



NEW YORK
STATE OF
OPPORTUNITY™

New York State Offshore Wind

Public Webinar | February 13, 2019

Presentation Outline

- 2018 Regional Market Updates
- 2019 New York State Updates
 - 2018 Solicitation
 - Stakeholder Engagement
 - New and Upcoming Analyses
- Upcoming Events and Activities
- Q&A



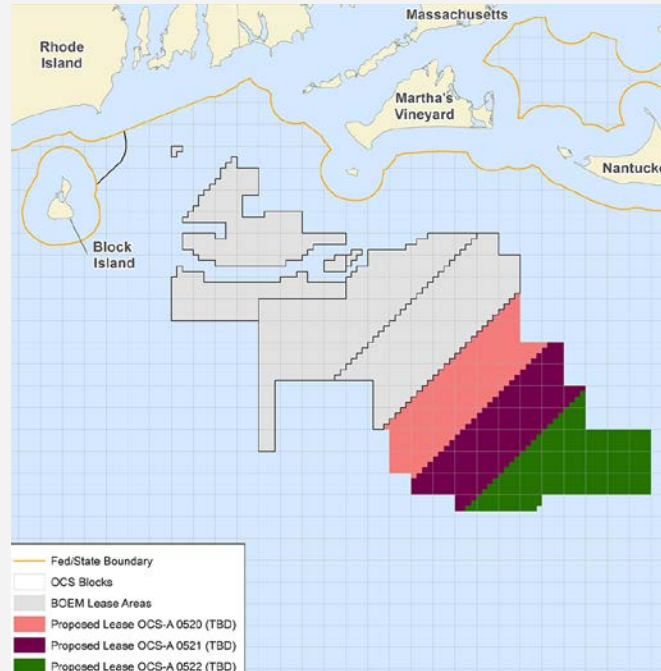
2018 Regional Market Updates

Developments in the Northeast

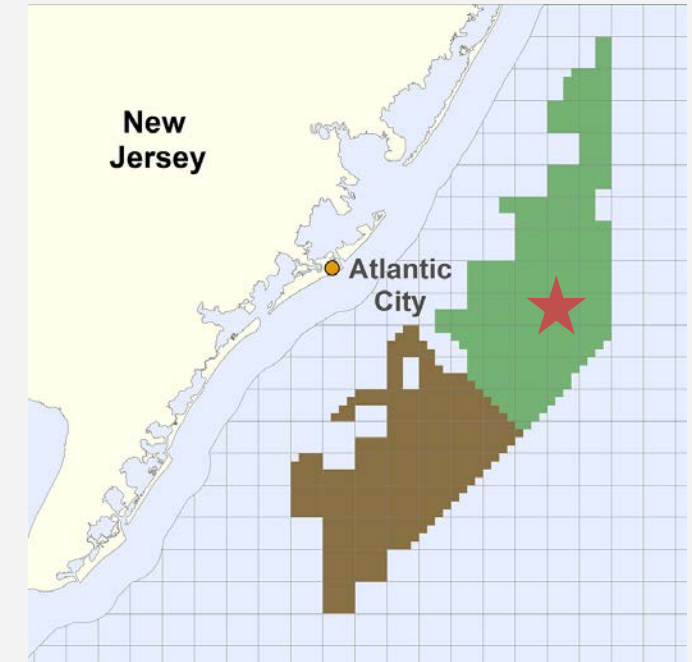
Ørsted acquired Rhode Island-based Deepwater Wind



BOEM held auction for three Lease Areas in Massachusetts totaling \$405 million



Atlantic Shores Offshore Wind (EDF-RE/Shell) acquired New Jersey Lease Area



Regional Offshore Wind Procurement

MA

Vineyard Wind was selected to deliver **800 MW** of offshore wind energy to Massachusetts



RI

Deepwater Wind's (Ørsted's) Revolution Wind was selected deliver **400 MW** of offshore wind energy to Rhode Island

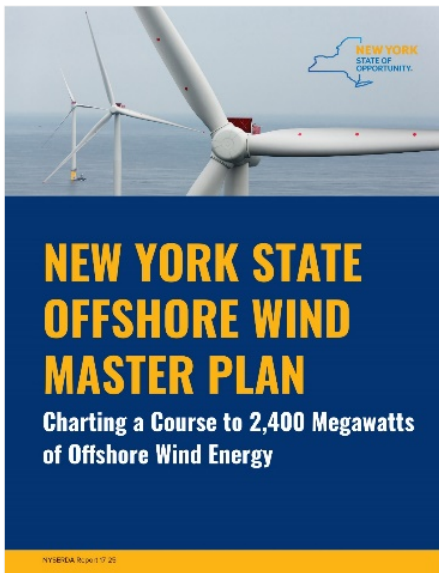


CT

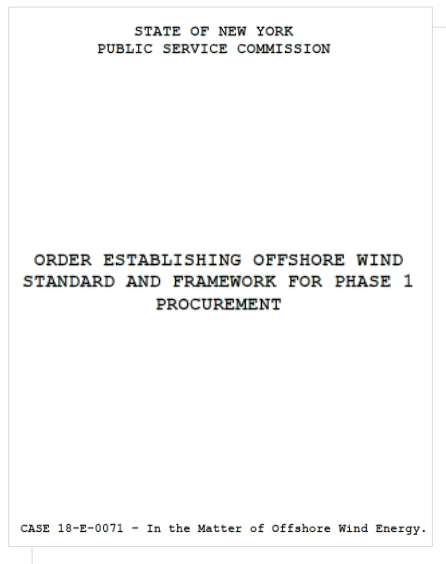
Ørsted's Revolution Wind was selected to deliver **300 MW** of offshore wind energy to Connecticut



