Sunrise Wind

A Joint Venture of Ørsted and Eversource

11.04.2021
F-TWG Meeting

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Agenda

01 Project Updates

02 OCS-DC Cooling Water System

03 Fisheries and Benthic Monitoring Plan

04 Other FMP Themed Comments

05 Future Reviews/Meetings

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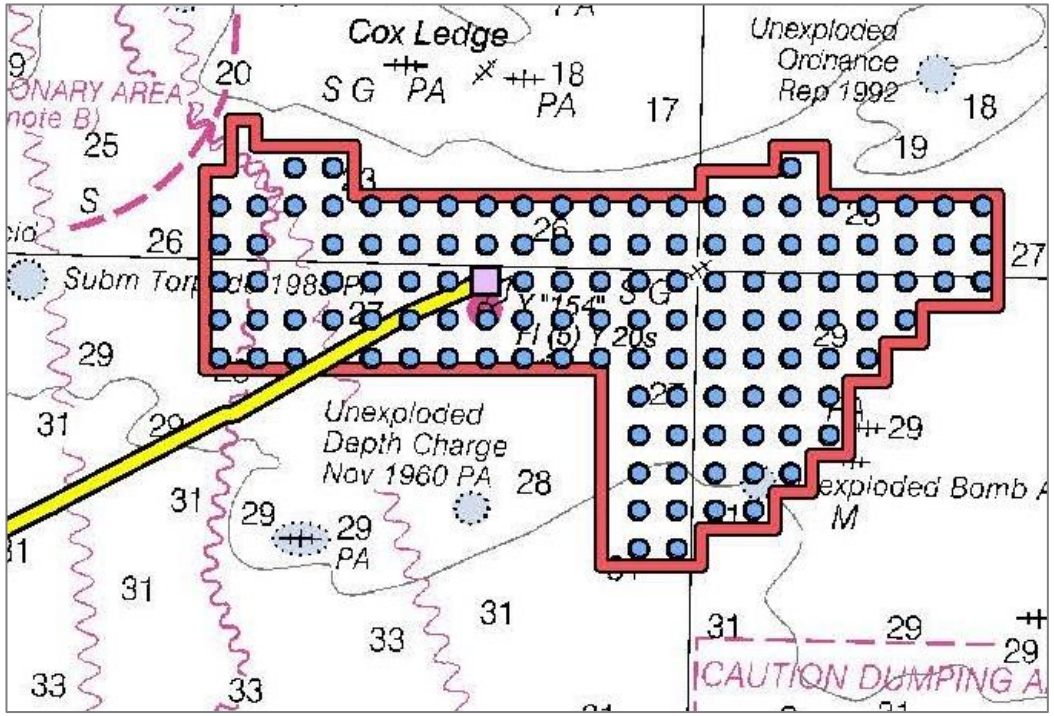
PROJECT UPDATE

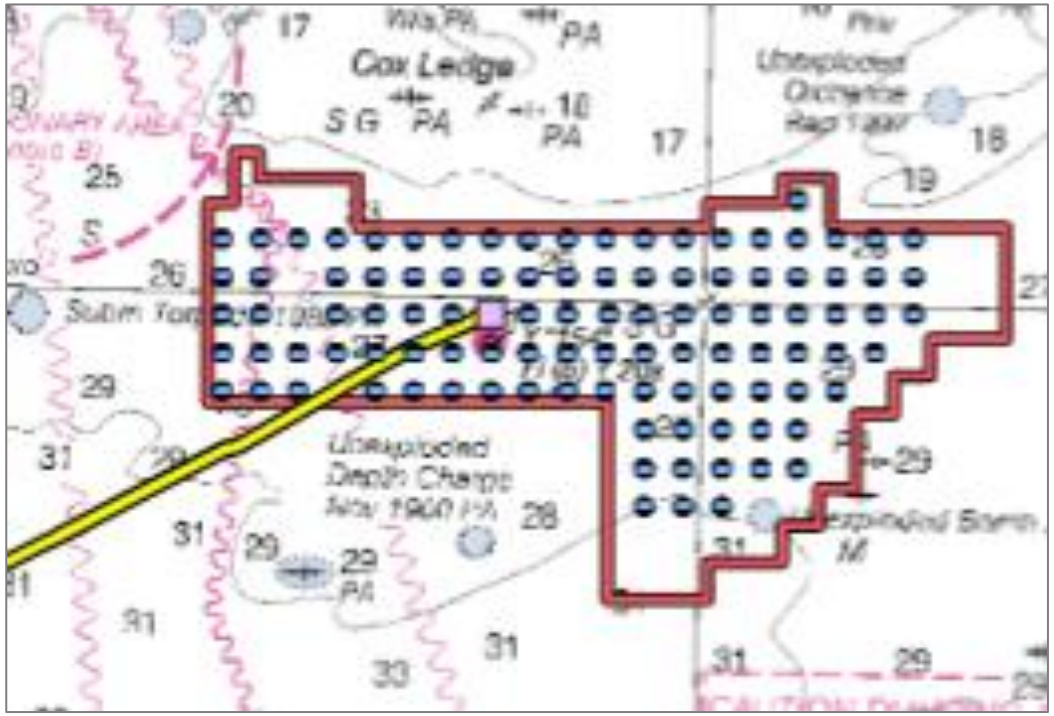
Project Updates (Since 8/17/2021 Meeting)

