

# VERMONT AGENCY NATURAL RESOURCES AND AGENCY OF TRANSPORTATION

## CAP-AND-INVEST: PUBLIC MEETING SUMMARY

October 3, 2024

### Attendees

12:00 p.m.: 54 attendees

6:00 p.m.: 19 attendees

Project Team
Jane Lazorchak (Agency of Natural Resources)
Andrea Wright (Agency of Transportation)
Brian Woods (Agency of Natural Resources)
Patrick Murphy (Agency of Transportation) - <i>present for afternoon session only</i>
Sophi Veltrop (Agency of Natural Resources)
Chris Porter (Cambridge Systematics)
Ben Eskin (Cambridge Systems)
Marc Hafstead (Resources for the Future)
Molly Robertson (Resources for the Future)
Jim Redeker (FHI Studio)
Toni Marie Pignatelli (FHI Studio)
Leah Beckett (FHI Studio)
Cassandra Valcourt (FHI Studio)
Sara Grossman (FHI Studio)

### Presentation Summary

Jane Lazorchak, of the Vermont Agency of Natural Resources (ANR) Climate Action Office, and Andrea Wright, of the Vermont Agency of Transportation (AOT), welcomed attendees to the first virtual public meeting on the topic of Cap-and-Invest on October 3, 2024. The public meeting was held twice (12:00 p.m. and 6:00 p.m.) on Zoom. J. Lazorchak and A. Wright thanked attendees for participating.

Toni Marie Pignatelli, of FHI Studio, discussed how to participate in the meeting.

A. Wright reviewed the agenda:

- Welcome
- What has Vermont done to plan for and address climate change?
- What is a cap-and-invest program?
- How can a cap-and-invest help Vermont meet our climate goals?
- What are the potential benefits and impacts to Vermonters?
- Introduction to this climate policy study
- Q&A Session
- Stay Involved!

A. Wright emphasized that the State of Vermont is in the process of conducting a study to evaluate the options for joining a cap-and-invest program and the potential benefits and costs of such a program. The state is not, at this time, actually implementing a cap-and-invest program. She then introduced the study team (see table above).

T. Pignatelli facilitated the first series of polling questions: "What county do you live in?" and "How much knowledge do you have of cap-and-invest or cap-and-trade?" (See results on pages 6-8.)

J. Lazorchak discussed key actions the State of Vermont has taken to plan for and address climate change. These actions have brought the State to the point that they are now studying cap-and-invest programs. Actions included:

- the State of Vermont's Global Warming Solutions Act, which aims to reduce climate pollution by 26% below 2005 levels by January 1, 2025, and by 40% below 1990 levels by 2030,
- the State's Climate Action Plan, which calls for the state to "pursue a cap-and-invest program for transportation fuels," and
- Vermont's Transportation Carbon Reduction Strategy (completed in 2023) found the state will fall well short of its requirements for transportation sector reductions, even with existing clean car/truck policies and additional investments.

J. Lazorchak introduced Marc Hafstead, Program Expert with Resources for the Future, who explained how cap-and-invest programs work. A traditional approach to regulating pollution sets a limit on emissions or emissions intensity (e.g., emissions per mile or megawatt hour) from different sources of emissions (car, truck, powerplant, factory, etc.). A cap-and-invest program is a complementary approach to this. The state would set a declining cap on carbon emissions over time. The cap could, for example, be based on the state's requirements for reducing emissions (in Vermont, these requirements are set in the Global Warming Solutions Act).

The state would sell or distribute the rights to emit carbon based on that declining cap. Those rights are known as "allowances", where one allowance is the permission to emit one metric ton of carbon dioxide equivalent emissions. As the emissions cap declines, so

do the number of allowances. Companies that emit pollution can buy, sell, and trade allowances. Companies that can reduce emissions at a cost lower than the market allowance price will choose to reduce emissions. On the other hand, companies with higher costs will purchase allowances. Thus, the market determines where and how the lowest cost emissions reductions will occur. The state can then achieve cost-effective emissions reductions without regulators setting the costs of emission reductions across firms or sectors. The state collects proceeds from auctioning the allowances. The state can then use the proceeds to invest in clean energy, energy efficiency, resilience and adaptation to climate change, and other priorities that benefit Vermonters and further reduce pollution.