New York State Activities



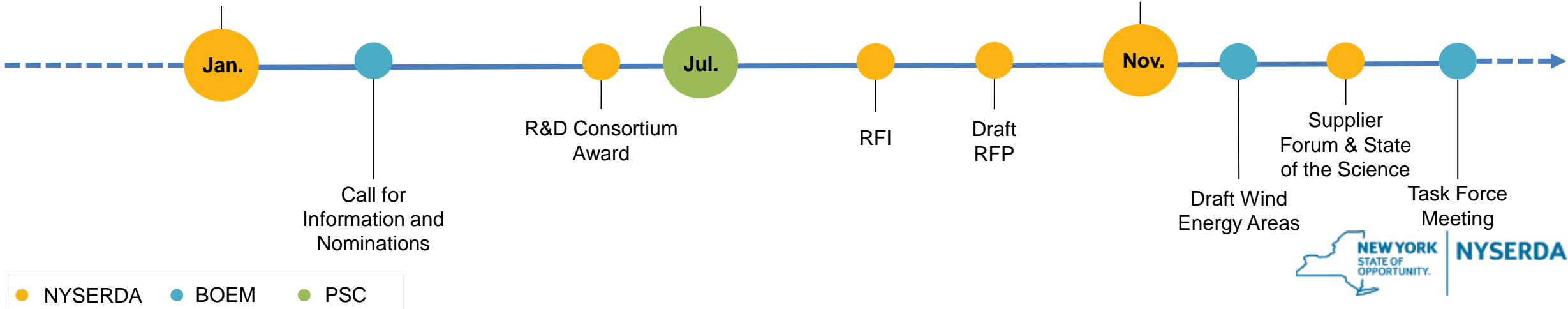
Master Plan



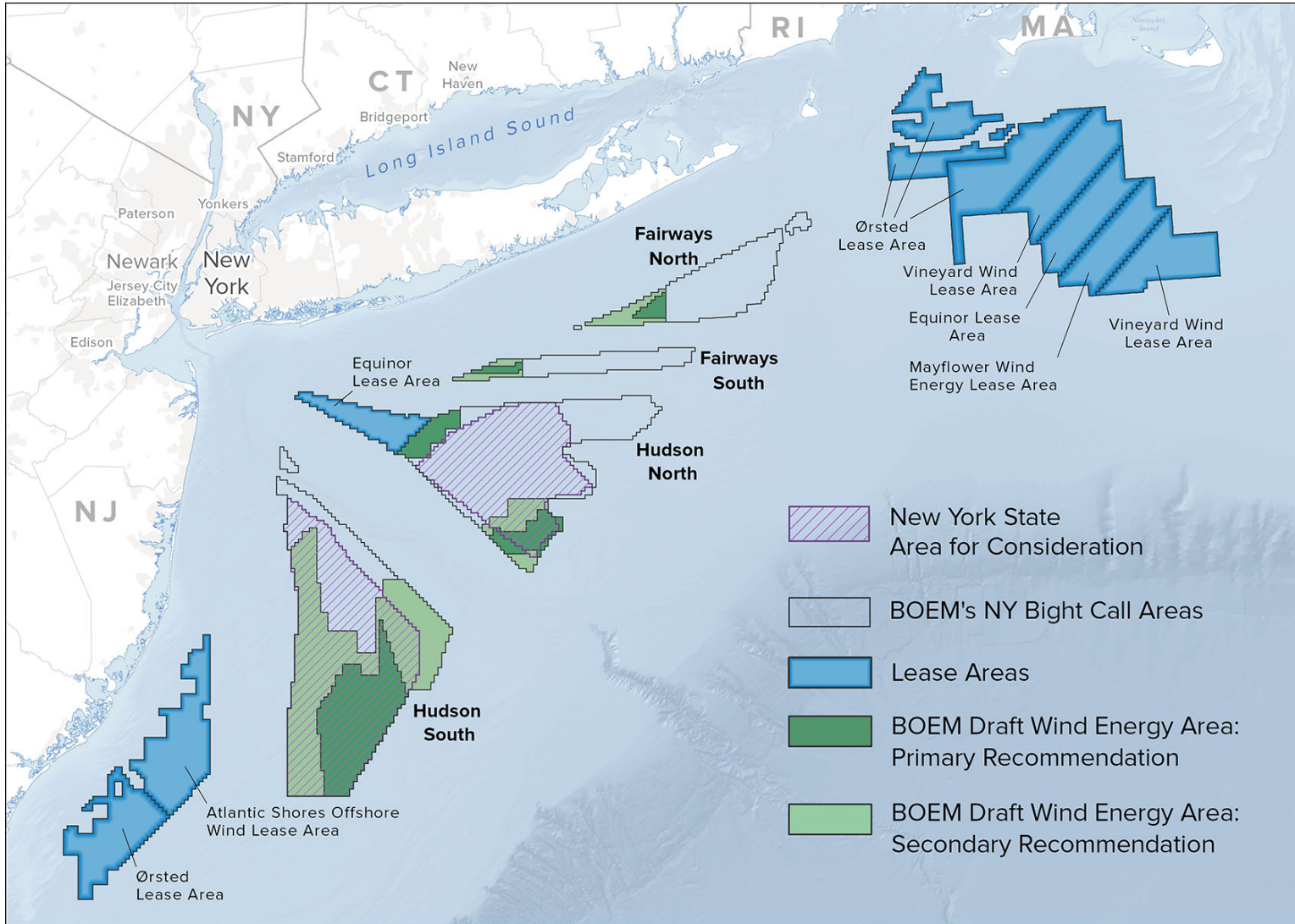
Offshore Wind Standard



Offshore Wind RFP



Siting and Area Identification



New York State's recommendations presented at BOEM's Task Force Meeting in November 2018

