

Offshore Wind Energy in the Northeast Region Special Session

IV. Updates on specific projects and leases

NEFMC Meeting
April 18, 2019



Ørsted U.S. Offshore Wind

New England Fisheries Management Council

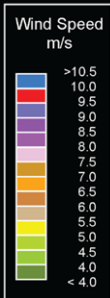
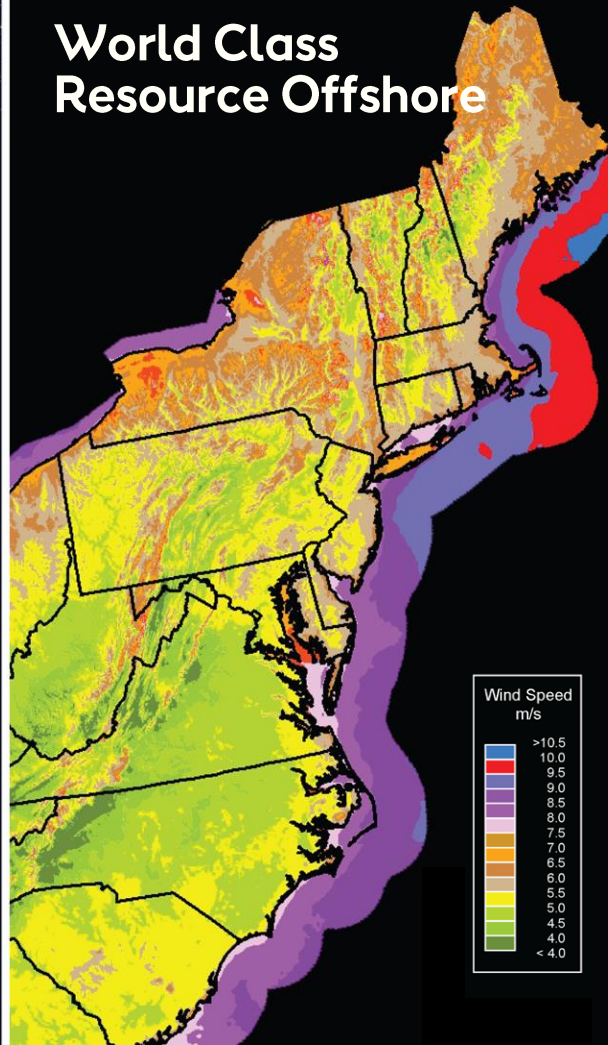


John O’Keeffe
April 18th, 2019

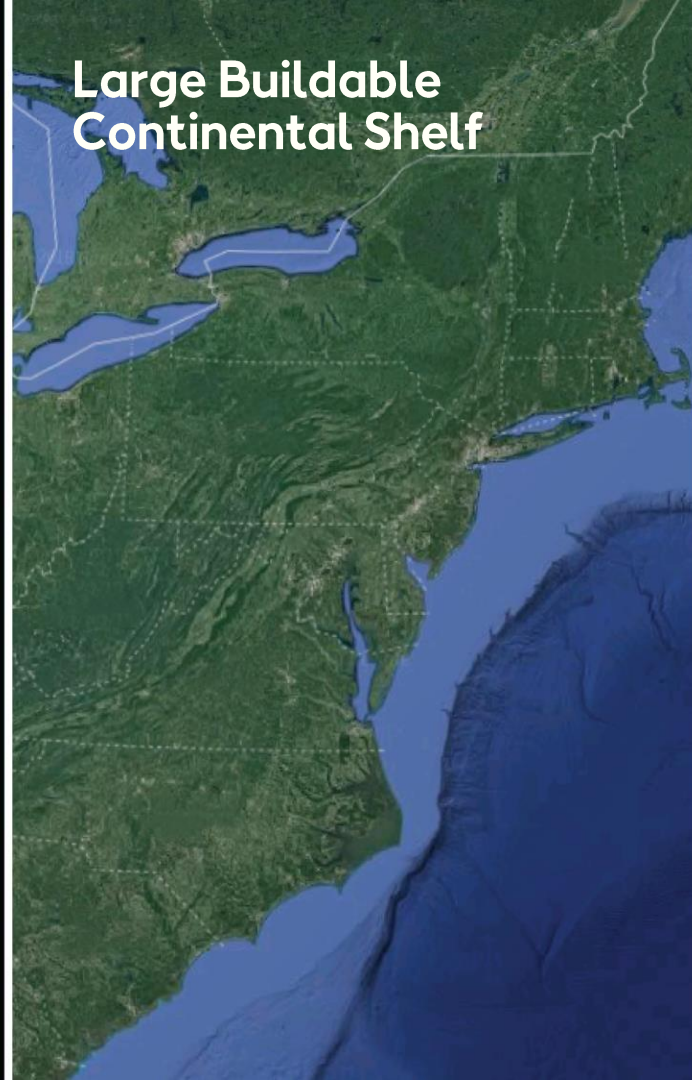
Huge Coastal Electricity Demand



World Class Resource Offshore

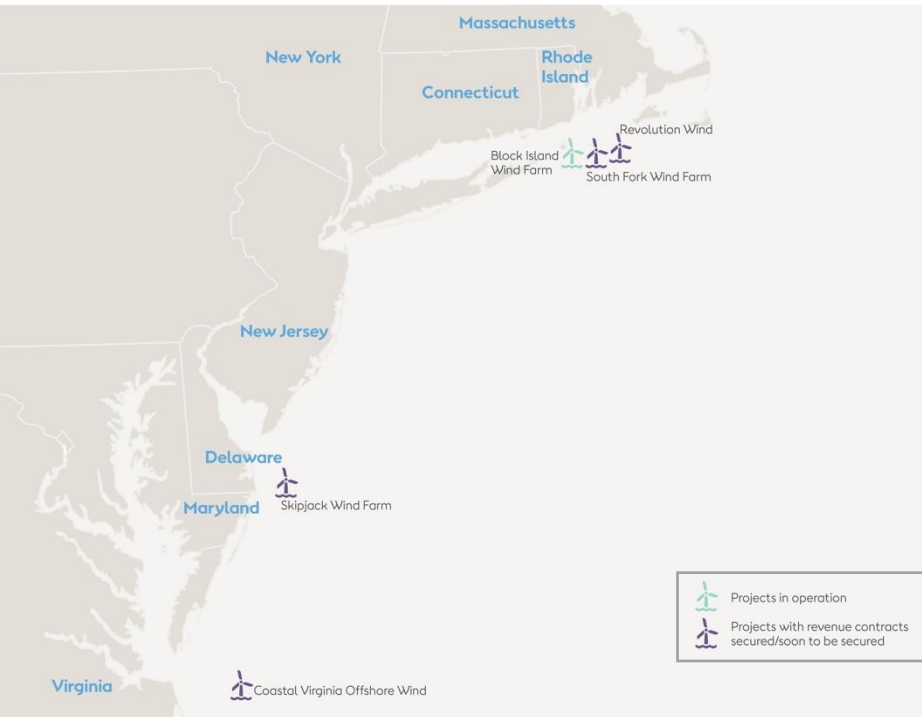


Large Buildable Continental Shelf



Ørsted U.S. Offshore Wind portfolio

Attractive and geographically diverse portfolio of offshore wind assets



In Operation

Block Island Wind Farm: 30MW

Projects with revenue contracts (secured or soon to be secured)

