

May 11, 2022 Vermont Workshop: Opportunities to Improve How Regulatory Agencies Address Climate Change

Workshop Goals & Outcomes

Brown University engaged Synapse Energy Economics and Climable to host a series of workshops in New England states. The purpose of these workshops is to collaborate and crowdsource ideas from stakeholders on the opportunities and challenges for regulatory agencies implementing lasting and equitable climate and energy solutions.

The effort includes:

- a background report to summarize research about best practices, barriers, and opportunities across New England states.
- public workshops in each state to gather stakeholder input and facilitate collaboration on solutions.
- a final report to accumulate and enable action on lessons learned and next steps for all New England states.

WORKSHOP AGENDA

12:30-1:00	Sign-In, Coffee & Snacks
1:00-1:10	Welcome & Logistics
1:10-1:30	Briefing on Vermont Climate Goals, Progress, Best Practices, and Barriers
1:30-2:20	Breakout Session #1: Idea Brainstorming
2:20-2:30	Break
2:30-3:20	Breakout Session #2: Force Field Analysis and Idea Prioritization
3:20-3:50	Wrap Up and Next Steps

DISCUSSION QUESTIONS

1. In addition to what is already underway, what else can be done to meet Vermont's climate goals? How does equity fit in with these ideas?
2. What policies and programs need to be in place to support the development of equitable utility regulation and climate action in Vermont?
3. What non-climate effects of climate action do the people of Vermont care about?

CLIMATE GOALS & PROGRESS

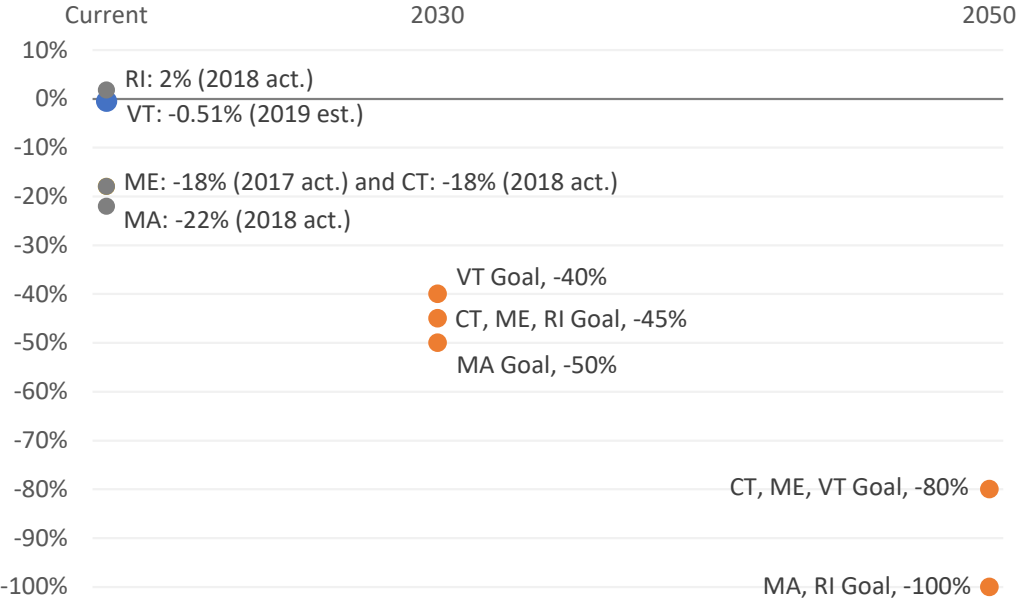
Vermont adopted climate goals, but they are less stringent than other New England states. Vermont has made little progress towards its 2030 greenhouse gas reduction goal. Key challenges include Vermont's transportation and thermal (heating fuel) sectors which represent more than 70 percent of greenhouse gas pollution and the state's reliance on wood and wood waste for electricity generation and heating.

Table 1: New England State Climate Goals and Achievements

Climate Goals		CT	ME	MA	NH	RI	VT
Greenhouse Gas Emissions Reduction Goals	Baseline	2001	1990	1990	None	1990	1990
	By 2030	45% (18%, 2018 act.)	45% (18%, 2017 act.)	50% (22%, 2018 act.)		45% (-2%, 2018 act.)	40% (0.51%, 2019 est.)
	By 2050	80%	80%	100%		100%	80%
Renewable Portfolio Standards		40% (by 2030)	80% (by 2030) 100% (by 2050)	40% (by 2030)	25% (by 2025)	39% (by 2035)	75% (by 2032)
Energy Efficiency Savings Targets (% of Total Sales)		1.1% (2019-2021)	2.3% (2020-2022)	2.7% (2019-2021)	0.6% (2022 est.)	2.5% (2018-2021)	2.4% (2018-2020)
Energy Storage Requirements		1,000 MW (by 2030)	300 MW (by 2025) 400 MW (by 2030)	1,000 MWh (by 2025)	None	None	None