- Remove the Fairways North and Fairways South draft areas
- Discuss areas outside Area for Consideration with stakeholders
- Convert all remaining Primary and Secondary areas to the Wind Energy Area
- Delineate and lease all areas within the Wind Energy Area in 2019 such that they:
 - Make the best use of the space
 - Maximize competition
 - Minimize development costs
 - Consider transit for fishing and other maritime users prior to leasing

2019 New York State Updates

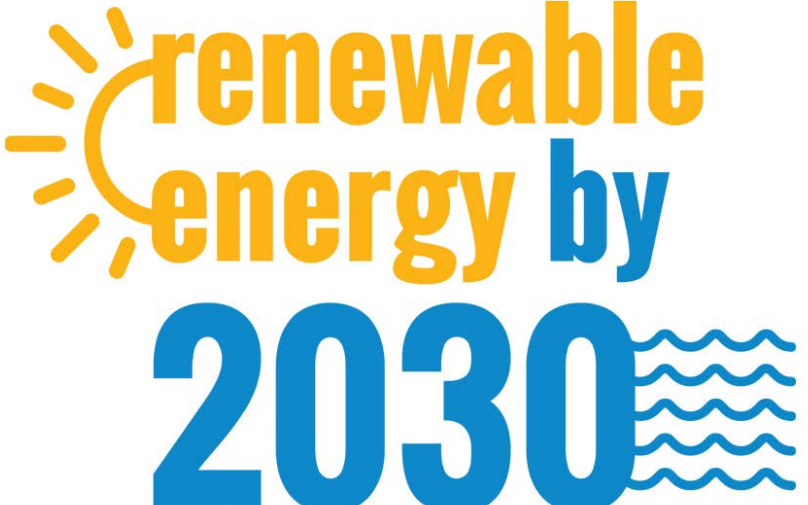
Green New Deal

Governor Andrew M. Cuomo has made a historic commitment to transforming New York's electricity sector to be

100% carbon-free by 2040

and putting the State on the path to eventually eliminating its carbon footprint all together

70%
renewable
energy by
2030

A graphic featuring a stylized sun icon on the left and a water wave icon on the right, both in blue and yellow colors, positioned behind the text.

OFFSHORE WIND ENERGY

9,000 MW

BY 2035

Largest Commitment
in the U.S.

enough to power up to
6 million homes

A photograph of several offshore wind turbines in the ocean at sunset. The sky is a mix of orange, pink, and blue, with some clouds. The water is calm and reflects the colors of the sky. The turbines are dark silhouettes against the bright sky.

2019 State of the State Offshore Wind Proposals

Port Infrastructure



Invest up to **\$200 million in port infrastructure** to match private sector investment in regional development of offshore wind to capture long-term economic benefits for New Yorkers

Workforce Development



Establish the **New York State Advisory Council on Offshore Wind Economic and Workforce Development** and invest in an **offshore wind training center** to provide New Yorkers with the required skills and safety training

Transmission



Evaluate and facilitate the development of an **offshore transmission grid** to benefit New York ratepayers by driving down offshore wind generation and integration costs