South Fork Wind Farm: 130MW; 50/50 JV with Eversource

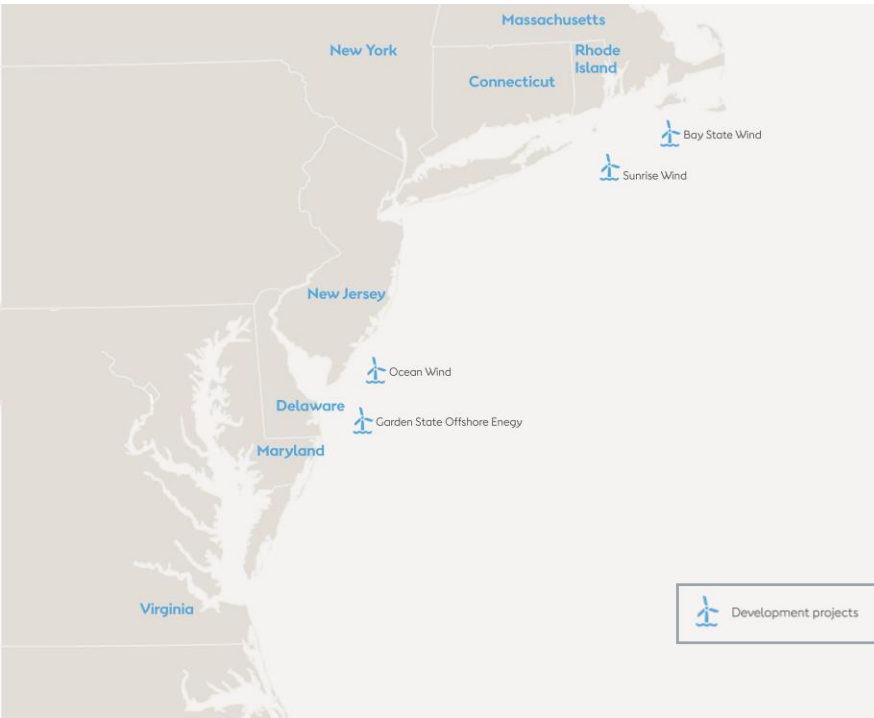
Skipjack Wind Farm: 120MW

Revolution Wind: 700MW (400MW to RI, 300MW to CT);
50/50 JV with Eversource

Coastal Virginia Offshore Wind: 12MW demo project

Ørsted U.S. Offshore Wind – in the pipeline

Potential for 8-10GW



Development projects

Ocean Wind: potential for up to 3.5GW of development

Garden State Offshore Energy: potential for up to 1.2GW of development

Bay State Wind: potential for up to 2GW of development; 50/50 JV with Eversource

Sunrise Wind: 50/50 JV with Eversource

Block Island Wind Farm

America's first offshore wind farm



30MW project



17,000 homes



First in the nation

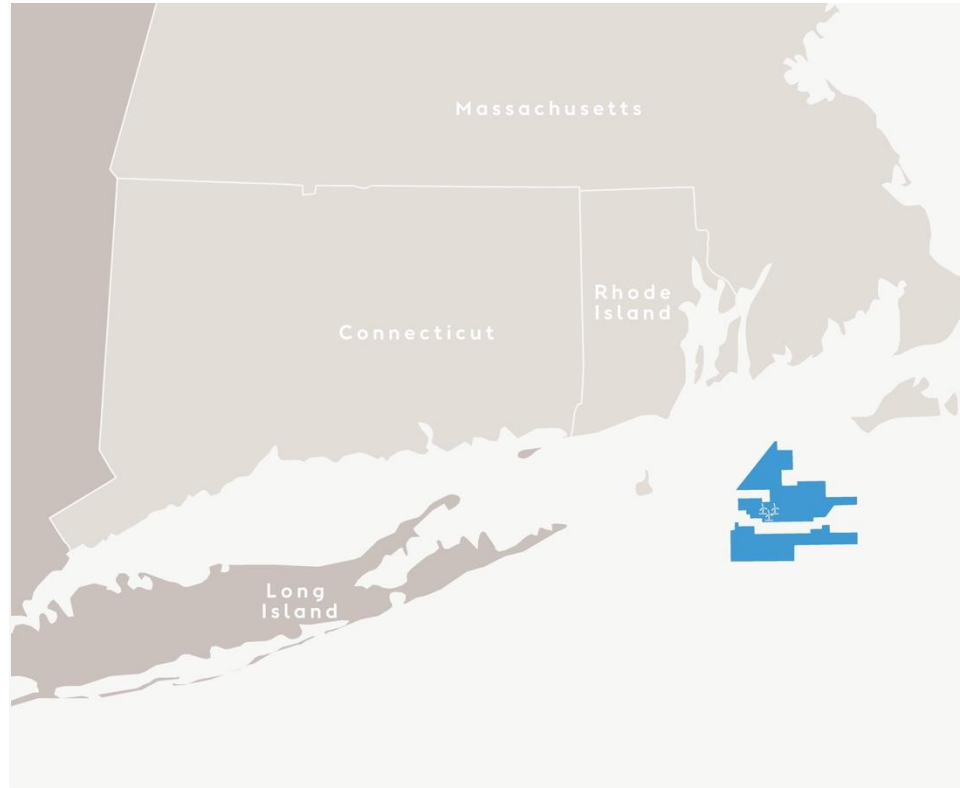


South Fork Wind Farm Overview

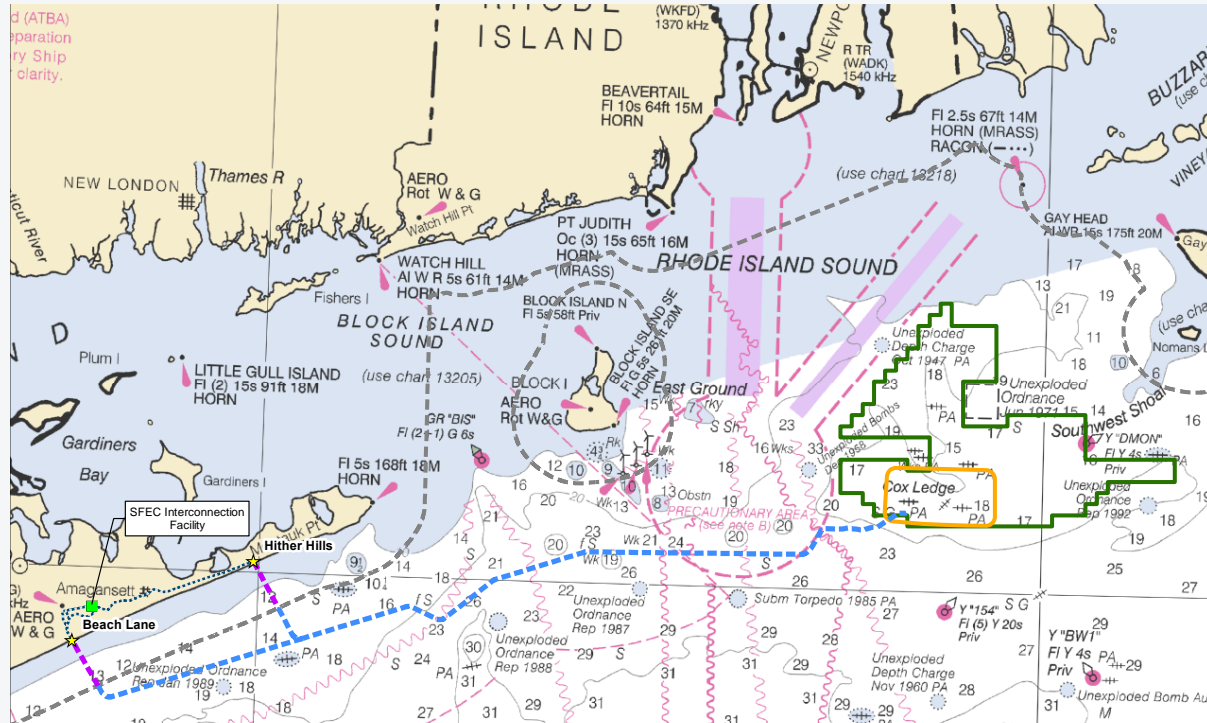
- 50/50 JV with Eversource, New England's premier transmission builder and operator
- 35 miles east of Montauk Point
- The South Fork Export Cable will deliver power to the substation located off Cove Hollow Rd in the Town of East Hampton
- Will power 70,000 Long Island homes

Schedule

Ongoing	Stakeholder meetings
2018	Apply for permits
2020	Permit approvals
2021	Installation begins offshore
2022	Commercial operations



Project Location



Revolution Wind Overview

- 50/50 JV with Eversource, New England's premier transmission builder and operator
- Three power contracts to date
 - CT 200MW - approved by regulators in December 2018
 - RI 400MW - contract filed with RI PUC in February 2019
 - CT 100MW - contract under negotiation
- Will power over 300,000 CT and RI homes

Schedule

Ongoing Stakeholder meetings

2019 Apply for permits

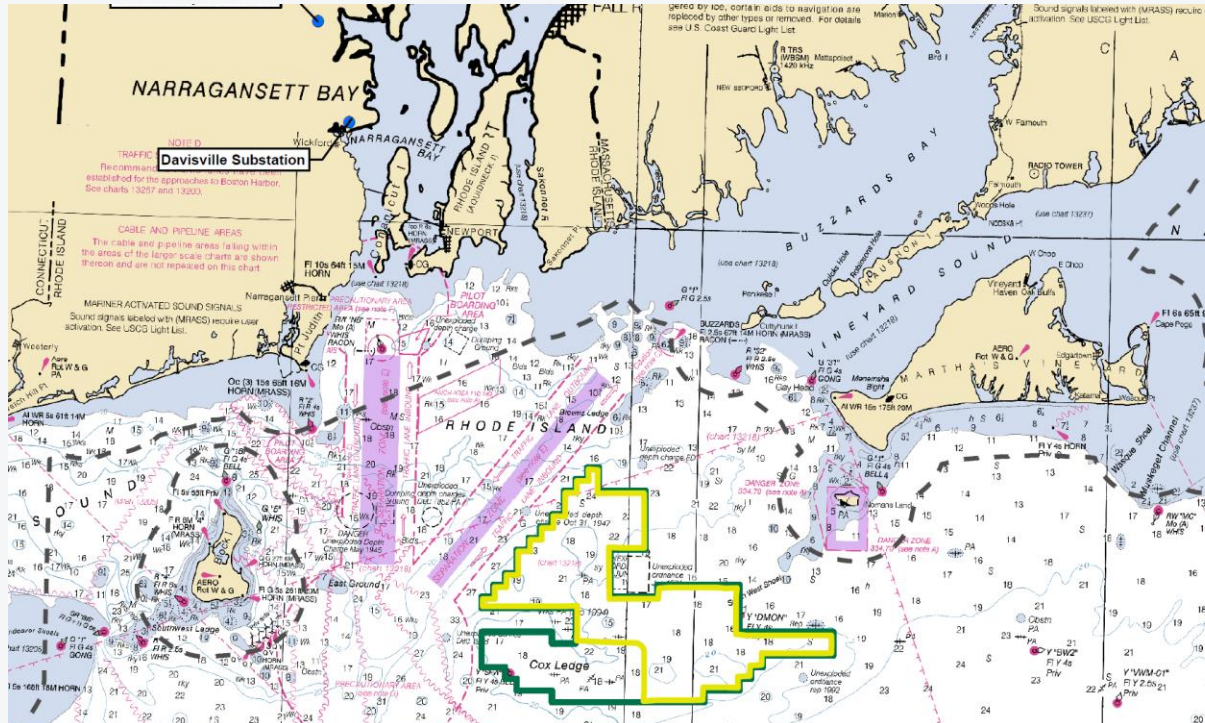
2021 Permit approvals

2021 Installation begins offshore

2023 Commercial operations



Project Location



Bay State Wind Overview

- 50/50 JV with Eversource, New England's premier transmission builder and operator
- ~14 miles south of Martha's Vineyard
- Up to 2,000MW potential capacity
- 73,657 acres within Massachusetts Wind Energy Area Lease OCS-A 0500

Schedule (subject to change)

