Siting and Leasing Offshore Wind Energy Areas

Luke Feinberg
Energy Program Specialist,
Office of Renewable Energy Programs
Bureau of Ocean Energy Management (BOEM)
March 24, 2021
Meeting Procedures

Webinar recordings and presentations will be available at:
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Participation for Members of the Public:

> Members of the public will be muted upon entry.

> Questions and comments may be submitted in writing through the Q&A feature at any time during the event.

> If technical problems arise, please contact Sal.Graven@nyserda.ny.gov
Learning from the Experts

This webinar series is hosted by NYSERDA’s offshore wind team and features experts in offshore wind technologies, development practices, and related research.

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The views and opinions expressed in this presentation are those of the presenter and do not represent the views or opinions of NYSERDA or New York State.
Renewable Energy Planning And Leasing Overview

Luke Feinberg
Office of Renewable Energy Programs

March 24, 2021
Outer Continental Shelf (OCS) Energy

**OCS Lands Act:** "... vital national resource ... expeditious and orderly development ... environmental safeguards"

**Energy Policy Act of 2005:** "... energy from sources other than oil and gas ..."
Renewable Energy Program by the Numbers

- Competitive Lease Sales Completed: 8
- Active Offshore Leases Issued: 16
- Site Assessment Plans (SAPs) Approved: 10
- General Activities & Research Plans Approved: 2
- Construction and Operations Plans (COPs):
  - Under Review: 13
  - Anticipated within next 12 months: 3
- Guidance: 10
- Leasing Under Consideration: 7
- Steel in the Water: 2020
Atlantic OCS Renewable Energy: “Projects in the Pipeline”

<table>
<thead>
<tr>
<th>Project</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2020</strong></td>
<td></td>
</tr>
<tr>
<td>Coastal Virginia Offshore Wind Pilot</td>
<td></td>
</tr>
<tr>
<td>South Fork</td>
<td></td>
</tr>
<tr>
<td>Vineyard Wind I</td>
<td></td>
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<tr>
<td>Revolution Wind</td>
<td></td>
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<tr>
<td>Skipjack Windfarm</td>
<td></td>
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<tr>
<td>Empire Wind</td>
<td></td>
</tr>
<tr>
<td>Bay State Wind</td>
<td></td>
</tr>
<tr>
<td>U.S. Wind</td>
<td></td>
</tr>
<tr>
<td>Sunrise Wind</td>
<td></td>
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<tr>
<td>Ocean Wind</td>
<td></td>
</tr>
<tr>
<td>Coastal Virginia Offshore Wind Commercial</td>
<td></td>
</tr>
<tr>
<td>Park City Wind</td>
<td></td>
</tr>
<tr>
<td>Mayflower Wind</td>
<td></td>
</tr>
<tr>
<td>Atlantic Shores</td>
<td></td>
</tr>
<tr>
<td>Kitty Hawk</td>
<td></td>
</tr>
<tr>
<td><strong>2030</strong></td>
<td></td>
</tr>
<tr>
<td>OCS-A 0522</td>
<td></td>
</tr>
</tbody>
</table>
Renewable Energy Process: From RFI/Call to Operation

[ Planning & Analysis ]
1. Initiate Leasing Process (RFI/Call)
2. Area Identification (Wind Energy Areas)
3. Publish Leasing Notices
4. NEPA/Environmental Reviews

[ Leasing ]
1. Lease Granted

[ Site Assessment ]
1. Submit SAP
2. Site Assessment & Surveys (maximum timeframe)
3. BOEM Reviews & Approves SAP
4. BOEM Deems COP Complete & Sufficient

[ Construction & Operations ]
1. BOEM Approves COP
2. BOEM Environmental & Technical Reviews
3. Submit COP (with Project Design Envelope – optional)
4. Installation & Design & Installation Plans
Request for Interest to Lease Sale

Area Identification
Wind Energy Areas

Leasing Document Development

Environmental Assessment Process & Public Involvement

Potential Task Force Meetings / Webinars

Request for Interest
Call
Area Identification

Proposed Sale Notice
Final Sale Notice

Public Comment

45 days

Public Comment

~ 1/2

Public Comment

60 days
Planning Area

- High-level screening
- Initial identification of areas that may be suitable for potential offshore wind development
Request for Interest (RFI) Area

- Collect information to determine the level of interest in offshore wind leasing
- Shed more light on suitability of area for wind development
Request comments on:

- Areas for special consideration and analysis
- Conditions in the Call Area
- Areas to be considered for leasing
Wind Energy Area

- A portion of the Outer Continental Shelf (OCS) identified by BOEM for NEPA analysis (Environmental Assessment)
- The basis for a Lease Area
Lease Areas

- Wind Energy Areas have the potential for further division into Lease Areas.
BOEM Bureau of Ocean Energy Management
Pre-Lease Sale Process

- Request for Interest
- Call for Information and Nominations
- Area Identification
- Leasing Document Development
- Environmental Assessment Process & Public Involvement
- Auction

Potential Task Force Meetings/Webinars

Request for Interest
Call
Area Identification

Public Comment

45 days
45 days

~ 1/2

Public Comment

60 days

Proposed Sale Notice
Final Sale Notice
Assesses Environmental Effects Associated with Leasing

- Site Characterization Activities
  - biological, geological, geotechnical, and archaeological surveys
- Site Assessment Activities
  - meteorological and oceanographic buoy deployment
Assesses Environmental Effects Associated with Leasing

- Site Characterization Activities
  - biological, geological, geotechnical, and archaeological surveys

- Site Assessment Activities
  - meteorological and oceanographic buoy deployment
Pre-Lease Sale Process: Proposed Sale Notice

What is in a PSN?

