward with the program.

More recently, Maryland has dithered over siting issues relating to wind farms originally slated for construction between 12 to 21 nautical miles off the coast of Ocean City.



High potential areas for offshore wind. Source: BOEM.

A US House of Representatives amendment to the Fiscal year 2018 Department of Interior Budget proposes federal funds be withheld for one-year for reviewing offshore wind projects closer than 24 miles to the shore. Originally the company was planning to place 62 turbines at up to 17 miles from shore.

Erich Stephens, CEO of Vineyard Wind, which holds a lease off the coast of Martha’s Vineyard in Massachusetts, says developers will need to be mindful of state attitudes to offshore wind when bidding for OCS leases.

“State policy, in some form or another, is going to be our customer,” he says, “and without customers there is no industry.”

State support appears to be the biggest concern for US offshore wind developers as other aspects of the OCS leasing program have been widely praised.

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The bidding program put in place by the US Bureau of Ocean Energy Management, for instance, has been welcomed as more favorable to smaller players than alternative methods such as the sealed bid mechanism used in oil and gas.

In this respect, says Michael Olsen, Senior Director at Statoil: "It works well. A lot of thought was put in."

And despite early hiccups, he says, state support for offshore wind now appears to be growing. Overall, this is leading most developers to have an optimistic view of the market.

"This is the beginning of the journey, and we will move forward positively from here," forecasts David Rowland, New Business Director at Iberdrola-owned Avangrid.

### US offshore wind permitting risk: issues, approaches and lessons learned

The US offshore wind market's haphazard development has one significant advantage: the permitting process can now benefit from experience gained in Europe.

Specifically, the adoption of a European-style project envelope approach to permitting could help add flexibility to the process while giving regulators a reasonable amount of certainty, says Alistair Davison, Sector Director for Renewable Energy at Royal Haskoning.

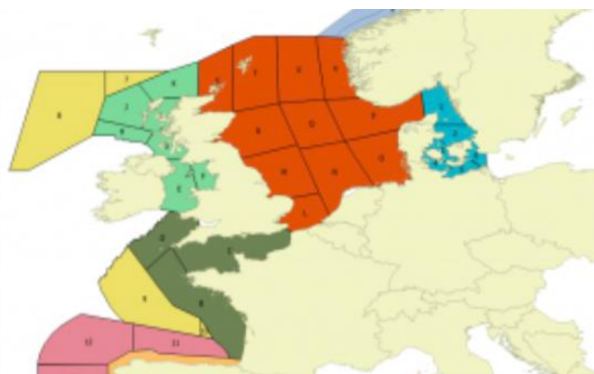
Known as a 'design envelop' in the US, the approach involves looking at the maximum impact that could be expected for each of a range of parameters.

For visual impact, for example, the design envelop would simply consider the effect of the largest possible turbines that could be expected for a given site.

Creating an envelope in this way means regulators are aware of all worst-case scenarios and developers have freedom to develop projects with a wide range of characteristics within it.

The approach can help developers move forward with projects with significant procurement flexibility and the ability to adapt to changes in layout, capacity, cable routes and turbine or foundation design, Davison says.

This flexibility is critical given the long lead times that have been seen in the European offshore wind market. In the UK, for instance, "it's not uncommon to have eight to 10 years from feasibility studies to beginning of construction," he says.



North Sea marine species survey areas. Source: Royal HaskoningDHV.

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For all its strengths, though, the European project envelop approach is still being refined, particularly as it relates to environmental impact assessments (EIAs).

Royal Haskoning, which has worked on 33 major offshore wind projects and has been the lead EIA consultant on 10 GW of capacity, believes the traditional impact model for environmental effects is too simplistic for large-scale offshore wind development.

Instead of just looking at the local effects of a single project, consultants such as Royal Haskoning now want to understand how multiple wind farms might create long-term impacts on marine species behavior, foraging and reproductive success.

At the same time, an overhaul of EIAs can potentially help streamline the process.

“What we’re doing now is to look at a review of all the EIAs that have been undertaken, to look at all those topics where we have had no impact or negligible impact, and ask, why are we doing these things?” Davison says.

“One of the real opportunities is to think about how the European experience can work with the industry here, to apply the lessons we’ve learned and make them better,” he comments.

### US permitting: environmental and grid challenges

US offshore wind developers welcome the adoption of a European-style design envelope approach to permitting but remain wary of how permit details will work out.

While the design envelope approach seems likely to confer flexibility to East Coast fixed-foundation projects for example, it is still unclear how or if it will encompass floating or lake-based plants.

In terms of environmental impact, floating foundations, which are likely to be the mainstay of US West Coast projects, have very different characteristics to fixed-foundation projects, says Jeff Kehne, Co-founder of Magellan Wind.

“There’s much less noise in the construction phase, but there are other issues,” he says. “The principal issue is anchor cables. There will be a forest of cables in a large site.”

While Magellan Wind does not foresee these being an entanglement risk for marine mammals and other sea animals, it is unclear whether such cable meshes will affect foraging behavior.

The issue is of significant concern in Californian waters, which are home to around 40 marine mammal species including eight types of beaked whales, a little-known and potentially endangered family of cetaceans.

Environmental impact is also of concern for LEEDCo, which is planning to build a 20.7 MW demonstration project on Lake Erie.

Agencies in the state of Ohio, where the US Bureau of Ocean Energy Management (BOEM) has no jurisdiction, are working together closely to mold their permitting process to North America’s first freshwater offshore wind Project.

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However, says LEEDCo President Dr. Lorry Wagner: “Without BOEM jurisdiction over the Great Lakes, each state must design its own permitting process. We are very fortunate that Ohio regulators have shown extreme flexibility in molding their regulations to the first freshwater offshore wind project in the Great Lakes.”

Ohio’s review of Icebreaker Wind will serve as a model for the other Great Lake states.

Finally, offshore wind developers are waiting to see how project permitting might be affected by federal regulations such as Section 106 of the National Historic Preservation Act.

“In recent years, laws protecting historic resources have increasingly conflicted with the development of utility-scale renewable energy sources and with the essential high-voltage transmission lines that connect such sources to the end users,” says lawyer David Lewis.

Michelle Morin, Chief of the Environment Branch at the BOEM’s office of Renewable Energy Programs, explains that the Section 106 process doesn’t necessarily stop development. Section 106 is designed to ensure that federal agencies consider historic properties as part of their project permitting process. In addition, there are mechanisms in the Section 106 process to address issues related to the timing of geophysical or geotechnical surveys, which is a concern of developers.

“Section 106 does allow for phased identification,” she notes, although “when survey information is received we would have to conduct additional consultation before construction can proceed.”

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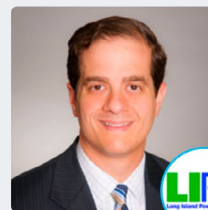
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