

Comprehensive Energy Plan/Vermont Climate Council Cross-Sector Mitigation
Subcommittee Electricity Sector Technical Workshop
August 10th, 2021 10am-2pm

This summary is not meant to be comprehensive, but rather captures key themes raised by participants. For more details, the agenda, presentation materials, and recording can be found on the VT PSD [website](#).

Attendance

Approximately 60 interested individuals and 16 state staff and invited speakers participated in the Workshop.

Workshop Objectives

The workshop was organized to share information about the Vermont Comprehensive Energy Plan (CEP) and the Climate Action Plan (CAP) process and to solicit input from experts and interested stakeholders on electric sector policies, programs, and strategies that should be considered, with an eye toward:

- Trade-offs made when assessing policy options and the basis for those trade-offs
- Strategies, policies, and programs that are (or are not) working to meet renewable energy and climate goals in the electric sector

I. Overview of CEP/CAP Development Process

Ed McNamara, VT Public Service Department (PSD) and Jane Lazorchak, VT Agency of Natural Resources (ANR) and Director of the Climate Council provided an overview of the CEP and CAP processes, emphasizing coordination and focus on consistency in assumptions, models, and strategies being considered in both the CEP and the CAP.

II. State of the State

Ed McNamara, VT PSD, presented information on the state's electric sector, the current policies and goals set for renewable energy and energy efficiency, and projections for changes in electricity demand as buildings and the transportation sector move toward electrification. He also highlighted the need to think about changes in the transmission network needed to support integration of renewables and increased resilience.

Discussion

Three main topics were covered during the discussion (including points made in the chat):

Sector Vs life cycle analysis of emissions:

- Several participants suggested that the state use life cycle analysis (LCA) of greenhouse gas (GHG) emissions from energy sources when evaluating options for meeting increased demand with clean energy. The point was made that hydro and other renewables do not have zero emissions if you consider LCA. According to one participant, for example, there are significant emissions due to flooding and draining of the large areas of land used for large-scale hydro.
- State staff responded that the state is considering how LCA and upstream emissions accounting might be used to evaluate GHG emission reduction strategies in the electricity sector.

VT in-state action vs regional contributions to renewable goals

- Participants raised several points about the implications of setting renewable energy goals that require resources come from within the state versus meeting the goals with resources that come from the New England region.
 - One participant noted that although Vermont has the largest share of in-state renewable electricity, New England is still heavily reliant on natural gas.
 - Several participants suggested that Vermont should be thinking both about increasing in-state resources and their resilience benefits, and also considering the state’s contribution to the region’s reliability and clean energy goals.
 - Right now, the region is far away from 100% renewable energy: NH only has a 25% by 2025 RPS. MA is 35% by 2030. RI is 38.5% by 2035. CT is 44% by 2030. And ME is 80% by 2030. (Full list here: <https://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>).
 - It was noted that VT’s policies for getting renewable built in-state are extremely difficult for Vermonters who are lower income and/or BIPOC to access.

Additionality in RES

- Several participants argued for the state to consider modifying the RES to an Emissions Reduction Standard (ERS) so that the metric targeted for electricity procurement is demonstrated incremental emissions reductions. To achieve additional “real reductions” existing hydro attributes should not be counted, they argued.
 - Expressing agreement, another participant noted that “for the climate it is what is built that matters, not what we buy.” Only by building renewables and simultaneously electrifying do we actually reduce GHGs.

III. Equity in Renewable Energy Policy

Two guest speakers presented California’s approach to incorporating equity into climate change policy in the electric sector, followed by a discussion of how Vermont should think about equity in the context of the CEP and CAP.

- Nadia Marquez Pabst, a lawyer with Woolmington, Campbell, Bent & Stasny, provided a definition of equity and the factors driving inequity. Nadia articulated three aspects of equity: procedural, distributional, and structural. She described challenges and the evolution of the CA Self Generation Incentive Program that is designed to encourage installment of distributed renewable resources in areas where the grid is more vulnerable and in disadvantaged areas that have suffered from inequitable funding in the past. She also noted that Vermont’s Just Transition Subcommittee has developed equity principles and guiding questions for consideration in the development of the Climate Action Plan.
- Allecia Gutierrez, CA Energy Commission (CEC), explained how equity is addressed in the design and implementation of the state’s 100% Clean Electricity goals (established in SB 100). To understand the equity implications of the transition, the state consulted the Disadvantaged Communities Advisory Group, a standing group of stakeholders that advise the CEC and the California Public Utilities Commission (CPUC) and used the CA Enviro Screening tool to identify communities impacted by poor air quality, experiencing high mortality and morbidity, and subject to other socio-economic factors that impact them disproportionately. Based on input from these communities, changes were made to the analysis of how the goal could be achieved.

Discussion

○ **In-state Vs regional approach to equity**

A significant portion of the discussion focused on how Vermont can ensure that its equity principles are being met when power comes from outside of the state.