If the state pursues a cap-and-invest program, Vermont would choose which emissions sources to include. A Vermont program would include fossil fuels for transportation, possibly fossil fuels used for buildings (natural gas, home heating oil, propane, etc.), and possibly large industrial sources. The state is currently looking at the advantages and disadvantages of including different sectors. Typically, about 75-80% of a state's emissions can be covered by a cap-and-invest program. Some emissions are from sources that are too small or difficult to include.

"Regulated entities" are the businesses that would need to buy and sell rights to emit pollution in the marketplace. Individual households and businesses other than fuel distributors would not be directly regulated and would not have a compliance obligation. Instead, fuel distributors and suppliers would be responsible for compliance. That is in addition to any large industrial sources.

M. Hafstead then explained how a cap-and-invest program might help Vermont meet its climate goals. He emphasized that the State of Vermont is currently evaluating creating such a program but has made no decisions about moving forward with it.

He stated that cap-and-invest is not new. Vermont has been participating in the Regional Greenhouse Gas Initiative (RGGI), which sets a declining cap on emissions from electricity generation powerplants. This program has been in place since 2009. He explained that RGGI has contributed to reducing climate pollution. It has generated revenue for the participating states, including Vermont, that has supported energy efficiency and clean energy programs.

M. Hafstead presented a graph showing that reducing climate pollution has not come at the expense of economic growth. This is indicated by a declining trajectory of electricity emissions between 2005 and 2021 with a steady upward trend in GDP during the same timeframe. RGGI investments have saved participants money on energy bills, created jobs, and reduced carbon emissions, even while the regional economy has been growing. Over their lifetime, investments made in 2022 alone will save participants an estimated \$1.8 billion on energy bills and prevent 7.5 million short tons of harmful carbon dioxide

emissions. In 2022, nearly half of RGGI's proceeds went to residential energy efficiency and clean energy; 15% went to business efficiency; and another 15% went to low-income rate relief and efficiency. Vermont invests the majority of its RGGI allowance proceeds in programs managed by Efficiency Vermont, including home energy loans and incentives, small business energy efficiency incentives, and low-income energy and weatherization services.

M. Hafstead noted that Vermont would not be the first state to do cap-and-invest, should it choose to do so. California started its program in 2013, and Quebec joined their program in 2014. Washington State started its own program in 2023. New York State is developing a program that could start by 2026. Vermont would join with another program—, either the joint California/Quebec program and/or New York. He explained that the more states join, the more opportunities there are for cost-effective emission reductions.

M. Hafstead then discussed how a cap-and invest program might help Vermont reduce its emissions to required levels. He discussed the importance of ensuring equitable distribution of the benefits and the need to manage impacts. The level of benefits and impacts will depend on what sectors are covered and what the allowance price is, as well as what actions Vermont's neighbors take.

**Benefits could include:**

- More money into energy efficiency, electrification, and multimodal transportation to reduce climate pollution.
- More money into climate resilience and adaptation.
- More jobs supporting clean energy investments.
- Improved health and environment, which can make the state a more attractive place to work, live, and play.
- The program would improve decision making and reduce uncertainty for businesses by formalizing a timeline for emissions reductions.

**Impacts could include:**

- Higher prices for conventional fossil fuels, including gasoline, diesel, natural gas, and heating oil.
- Potential border effects with non-participating neighbors e.g. people driving out of state to buy gas, or businesses moving to a lower-cost state.

