L8 Distribution Reliability Project - Upgrades to Existing Overhead Distribution Facilities

Presented to Select Board - Nantucket, MA

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nationalgrid

Introductions

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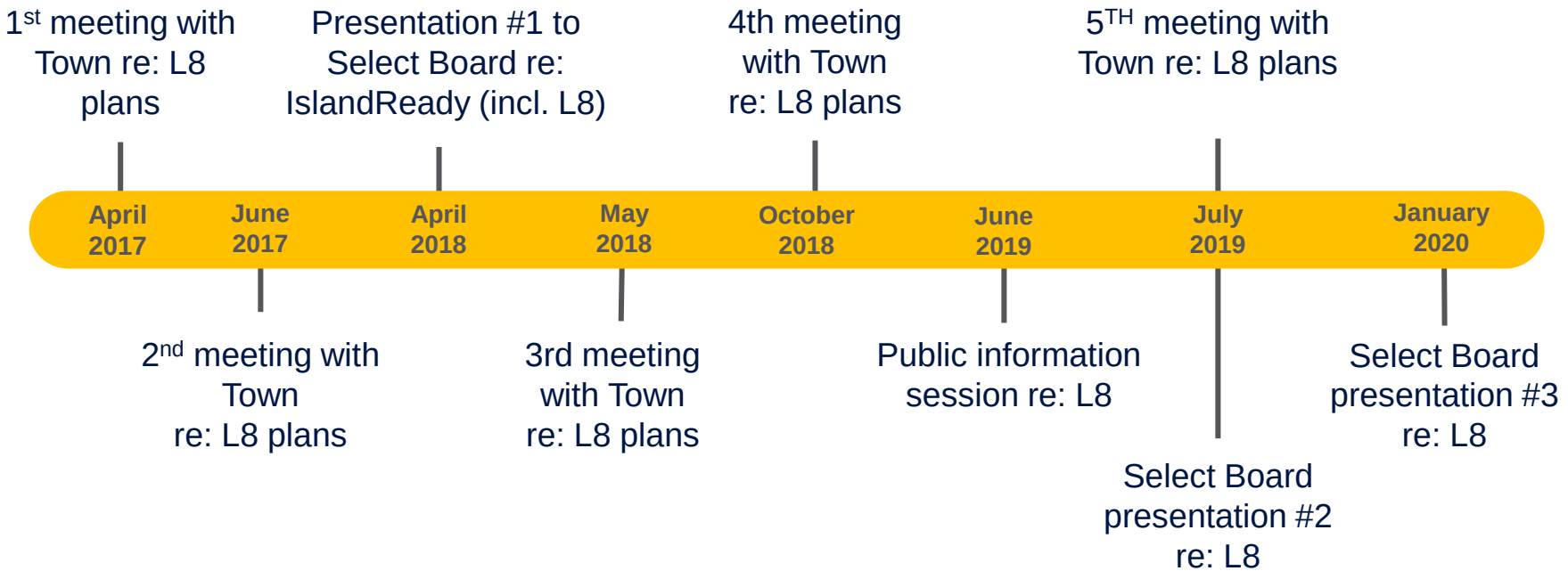
Agenda

01	History of L8 Planning
02	Existing Overhead Route & Facilities
03	Project Description & Need
04	Demand Growth
05	Construction Elements
06	Traffic Management
07	Timeline
08	Outreach

History of L8 Planning



Existing Overhead Route & Facilities

National Grid and Verizon maintain existing overhead distribution facilities along an approximately 1.5 mile route between Candle Street and Milestone Road pursuant to grants of location issued by the town in the 1930's and 1940's.

National Grid and Verizon have maintained, repaired and replaced these poles and wires pursuant to these grants of location for several decades.

Project Description and Need

Scope

Limited replacement and upgrade of existing facilities between Candle Street and Milestone Road

- Installation of 13.2kV line or “feeder” to Milestone Road (101L8) – involves limited pole replacements and wire upgrades
- Scope is consistent with typical overhead maintenance operations (completed many similar projects on Nantucket in past without any public process)
- Anticipated cost: ~ $3 million (socialized among MECo ratepayers)