- Up to *1,122* MW
- *11* MW WTGs
- Up to *102* Wind Turbine Generators (WTG)

Previous Layout



Current Layout



Permitting Overview and Status (since 8/17/2021 Meeting)

NOI Issued August 31, 2021

- COP Posted on BOEM website
- Update/Supplemental filings planned for October/November 2021
- DEIS: October 2022

Other Federal Permit Applications to be filed in 2021 and 2022

- Schedule Posted on FAST-41 Dashboard
- NPS: ROW, Temp Construction: Submitted September 2021
- EPA NPDES 316(b)- December 2021
  - Draft Permit Public Notice- August 2022
- NMFS ITA- May 2022
  - Public Notice- June 2022
- EPA: OCS Air Permit- October 2022
- USACE 404/10/408- August 2022
  - Public Notice- October 2022 (with DEIS)

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Offshore Convertor Station Cooling System

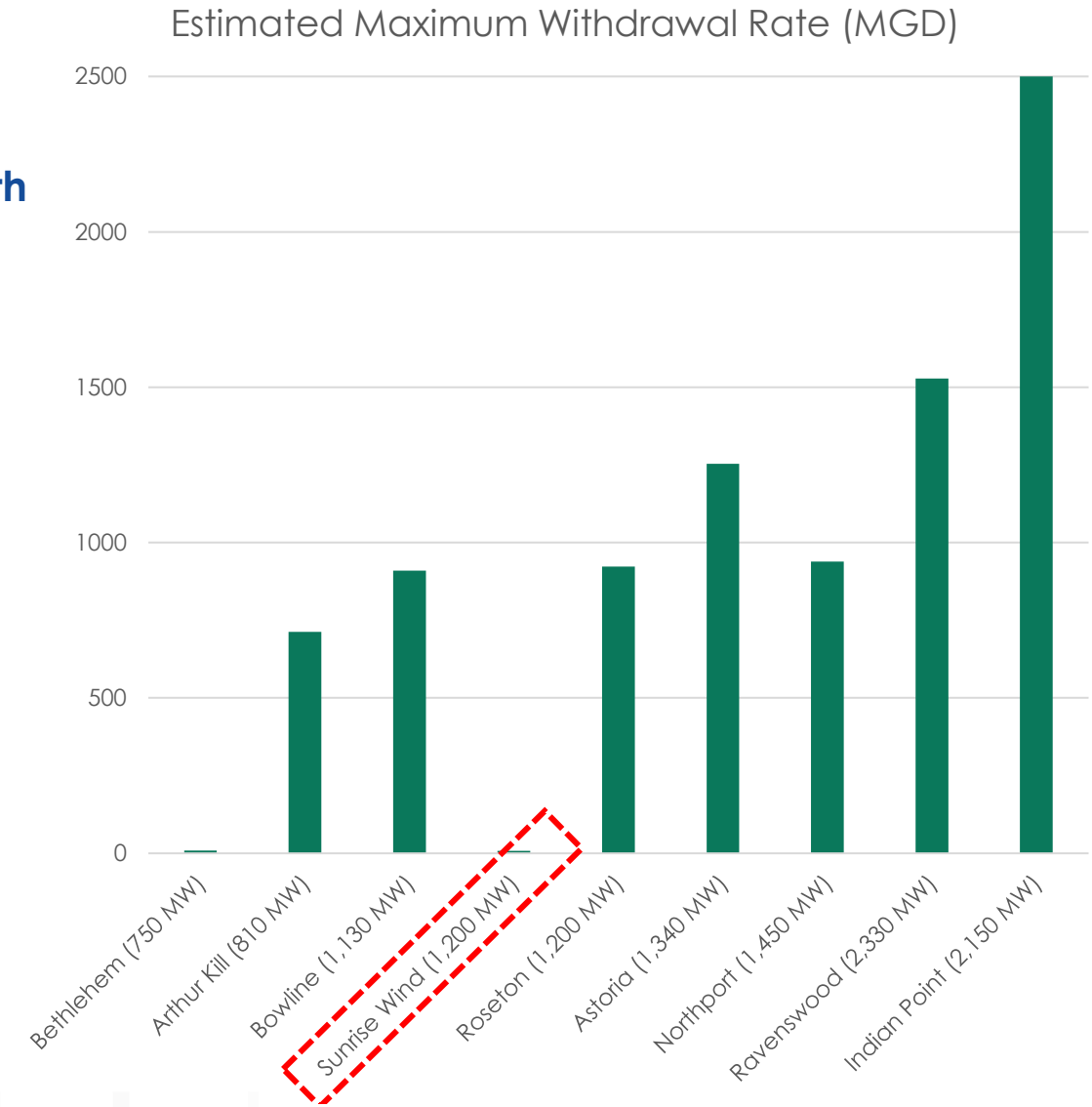
Offshore Convertor Station (OCS-DC)