- Area for leasing
- Fiscal terms
- Auction details and format
- Proposed lease terms
- Last opportunity to submit company qualification materials
  - Legal
  - Technical
  - Financial
- Nonmonetary factors

Auction Seminar for potential bidders
Pre-Lease Sale Process: Final Sale Notice

Final Sale Notice

- Bid deposit required to participate in auction ($450,000)
- List of qualified bidders

Mock Auction

Auction
Auction Format – Online and Anonymous

Bidder 1

Bidder 2

Bidder n

Server

Backup Server

Internet

Auction Manager

BOEM

Encrypted data transfer
Bidding occurs over multiple rounds.

During each round, BOEM’s asking price is raised, and a bidder indicates whether it would be willing to pay that amount for the lease area.

When only one bidder is willing to pay that round price, or has the highest exit bid, that bidder wins the auction.

<table>
<thead>
<tr>
<th>Round</th>
<th>Asking Price</th>
<th>Bidder 1</th>
<th>Bidder 2</th>
<th>Bidder 3</th>
<th>Bidder 4</th>
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<tbody>
<tr>
<td>1</td>
<td>$100?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>2</td>
<td>$150?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
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<tr>
<td>3</td>
<td>$200?</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✗</td>
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<tr>
<td>4</td>
<td>$250?</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

WINNER
## Auction Format - Bidding

Bidding occurs over multiple rounds. During each round, BOEM's asking price is raised, and a bidder indicates whether it would be willing to pay that amount for the lease area. When only one bidder is willing to pay that round price, or has the highest exit bid, that bidder wins the auction.

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<th>Bidder 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$100?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>$150?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>3</td>
<td>$200?</td>
<td>$190</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>4</td>
<td>$250?</td>
<td>×</td>
<td>$240</td>
<td>$225</td>
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**WINNER**
<table>
<thead>
<tr>
<th>Lease Sale Date</th>
<th>Adj. State</th>
<th>Lease Size (acres)</th>
<th>Bid ($)</th>
<th>Developer</th>
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<tbody>
<tr>
<td>July 2013</td>
<td>RI-MA</td>
<td>97,498</td>
<td>$3,838,288</td>
<td>Orsted (Deepwater Wind New England, LLC)</td>
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<td>67,252</td>
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<td>September 2013</td>
<td>VA</td>
<td>112,799</td>
<td>$1,600,000</td>
<td>Virginia Electric and Power Company</td>
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<td>August 2014</td>
<td>MD</td>
<td>32,737</td>
<td>$3,841,538</td>
<td>U.S. Wind, Inc.</td>
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<td>46,970</td>
<td>$4,859,560</td>
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<td>January 2015</td>
<td>MA</td>
<td>187,523</td>
<td>$281,285</td>
<td>Orsted (Bay State Wind LLC)</td>
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<td>166,886</td>
<td>$166,886</td>
<td>Vineyard Wind LLC</td>
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<td>248,015</td>
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<td>140,554</td>
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<td>November 2015</td>
<td>NJ</td>
<td>160,480</td>
<td>$880,715</td>
<td>Orsted (Ocean Wind LLC)</td>
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<td>183,353</td>
<td>$1,006,240</td>
<td>Atlantic Shores LLC</td>
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<tr>
<td>December 2016</td>
<td>NY</td>
<td>79,350</td>
<td>$42,469,725</td>
<td>Equinor Wind US LLC</td>
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<td>March 2017</td>
<td>NC</td>
<td>122,405</td>
<td>$9,066,650</td>
<td>Avangrid Renewables LLC</td>
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<td>December 2018</td>
<td>MA</td>
<td>128,811</td>
<td>$135,000,000</td>
<td>Equinor Wind US LLC</td>
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<td></td>
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<td>127,388</td>
<td>$135,000,000</td>
<td>Mayflower Wind Energy LLC</td>
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<tr>
<td></td>
<td></td>
<td>132,370</td>
<td>$135,100,000</td>
<td>Vineyard Wind, LLC</td>
</tr>
</tbody>
</table>

* Over $472M auction revenue  ** Over $5M annual rental income
Coming Next:

April 7, 1:00 p.m. ET
Offshore Wind Technologies 101
Walt Musial, NREL

April 28, 1:00 p.m. ET
Article VII Permitting Process for Offshore Wind
Bill Flynn, Harris Beach PLLC

Visit wind.ny.gov to register

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