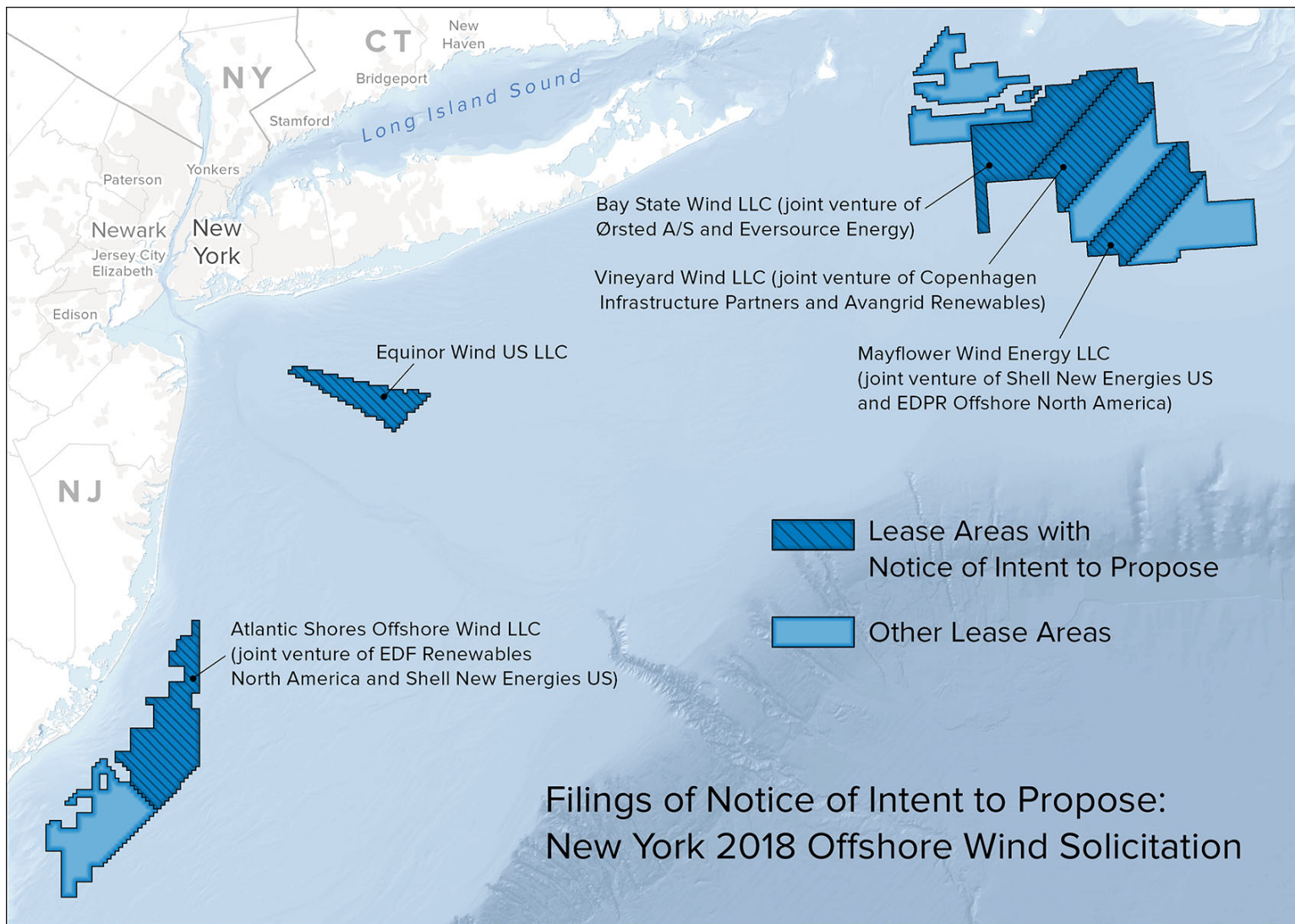
2018 Solicitation

2018 Solicitation Overview

- Competitive solicitation to purchase Offshore Wind Renewable Energy Certificates (ORECs) for projects from 200 MW to 800 MW or more for up to 25 years
- **Contract Requirements**
 - Participation in New York State's Technical Working Groups
 - Prevailing Wage and Project Labor Agreements
 - Consultation with New York State Agencies
 - Site and Environmental Data Transparency
 - New York State Supplier Opportunity
 - Environmental Mitigation
 - Fisheries Mitigation
 - Lighting Controls



Notice of Intent to Propose



5 Notices of Intent to Propose Received December 20, 2018

POLITICO

Energy Health Care Real Estate Newsletters Trackers Document Drawer

No mahogany desks.
Just a team of women who've been there too.

POLITICO New York Energy
Digest of the day's top energy news, condensed from New York Pro's essential early morning brief

Record offshore wind interest
by MARE J. FRENCH (@mrench@politico.com, @m_j_french), DANIELLE MUIOIO (@dmuioid@politico.com, @dmuioid) 11/15/2019 10:04 AM EST

NY DRAWS RECORD OFFSHORE WIND INTEREST — POLITICO'S Marie J. French: Five developers have told New York that they will submit bids in the state's current solicitation for offshore wind projects targeting 800 megawatts of new capacity. The level of interest is greater than in several other states seeking to take the lead on offshore wind and is expected to support Gov. Andrew Cuomo's goal of securing 4,400 megawatts of offshore wind by 2020. It also highlights the growing momentum for the industry in the U.S. as big-name players in the European offshore wind market step up their efforts here. "We've seen this coming and we know that New York will be the center of gravity with regards to offshore wind development," said Doreen Harris, director for large-scale renewables for the New York State Energy and Research Development Authority. "The five companies that have submitted ... represent not only a significant scale — a larger scale than any other state has seen with regard to participation — but also these are very significant, major developers who are going to bring this industry to the U.S. even more quickly than some had expected." The five developers expressed interest by the notice of intent deadline on Dec. 20. NYSERDA will pay subsidies collected from ratepayers for electricity produced by selected projects.

