Massachusetts Offshore Wind Initiatives

Business Network for Offshore Wind
State of the States Webinar
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Overview

• Status of offshore wind in Massachusetts
  - Leasing
  - Procurement
  - Vineyard Wind update
  - Information and analysis
  - Sector development
  - Workforce
  - Research and monitoring
Update on BOEM leasing offshore MA

- 2 prior lease areas – no bids in 2015
- Unsolicited bids submitted in 2016
- Task Force recommendation to proceed with lease sale – May 2017
- Proposed Sale Notice – April 2018
- Final Sale Notice – Oct. 2018
- Lease Sale ATLW 4A – Dec. 13-14, 2018
  - 11 opening bids @ ~$250,000
  - 32 rounds over 2 days
- Auction winners:
  - Equinor Wind US: OCS-A 0520 - $135M
  - Mayflower Wind: OCS-A 0521 - $135M
  - Vineyard Wind: OCS-A 0522 - $135.1M
MA offshore wind procurements

• Massachusetts Legislation
  - Aug 2016 statute requiring utilities to solicit 1,600 MW of cost-effective offshore wind energy by 2027
  - Aug 2018 statute increasing procurement to 3,200 MW by 2035

• Procurements
  - MA 1st RFP: posted June 2017, bids due December 2017
  - 3 bids, Vineyard Wind selected for 800 MW project May 2018
  - 2nd RFP: must be posted by June 30, 2019
  - DOER requested stakeholder input on 2nd solicitation
  - Comments submitted, under review - macleanenergy.com/83c-ii/
Vineyard Wind

- Permitting
  - DEIS comments due Jan. 22, 2019
  - BOEM public meetings postponed
  - State FEIR comments due Jan. 25, 2019

- Supply chain
  - MHI/Vestas preferred supplier - Nov. 2019
  - 84 units of MHI’s V164 9.5 MW turbine
  - Best/final on major tenders in Q1/Q2 2019

- NA Right Whale Agreement
  - NWF, NRDC, CLF, and VW announce special protections Jan. 23, 2019

- Fisheries mitigation proposed
Offshore wind advisory groups

To augment federal process, MA (EEA, DMF, CZM, MassCEC) continues to consult with two stakeholders groups on fisheries and habitat issues:

- **Fisheries Working Group on Offshore Wind Energy**: commercial fishermen and reps from different ports and sectors, recreational fishermen, scientists, and state and federal agencies

- **Habitat Working Group on Offshore Wind Energy**: scientists and technical experts from environmental organizations, academia, and state and federal agencies

Voluntary, informal groups to:

- Maintain a dialogue with stakeholders
- Obtain input, feedback, and guidance
- Work to address identified concerns
Met-ocean data measurement

- Collect accurate publicly available hub-height wind resource data applicable to the wind energy areas
- Site at WHOI’s Air-Sea Interaction Tower 2 miles south of Martha’s Vineyard, 50’ depth
- Year 1 Results (October 2016 to 2017):
  - Annual average speeds 9.8 - 10.2 m/s at 110m across the wind energy areas
- 2018 study by ISO-NE with AWS Truepower on impacts of offshore wind on power system during 16-day severe cold period (12/24/17 to 1/8/18)
  - 435,257 MWhr at 70% capacity
  - $80-85M savings in wholesale production costs
  - 11% of CO2 emissions avoided
New Bedford Marine Commerce Terminal

- 29 acre heavy-lift facility designed to support staging and deployment of OSW projects and handle other marine cargo
- December 2017: MassCEC signed identical Option Agreements with each of the MA developers
- September 2018: MassCEC and Vineyard Wind executed lease
  - $6 million/year
  - December 2020 – May 2022
- Terminal continues to host marine survey vessels, blade shipments ...
Ports and infrastructure assessment

- Identified need for additional locations for manufacturing and staging of foundations, TPs, and other turbine components, as well as O&M

- MassCEC study in 2017/2018 to evaluate existing port and waterfront infrastructure as potential OSW support locations

- Project team: Apex, Ramboll, Tufts and UMass Boston with advisory panel

- 19 sites evaluated:
  - Engineering assessment
  - Redevelopment scenarios and reuse cases
  - Permitting, regulatory processes, and timelines
  - Limitations and conditions
Supply chain development

• Hosted supply chain forums connecting the OSW industry with MA manufacturers, service providers, suppliers and organizations in 2017 and 2018, next one in June 2019

• OSW Supply Chain Directory – inventory of business contact information and capabilities
  - More than 400 companies
  - Moving to an online portal in 2019

• Supporting Vineyard Wind’s Offshore Wind Industry Accelerator Fund
Offshore wind workforce

- 2018 study estimating job and economic impacts and workforce gap analysis
- Project team: Bristol Community College, UMass Dartmouth, Massachusetts Maritime Academy
- Deployment of 1,600 MW will generate:
  - ~2,000 to 3,000 job years during construction
  - ~140 to 255 O&M jobs over 25-year project life
- Recommendations
  - Target priority occupations: water transportation workers, trade workers, and O&M workers
  - Invest in courses and facilities to provide technicians with appropriate industry-recognized training
MassCEC 2018 Workforce Solicitation

• MassCEC grants for development and implementation of workforce training programs for offshore wind
  - $400,000 available in FY19; similar or greater in FY20
  - Potential additional funding from Vineyard Wind

• Types of applications received (November 2018)
  - Career introduction courses – high school, vocational schools, and college level
  - Basic safety training; basic technical/skills training – skilled trades primary
  - Professional training – certificates and degrees

• Coordinate with and compliment company-specific technical training
MA Research Partnership in Offshore Wind

• Nine higher education institutions: Collaborating with agencies, institutions, and laboratories across the country

• Convening sponsor for POWER-US: a national Partnership for Offshore Wind Energy Research

• Issued white paper on offshore wind research networks and guiding themes in December 2018

• MassCEC joins National Offshore Wind Research and Development Consortium on Board of Directors
www.masscec.com/offshore-wind

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