January 31, 2019
Markets
Head of New England
Matthew A. Mortress

An Overview of Offshore Wind

Formal Second International Energy & Technology's
green, independent and economically viable

Orsted develops energy systems that are...
Ørsted Offshore Overview - Globally

Unparalleled experience and track record

1991
25 years of experience
and track record in the offshore wind power sector

2018

25 offshore wind farms in operation
5 offshore wind farms under construction

5.6 GW installed capacity

~3,200 skilled employees

34 GW installed capacity

15 million euros in direct domestic spend

~1,300 turbines

30 partnerships
Ørsted

Development

M/NR Lease Area(s): Potential for up to 1.5GW of

Additional Lease Areas

Coastal Virginia Offshore Wind: 12GW demo project

Bay State Wind: Potential for up to 2GW of development

Garden State Offshore Energy: Potential for up to 1.2GW

Ocean Wind: Potential for up to 3.5GW of development

Development Projects

Revolution Wind: 700MW (400MW to RI, 300MW to CT)

Skipjack Wind Farm: 12GW

South Fork Wind Farm: 13GW

(Sequestered with revenue constraints (sequestered or soon to be released))

Block Island Wind Farm: 30MW

In Operation

Potential for 8-10GW

Attractively and geographically diverse portfolio of offshore wind assets:

Ørsted U.S. Offshore Wind
### Revolution Wind

- 150,000 cars off the road
- 150,000 CT homes powered

**Energy and Environmental Impacts**

- 40 miles from Connecticut coast
- 35 turbines

Wind farm for Rhode Island

- 300 MW wind farm paired with 400 MW over 

---

**Schedule**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Stakeholder meetings</td>
</tr>
<tr>
<td>2021</td>
<td>Apply for permits</td>
</tr>
<tr>
<td>2021</td>
<td>Permit approvals</td>
</tr>
<tr>
<td>2022</td>
<td>Installation begins offshore</td>
</tr>
<tr>
<td>2023</td>
<td>Commercial operations</td>
</tr>
</tbody>
</table>

---

Oversized
Spring 2019: New London Office Opening

- Regional infrastructure, research, and STEM education.
- Workforce and supply chain studies.
- $4.5 million in grants supporting transfer vessels construction.
- Connecticut boat builder for crew training.
- Commercial fishing industry investment.
- To improve maritime facilities used by community partners.
- $3 million grant to Port of New London.
- $1.5 million in Revolution Wind host investments.
- $32.1 million in Greater New London jobs.
- 300 local development and construction jobs.
- $147 million economic impact.
Winter Reliability

- 85-90 million gallons of oil was burned, leading to an increase of emissions

- Electricity costs to customers paid an additional $700,000 per week.

In the winter of 2017/2018, over a two-week period, meeting the region's electricity needs was a challenge. The region, with the exception of the offshore wind that is most productive in the winter, becomes extremely dependent on oil and natural gas. To meet demand during winter months, the offshore wind during afternoon hours and electricity demand show variability.
Cumulative Offshore Wind Installations (MW)

Growth of Offshore Wind Globally

1.8 GW in operation - 4.149 turbines spinning - 3.1 GW added in 2017
Rapid advances in offshore turbine technology
The rapid cost reductions in the industry have made offshore wind power competitive to conventional power generation based on fossil fuels. Technologies have lowered the cost of electricity for different applications.
State offshore wind procurements

- Connecticut: 300 MW
- Maryland: 368 MW
- Rhode Island: 400 MW
- Massachusetts: 808 MW

Total: 1,900 MW

State offshore wind targets

- New York: 9,000 MW
- New Jersey: 3,500 MW
- Massachusetts: 2,400 MW
- Virginia: 2,000 MW

Offshore wind market on the East Coast
Q&A
Contact:
Matthew A. Morrissey
Head of New England Markets
MAMOR@orsted.com