Purpose

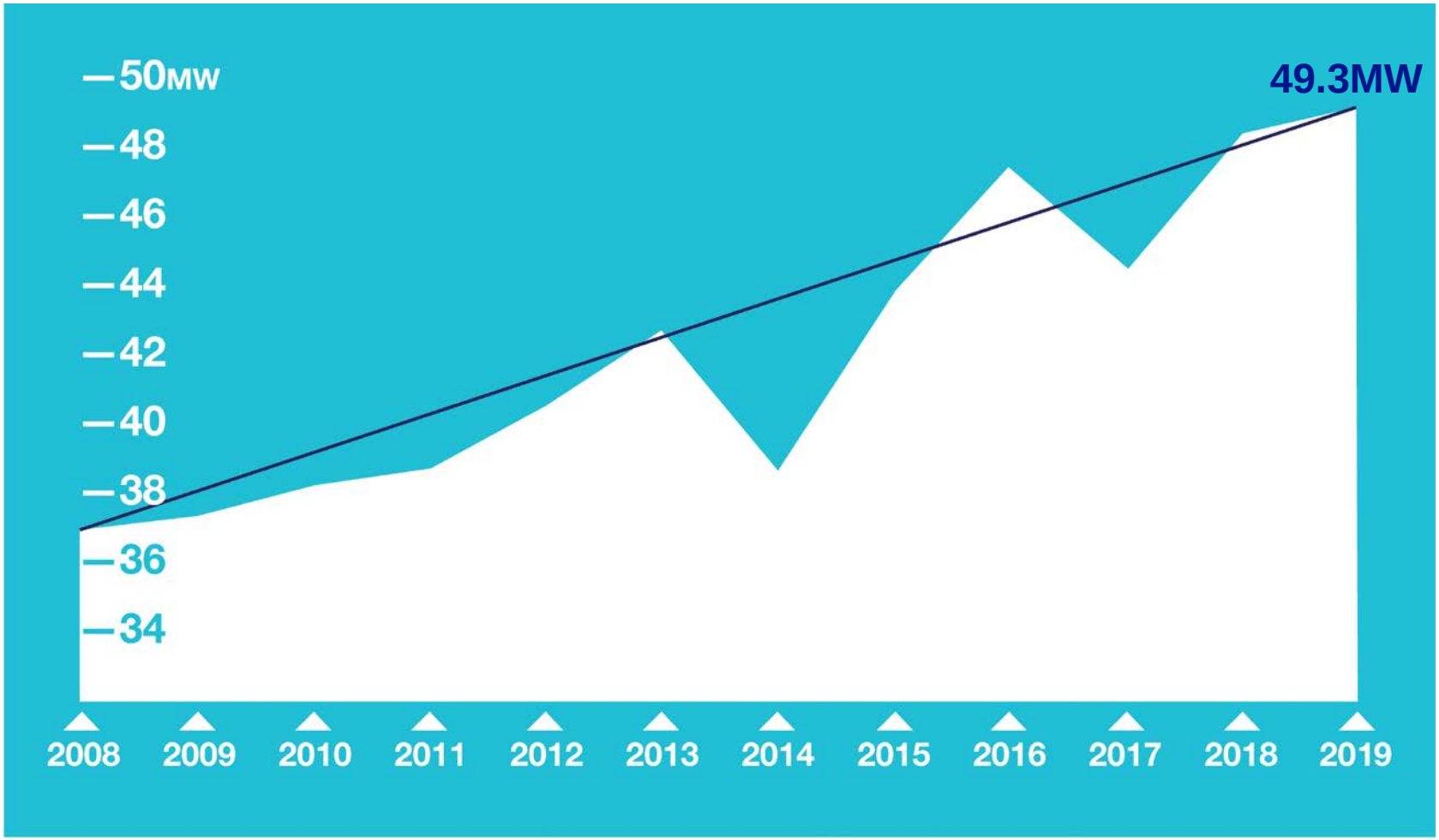
Upgrades are needed in the short term to ensure electric reliability for the island:

- Increase capacity for east side of island, improve switching ability
- Utilize full benefit and capacity of Bunker Road battery system and generator
- Reduce potential for outages on other feeders, which serve critical facilities (L2 – sewage treatment; L4 – hospital; L7 – airport)

Nearing summer capacity ratings: the wire could potentially fail and outages would result until repairs are completed

