U.S. Offshore Wind Policy Considerations

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Why Offshore Wind?

This map shows the annual average wind power estimates at 50 meters above the surface of the United States. It is a combination of high resolution and low resolution datasets produced by NREL and other organizations. The data was screened to eliminate areas unlikely to be developed onshore due to land use or environmental issues. In many states, the wind resource on this map is visually enhanced to better show the distribution on ridge crests and other features.
U.S. Outer Continental Shelf
Example case: New Jersey needs 16,000 GWh by 2020 to satisfy the RPS.

Offshore wind is one of the most promising means of satisfying this in-state.

<table>
<thead>
<tr>
<th>Source</th>
<th>Capacity (MW)</th>
<th>Energy (GWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar</td>
<td>1,500</td>
<td>1,600</td>
</tr>
<tr>
<td>Biomass</td>
<td>50</td>
<td>300</td>
</tr>
<tr>
<td>Landfill Gas</td>
<td>64</td>
<td>400</td>
</tr>
<tr>
<td>Wind Onshore</td>
<td>200</td>
<td>600</td>
</tr>
<tr>
<td>Wind Offshore</td>
<td>2,400</td>
<td>8,400</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,300</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Renewable Energy Potential in New Jersey**

2. Limited only to near-shore sites, total potential is significantly higher.

NJ Energy Master Plan calls for 3,000 MW of offshore wind in NJ by 2020, of which 1,000 MW by 2012.
Challenges to Offshore Wind

• Nascent DOI/MMS Leasing Rules
  – Became effective June 29, 2009
  – First Request for Interest (Delaware) released April 21, 2010
    • Other states not expected until late spring/early summer 2010
  – Permitting process could be as long as 7-9 years

• Infrastructure to support Offshore Wind Industry
  – Virtually non-existent in Northeast; existing port and manufacturing facilities would need upgrades
  – Dearth of U.S. based vessels capable of installing large numbers of turbines
  – Vessels that do exist are either in Europe or the Gulf of Mexico

• Offshore wind is currently more expensive than traditional forms of generation
So How Do We Achieve These Goals?

• Through policies which give clarity and consistency to an emerging industry that could provide tens of thousands of “green sector” jobs and contribute to the nation’s energy independence:
  – Financial
  – Permitting/Regulatory
  – Transmission

• Critical to capturing economic development opportunities and maintaining competitiveness with markets that are mature (Europe) or quickly emerging (Asia, China in particular)
Financial Policies

• Any financial policy must:
  – Provide certainty to developers and lending institutions that investments will be repaid and uninterrupted
  – Offer some type of benefit from project operations to ratepayers (i.e. financial or environmental)
  – Balance risk allocation fairly between ratepayers and developers

• Mandatory long-term contracts are not necessary
  – New Jersey working to establish 20 year fixed price offshore renewable energy credit (OREC)
  – Provides similar level of financial certainty as other constructs

• Balance environmental benefits, job creation and fuel diversity with higher costs
Other Government Financial Policies

• Loan Guarantees
  – Reduces the cost of borrowing and lessen overall cost to project and ratepayers

• Grants
  – Provides upfront funding for development or R&D activities
  – Typically not for equipment purchases or construction costs

• Tax Credits
  – Probably the single most effective way to reduce overall cost of project to ratepayers
  – Given complexity of existing development environment, should provide sufficient time to get to commercial operations
Permitting/Regulatory Policies

• Existing Minerals Management Service ("MMS") permitting timeline for offshore wind is 7-9 years
  – Longer than permitting a nuclear facility
  – Spans multiple federal agencies with divergent authority
    • NOAA/NMFS – marine mammals/avian species
    • USEPA – air/water quality
    • USACOE – engineering, construction
    • USFWS – conservation
    • MMS – leasing of OCS
    • USCG – mariner issues
    • FAA – aviation issues
  – No clear, coordinated workflow to ensure minimal “dwell time”

• Future policies must balance need to protect environment while affording industry reasonable roadmap for moving forward
Permitting/Regulatory Suggestions

• Eliminate competitive leasing procedures where no public benefit is gained
  – Some states have completed competitive bid procedures and selected technically and financially competent developers
  – Eliminates risk of claim jumpers or opposition-based delay

• Eliminate unnecessary or repetitive Environmental Impact Statements (“EIS”)
  – Each EIS takes approximately 18-24 months
  – Many offshore activities already have been evaluated and found not to have significant environmental impacts
  – Emerging data from Europe confirms what we already know: there are no major impacts or those that do exist can be reasonably mitigated
Permitting/Regulatory Suggestions cont

- Streamline review and approval process through better coordination and commitment to reduce “dwell time” within a responsible agency

- Streamline judicial review by consolidating and expediting leasing and permitting challenges
  - Eliminates threat of prolonged litigation in multiple proceedings that could present an unnecessary deterrent to investment in offshore wind

- Consider pilot program to expedite first-generation of projects
  - Data from these projects can be used to make better informed decisions on second-generation and beyond projects
  - This data can be particularly useful in the marine spatial planning debate
Transmission Policy

• Existing policy
  – Triggered by generators’ interconnection request or instances of anticipated reliability concerns
  – With regard to new generation, in most cases places full responsibility for costs of interconnection facilities squarely on generator
  – Fair allocation of risk and cost on those looking to impact the transmission system

• Some in the industry want to change these rules
  – Owners of generation or transmission in the nation’s core where onshore wind and traditional forms of generation are abundant
  – Expands rate base or market reach to load centers that do not exist where the generation is located
  – Socializes cost of interconnection facilities to large numbers of ratepayers who may not benefit from generation
Reasons to maintain existing policy . . .

• Hides the true cost of generation from ratepayers by shifting what is now a generator’s cost to ratepayers who may not benefit
  – Ultimate end users will not see the full cost of the new generation in rates
  – Local renewable generation projects would not have this option and must include full cost of project in rates
  – Would also hurt LMP prices, thereby further reducing competitiveness or viability of local renewable generation projects

• Stymies coastal states’ efforts to implement aggressive RPS and create green collar jobs and industries
  – Lower LMP prices may cause developers to postpone or cancel projects
Thank You!!!

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