

## Minutes

### Martha's Vineyard Commission Climate Action Task Force (CATF)

Monday, August 3, 2020

Zoom

CATF members present: Richard Andre, Dan Doyle, Alex Elvin, Christine Flynn, Rob Hannemann, Tristan Israel, Joan Malkin, Donna Paulnock, Ben Robinson, Tom Soldini, Alan Strahler, Richard Toole, Kate Warner

Others present: Liz Argo (Cape and Vineyard Electric Cooperative manager of programs and administration), Witter Swanson (Vineyard Power business development intern)

Eversource representatives:

Steve Casey, manager of strategic planning  
Ronit Goldstein, community relations specialist  
Keith Jones, senior planning engineer  
Juan Martinez, manager of distribution system planning  
Suresh Mukherjee, system planner  
John Nyada, senior forecast analyst  
John Ventura, manager of distribution engineering

### ***Key points***

#### LOAD FORECASTS

- Much of the conversation focused on electric vehicle adoption, which remains uncertain. The adoption rates proposed in the transportation energy paper are slightly higher than the average for the Northeast.
- Eversource acknowledges that the load forecasts for the Vineyard may no longer be as straightforward as they once were.
- The greater adoption of EV and other electric uses on the Vineyard could potentially shift the annual peak from summer to winter, as it has in the past.
- An updated version of the Vineyard load forecast for 2020-2029, shows a potential load increase from 62MW to 70MW. This assumes a higher penetration of EV on the Island, but does not incorporate other aspects of the energy papers.
- Eversource is still using the original lower forecast (an increase from 62MW to 64MW between 2020 and 2029), but is planning for different contingencies.
- Eversource has concluded that meeting the additional load from EV charging would require a fifth submarine cable to the mainland by at least 2025, in addition to phase one of the

proposed Battery Energy Storage System (ESS) in Oak Bluffs. (Phase two of the ESS would likely not be pursued in that case.)

- Eversource would need to see actual increases in electricity usage before making formal changes to its forecasts.

## POLICIES AND REGULATIONS

- Specific policies and regulations aimed at supporting the Island's GHG reduction goals would provide a higher level of certainty in terms of the load forecasts.
- Policies and regulations should consider the timing of peak-loads (for instance, encouraging EV charging in the daytime, rather than the evening peak).
- Larger solar systems are probably better than smaller ones in terms of energy modeling, and would require less reinforcement in locations near main roads.

### ***Summary of discussion***

#### I. Introductions

Steve Casey introduced the Eversource representatives and reported that they have been working on the company's load forecast for the Island. He said their approach differs from the recent CATF energy working papers, which focus on overall energy use rather than peak loads. Alex Elvin introduced members of the CATF.

#### II. CATF energy group working papers: overview and discussion

Rob Hannemann gave an overview of the four energy working papers, explaining that the first step had been to establish an energy baseline for the Island. The baseline will be assessed each year. The energy papers represent phase one of the group's work, which was to understand the different energy sectors on the Island and what a fossil-free future might look like in each case. The overall goals are to reduce greenhouse gas emissions 50% by 2030 and 100% by 2040. The papers cover transportation, the built environment, and energy efficiency, with an additional summary paper describing a potential future if the goals are met, and outlining some initial strategies.

Rob acknowledged the question of peak loads, in terms of both seasonal and daily peaks, and said Eversource would have a better handle on how the peaks are affected by the total energy use. The next step in for the CATF is to consider various scenarios for achieving the goals, using an energy model that can take inputs such as population growth, development, and the rate of electric vehicle adoption. The group will then develop a roadmap of actions, with a focus on strategies that will most impact overall energy use on the Island.

Rob clarified that the energy model does not provide an hour-by-hour analysis of energy use, but the hope is for Eversource to use the gross usage data provided by the CATF to better understand the peaks. He also emphasized that the energy papers are an assessment, not a plan.

Juan Martinez asked for clarification about the projections for light vehicles, and whether the task force anticipates EVs being adopted faster than the average rate for the Northeast. Tom Soldini said most forecasts in the Northeast vary widely, which makes it difficult to make predictions for the Vineyard, but he said the rate proposed in the transportation paper is slightly higher than average.