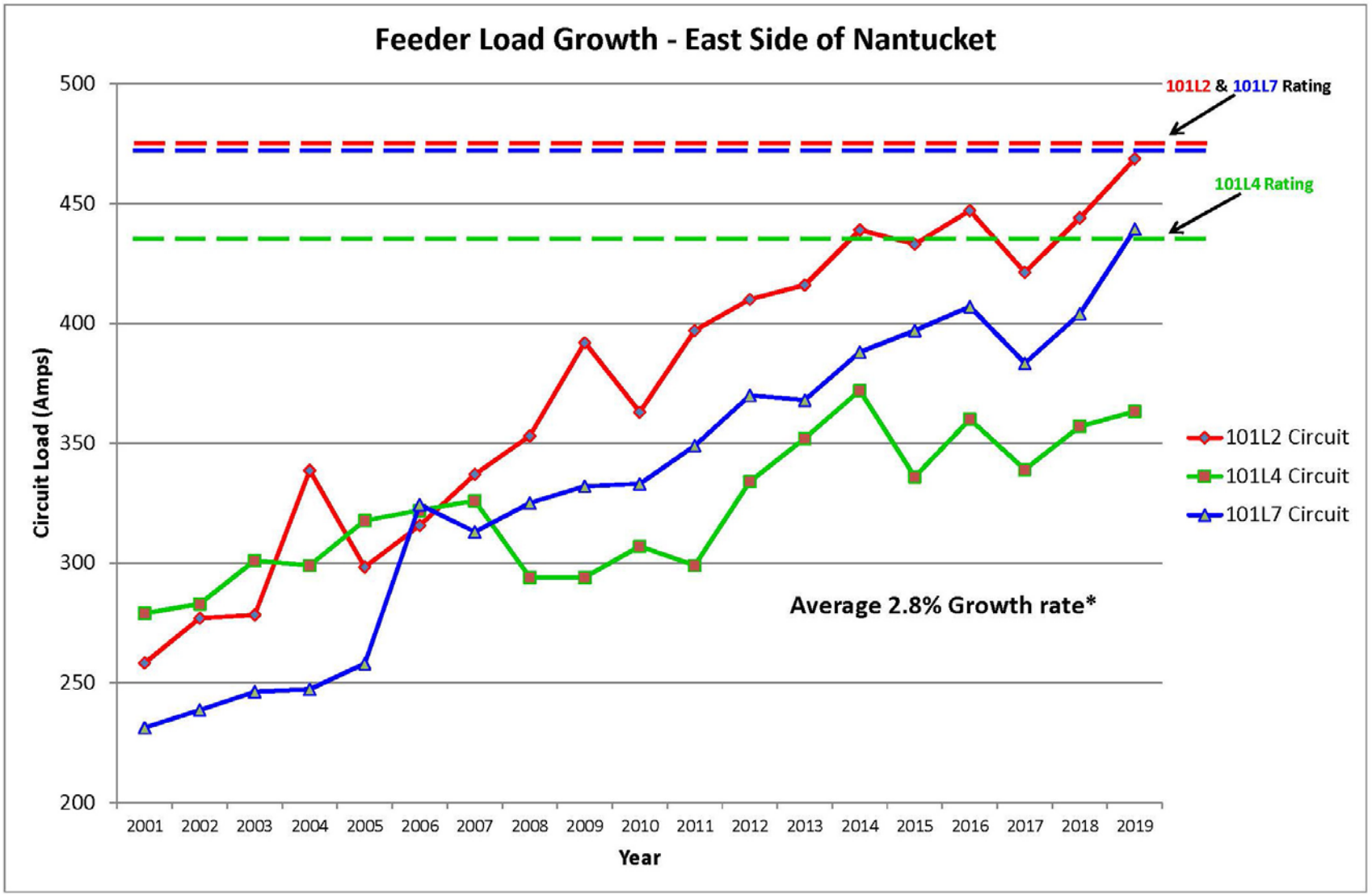
Upgrades via L8 feeder alleviates summer demands on L2, L4, and L7

Demand Growth (2008-2019)



Demand in 2014 was aberration due to unusually mild summer.

Demand Growth by Feeder (2008-2019)