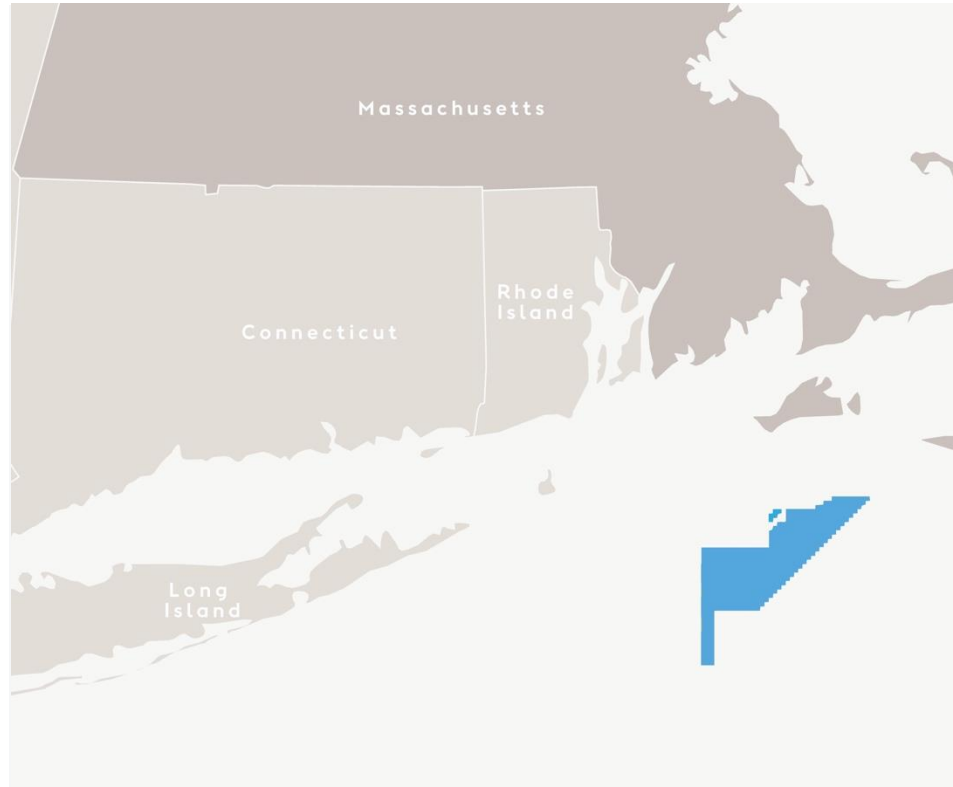
Ongoing Stakeholder meetings

2019 Submit COP

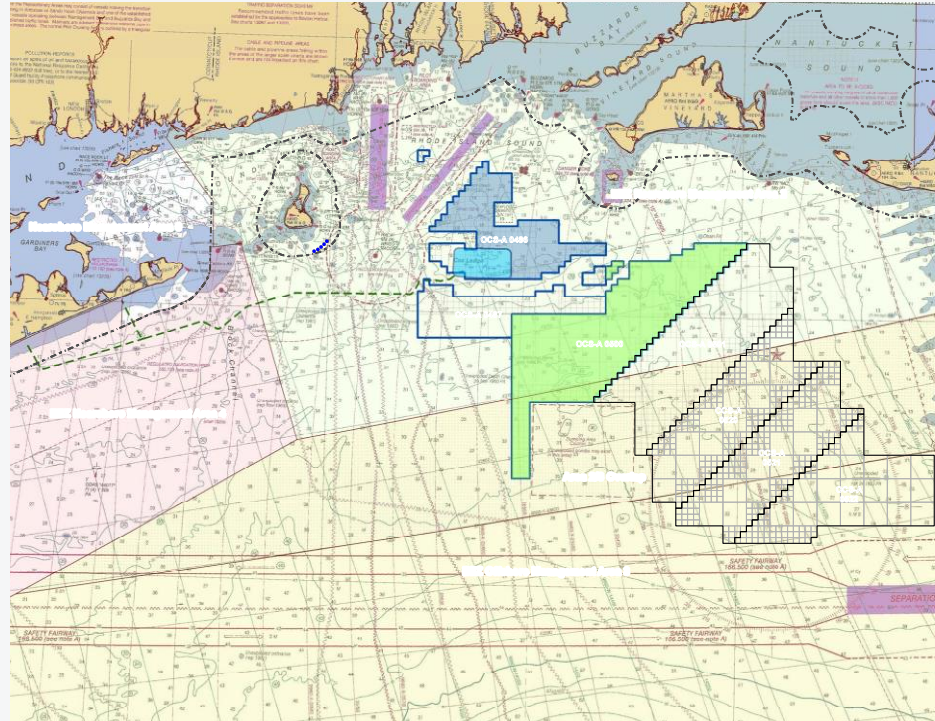
2020 All Permits

2022 Installation begins offshore

2023 Commercial operations



Project Location



Sunrise Wind

Best Site to Serve New York

- Over 30 miles away, over the horizon
- Most de-conflicted, based on extensive stakeholder engagement

Partnerships with NY's Premier Transmission Developers

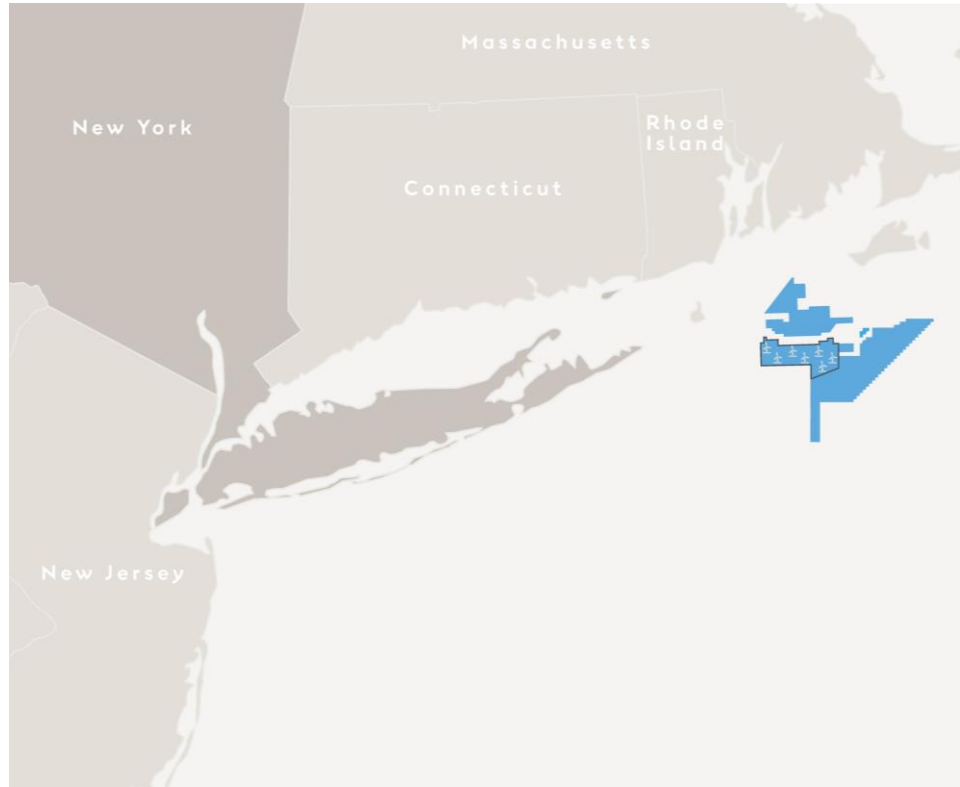
- Sunrise Wind is supported by Con Edison Transmission and NYPA, who will cooperate in the development of the transmission system
- After construction, Con Edison and NYPA will have the opportunity to invest in the transmission system

Most Experienced Team

- Ørsted has the most experience building offshore wind
- Eversource brings unmatched expertise in the region's electric system

The Hometown Team

- Our team has been working on Long Island since 2010
- We are the only developer with Long Island-based staff and office



Upcoming Survey Work

- We send out regular Mariners Briefings and Information for Mariners documents to keep mariners informed of activities within our lease areas
- Starting April 1st, 2019, we will be conducting geotechnical surveys in Massachusetts Wind Energy Area Lease OCS-A 0500
- For more information, and to find these documents, visit <http://dwwind.com/information-for-mariners/>



Conti
MV Conti is used for geotechnical surveying. It employs a dynamic positioning system to maintain position when on site.
Flag: USA
LOA: 210 ft
Beam: 54 ft
DWT: 2340 mt
Call Sign: WDD3645
IMO: 9285299



Regulus
MV Regulus is used for geotechnical surveying. It employs a dynamic positioning system to maintain position when on site.
Flag: USA
LOA: 272 ft
Beam: 58 ft
DWT: 3360 mt
Call Sign: WCD2967
IMO: 9582324

Contact

For fisheries related inquiries:

Rodney Avila
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B27M Fisheries Liaison
Phone: 207.939.7055
Email: John@seakeeper.net

John O'Keefe
Director Marine Affairs
Phone: 857.332.4485
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Julia Prince
C77M Fisheries Liaison
Phone: 857.348.3263
Email: JULPRI@orsted.com



New England Survey Activity Information for Mariners

Date of Notice: April 01, 2019

Overview

These briefings are intended to update mariners on marine operations for the Bay State Wind survey activities. Survey operations are planned for locations throughout the lease area (see chart) and are expected to last several months. These operations involve only the survey phase of the projects.

Mariners briefings are submitted as needed to the U.S. Coast Guard and distributed to the fishing community and interested mariners on our website at: dwwind.com/information-for-mariners or via email upon request through Rodney Avila (RODAV@orsted.com).

Vessels will designate a working channel on VHF 16 daily at 0600 and 1800

About the Wind Farm

Bay State Wind (BSW), a 50-50 joint venture between Orsted and Eversource, is a planned offshore wind farm located 14 miles south of Martha's Vineyard. BSW will contain an offshore substation, and a subsea transmission system able to deliver clean energy to the New England electrical grid.

Ongoing Survey Activities

- Projected Beginning April 2019
- Projected End: July 2019



Thank You

John O’Keeffe

Director of Marine Affairs, U.S.

