
Agencies Chart the Future of US Offshore Wind Development

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The US Department of Energy (DOE) and US Department of the Interior (DOI) recently announced an updated national strategy to facilitate the responsible development of offshore wind energy in the United States, with a goal of supporting the development of 86 gigawatts of wind energy by 2050. DOE and DOI officials, including Secretary of Energy Ernest Moniz and Secretary of the Interior Sally Jewell, made a number of public appearances in mid-September to showcase the Strategy.

Developed in consultation with offshore wind stakeholders, the Strategy reflects both the progress and changes in the energy landscape that have occurred since the first US offshore wind strategy was released in 2011. It also identifies the key obstacles to offshore wind development that remain—including technology limitations, regulatory barriers and access to data—and lays out a five-year road map for actions the federal government can take to address those challenges.

Current Status of Offshore Wind

The first domestic offshore wind facility, the 30-megawatt Block Island Wind Farm, is scheduled to begin commercial operation before the end of 2016. In addition, DOI's Bureau of Ocean Energy Management (BOEM) has issued 11 active commercial leases along the Atlantic coast—which in the aggregate could produce an estimated 14.6 gigawatts of wind energy—and is continuing to evaluate the issuance of additional leases on the Outer Continental Shelf. BOEM's leasing program has created, for the first time in US history, a real opportunity for domestic offshore wind development.

Benefits of Offshore Wind Energy

The Strategy makes a compelling case in support of offshore wind development. It emphasizes the ability of offshore wind generation projects to produce abundant, reliable, low-cost and low-carbon energy, which not only directly benefits consumers, but also enhances overall energy security by diversifying the national energy portfolio and providing related protection from price fluctuations. From an environmental perspective, deployment of robust offshore capacity would reduce greenhouse gas and other emissions, curtail water consumption, and improve energy diversity and security.

The Strategy is centered around the concept that existing wind technology could produce over 2,000 gigawatts offshore. In contrast to many terrestrial facilities, offshore wind project could be located closer to major coastal load centers, thus minimizing the need for long-distance electricity transmission and attendant technology challenges.

Wind energy's increasing cost-competitiveness also is highlighted in the Strategy, which projects that offshore wind could become even more competitive with incumbent forms of generation over the next decade.

Challenges Facing the Industry

Despite its benefits, the Strategy recognizes that significant challenges remain before offshore wind will serve as a significant component of the nation's energy mix. Three principal challenges—labeled as “strategic themes”—are identified in the Strategy:

1. *Reducing costs and technology risks:* The current cost of offshore wind energy is still too high to compete in most markets without subsidies.
2. *Supporting effective stewardship:* Development and expansion of a sustainable offshore wind industry will require thoughtful and effective stewardship of the nation's ocean and Great Lakes resources.
3. *Increasing understanding of costs and benefits:* Some uncertainty regarding offshore wind remains, including its impacts on the electricity grid, transmission options, and quantifiable environmental and economic benefits.

Federal Offshore Wind Strategy

To address those challenges, the Strategy identifies specific actions the federal government can undertake in the near term to better promote offshore wind development.

Strategic Theme 1: Reducing Costs and Technology Risks

First, the Strategy identifies a number of actions intended to reduce the high costs and technology risks that currently hinder widespread offshore wind deployment in the United States. Those actions include improving access to relevant site characterization data; increasing investment in R&D to advance offshore wind technology and adapt it to US offshore conditions; and evaluating supply chain limitations.

Strategic Theme 2: Supporting Effective Stewardship

The Strategy lays out a blueprint for planned regulatory reforms aimed to improve federal oversight over offshore wind and develop “processes [that] are well-informed and adaptable, avoid unnecessary burdens, and provide transparency and certainty for the regulated community and stakeholders.” Over the next year, DOI will begin the following reform efforts:

- Reforming the current Site Assessment Plan requirements to allow less costly and more efficient deployment of meteorological buoys; BOEM will announce the process for this reform in early 2017.

- Improving and streamlining review of facility plans to provide greater certainty regarding timing and requirements, including through the development of timelines for BOEM's NEPA review process and project-specific schedules with critical milestones.
 - Revising the process used to coordinate with states and federal agencies.
 - Preparing a "Regulatory Roadmap" identifying all federal permits and authorizations necessary to develop offshore wind projects.
 - Developing offshore wind energy health, safety and environmental guidelines to provide greater certainty for developers.
 - Holding stakeholder meetings in the summer and fall of 2017 to gather input on a potential next round of Atlantic planning and leasing.
- BOEM also committed to considering the following reforms:
- Modifying financial assurance requirements for decommissioning to allow for phased financial assurance and reduce upfront financial burdens on lessees before projects are generating income.
 - Adopting a "Design Envelope" approach for Construction and Operation Plan review, similar to the approach used in Europe, that would allow greater flexibility to make design decisions later in the process (that decision will be announced by July 1, 2017).

Those regulatory reforms will be supplemented by a joint DOI-DOE effort to study first-generation offshore wind projects to gain a better understanding of the impacts of those projects on biological resources and the human environment, and to develop appropriate mitigation strategies.

Strategic Theme 3: Increasing Understanding of the Benefits and Costs of Offshore Wind

Although the challenges associated with integrating offshore wind energy into the grid are in many ways no different than those for land-based wind, the Strategy notes that some unique aspects of offshore wind (including its generally higher output) merit further study. DOE committed to analyzing the examples of existing projects and potential technologies to optimize grid structure and integration strategies for offshore wind projects. DOE also will attempt to quantify and better communicate the costs and benefits associated with offshore wind, some of which are outlined above. For its part, DOI will reconsider its operating fee structure in order to provide more certainty to developers during power purchase agreement negotiations.

Analysis

The Strategy identifies a number of meaningful reforms to the current offshore wind regulatory framework that would, if implemented, remove significant barriers for project developers. While most of the actions discussed in the Strategy remain under evaluation, stakeholders remain hopeful that they will be implemented by the relevant agencies in the not-too-distant future. That uncertainty is also compounded by the upcoming Presidential election; while offshore wind development will likely remain a priority in any future administration, turnover of political leadership at the relevant agencies can delay any pending decisions. Pushing the strategy (or components thereof) to the short list for the winning administration would help ensure that BOEM's leasing uptick is supported by the momentum and improved regulatory landscape necessary to facilitate the development of significant offshore wind generation capacity.