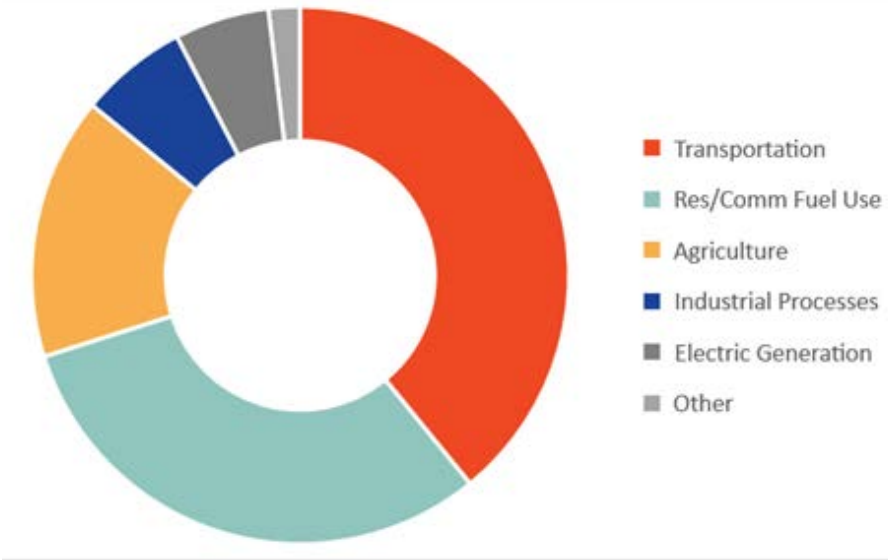
Source: Synapse Energy Economics. (2022). A Better New England Regulatory Framework for Mitigating Climate Change. Available at: <https://www.synapse-energy.com/project/study-climate-action-and-public-utility-commissions-new-england-states>. Updated 5/2/2022.

Figure 1: Vermont Greenhouse Gas Emission Reductions Compared to Other States and Goals



Source: Vermont data from VT Department of Conservation, Air Quality and Climate Division. (2021). Greenhouse Gas Emissions Inventory Update

Figure 2: Vermont Greenhouse Gas Emissions by Source



Source: VT Department of Conservation, Air Quality and Climate Division. (2021). Greenhouse Gas Emissions Inventory Update

Note: Res/Comm Fuel Use represents the thermal (heating fuel) sector.

VERMONT BEST PRACTICES

- Vermont has set economy-wide, legally binding goals to reduce greenhouse gas emissions and implemented supporting policies such as renewable energy standards and energy efficiency targets to enable goal achievement.
- Vermont established a Climate Council which led the development of the state's initial [Climate Action Plan](#).

VERMONT BARRIERS & CHALLENGES

- Vermont is not making progress towards its greenhouse gas emissions reduction goals, particularly in the two sectors that emit the most greenhouse gases—the transportation and thermal (heating fuel) sectors.
- Vermont does not require its Public Utility Commission to address climate change or environmental justice in its mission and decision-making.
- The state has not yet enacted environmental justice legislation and policies or explicitly defined environmental justice.
- The Vermont Public Utility Commission's 2020 Annual Report noted that Vermont lacks the public funding necessary to meet its greenhouse gas emission reduction commitments.
- Another impediment to reducing emissions from the fossil-fuel sectors is a lack of trained and certified clean energy workers.
- Vermont may also experience issues mentioned in other states such as: lobbying and legislative challenges, a lack of technical support for decision-makers, public awareness and participation in Public Utility Commission proceedings and utility power and influence.

SOURCES AND ADDITIONAL RESOURCES

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2. VT Department of Conservation, Air Quality and Climate Division. (2021). *Greenhouse Gas Emissions Inventory Update*. Available at: https://dec.vermont.gov/sites/dec/files/aqc/climate-change/documents/Vermont_Greenhouse_Gas_Emissions_Inventory_Update_1990-2017_Final.pdf.
3. National Regulatory Research Institute. (2021). *Clean Energy Policy Tracker*. Available at: <https://www.naruc.org/nrri/nrri-activities/clean-energy-tracker/>
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5. Maine Won't Wait: A Four-Year Plan for Climate Action. (2020). Available at: https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MaineWontWait_December2020.pdf.
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8. American Council for an Energy Efficiency Economy. August 2020. Energy Efficiency Resource Standards. Available at: <http://www.database.aceee.org/state/energy-efficiency-resource-standards>
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10. The State of Maine Governor's Energy Office. June 2021. Energy Storage. Available at: <http://www.maine.gov/energy/initiatives/renewable-energy/energy-storage>.
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GLOSSARY OF TERMS

Acronym	Name	Definition
DER	Distributed Energy Resource	Technology for generating and managing electricity at the place of consumption
DR	Demand Response	Reducing energy consumption on the consumer side during peak demand
DSM	Demand-Side Management	Managing demand for energy on the consumer side to reduce overall consumption
DSP	Distribution System Planning	Planning for the incorporation of DERs into the grid, oftentimes by improving grid flexibility
FERC	Federal Energy Regulatory Commission	An independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects.
FIT	Feed-In Tariff	A policy guaranteeing a price for each unit of renewable energy generated
ISO	Independent System Operator	An independent organization that coordinates, controls, and monitors the operation of the electrical power system. New England's system operator is ISO New England (ISO-NE)
PIM	Performance Incentive Mechanism	A policy that encourages utility performance in areas such as reliability, safety, customer service, and energy efficiency
PTC	Production Tax Credit	Federal tax credit that incentivizes renewable generation
REC	Renewable Energy Certificate	Certificate representing renewable energy generation that utilities must purchase to fulfill RPS requirements
RGGI	Regional Greenhouse Gas Initiative	A cooperative, market-based effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia to cap and reduce CO2 emissions from the power sector
RPS	Renewable Portfolio Standard	A regulation requiring increased production in renewable energy, usually involving a percentage goal by a specified year

Sources:

1. Harvey, Hal, Robbie Orvis, and Jeffrey Rissman. *Designing Climate Solutions: A Policy Guide for Low-Carbon Energy*. Island Press. November 2018. Available at: <https://islandpress.org/books/designing-climate-solutions>
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