M. Hafstead expressed that to make the program affordable to Vermonters the state would need to take a number of steps such as:

- Including an upper limit on the emissions price.
- Targeting a portion of program proceeds to lower-income households, vulnerable businesses, and other programs to address equity concerns. Examples include

income-qualified heat pump rebates, weatherization programs, or electric vehicle incentives. Some of the proceeds could also go directly to lower-income households as rebates. The remaining proceeds would be invested to make it easier to reduce energy use and switch to cleaner energy sources, which would not be affected by the pollution price.

- If including major industries in the program, the state might allocate emission allowances at no cost to industries at risk of leaving the state, to discourage them from relocating.

M. Hafstead summarized that Vermont is considering cap-and-invest for a number of reasons. Vermont has requirements for reducing climate pollution in the state, and the program would provide more certainty for achieving those reductions. A cap-and-invest program would provide additional money that could be reinvested in making Vermont's homes, cars and trucks, businesses, and industry more energy efficient and converting to clean energy. The proceeds can be spent in ways that improve equity, such as prioritizing incentives for lower-income households. The rising price for conventional, polluting energy will help tilt the playing field towards renewables, clean energy, and efficiency. The cap-and-invest program would not be a stand-alone program. Rather, it would complement other policies Vermont has in place such as clean vehicle standards, industrial emissions limits, and clean energy/efficiency programs.

T. Pignatelli then conducted the final poll: "What additional information or resources, if any, would help to increase your knowledge of cap-and-invest programs?" (See results on pages 6-8.)

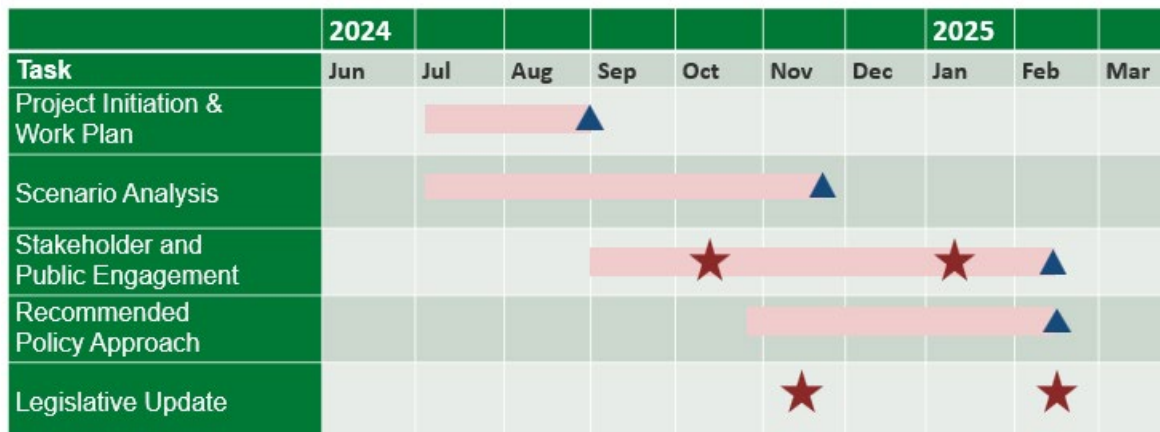
J. Lazorchak shared that this study was recommended by the Climate Action Plan and then required by the Vermont State Legislature. The current study aims to understand the options for joining a cap-and-invest program, the potential benefits and costs, and how to ensure equitable distribution of both benefits and impacts. The study is broader than cap-and-invest and also explores other complementary policies, such as switching to less polluting fuels, that can work together with cap-and-invest. She stated that the study will estimate:

- The amount of emissions reduction that could be generated,
- revenue that could be generated for reinvestment,
- potential benefits and impacts to Vermonters, and
- the resources needed to administer a program.

The study will generate information to support a recommendation from the Treasurer's Office to the Vermont State Legislature about a cap-and-invest program.