JOHNO@orsted.com

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Mayflower Wind Energy, LLC

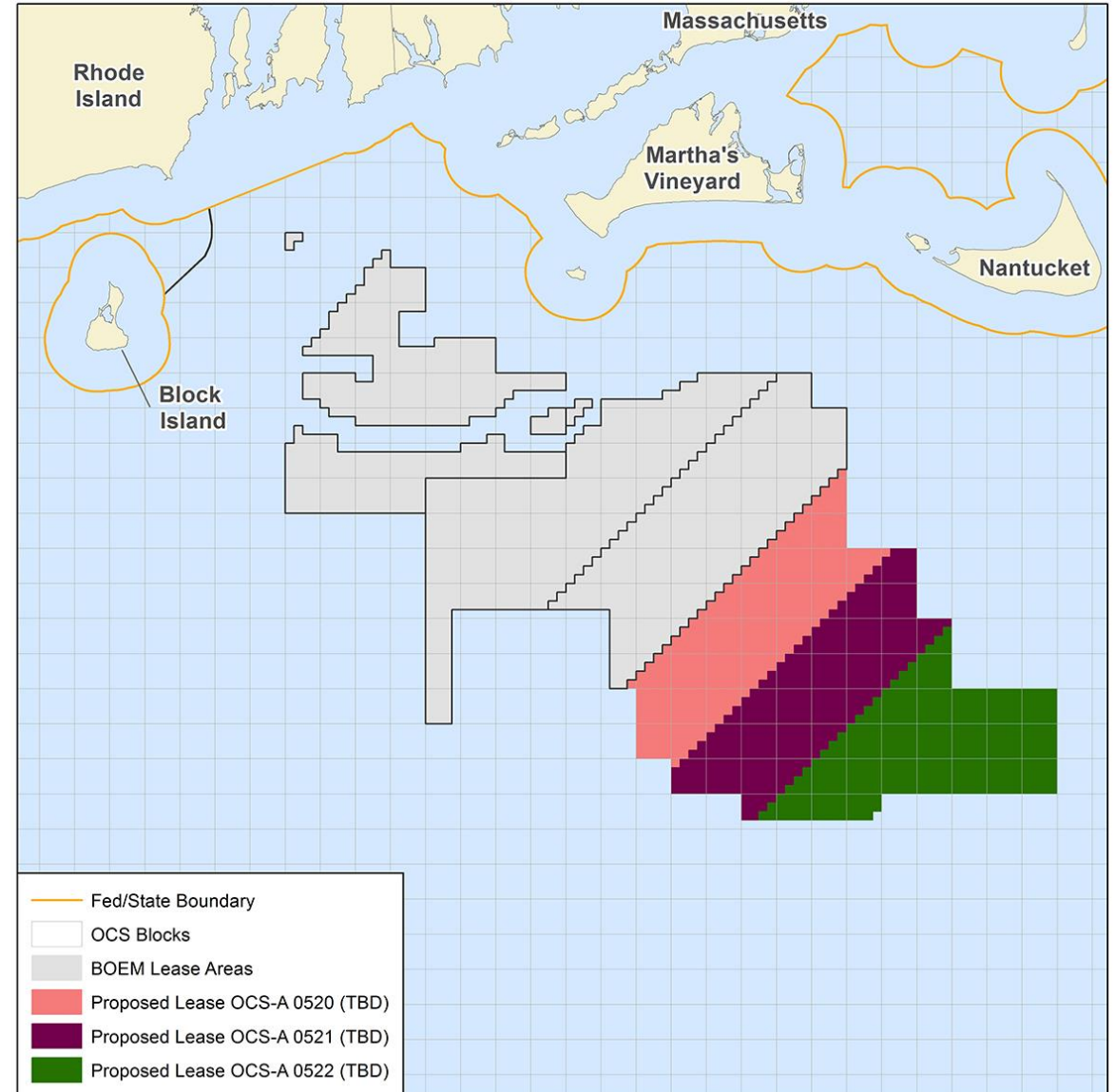
Joint venture between EDP Offshore North America, LLC & Shell New Energies, LLC



renewables



- » Developing BOEM OCS-0521 (~127,000 acres)
- » Lease can accommodate a project of around ~2.0 GW
- » Venture is currently initiating formal development efforts to bring the wind farm into operation by mid-2020s



<https://www.boem.gov/Massachusetts-Proposed-Commercial-Wind-Leases/>

Mayflower Capabilities



- 4th largest global wind energy developer
- Operates 48 onshore farms across the US; Developed and operates a number offshore projects in Europe

- 40 years of operations in the US offshore
- Actively developing and/or operating offshore wind projects in the Netherlands



Atlantic Renewable Energy Program Update

New England Fishery Management Council
April 18, 2019

BOEM Office of Renewable Energy Programs



Leasing and Development Process

Initiate
Leasing Process
(RFI/Call)



Area Identification
Wind Energy Areas

Publish
Leasing Notices

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NEPA/Environmental Reviews

Lease
Granted



Submit SAP



Pre-survey
Meetings/Plan

0

1

Auction



BOEM Reviews &
Approves SAP



Site Assessment & Surveys
(maximum timeframe)



0

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Submit COP
(with Project Design Envelope – optional)



BOEM Deems COP
Complete & Sufficient



0

BOEM
Approves COP



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1

Submit Design &
Installation Plans



BOEM Environmental
& Technical Reviews

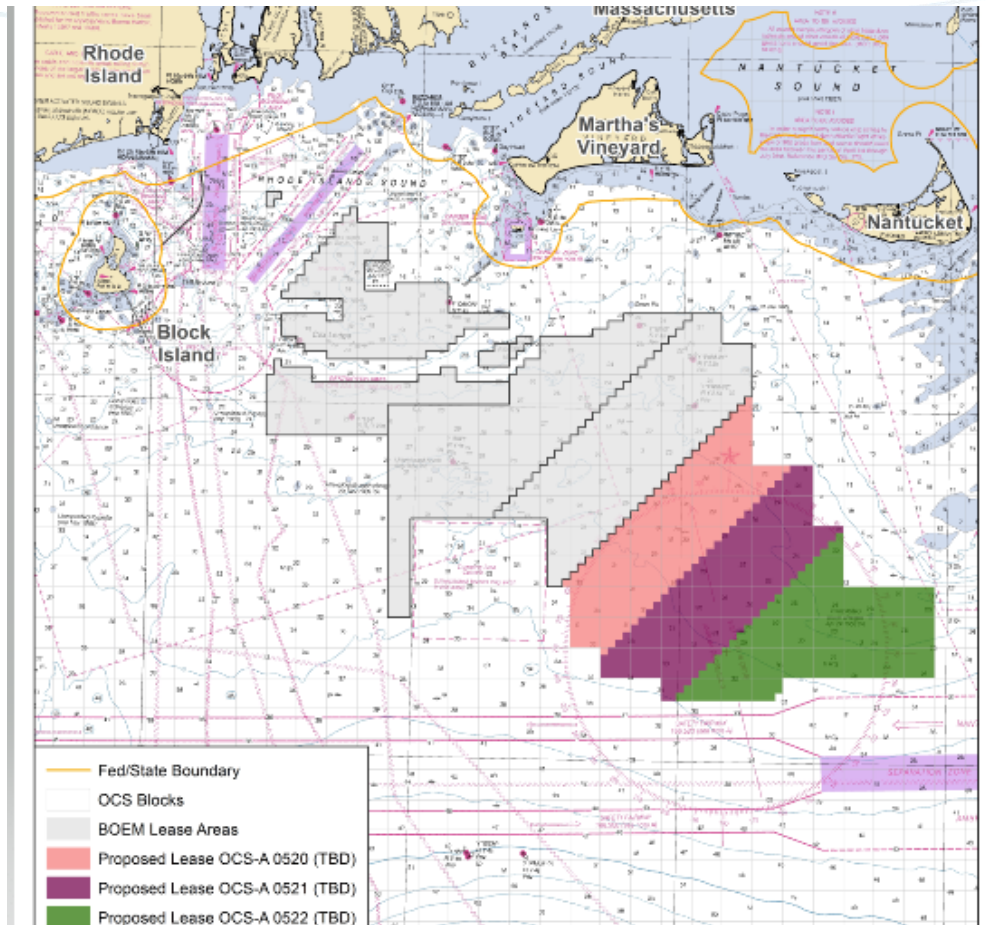


Installation



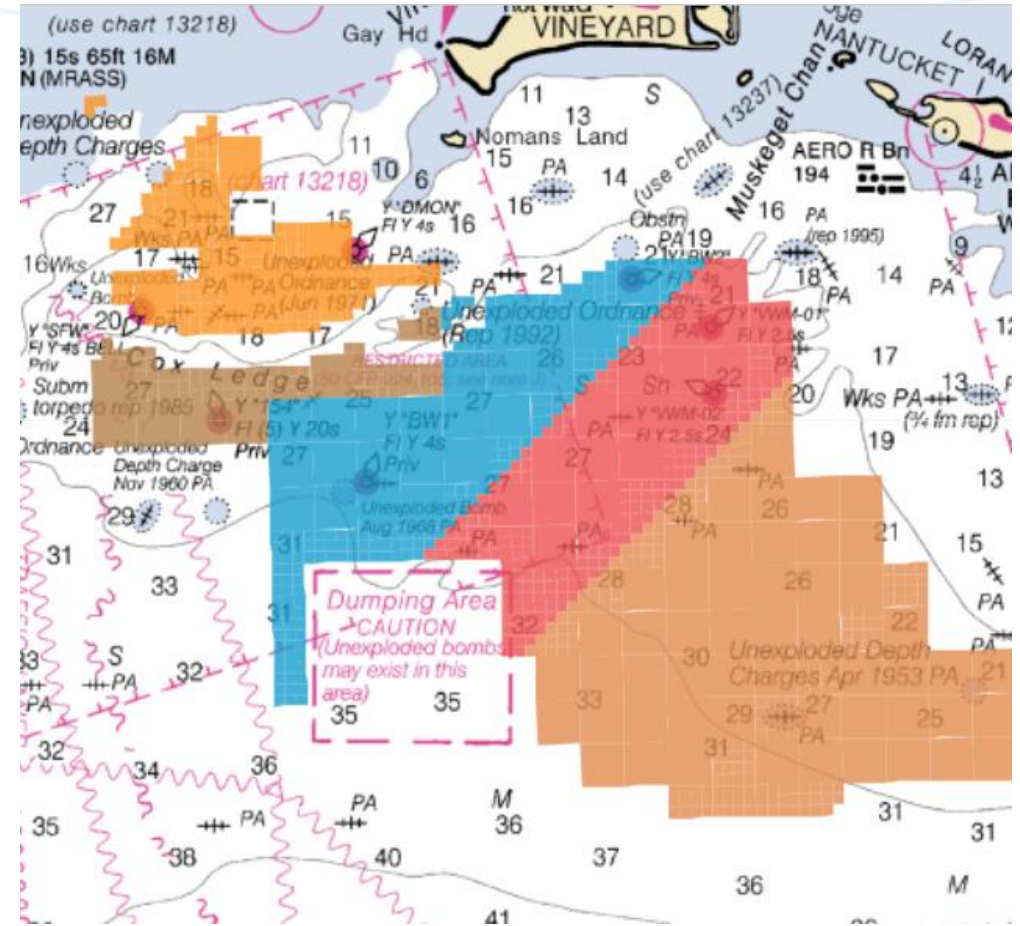
Project Status Updates 1

- **Atlantic Link (Emera):** Next step is a request for competitive interest to determine the leasing path.
- **Vineyard Liberty:** Lease OCS-A 0522 executed in March 2019.
- **Mayflower (Shell/EDPR):** Lease OCS-A 0521 executed in March 2019.
- **Equinor:** Lease OCS-A 0520 executed in March 2019