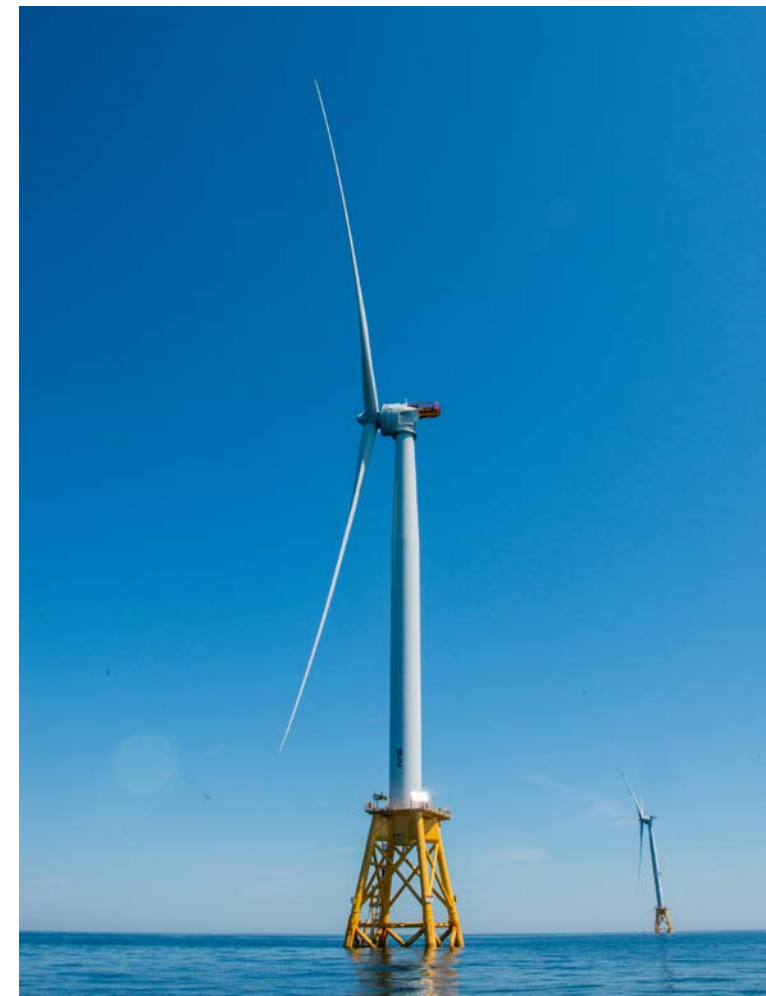
Quicken Loans URGES AMERICANS TO SWITCH TO A 15-YEAR FIXED
If you owe less than \$679,650, you may be shocked by how much Quicken Loans could reduce your total mortgage payments. Try this radically simple mortgage experience and see if you can lock a low rate that will never rise.

SELECT YOUR MORTGAGE BALANCE:
\$10K-\$100K \$100K-\$150K \$150K-\$200K
\$200K-\$250K \$250K+
CALCULATE NEW HOUSE PAYMENT

ABOUT THE AUTHOR
Marie J. French covers energy and the environment for POLITICO New York in Albany. She has covered state government in New York for the Albany Business Review and previously wrote about business and labor issues

Proposal Evaluation and Next Steps

- NYSERDA will employ a scoring system that weighs price and non-price factors for a maximum total of 100 points
 - **70% Price**
 - **20% Economic Benefits**
 - **10% Project Viability**
- Next Steps
 - **Bids Due: February 14, 2019**
 - Public versions of Proposals will be made available on NYSERDA's Offshore Wind website
nyserdera.ny.gov/offshore-wind-2018-solicitation
 - **Award(s): Spring 2019**
 - **Contracts(s): Summer 2019**



Stakeholder Engagement

Technical Working Groups – Environmental

- In November 2018, NYSERDA hosted its first **State of the Science Workshop** to bring together stakeholders engaged with environmental and wildlife research relevant to offshore wind energy development
- **Workshop highlights**
 - 183 workshop participants
 - 8 sessions with 32 presentations
 - 45 posters at evening poster session
 - Attendees and presenters from along the Eastern Seaboard, the UK, Belgium, and the Netherlands
- ★ **Report coming Spring 2019**



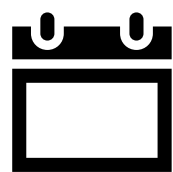
Technical Working Groups – Environmental

- Developing a synthesis of **best management practices (BMP)/monitoring and mitigation practices (MMP)** interactive tool that will be made publicly available and for use in discussions around Environmental and Commercial Fishing Mitigation Plans
- Initiating discussions around development of **BMPs** from **MMPs** at the project level (e.g. Vineyard Wind right whale agreement) and at the regional level for consideration in New York State procurements



Technical Working Groups – Commercial Fishing

- NYSERDA, in partnership with the New York State Department of Environmental Conservation and the Responsible Offshore Development Alliance, will be hosting a **workshop on commercial fishing transit lanes and offshore wind energy**



March 27, 2019

Danfords Hotel, Marina, and Spa

25 E Broadway, Port Jefferson, NY 11777

- Developing a synthesis of **best management practices (BMP)/monitoring and mitigation practices (MMP)** interactive tool that will be made publicly available and for use in discussions around Environmental and Commercial Fishing Mitigation Plans



Technical Working Groups – Maritime

- Kick-off meeting held **January 2019** by the Office of Planning and Development at the New York State Department of State
- **Working goals identified:**
 - Engage the maritime community and regulators in an unofficial and non-decision-making information sharing advisory capacity
 - Seek input from maritime stakeholders by drawing upon their collective technical knowledge and practical experience
 - Build off existing regional efforts
 - Include representatives of the USCG, PANYNJ (and the Harbor Operations committee), maritime and navigation communities and engagement of other state and federal agencies
 - Consult with the offshore wind development industry in an ad hoc manner and on an as needed basis



Technical Working Groups – Jobs and Supply Chain

- In November 2018, NYSERDA held its first **New York Offshore Wind Supplier Forum** to facilitate the introduction of offshore wind developers and suppliers to local companies
 - Attended by over **300 individuals** and over **150 companies** interested in offshore wind supply chain opportunities
- Developed the **New York Offshore Wind Supply Chain Database** to encourage in-state partnerships and attract international leaders across the offshore wind supply chain to New York companies (recently updated)