Existing Overhead Route – Select Pole Replacements

Poles

There are 79 existing poles over 1.5-mile route

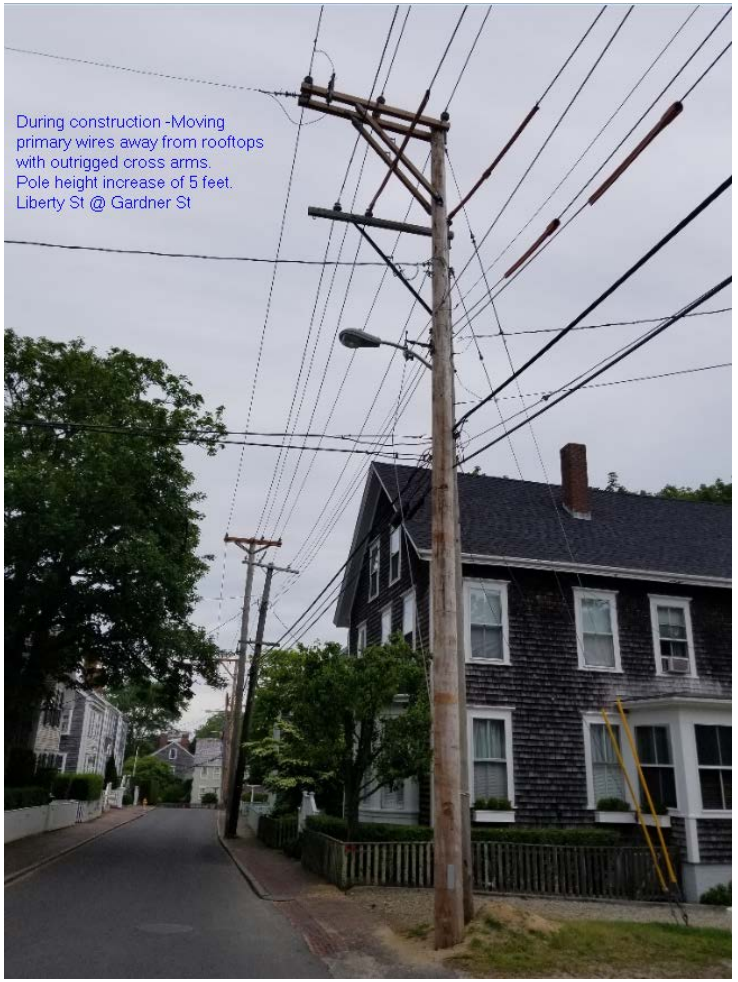
- Keeping 41 existing poles
- Replacing 38 poles (same locations as existing)
  - 9 will remain the same height
  - 29 will be slightly taller to meet clearances/standards:

Existing	Replacement	Quantity
35 ft	40 ft	1
40 ft	45 ft	27
45 ft	50 ft	1

Example of Replacement Pole

Limited pole replacements required to meet standards and clearances

- Replacement poles are needed to meet current federal electrical standards, and to provide necessary safety clearances
- Replacement poles provide greater durability and reliability (less susceptible to damage, particularly from wind)
- Exploring process for faster removal of old poles (limit duration of “double poles”)



Existing Overhead Route – Wire Upgrades

Minimal visual impact, upgrades to existing infrastructure

- Aerial cable upgrades:
  - Replaces three vertically-oriented wires (slightly thicker, singular wire)
- Other wire upgrades:
  - Top three horizontally-oriented wires are replaced with upgraded versions
  - Lower three vertically-oriented wires converted to one triplex wire (bundled, appears as one wire)
  - Number of electrical wires will be reduced in many locations

Example of Wire Changes

Existing

Planned (example)

Three, vertical wires in secondary → Single, slightly thicker wire in aerial cable

Traffic Management

Traffic Management Plan

Intended to limit impact during construction

Developed in collaboration with Nantucket officials (town, police, fire)

Potential conditions include:

- Maintain one lane of travel (alternating traffic) on two-lane roads
- Temporary closures on narrow roads (e.g. East Dover, Back Street, Weymouth Street @ Union Street)