- AC to DC Conversion of renewable generation
  - Provides more efficient electrical design that reduces losses
  - Reduces project infrastructure (one export cable, one OCS-DC)
  - No booster station required
- Process requires cooling water
  - Maximum of 8.1 million gallons daily (MGD)
  - Average of 4.0 MGD
- Once through Cooling System
  - Insufficient freshwater volume (make-up) available
  - Unmanned platform

Water Consumption

Increased water volume and flow rate are correlated with biological effects

Integrate protective elements into cooling water intake design (CWIS) design to minimize flow and volume



Cooling Water Intake System (CWIS) – Protective Design and Operational Elements

→ Intake Pipes

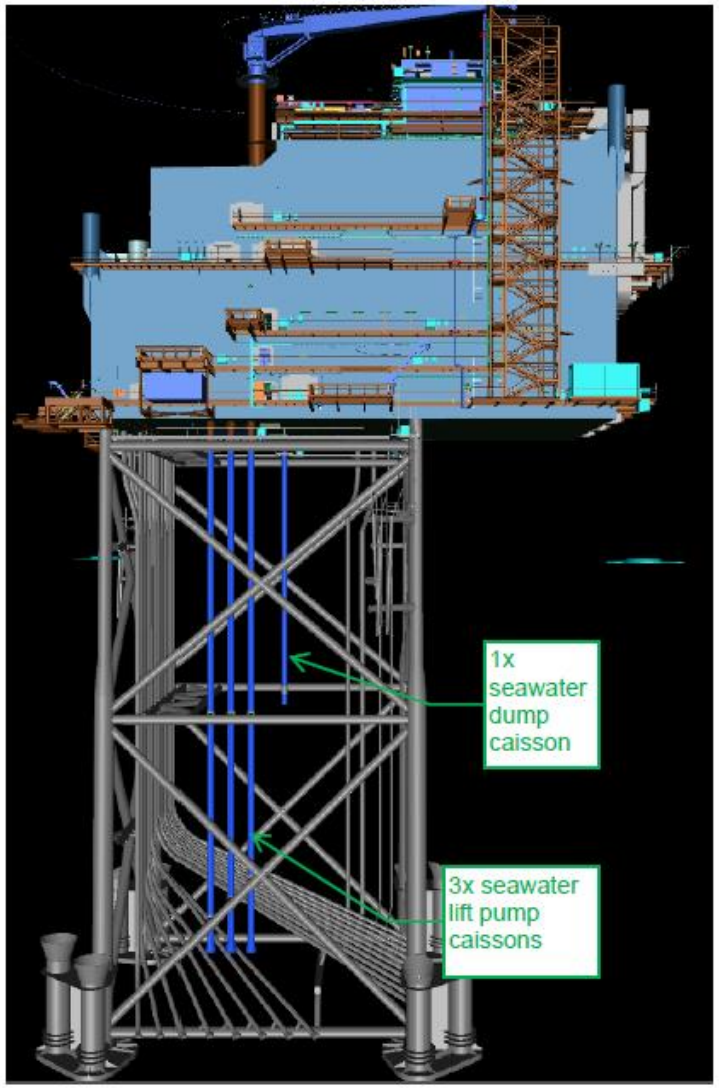
- Sited in water column (10 m from sea floor)
- Hydraulic modelling to define zone of influence
- **Avoid benthic resources**

→ Dump Caisson

- Single vertical outlet at 40 ft (12m) below sea surface
- Thermal plume modelling to define mixing zone
- **Minimize mixing zone**

→ Seawater Lift Pumps

- Ability to control flow rate
- **Minimize zone of entrainment for eggs and larvae**
- Maintain intake velocities less than 0.5 ft/s
- **Eliminate impingement of juvenile/adult fish**



