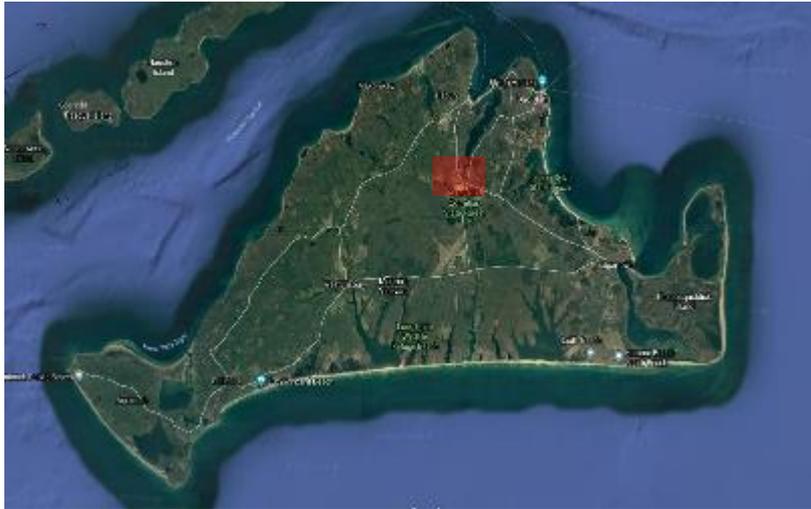


# Martha's Vineyard Energy Storage System

Oak Bluffs Planning Board  
Site Plan Review Meeting  
May 9, 2019

- Project Need
- Project Overview and Benefits
- Site Overview Plans
- Project Visual Simulations
- Project Technology
- Key Project Components
- Project Timeline
- Community Outreach
- Contact Information

# Martha's Vineyard Today: Project Need



- Currently, Martha's Vineyard's energy needs are served by four submarine cables that originate in Falmouth, MA.
  - If there is an issue with one of the submarine cables, the island is supported by five diesel generators that act as a back-up to the electric system.
- The Island is expected to experience five percent load growth over the next decade that will require additional energy resources.
- This important clean energy project will provide an additional energy source to the island.
- The Massachusetts Department of Public Utilities ("DPU") has authorized Eversource to pursue an Energy Storage Project on Martha's Vineyard.
- Energy Storage Projects are consistent with the DPU's efforts to promote alternative electric supplies, where appropriate.

**Eversource is proposing to construct an energy storage system, in the form of a lithium ion battery project, on Eversource-owned land in Oak Bluffs.**

- **The Project will be constructed in two phases:**
  - **Phase I** – installation of a 4.9 megawatt lithium ion battery system.
  - **Phase II** – installation of an additional 9.8 megawatt lithium ion battery system.
- **The Project will benefit Martha's Vineyard by:**
  - improving electric reliability on the Island by adding a valuable new source of energy
  - helping to reduce reliance on the existing diesel-fired generators in Oak Bluffs and West Tisbury
  - reducing greenhouse gas emissions, improving air quality
  - enhancing opportunities for additional deployment of solar and wind generation
  - providing tax revenues over the life of the project with minimal impact to municipal services.