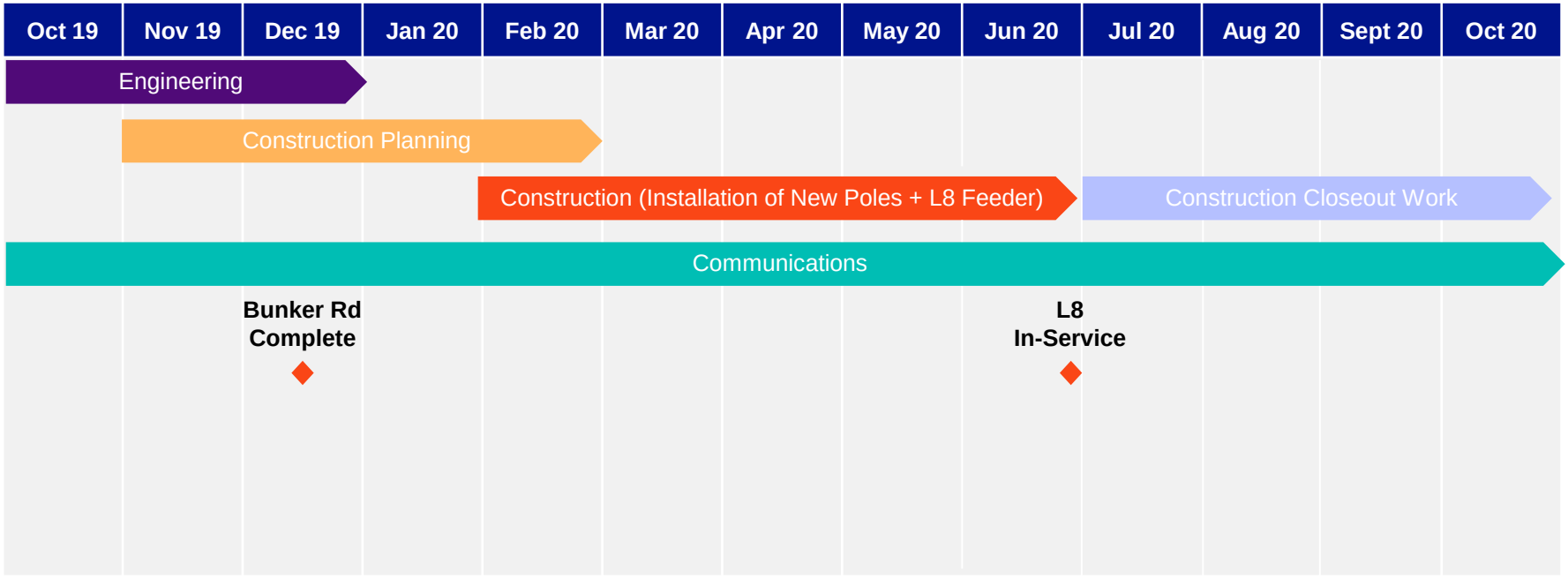
Police detail likely at all times (exact plans TBD in collaboration with NPD)

Proposed Timeline

February 2020 through Fall 2020

Installation to be complete by end of June (L8 in service end of June); construction closeout* work to take place through summer and fall.

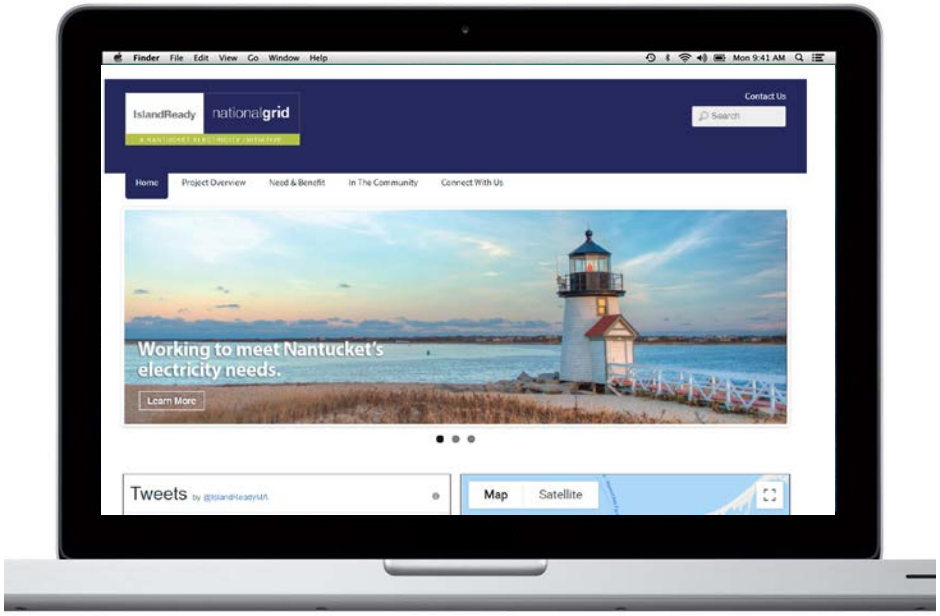
*Closeout work includes transfer of other utilities to new poles, removal of old poles



Outreach

IslandReady: Comprehensive Communications Plan for All Nantucket Projects

- Proactive outreach to project abutters and town officials re: project updates
- Door-to-door outreach, one-on-one meetings
- Public Information Sessions
- Maintain regular channels of communication (web, email, phone, Twitter)
- Provide project updates via Inquirer and Mirror (editorial + paid ads)
- Participate in Nantucket events (e.g. Nantucket Island Fair)



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