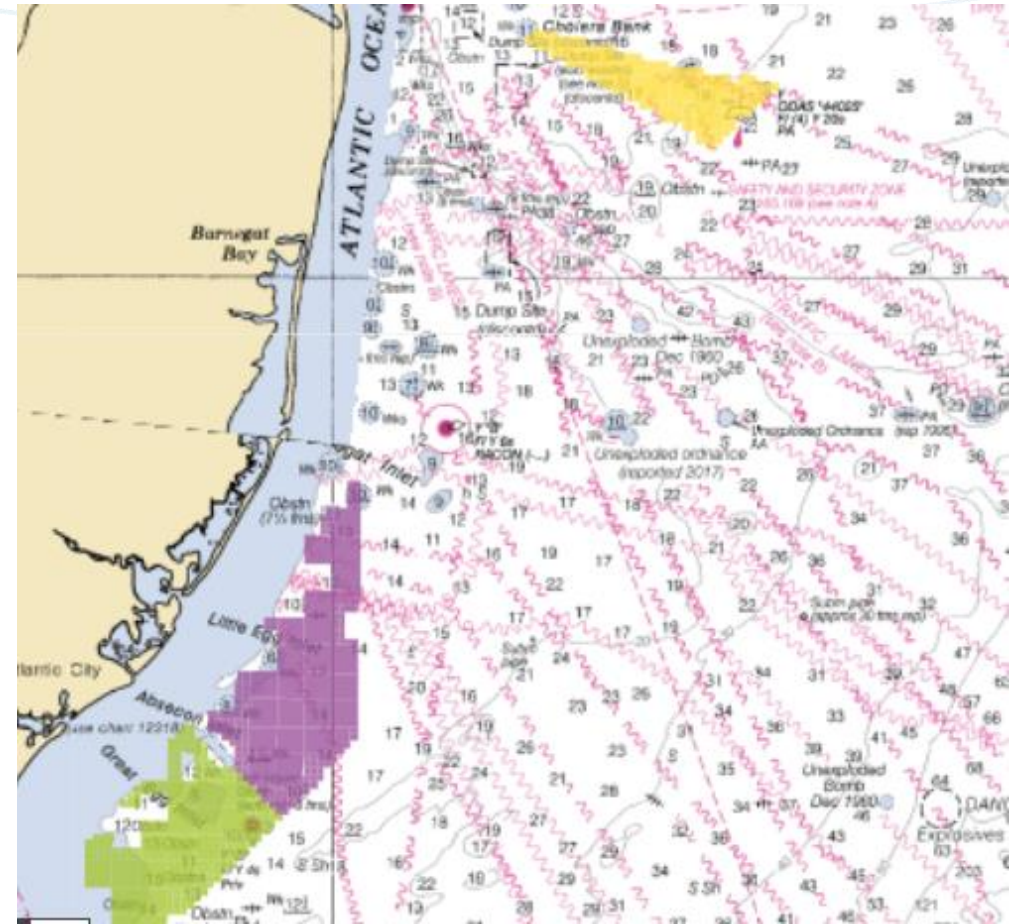
Project Status Updates 2

- **Vineyard Wind: COP submitted, DEIS Published, drafting of FEIS/response to comments underway.**
- **Bay State Wind: Surveys ongoing, COP submitted in March, completeness and sufficiency review underway.**
- **South Fork Wind Farm: COP submitted, Scoping meetings held, DEIS under development.**
- **Revolution Wind Farm**
- **Sunrise Wind Farm**



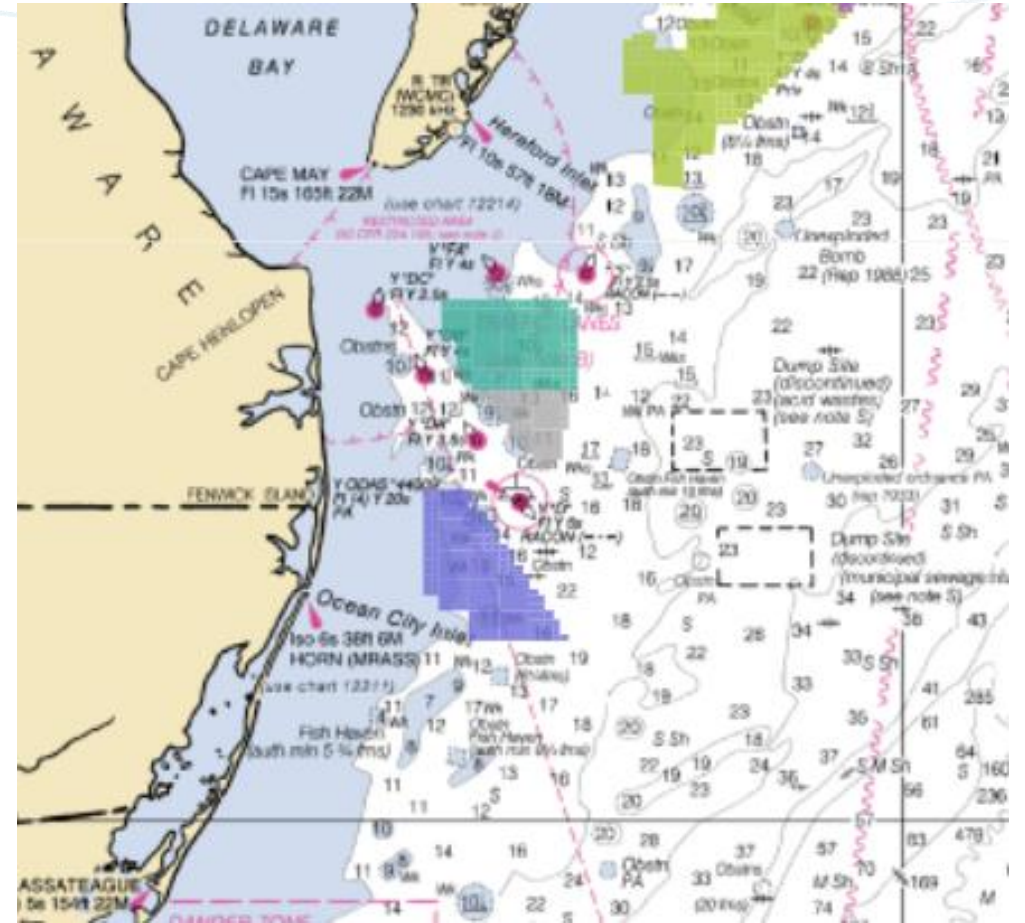
Project Status Updates 3

- **Empire Wind (Equinor): SAP approved November 2018.**
- **Atlantic Shores (EDF/Shell).**
- **Ocean Wind NJ (Orsted): SAP approved May 2018.**
- **Anbaric NY/NJ Ocean Grid (transmission): Next step is Request for Competitive Interest.**



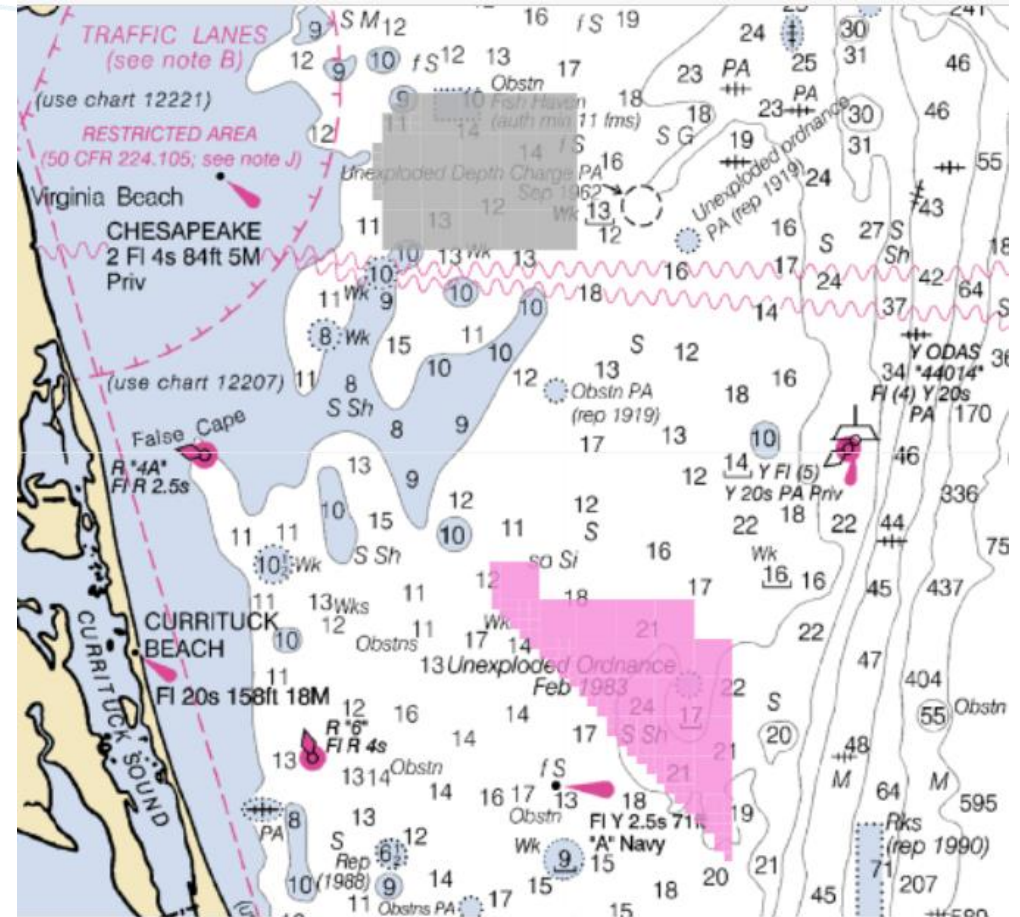
Project Status Updates 4

- Skipjack Wind Farm (Orsted): Surveys ongoing.
- US Wind MD (Toto/Renexia): SAP approved.



Project Status Updates 5

- Coastal Virginia Offshore Wind Project (demonstration scale with VA DMME/Orsted/Dominion). Revised RAP under review.
- Virginia (Dominion). SAP approved.
- Commercial Lease OCS-A 0508 (aka Kitty Hawk): Surveys beginning.