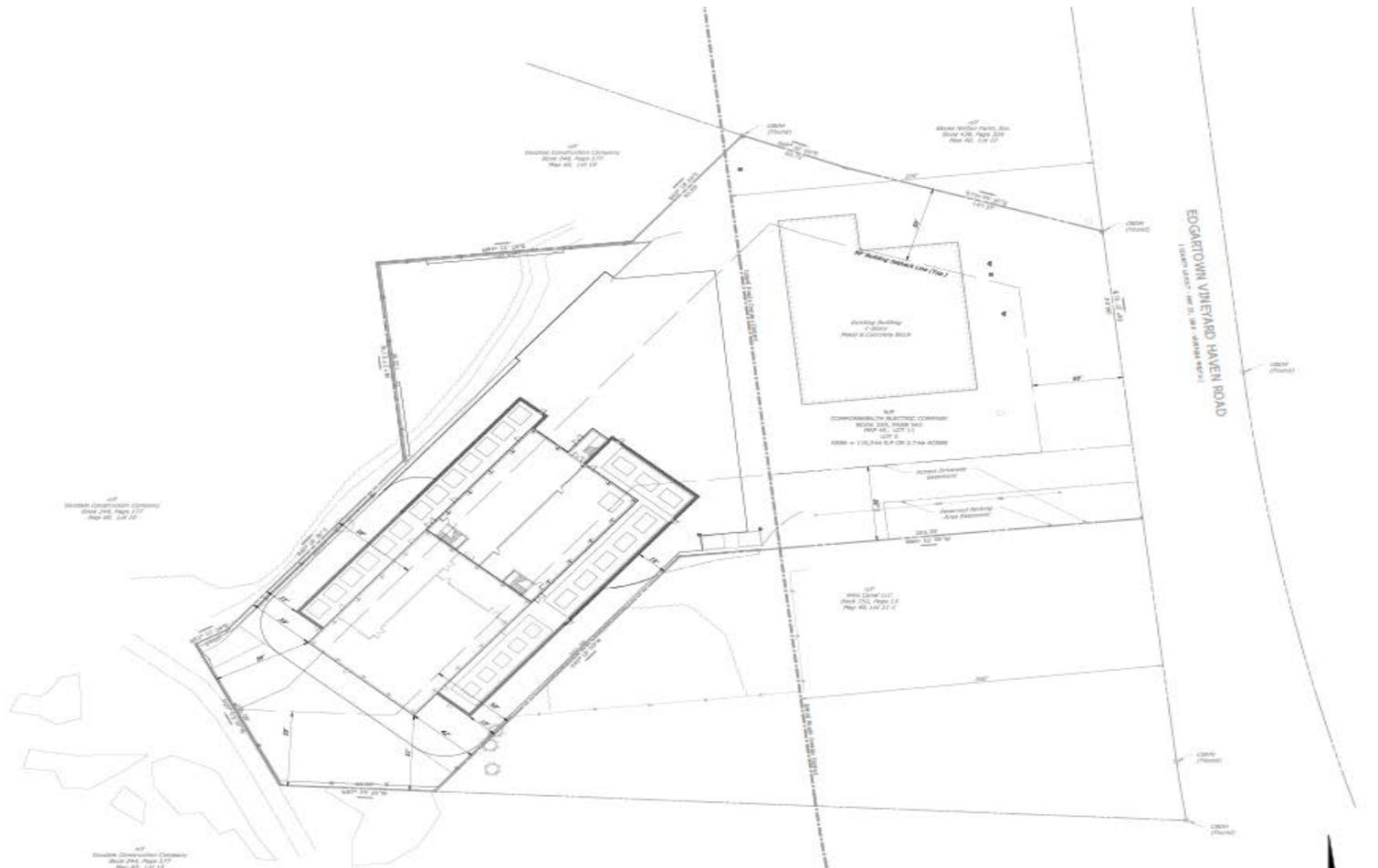


**Eversource's Oak Bluffs Area Work Center**

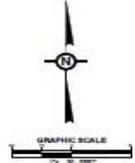
# Martha's Vineyard ESS – Site Overview



# Martha's Vineyard ESS – Site Plan



**PRELIMINARY**  
ISSUED FOR PERMIT  
NOT FOR CONSTRUCTION



# Visual Simulation – Existing Conditions

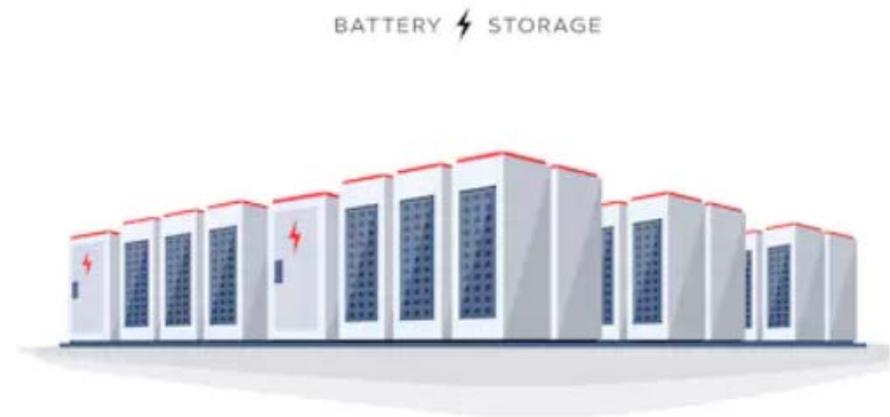


# Visual Simulation – Proposed Conditions



# Technology Spotlight: Lithium Ion Energy Storage System (ESS)

- Lithium ion batteries are the key component of the Energy Storage facility. When called upon to operate, the batteries will supply power to the local distribution system.
- Large scale lithium ion battery projects are highly efficient, do not produce any emissions, and are considered as the battery of choice in a wide variety of installations worldwide.
- Other key components of the facility include the power conversion system, heat exchangers (HVAC), pad-mounted transformers, and switchgear for connection to the Eversource distribution system.
- State of the art safety systems to continuously monitor and protect the energy storage facility.