Visit <http://nyserda.ny.gov/supply-chain-database>

Technical Working Groups – Jobs and Supply Chain

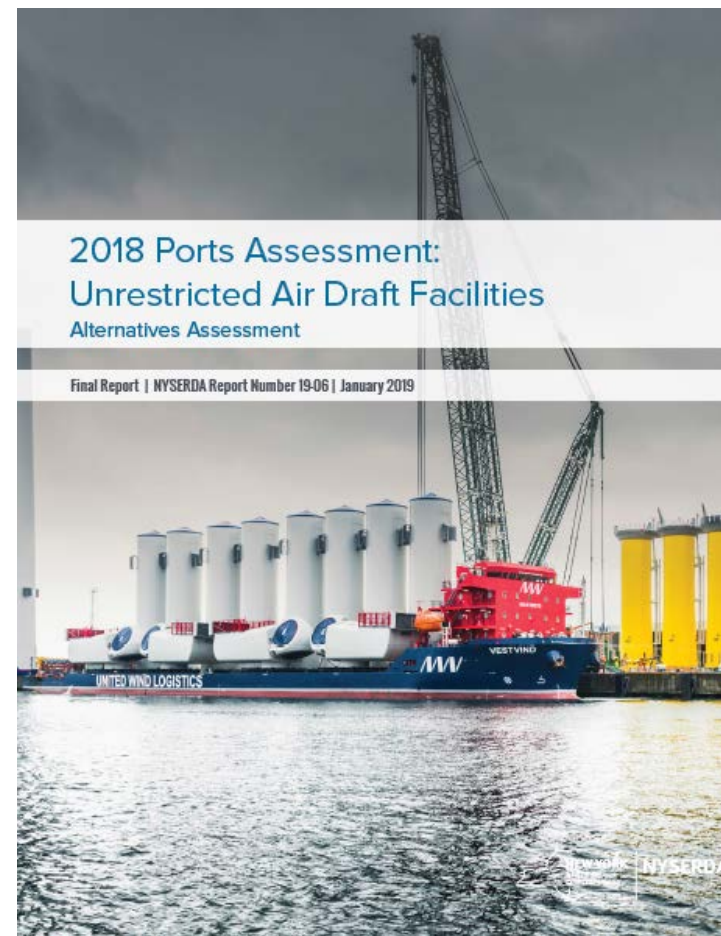
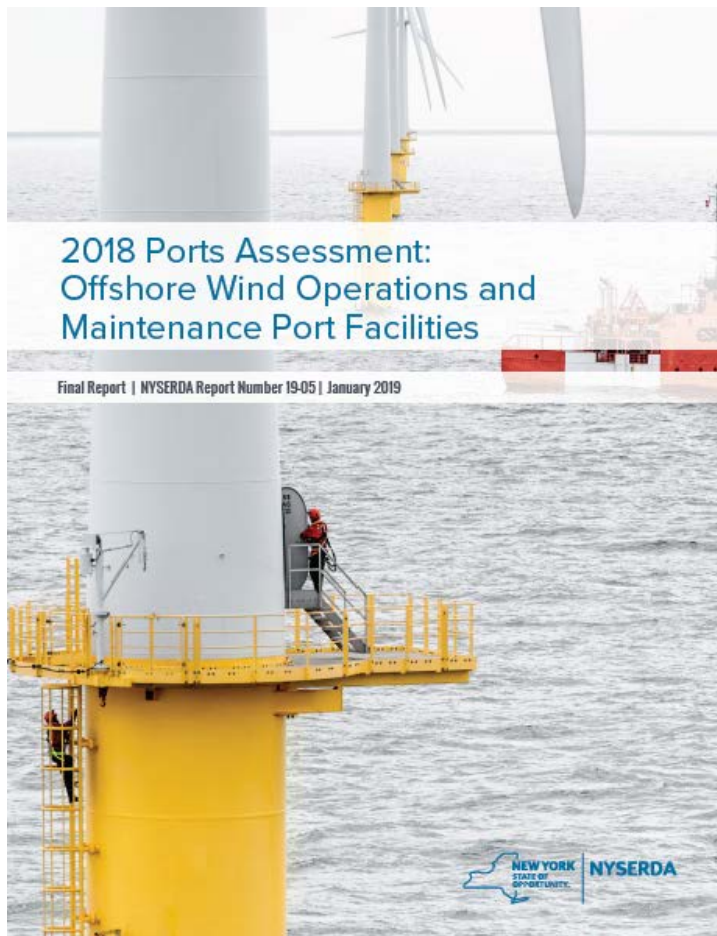
- Issuing funding opportunities for offshore wind workforce training as part of the State's **\$10 million** commitment
 - Vocational training
 - Training facilities
 - Certification programs
 - Union training
 - Apprenticeship opportunities
 - Curriculum development
- Recently published **6 new studies** on port infrastructure using guidance from the Technical Working Group