New York Bight Update

Call for Information and Nominations



Public Comment

45 days

Area Identification

Wind Energy Areas

0

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Leasing Document Development

0

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Public Comment

60 days

Environmental Assessment Process & Public Involvement



Proposed Sale Notice

CZMA Consultation



Final Sale Notice

PSN

Auction



Potential Task Force Meetings/Webinars



Call



Area ID



PSN

The “Path Forward”

- **Includes:**
 - Develop an Efficient and Predictable Regulatory Process
 - Regulatory streamlining
 - One Federal Decision
 - Design Envelope
 - Develop a regional approach
 - Regional Gulf of Maine Intergovernmental Task Force
 - Regional South Atlantic Intergovernmental Task Force
 - Promote clean and safe energy development
 - Marking and lighting guidelines

BOEM

Bureau of Ocean Energy
Management

BOEM.gov



Brian Hooker | brian.hooker@boem.gov | 703-787-1634



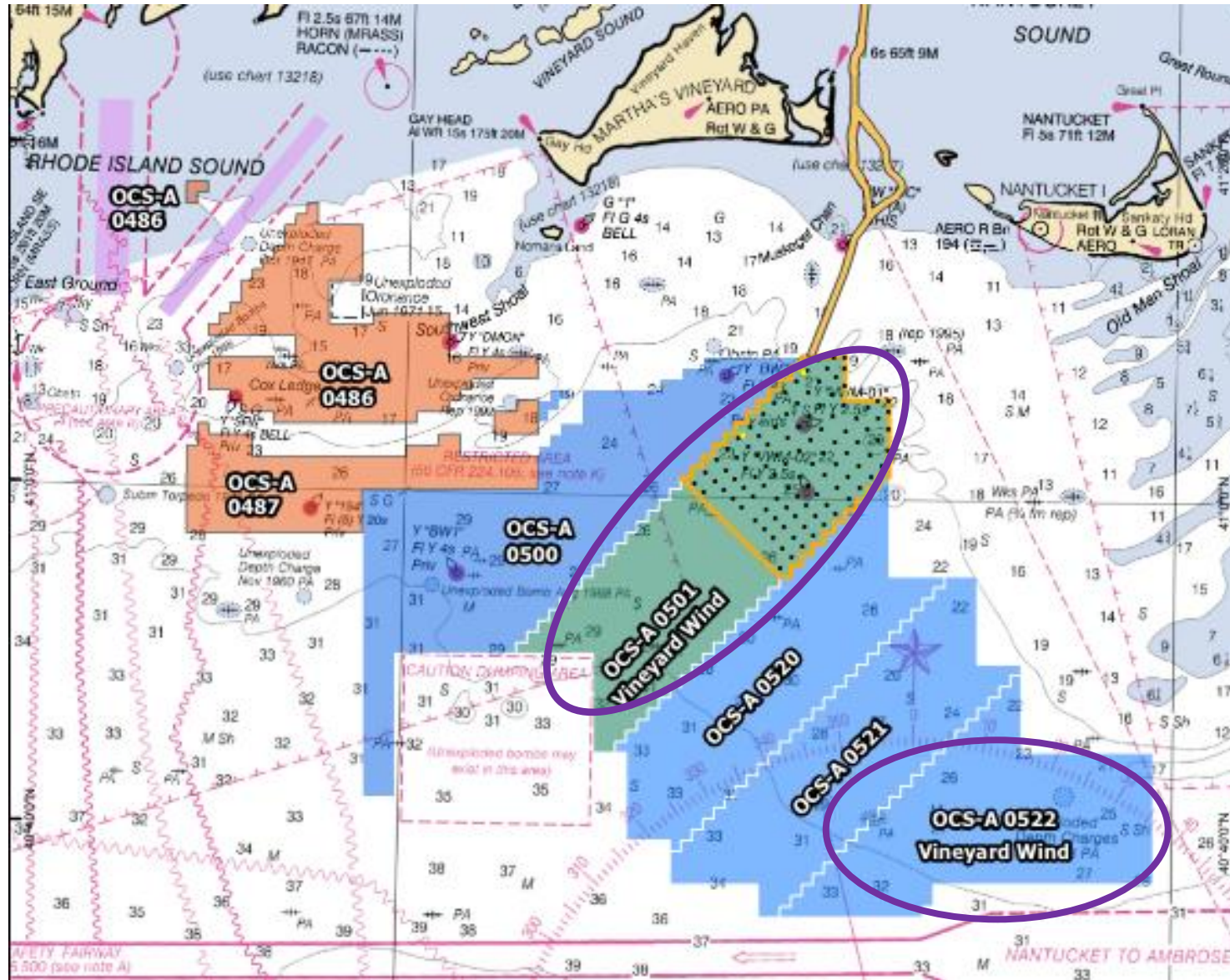
VINEYARD WIND

PROJECT UPDATE

New England Fishery Management Council

April 18, 2019

VINEYARD WIND LEASE AREAS



PERMIT UPDATE

FEDERAL – BOEM Lead Federal Agency

- Draft Environmental Impact Statement (DEIS) released December 2018
- Final Environmental Impact Statement (FEIS) expected Summer 2019

STATE

- Massachusetts Environmental Policy Act (MEPA)
 - Issued Certificate for Final Environmental Impact Report (FEIR) in February 2019
- State and Local Permitting ongoing

RIGHT WHALE PROTECTION

- Agreement with Environmental Groups
- Seasonal restrictions, vessel speed restrictions, acoustic and visual monitoring
- Noise reduction measures during pile driving

CABLE CONSTRUCTION TIMELINE

Onshore work – Barnstable

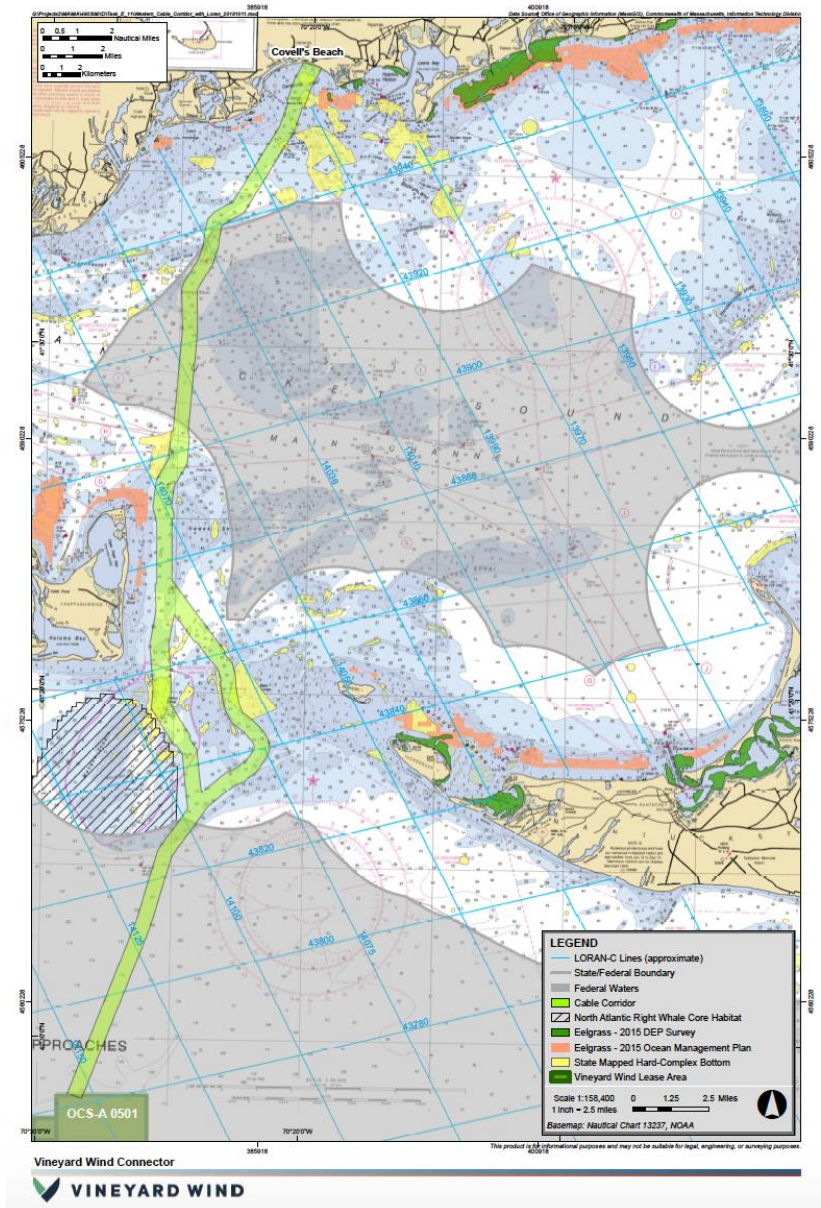
- Starts fall 2019

Offshore work

- Starts late summer 2020

Cable Route

- Fall 2020 most of Nantucket Sound
- Early spring 2021 southern Nantucket Sound to wind farm



FISHERY REPRESENTATIVES

Vineyard Wind is looking to expand our network of Fishery Representatives

- Represent the fishermen, port, fishery, sector, organization; provide feedback into the project

Existing Representatives

- New Bedford Port Authority, Ed Washburn
- New Bedford Seafood Consulting, Jim Kendall
- Martha's Vineyard Fishermen's Preservation Trust, Shelley Edmundson
- Massachusetts Lobstermen's Association, Beth Casoni

Please contact Crista Bank (cbank@vineyardwind.com) if interested

FISHERY OUTREACH APPROACH

- Fishing Representatives
- MA FWG, RI FAB meetings
- Outreach to fishing organizations
- Individual meetings / phone calls with fishermen, word of mouth, dock visits
- Outreach events
 - MLA annual weekend
 - Commercial Marine Expo
 - New England Saltwater Fishing Show
 - RISAA meeting
 - Falmouth Fishermen's Association