A. Wright described the engagement activities that are taking place as part of the study. In addition to this series of public meetings there will be focus groups with representatives of potentially affected entities in October and November. A second round of engagement, including focus groups and two public meetings, will take place in early 2025 after draft program recommendations have been developed. Current study information can be found at [climatechange.vermont.gov/cap-and-invest-study](https://climatechange.vermont.gov/cap-and-invest-study).

## Timeline



## Polling

### Afternoon Session

**Q1) What county do you live in?**

**A1) 32 Responses:**

- Grand Isle
- Windsor
- Chittenden
- Washington
- Franklin
- Orange
- Windham
- Addison

**Q2) How much knowledge do you have of cap-and-invest or cap-and-trade?**

**A2) 38 responses**

- None – 10
- A little – 18
- A lot – 10

**Q3) What additional information or resources, if any, would help to increase your knowledge of cap-and-invest programs?**

**A3)**

- Where is cap-and-invest for transportation programs working?
- Are there similar case studies that showed the price impacts to consumers?
- Case studies
- Success & challenges faced by other states/regions
- <https://www.plainlanguage.gov/> Would help explain this very well
- Where do renewable liquid fuels fit?
- Opportunity to meet with leaders in other states who already have cap-and-invest programs underway
- Who is actually buying the credits?
- Sense of potential revenue generated
- Articles written in local media
- Could the cap-and-invest focus on vehicle type instead of fuel? (e.g., More expensive to buy heavy/inefficient vehicles; incentives for EVs)
- I would like to know about the cost of allowances in states that have already adopted
- Where do biofuels fit it?
- How much is the price of fossil fuels likely to increase?
- What other jurisdictions are pursuing; what are their program parameters and/or realized costs/benefits?
- How/why did it fail earlier?
- How would the state facilitate workforce development?
- Data on the cost of implementation; seems like it makes more sense regionally because of scale
- Net metering
- I would like to understand the trickle-down financial impact for Vermonters
- How do we access the resource to make the home improvement and vehicle choices
- Are there similar case studies which show impacts on businesses? In particular regarding manufacturers who are impacted by shipping the product they create and send out?
- The impact of travel and how this policy could address commercial and shipping into the state

- How would a cap-and-invest program interact with the proposed Vermont Clean Heat Standard?
- How much is this expected to be passed onto consumers? Is there data from already active cap-and-invest programs? Did the electricity cap-and-invest also increase costs for businesses and Vermonters?

### Evening Session

#### Q1) What county do you live in?

##### A1) 8 Reponses:

- Franklin
- Chittenden
- Washington
- Addison
- Orleans
- Rutland

#### Q2) How much knowledge do you have of cap-and-invest or cap-and-trade?

##### A2) 10 responses

- None – 4
- A little – 5
- A lot – 1

#### Q3) What additional information or resources, if any, would help to increase your knowledge of cap-and-invest programs?

##### A3)

- Case studies of how low-income people are affected
- Impacts on Vermont households
- How will you keep your high income and large businesses, your tax base, from running away?
- Wouldn't a simple carbon tax be very much cheaper to implement? And wouldn't returning this to the citizens (equally) be more efficient and much more equitable with each of us different?



## Questions & Answers

Afternoon Session	
<b>Q1) Will you break down transportation for GHG emission requirements? If so, what type?</b>	A1) It's based on fuels that are sold for different types of vehicles; the distinction is between fuels used for housing vs. transportation
<b>Q2) Where do renewable liquids fit?</b>	A2) Might be affected if the price of fossil fuels goes up; would be better to address with a low-carbon or renewable fuel standard
<b>Q3) Are there similar studies that show price impact to consumers?</b>	A3) This will depend on a lot of factors; the allowance price is uncertain
<b>Q4) How do we access resources to make home improvements and vehicle choices?</b>	A4) There are many ways - Efficiency Vermont is a good place to start
<b>Q5) Who's buying the credits?</b>	A5) Fuel suppliers and distributors
<b>Q6) What potential options are being explored for Vermont Cap-and-Invest and RGGI?</b>	A6) Vermont is not including electricity for this study
<b>Q7) Has the obligated industry focus group invitation been sent out?</b>	A7) Not yet