- Traffic Management

- Project to develop a Traffic Management Plan
- Construction Access: Vehicles to primarily use Edgartown-Vineyard Haven Road and a construction access road into facility
- Operation: 1 or 2 vehicles per month; and small crew for ~1 week semi-annually

- Stormwater Management
  - Designed to MassDEP Standards
  - New impervious area = 31,158 sf; 14,692 sf rooftop/building, and 16,466 sf paved/concrete
  - Components: stormwater detention basin with pre-treatment forebay; inlet and pipe collection system for roof runoff and driveway, deep sump catch basins, and stone infiltration beds
  - Attenuates peak flows of 2-year, 10-year, 25-year and 100-year return period design storms

## ■ Water Quality Controls

- Existing Eversource Work Center and ESS Site is located within Zone II Wellhead Protection Area and the Town of Oak Bluffs Water Resource Protection Overlay District (WRPOD)
- Nearest public water supply well is 1,880 ft away from facility
- Project controls for supporting local groundwater and surface water quality include:
  - Battery modules contained within the state-of-the-art ESS building
  - Project utilizing non-toxic, non-hazardous battery, electrical transformer, and building materials
  - The on-site stormwater management system designed to collect and retain 2-year, 10-year, 25-year and 100-year storms

## ■ Leak/Spill Containment Program

Eversource:

- Maintains a 24-hour-per-day/7-day-per-week response program
- Implements an Oil & Hazardous Material Spill Release Notification/ Contingency Plan Policy & Procedure
- Implements a robust spill/leak detection and containment program
- Has prepared a Spill Prevention, Control and Countermeasures (SPCC) Plan for Facility

## ■ Noise

- Eversource studied ambient noise conditions and modelled/ designed the proposed facility to meet state-wide noise standards at property and nearest residences
- Utilizing low-sound sources for project equipment as well as absorptive sound barriers
- No noise impacts anticipated for project

## ■ Electric and Magnetic Fields

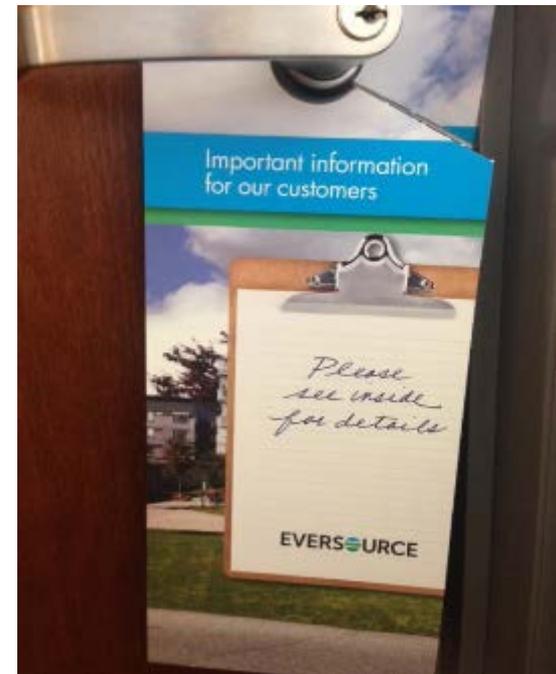
- Eversource conducted an EMF analysis of project including ESS facility and local distribution lines
- No net EMF levels beyond that of existing local distribution lines
- EMF levels will remain significantly below the allowable guidelines developed by scientific and health agencies

# Project Timeline

	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2021	2022	2023
Zoning Exemption Filed With DPU	█											
Public Comment Hearing		█										
Final Decision from DPU					█							
Other State & Local Permitting		█	█	█								
Construction Phase I						█	█	█	█			
Construction Phase II											█	█
Community Outreach	█	█	█	█	█	█	█	█	█	█	█	█

**Eversource is committed to being a good neighbor while conducting this important Project. Outreach is conducted early and often to inform our customers and other stakeholders about work proposed to occur in their area and address any questions.**

- Stakeholders
  - Municipal officials
  - State and federal elected officials and regulators
  - Property owners & residents
  - Businesses
  
- Project Communication for Municipalities
  - Briefings & Presentations
  - E-mail updates
  
- Project Communication for the Public
  - Door to door outreach, including door hangers



**For further information on the Project, please reach out to:**

**Project Manager**

**Brian Bosse**

**Phone: (603) 634-2933**

**Email: [brian.bosse@eversource.com](mailto:brian.bosse@eversource.com)**

**Project website:**

**<https://www.eversource.com/content/ema-c/about/projects-infrastructure/projects/martha's-vineyard-energy-storage-project>**