CONTACT DETAILS

Crista Bank – Fishery Liaison
Cbank@vineyardwind.com
phone: 508-525-0421

Rachel Pachter – Vice President of Permitting Affairs
Rpachter@vineyardwind.com

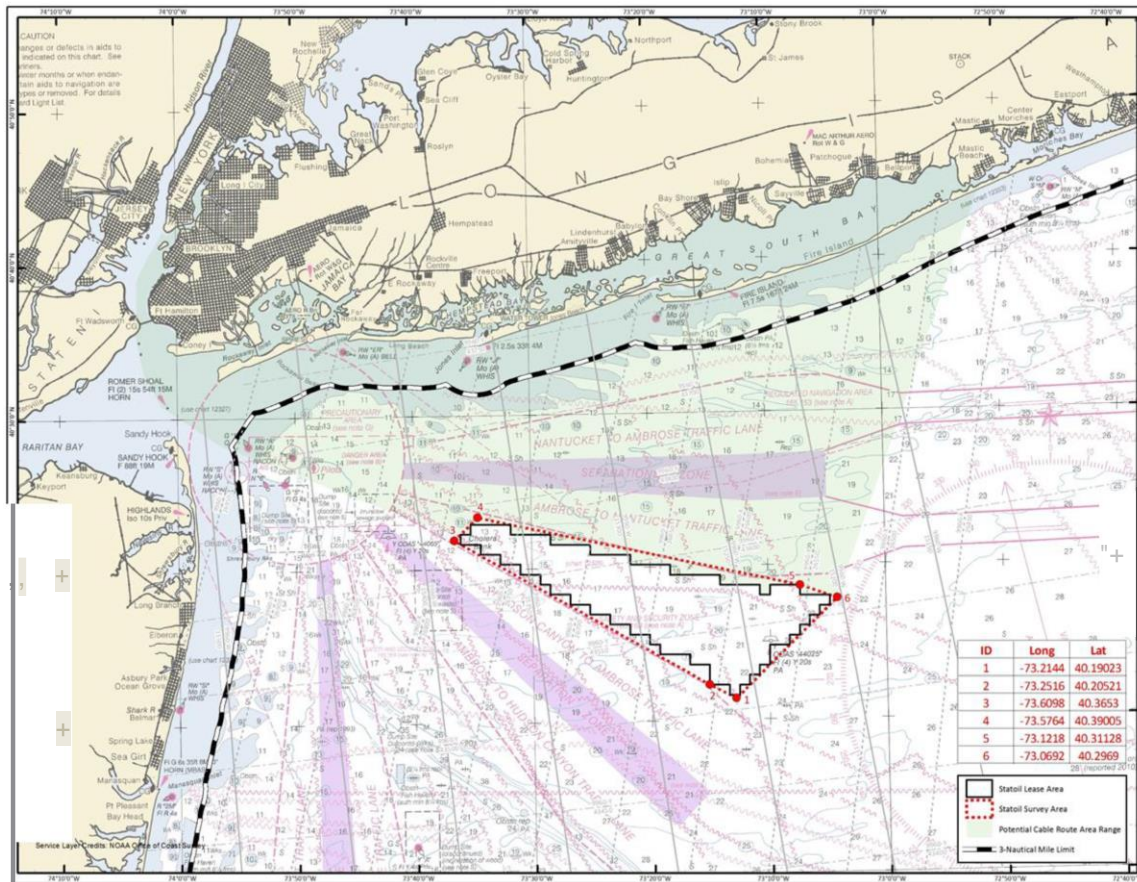
**To sign up for updates and see the latest notices/information please
visit
www.vineyardwind.com/fisheries**

Equinor Wind US

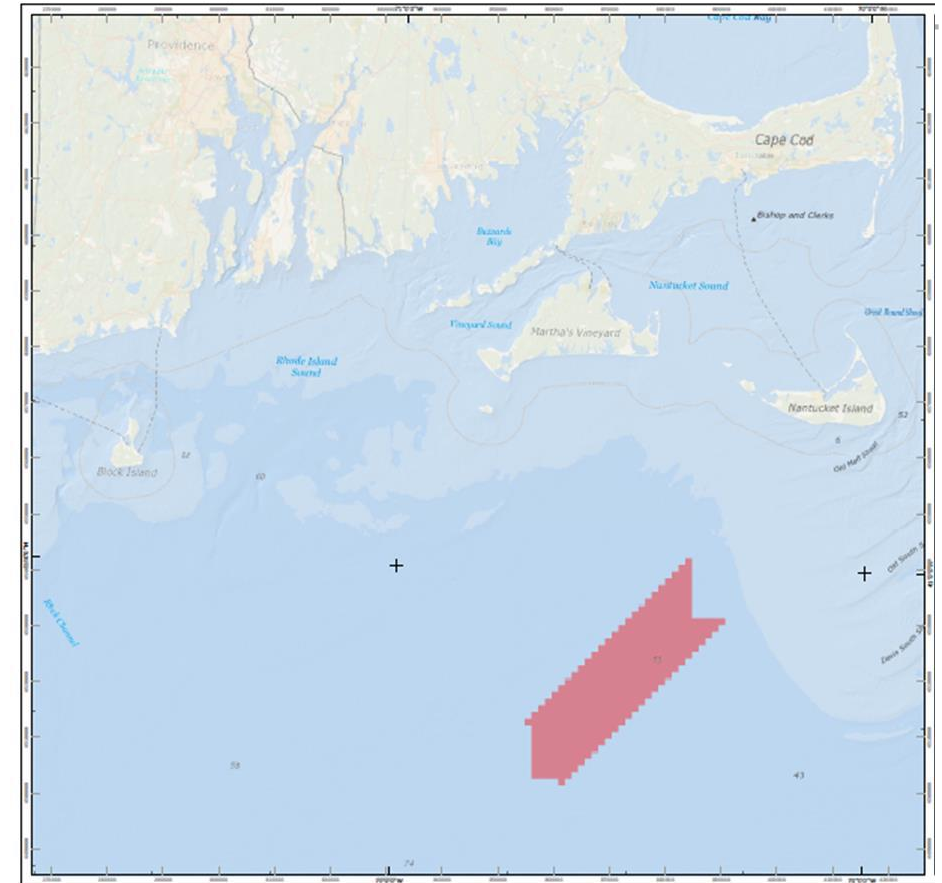
New England Fishery Management Council

Martin Goff, Equinor Wind US
Stephen Drew, EWUS Fisheries Liaison Officer
April 9, 2019

Lease Areas



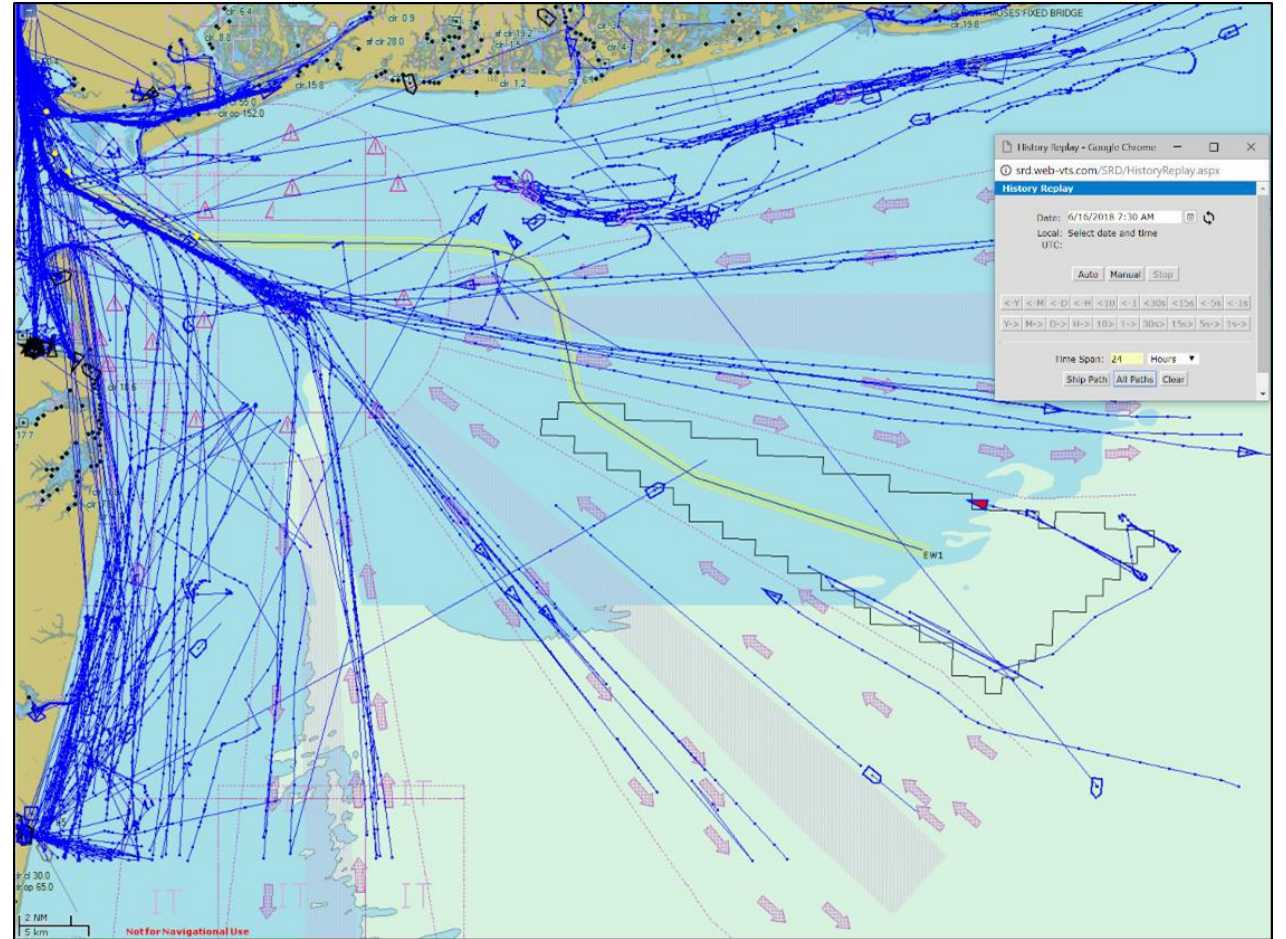
NY Bight OCS-A 512 (2017)
Empire/Boardwalk Wind



OCS-A 520 (2019) Between
OCS-A 501 (Vineyard Wind) &
OCS-A 521 (Mayflower Wind Energy)