New and Upcoming Analyses

2018 Ports Assessment

General Studies



2018 Ports Assessment

Site-Specific Studies



2018 Ports Assessment: Port of Albany-Rensselaer

Pre-front End Engineering Design Report

Final Report | NYSERDA Report Number 19-02 | January 2019



2018 Ports Assessment: Port of Coeymans

Pre-front End Engineering Design Report

Final Report | NYSERDA Report Number 19-04 | February 2019



2018 Ports Assessment: Port Ivory

Pre-front End Engineering Design Report

Final Report | NYSERDA Report Number 19-03 | February 2019



2018 Ports Assessment: South Brooklyn Marine Terminal

Pre-front End Engineering Design Report

Final Report | NYSERDA Report Number 19-01 | January 2019



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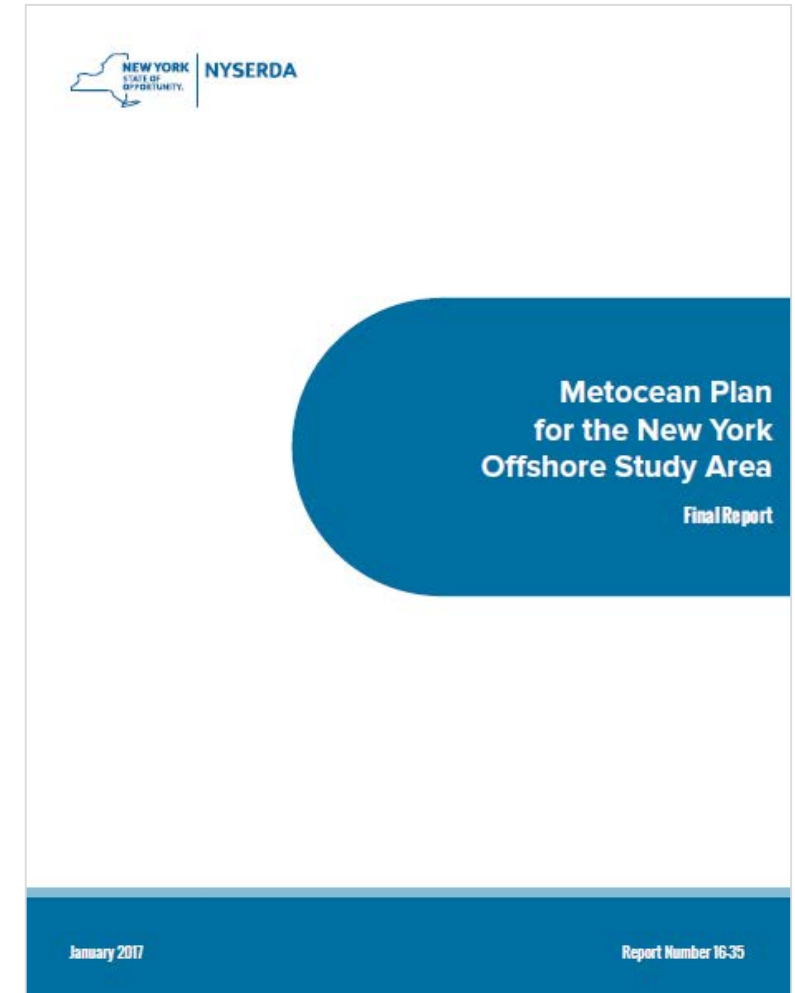


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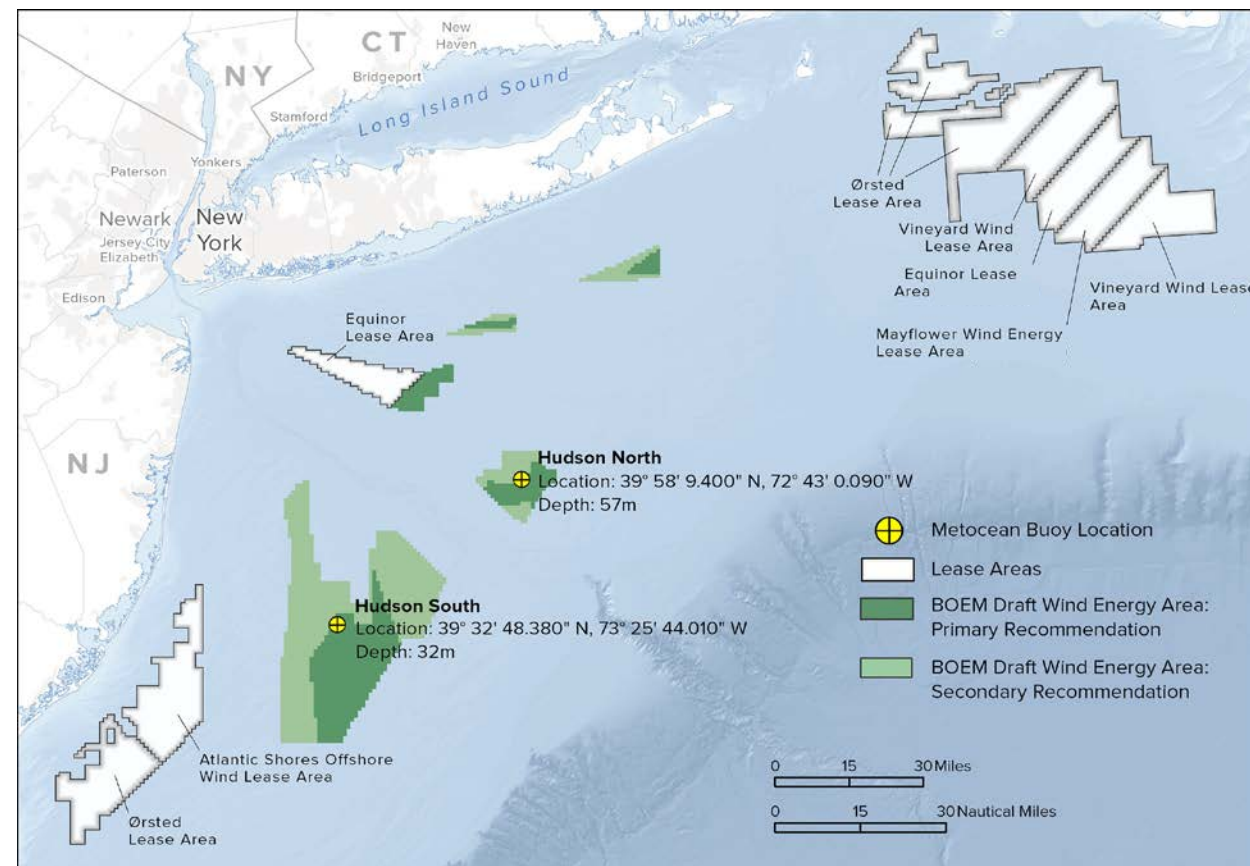
Environmental and Metocean Data