Evening Session	
<b>Q1) What do we know about the cost of allowances and impact of emissions from other states?</b>	A1) <ul style="list-style-type: none"><li>• California's allowances were the lowest but has increased</li><li>• Washington state had a high price, but has lowered since every \$20 of allowance price is equivalent to an increase of \$0.18 for gas</li></ul>
<b>Q2) What would be the likely cost per gallon of the program?</b>	A2) We will also be looking at cost savings for Vermont households and costs vs. benefits
<b>Q3) How will you provide enough electricity to replace fossil fuels?</b>	A3) For the 2021 Climate Action Plan, they looked at different electrification outcomes
<b>Q4) Would Vermont be joining New York or the West program?</b>	A4) That has not yet been determined
<b>Q5) Is the study exploring the potential use of carbon offsets?</b>	A5) No - this is outside of the scope of this study
<b>Q6) If you join an existing program, do you have to have the same allowance price?</b>	A6) Yes
<b>Q7) What does it mean that Vermont would be a "price taker"?</b>	

A7) The allowance price will likely be set by dynamics going on in California and other participating states rather than in Vermont

### Questions not addressed at meetings due to time constraints

**Q1) Will the study provide a draft/suggested design of the potential cap-and-invest program, or just recommendations?**

A1) The study will include a recommendation for the cap-and-invest program Vermont should consider linking to based on the evaluation criteria shared during the meeting. The study results and recommendations will be used to guide development of a Vermont program.

**Q2) Many of Vermont's key programs to access more efficient, cleaner transportation — in particular offering solutions to lower income Vermonters — are facing fiscal cliffs, likely by the end of this year. Can you speak to how states and jurisdictions with Cap-and-invest programs are using consistent revenues from their Cap-and-invest to fund clean transportation programs? Thanks.**

A2) The question answers itself in that Vermont has relied on federal funding and other influxes of one-time funding to support the decarbonization of the transportation sector. A Cap-and-invest program would both send a market signal that Vermont is committed to decarbonization, as well as provide a consistent funding source to incentivize this energy transition.

**Q3) Would a carbon tax be much cheaper to implement? And wouldn't returning the proceeds to the citizens (equally) be more efficient and much more equitable, with each of us different?**

A3) Administratively a carbon tax would likely be simpler to implement but it would not give businesses the benefit of a broader marketplace to support emission reductions, nor the opportunity to identify and implement the lowest-cost emission reduction options. As for equity, programs such as New York's and California's contemplate returning or actually do return roughly 30% of the revenue to the people in their state.

**Q4) Would a heating Cap-and-invest Program be structured differently than transportation Cap-and-invest?**

A4) The universe of regulated entities is quite different in each sector. But in general it would be structured in the same way, with obligated parties being the entity owning the fuel when it is brought into Vermont.

**Q5) How will your high-income taxpayers not run away quickly?**

A5) This program is designed to impact regulated entities, not high-income taxpayers. High-income households actually pay a smaller percentage of their total income on fuel and energy than lower-income households, and the study will examine mechanisms in other programs to address that issue.

**Q6) Could the cap-and-invest focus on vehicle type instead of fuel?**

A6) This is actually a policy typically referred to as a "fee-bate" or a vehicle efficiency charge. In a fee-bate program, motor vehicle owners pay a registration fee once or annually (depending on policy design) based on the efficiency of the vehicle. Less

efficient vehicles would have a higher registration fee and more efficient vehicles would have a lower fee. This is a recommendation in Vermont's Climate Action Plan.

**Q7) How would the state facilitate workforce development?**

A7) The Climate Action Office is currently working closely with the Department of Labor on workforce considerations for meeting the state's climate goals. Department of Labor serves on the Inter-Agency Advisory Board to the Climate Action Office and in that role supports state Agencies coming together to proactively discuss needs in this space.