- There was strong support among participants to expand the equity lens beyond the borders of Vermont to avoid shifting equity burdens to non-Vermonters. One example raised of how Vermont's procurement of imported power is having adverse equity impacts was the burden on indigenous populations displaced by the development of Canadian hydro.
- That said, there is still work to be done argued other participants, to ensure that equity is achieved in siting large-scale renewable projects in-state. Some participants urged the state to shift decision making authority to communities, so they have more ability to determine what they need and want.

○ **Equity in cost allocation and access**

- Participants also raised concerns about the equitable allocation of costs for meeting the renewable energy goals. One individual noted that placing greater restrictions on how the goals are met will lead to higher costs.
- Another noted that Vermont is a lower-income state (as measured by median household income) and suggested that equitable cost allocation should place greater responsibility for covering increased costs on wealthier households in the region.
- Changes in electricity rate design was suggested as one mechanism for reducing the burden on the people least able to pay increased costs.
- Noting that homeownership has been correlated with greater access to distributed renewable resources, participants also promoted increased development of and access to community solar.

○ **Implementing equity principles**

- Finally, a participant emphasized that putting Nadia's recommendations to work means: 1) the renewable energy goals need to be developed with input from overburdened and underserved (OBUS) communities, ensuring access to the process of developing, planning and investment; 2) the benefits of an RES need to be intentionally directed at OBUS communities as well; and 3) there needs to be some consensus as to the structural challenges. This means some sort of restorative approach that further ensures renewable energy benefits get to the right communities.

IV. **Design Considerations for 100% Renewable Energy Standard (RES) in Vermont**

- Patrick Woodcock, Commissioner for Massachusetts Department of Energy Resources, presented an overview of the state's 2050 Decarbonization Roadmap, including Massachusetts' approach in setting a Renewable Portfolio Standard (RPS) and supporting policies and programs.
- Liz Miller, Green Mountain Power, led a facilitated discussion of how Vermont might design and implement a 100% renewable energy standard.

Discussion

○ **Consistency in regional design and coordination of renewable portfolio standards**

- There was support from several participants for the idea of better alignment among states in the RPS framework so the region could move faster and more consistently toward clean energy.

- The measurement of the emissions from different sources should also be consistent across the region, according to some participants.
 - While some agreed that there are benefits to a regional framework, they expressed concerns about moving to centralized procurement of renewable resources. States should have the same rules but do not necessarily need to agree on the same amount, according to a participant.
 - Another participant raised the point that utilities have made decisions under the past rules that should be honored.
 - State staff confirmed that New England states are coordinating with ISO-NE on analysis of the regional build out of renewables and transmission and potential regional benefits. For instance, Ed McNamara noted growing evidence of the benefits of balancing excess power from offshore wind with Canadian hydro power storage capacity.
- **Existing vs new resources**
- Massachusetts includes existing resources in meeting its renewable energy goals. Mr. Woodcock explained that if existing resources were not counted, the gap might drive development of new fossil generation. Existing clean energy (including nuclear) are also critical resources for meeting periods of extreme cold weather in the winter.
 - Several participants repeated their earlier arguments that driving new or additional renewable energy should be the primary consideration for reducing electric sector GHGs.
 - Concerns were raised about the state's current policy on existing vs new renewable energy credits (RECs) that allow utilities to sell RECs from new resources out-of-state and use RECs from existing resources to meet the goals. Changes to this policy are needed to maintain the credibility of the RECs market, according to one participant.

○ **In-state vs regional resources**

The topic of whether and how to meet the RES with out-of-state resources was raised again during this session. In addition to points made earlier, participants noted that:

- Allowing new renewables from outside of VT could be a good strategy to improve resource diversity across the region. E.g., If Vermont's internal resources are primarily solar PV, perhaps we could acquire out-of-state hydro (big and small), wind, long duration storage, etc.
- A participant noted that resiliency benefits that come from local distributed energy resources and are not necessarily supported by a remote central plant -- renewable or not.

○ **Costs and cost-effectiveness of RES**

- There was acknowledgment that achieving 100% renewable energy and electrifying buildings and transportation comes with significant costs in solar, wind, EVs, heat pumps, new wood stoves, batteries, etc.
- In addition, the region has invested significantly in new transmission in VT, which is driving requests for increased electricity rates. It was noted that transmission cost allocation is a very complicated question that should be addressed as part of the transition.
- Participants said more information is needed on the cost of success, e.g., the cost of weatherizing homes to the level needed, and suggested we should not be trading one sector off against another since VT will need all sectors to contribute.
- In response, another participant agreed we should be considering cost effectiveness (including the social cost of carbon), but the electric sector GHG reductions are foundational to the success of the other sectors and should not be given short shrift.

- A participant argued that the state should encourage private sector investment in addition to public funding by eliminating some of the barriers, e.g., the penalties for investing in private solar.
- **Global Foundries opt-out**
 - There was a question raised about the pending case of Global Foundries before the PSD seeking approval to become a self-managing utility and secure its own resources. Given the significant portion (8%) of Vermont's total load represented by Global Foundries, the participant argued that the state should not allow it to opt-out of the RES requirements.