Steve asked if there will be specific policies and regulations to enforce the GHG reduction goals. Rob said the strategies will include incentives such as those available through the Cape Light Compact and CVEC, as well as policies and regulations. Ben added that policy changes are being pursued at the MVC, but not necessarily at the town levels, and that policies related to the Steamship Authority are more of a state issue, since the SSA is essentially an extension of the state highway. Richard Andre noted recent legislation that would require a feasibility study on converting ferries in the state to electric or hybrid systems. (The Department of Energy Resources still has to review the bill.)

Steve said greater certainty surrounding the proposed changes will make it easier to develop the forecasts, and he suggested that new policies align with the forecasts, such as requiring EV charging to take place in the daytime, rather than the evening peaks. Tom noted that most vehicles in the summer are driven by visitors, so a mix of private overnight and public daytime chargers will be necessary. Juan added that commercial cooking uses a large amount of energy, and often coincides with peak hours, so that should be considered as well.

Rob said the Island should not wait for demand to dictate the installation of new EV charging stations, since installing the stations themselves will help drive the adoption of EV. He added that EV charging is now generally part of the design for new town buildings. John Nadya said EV usage does help inform the load forecasts, and he acknowledged that the forecasts for the Vineyard may no longer be as straightforward as they once were.

On the topic of energy efficiency, Steve said Eversource is limited in what it can do for the Island, but would be happy to connect with Cape Light Compact in regard to their programs.

Keith Jones explained how the greater adoption of EV and other electric uses on the Vineyard could potentially shift the annual peak from summer to winter. Eversource currently does a 10-year forecast, which shows a summer peak. However, under Commonwealth Electric in the 1980s and '90s, the Cape and Islands had a winter peak because the utility was a strong proponent of electric heat and hot water. When electric heat was later phased out, the peak shifted back to summer. Keith said if everything on the Island were powered by electricity, the peak would shift back to winter.

On the other hand, Richard said the projected increase in electric transportation in summer could moderate that effect, and Rob pointed out that summers are getting warmer, leading to more air conditioning. Steve said it is not yet clear how the various changes will play out on the Island.

### III. Martha's Vineyard load forecast presentation and further discussion

Juan presented an updated version of the Vineyard load forecast for 2020-2029, showing a potential load increase from 62MW to 70MW, as opposed to 62MW to 64MW. The updated version assumes a

higher penetration of EV on the Island, but does not incorporate other aspects of the energy papers. The growth rate on the Vineyard is limited by the growth rate of the substation in Falmouth. Eversource has concluded that supplying the additional load would require a fifth submarine cable to the mainland by at least 2025, in addition to phase one of the proposed Battery Energy Storage System (ESS) in Oak Bluffs. (Phase two of the facility would likely not be pursued under this scenario, since it might require a larger capacity than is feasible.) The fifth cable and the 4.9MW ESS would allow for the retirement of the Island's five backup diesel generators.

The actual load for the Island may fall somewhere between the current and updated projections, but exactly where is unknown. Eversource is currently still working under the lower scenario, but is planning for different contingencies. The current forecast is about 1-2MW higher than in Falmouth. Eversource would need to see actual increases in electricity usage before making formal changes to its forecasts. Keith said installing a fifth cable would take at least five years, so planning has already begun. Rob noted that Eversource would only have so much time to decide on the cable, and he pledged to provide Eversource the best information possible.

Looking forward, Steve said the Eversource team is open to regular meetings with the CATF, and the more information the better. Ben asked the team to provide a list of other system upgrades that would be needed to meet the higher load scenario.

#### IV. Other topics

Liz Argo asked for clarity on an announcement that Eversource needs to complete a cluster study of distributed energy resources (DER) in the region before any new renewable projects can be connected. Juan said the cluster study would focus on groups of DER interconnections, based on their supply stations, which is more efficient than studying each system separately. He explained that DER applications can have complex effects when grouped together, including voltage flicker, voltage rise, and impacts on substation equipment. He did know how long the study would take, but said it would be more complicated than load forecasts and require more granular data.

Ben asked if it was better from a DER standpoint to have one large solar farm rather than smaller systems. Juan said larger systems were probably better in terms of modeling, and they would require less reinforcement near main roads, where the main circuits are located. He said Eversource would provide a map of the strongest parts of the Island system. Keith added that the closer to the Falmouth substation the better, but in the case of the Vineyard, projects can only get as close as West Chop.

The CATF agreed to draft a list of follow-up questions, and invited Eversource to do the same. Task force members and the Eversource team agreed to schedule their next meeting for late September.