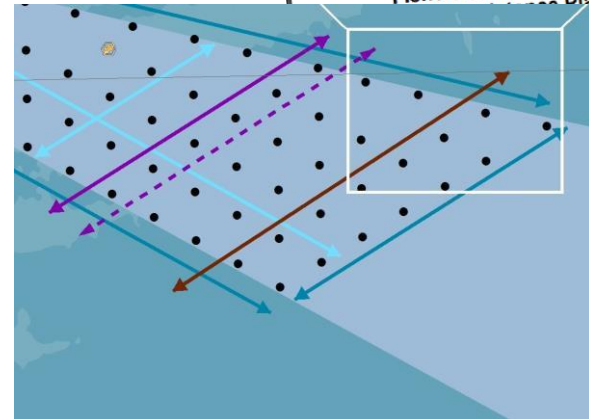
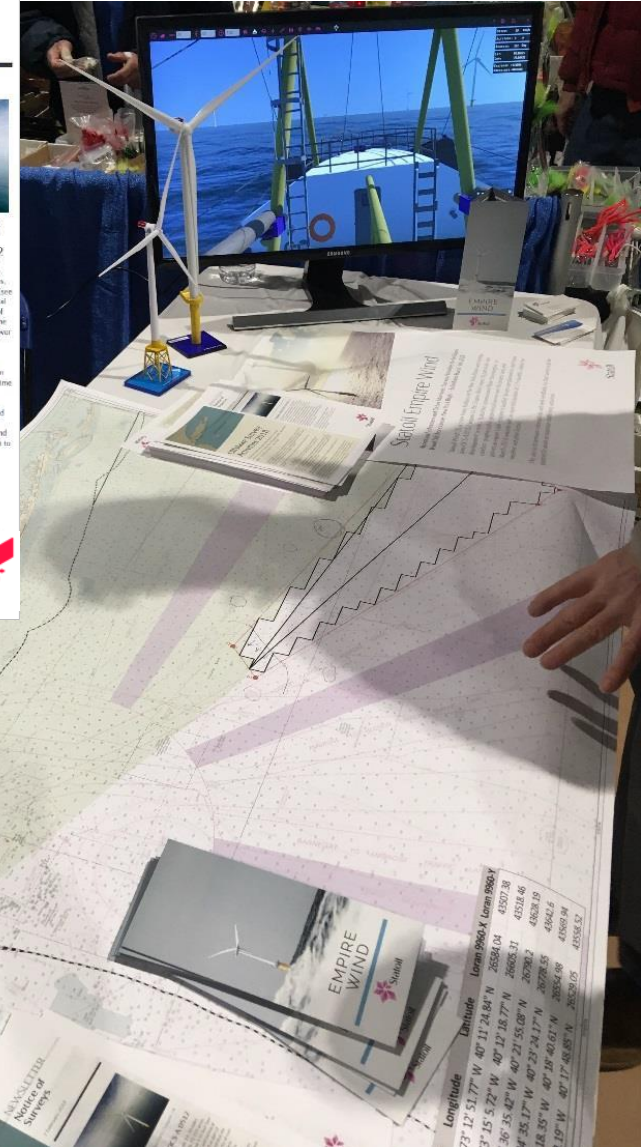
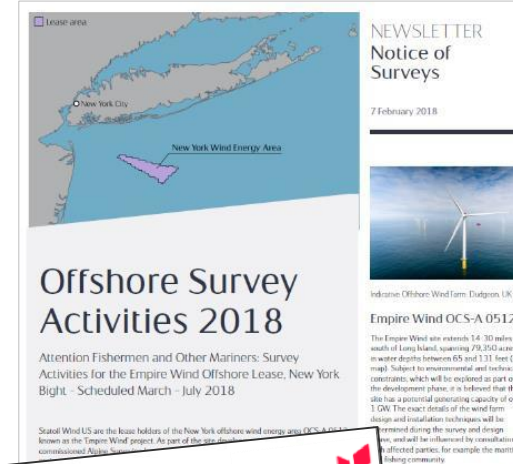
Equinor Wind US

- BOEM OCS-A 0520 lease south of Massachusetts signed in 2019
- BOEM OCS-A 0512 lease in NY Bight signed in 2017
- Sea Risk represent Equinor Wind as Fisheries Liaison Officers in both lease areas
- NY Bight lease SAP approved, buoys deployed
- NY Bight lease COP submission summer 2019, construction 2022
- MA lease SAP surveys planned summer 2019, SAP Q4 2019
- NY Bight lease surveys ongoing in 2019
- MA lease development plan underway
- Commitment to coexistence with fisheries
- Collaboration with MA FWG, NY F-TWG and RODA
- Open to collaborative research via FWGs and RODA

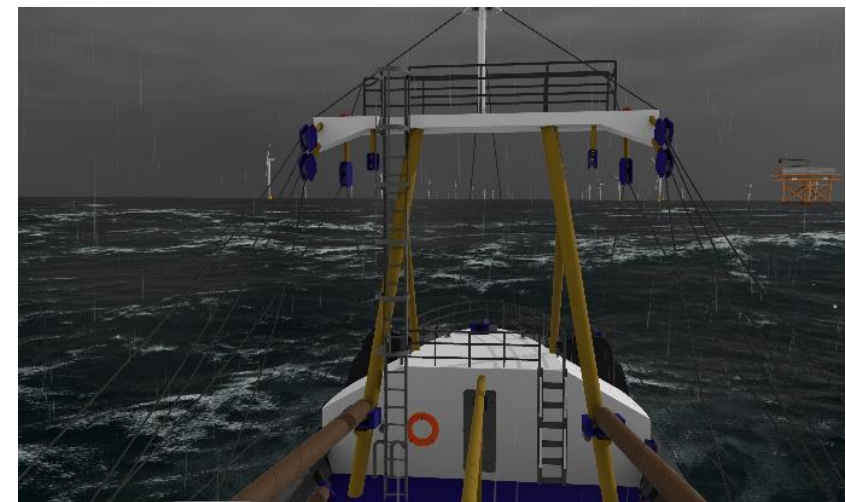
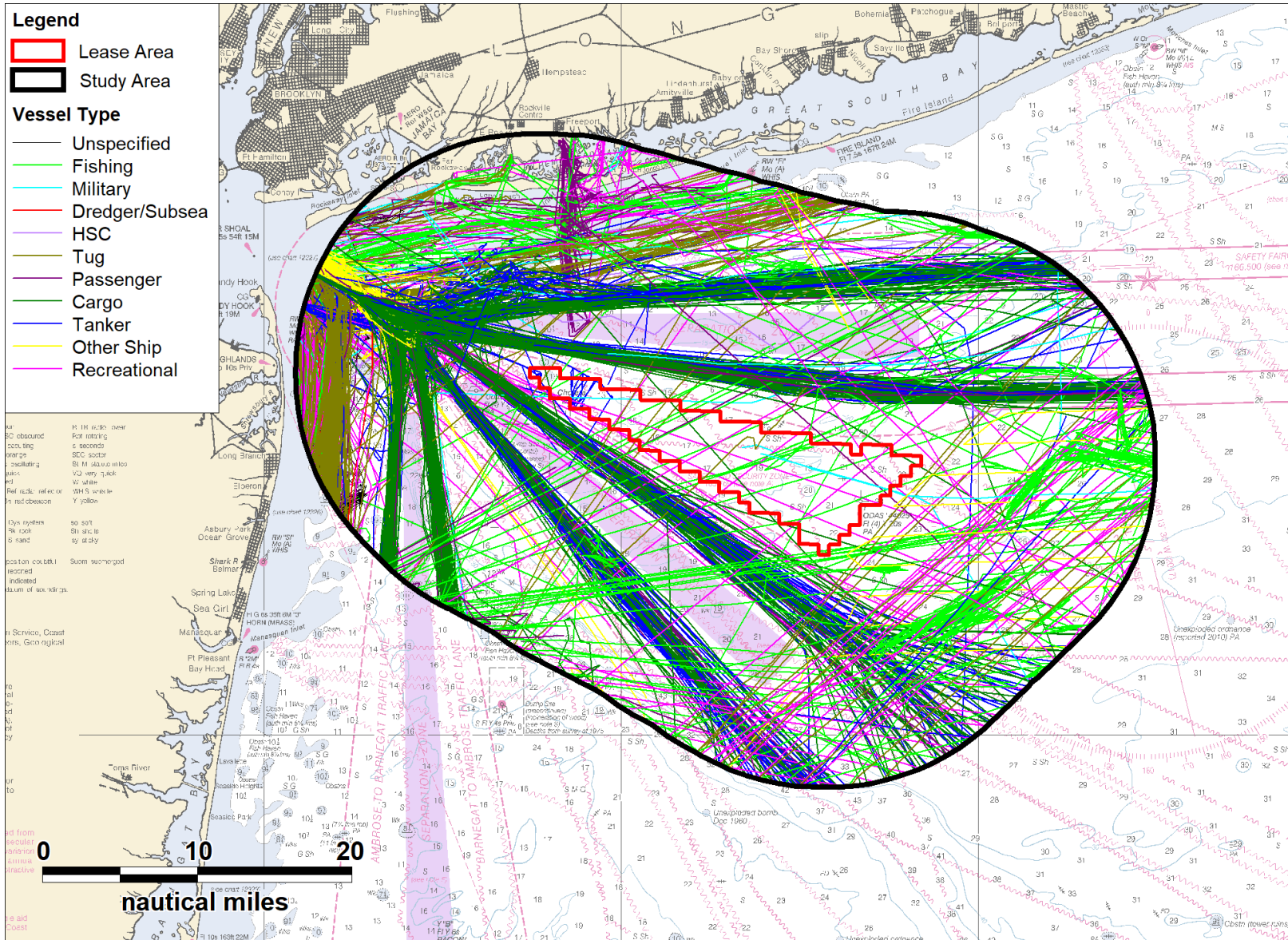


Fisheries Liaison & Coexistence Plan

- FLP available online and updated for the MA lease area
- Outline coexistence philosophy and communications approach
- Offshore fisheries reps - five different fishermen served as Offshore Fisheries Liaison Representatives on survey vessels
- 160 days offshore survey in NY Bight lease area 2018 - no active gear contacts nor conflicts were reported
- Seeking more fishermen reps for survey trips Spring - Summer 2019
- Monitored fishing activity with onboard observations, radar, AIS and communications with NOAA - VMS
- Working with RODA and fisheries to solicit feedback on draft layouts and other project planning
- Hosted booths at NY Sportfishing Federation Forum 2018 & 2019, Commercial Marine Expo, New England Saltwater Fishing Show 2019.
- Spatial planning & site specific 'layout rules' as appropriate to avoid or minimize impacts on fisheries



Maritime navigation safety risk assessments



For more info:

Fisheries Liaison Officers

Steve Drew, sdrew@searisksolutions.com

Elizabeth Marchetti,

emarchetti@searisksolutions.com

Wolfgang Rain, wrain@searisksolutions.com

Equinor Wind US

Martin Goff, mgoff@equinor.com

Laura Morales,

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lmora@equinor.com



Discussion Questions

- Are there specific questions for BOEM and the developers?
- How can the Council and fisheries stakeholders engage most effectively with wind developers?