

Science and Data Subcommittee of the Vermont Climate Council
1:30:00 PM November 3, 2021
Meeting Notes

Location: Physical location at ANR office in Montpelier; meeting was recorded and [posted online](#).

Subcommittee Members Present: TJ Poor, Jared Duval, Richard Hopkins, Julie Moore, Lou Cercere, Dr. Lesley-Ann Dupigny-Giroux, Jay Shafer

State Agency Staff Present: Jane Lazorchak, ANR; Karen Blakelock, AoT; Megan O'Toole, VT DEC; Colin Smythe, VT DEC; Marian Wolz, ANR; Claire McIlvennie, PSD; Sarah Phillips, OEO, Bennett Leon, VT DEC

Speakers: David Hill, Dan Mellinger, Richard Faesy, and G. Stebbins, EFG; Liz Hanson, Cadmus

1:35 Welcome, review of agenda, approval of minutes (TJ Poor)

TJ Poor opened the meeting and the Subcommittee approved the [Minutes for 10/27/21](#)

1:39 Climate Projections, Impacts & Hazards, (Jay Shafer)

Jay Shafer shared generalized historical trends in several hazard maps (high winds and wet snow and ice) to accept feedback on how it is presented.

Comments included:

- It would be helpful to highlight difference between past and future as well changes in historical trends. Jay clarified that this data is aggregate for the past 40 years and the team is still working on projections.
- In response to a question re how observed changes are related to climate change and what it means in terms of related costs; Jay said that limited information is available, so they will not likely be able to provide more than directional indications of damage costs.
- Lauren Oates will be drafting a section on hazard costs and Ken Jones on economic opportunities.
- We also care about the climate changing in the rest of the world because of climate migration and food security implications for Vermont.
 - The Climate Impacts Section is specific to climactic impacts of climate change, but the modeling will have a population-based sensitivity, showing an increase in population as might be considered as implications for VT.
- It would be valuable to identify data that is difficult to get so a decision can be made as to how to address those data needs.
- S&D will review draft that is provided to the Council for review.

1:43 Update on Economic Modelling (EFG)

Jared Duval set the context by explaining that several questions were raised in the Council meeting this week on the feasibility of achieving weatherization goals. This session is intended to clarify the model's projections for weatherization and how that relates to concerns raised about workforce availability and the historic pace of weatherization.

- Richard Faesy explained that iterations of the model have resulted in changing numbers. Most recent data shared on retrofitted buildings showed:
 - By 2030 – 38,000 baseline and 82,000 additional weatherized homes = 120,000 cumulative total
 - Annual average weatherization = 10,000 homes /year to achieve 2030 target
- Sarah Phillips questioned the state’s ability to achieve this pace given current levels of weatherization. There was agreement that additional discussion is needed on past experience and available resources to better inform realistic targets. The modelling assumptions, which are meant to be informative, will not be changed at this point.
- A member emphasized the importance of managing expectations of the legislature and other audiences regarding what can be accomplished, including where there are opportunities for alternative sources of reductions from other sectors. The Subcommittee agreed that it will be important to be exceptionally clear in the CAP about the use of the model, which is not intended to be predictive.
- The Weatherization at Scale Workgroup completed an exercise to predict potential pace of weatherization and suggested that over 4 years, the state could weatherize 40% more, which is not the pace needed to achieve the assumption in the models.
- This highlights the importance of monitoring and enforcement, which can provide feedback on progress in each area and allow the opportunity to make adjustments to the plan and modelling.

2:40 Monitoring and Evaluation Framework (Liz Hanson, Cadmus)

Liz Hanson reviewed [the memo](#) on the M&E Framework provided in advance of the meeting.

Discussion:

A Subcommittee member raised a question about the need to coordinate the VT climate Impacts Assessment data on climate, wildlife and natural resources with data for other aspects of M&E and suggested that the state may want to look for data from other partners and agencies as well.

A member noted that without monitoring data on GHG emissions, the state will be using other metrics such as heat pumps installed and homes weatherized and then modelling the GHG reductions. This approach can lead to potentially different results depending on the assumptions used in the modelling. Cadmus clarified that keeping the assumptions aligned with GHG inventory will be helpful but cannot guarantee a certain amount of reductions. Empirical studies may be useful in adjusting assumptions to better predict reductions in the model.

For example, the sale of EVs does guarantee a one to one correlation with taking a similar number of gasoline vehicles off the road. In a given year, EV emission reductions could be offset by more out-of-state tourists gas vehicles than predicted.

Cadmus will incorporate feedback from today or received by the end of the week into memo to be shared with Council by next Tues.

3:19 Miscellaneous Updates (TJ Poor)

- LEAP Model inputs and outputs will be posted in several weeks
- Social Cost of Carbon draft edits based on feedback from Council members was posted yesterday.
- The latest version of the EFG economic modelling was shared with a task group; EFG will meet with them again to share an updated version with VMT costs that had not been reflected

in the prior version. Key findings of the analysis will be woven into the CAP and full report will be in the appendix.

- The CAP text will include a broad overview of the economic impacts of the Actions (draft by end of day Thurs.); Technology pathways writeup will be taken from Cadmus and EFG's report. CSM SC will have a chance to review draft in advance.

3:30 Public Comment

- Stephen Crowley would like the climate impacts assessment to provide guidance on what the level of impacts communities should be planning for.
- George Gross had questions regarding the form and documentation of the LEAP model that will be made available as part of disclosure. TJ clarified that it was not yet determined how it will be shared. He said the main assumptions will be fully documented.
- Mr. Gross also noted that the uncertainty about the number of houses weatherized, etc. could be addressed through a risk management approach, including gathering the best available data and preparing a contingency plan. Likewise the availability of critical materials for batteries and solar panels may be in jeopardy over time due to increasing global demand which may also require contingency planning.
- He mentioned "consequential life cycle assessment" as a way to better predict the results of different policies, because it takes into account some market dynamics that might affect the mix and price of technologies and fuels

3:47 Adjourn

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