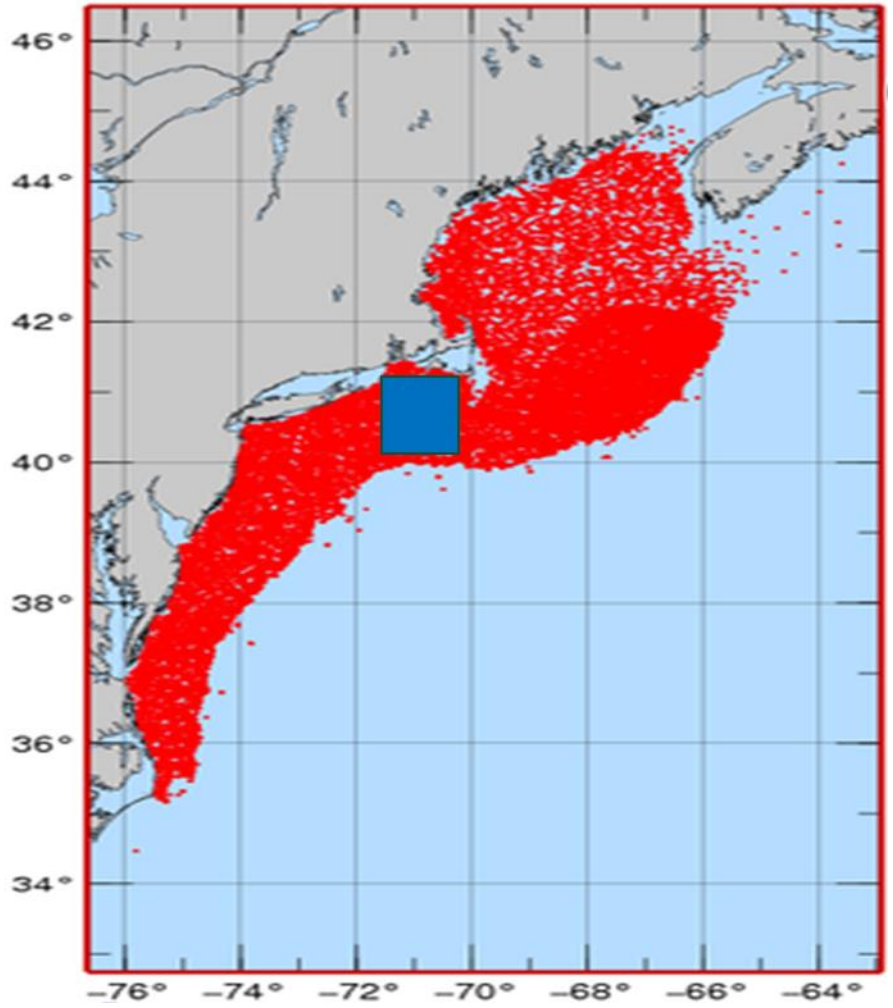
Assessment of Impacts

Intake

- Impingement effects (Juvenile/adult) mitigated by maintaining a TSV of < 0.5 ft/s (defined at §125.84(c))
- Entrainment of eggs/larvae expected. Limited to species with pelagic life history characteristics
  - Identify susceptible species with designated Essential Fish Habitat (EFH)
  - Use available abundance/density information
    - MARMAP ichthyoplankton density data from 1977 through 2017
  - Extrapolate e to facility operation
  - Consider results in context of population level effects

Effluent

- Assess according to Clean Water Act Section 403: Ocean Discharge Criteria
- Confirm mixing zone is contained within 100 meters from discharge point (defined at §125.121(c))



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FISHERIES AND BENTHIC MONITORING PLAN

Fisheries and Benthic Monitoring Plan

Overview

- Plan intended to facilitate a regional approach to monitoring and was informed by fisheries-dependent and fisheries-independent data, as well as monitoring guidelines and priorities
- Draft Plan has been sent to NMFS, BOEM, RIDEM, NYSDOS, NYSDEC, NYSDPS, MADMF, MACZM, NYSERDA F-TWG, NYSERDA E-TWG for review and meetings held with these groups in August and September. The draft plan was provided to RICRMC staff on October 8, 2021.
- Comments are being incorporated and a revised Plan is being drafted (to be submitted to RICRMC in Nov.)
- Final Plan to be submitted to BOEM upon incorporation of any final comments
- NYS Waters Benthic Monitoring Plan being developed and will be shared with NYS and TWGs
- Some surveys expected to begin in Q1 2022

Discussion on overarching comment themes and specific comments

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Other FMP Comments

Other FMP Comments Discussion

Overview

- Overarching comment themes and specific comments:
  1. Definition of avoidance, minimization, and mitigation
  2. Data sharing
  3. Coordination with other ongoing/planned surveys
  4. Plan development

- Comments will be incorporated into future iterations of FMP, as well as continued alignment with COP and regulatory processes
- Other initiatives are still in development and will be announced in the future and incorporate in future versions of the FMP

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Future Meetings and Plan Reviews

THANK YOU

Contact Us

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