- Light Detection and Ranging (LiDAR) systems are being deployed to measure turbine hub-height **wind speed and direction, wave and current measurements**, and other **environmental data**
- Will help **increase certainty** of development conditions to inform planning project layout, turbine siting, and engineering
- Data will be **made available to the public on an ongoing basis** to encourage broad use and inform additional studies
 - Ocean Tech Services - Floating LiDAR System Supplier
 - Normandeau Associates – Environmental Data
 - DNV GL – Data Management and Analysis Contractor



Environmental and Metocean Data

- **Location:** New York Bight, BOEM draft Wind Energy Areas
- **Time period:** 2 year deployment; possible relocation
 - **“Bankable” Metocean data**
 - Wind
 - Waves
 - Currents
 - Other meteorological data
 - **Wildlife data**
 - Bird acoustic monitoring
 - Bat acoustic monitoring
 - Marine mammal hydrophone and data logger
 - Nanotag receiver



Environmental and Metocean Data

Outputs:

- Metocean data will be made publicly available via DNV GL data portal, plus annual reporting
- Wildlife data via Normandeau “REMOTE” data platform, plus reporting summarizing wildlife data including species occurrence, seasonal patterns, presence of T&E species



Environmental & Commercial Fishing Research Solicitation

- Expected to be released in **March 2019**
- **\$2,000,000** available across multiple topics
- Proposed topical areas:
 - Ecosystem dynamics
 - Wildlife monitoring protocols
 - Citizen science opportunities
 - Fishing access within arrays
 - Cold pool mixing



National Offshore Wind Research & Development Consortium

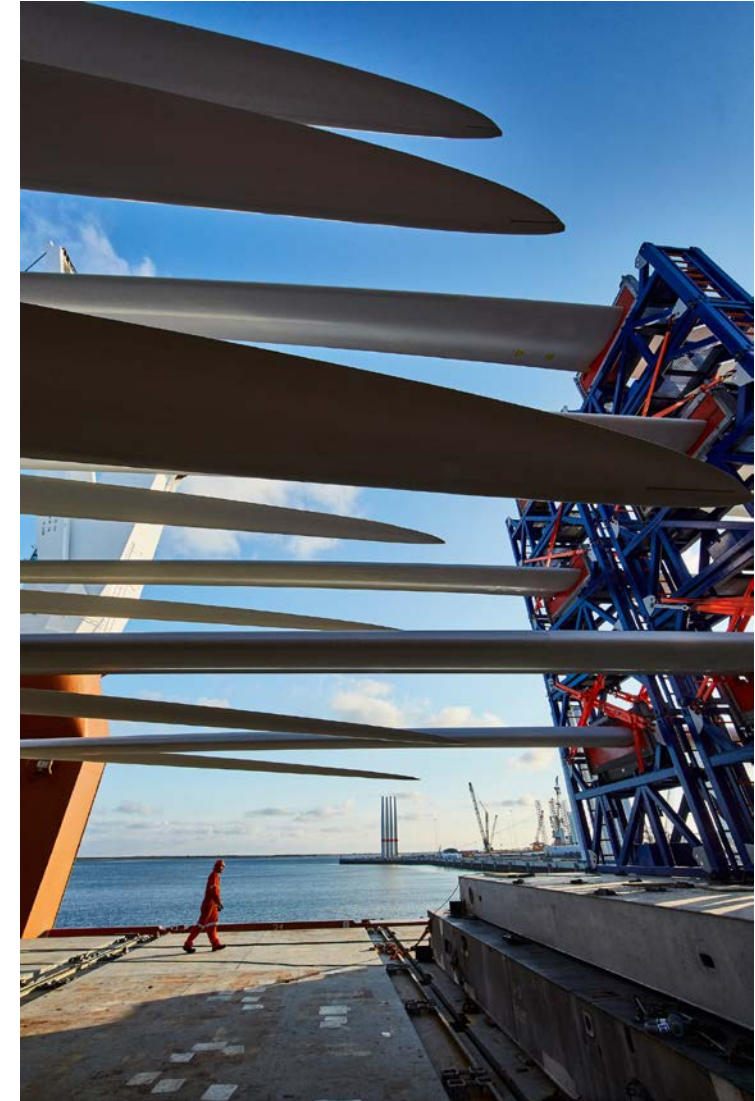


- Dedicated to managing industry-focused research and development of offshore wind to maximize economic benefits for the U.S.
- Prioritized **Research and Development Roadmap** and **Notice of Upcoming Technical Challenges** published in November 2018
- First solicitations expected in Q1 of 2019
 - Offshore Wind Plant Technology Advancement
 - Offshore Wind Power Resource and Physical Site Characterization
 - Installation, O&M and Supply Chain Solutions

Upcoming Events and Activities

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- First Offshore Wind Research & Development Consortium solicitation expected **February 2019**
- Environmental and commercial fishing research solicitation expected **March 2019**
- Commercial Fishing Transit Lanes and Offshore Wind Energy Workshop being held **March 27, 2019**
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Questions?

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NYSERDA