State of Vermont
Office of Climate Action
1 National Life Dr, Davis 2
Montpelier, VT 05620-3901
climatechange.vermont.gov

Agency of Natural Resources

MEMORANDUM

To: Vermont General Assembly
Vermont Climate Council
From: Julia S. Moore, Secretary, Agency of Natural Resources
CC: Jane Lazorchak, Program Manager, Climate Action Office, Agency of Natural Resources
Date: December 22, 2025
Re: Review of Possible Frameworks for a Greenhouse Gas Reporting Program

Summary

The 2025 Vermont Climate Action Plan (CAP) includes the following request to the Agency of Natural Resources (ANR):

> Develop a framework for the reporting of greenhouse gas emissions data from fuel suppliers and other significant emitters of climate pollution. ANR will work expeditiously to put a reporting framework in place and recommend to the Legislature by December 15, 2025, statutory changes and funding needed to support streamlined reporting requirements and a stepped implementation plan. [1]

This request is part of a multi-step recommendation made by the Climate Council in its 2025 Climate Action Plan related to having Vermont join a cap-and-invest program. A comprehensive greenhouse gas (GHG) reporting program is foundational for any sector-wide or multi-sectoral policy or regulatory approach to reduce GHG emissions and so would be integral to any broad-based effort(s) to reduce GHG emissions.

Similar to the CAP, in his February 18, 2025, report to the Vermont General Assembly on approaches to a cap-and-invest program, Treasurer Pieciak identified the development of a framework for reporting GHG emissions data as a foundational step. Specifically, in his report, Treasurer Pieciak concludes that there is currently no viable cap-and-invest program to join and recommends further evaluation of the benefits and impacts of joining such a program in future, including studying whether and when to establish a GHG emissions reporting program. [2]

Following from both the Treasurer's report and the CAP, this memo presents a recommended framework should the Legislature choose to require establishment of a GHG reporting program in Vermont.

In fulfilling this request from the Climate Council, ANR analyzed two reporting frameworks: harmonization and standalone. Harmonization would have ANR staff compiling and reconciling various types of data collected by other departments, notably fuel sales data collected by the Departments of Tax and Motor Vehicles. The adoption of a standalone reporting rule, on the

[1] https://climatechange.vermont.gov/cap-2025
[2] 20250218-TRE-Cap-and-Invest-Report.pdf

other hand, would have covered entities reporting GHG emissions data directly to ANR. We have considered both options and believe, should the Legislature choose to proceed with a GHG reporting program, that a standalone reporting rule is most appropriate for Vermont.

A standalone reporting rule would allow ANR to define, collect, and analyze sufficient data to develop a robust estimate of statewide GHG emissions from covered sectors. It would also give ANR the ability to expand the scope of the reporting program to additional sectors and covered entities if deemed appropriate for future mitigation activities. A standalone rule would decrease ANR's reliance on federal datasets, such as the EPA's Electronic Greenhouse Gas Reporting Tool (e-GGRT), which has growing value as federal data reporting requirements are rolled back.[3]

ANR staff continue to explore "reverse harmonization"—a process by which fuel data collected by ANR would be shared with other departments, reducing their current reporting responsibilities—to minimize duplicate reporting to the greatest extent possible.

While ANR has general legal authority to require reporting of air contaminant emissions, including GHGs, given current legal challenges in other jurisdictions and the considerable resources required to undertake this work, it is important that the General Assembly specifically authorize ANR to create a comprehensive GHG reporting program that covers all direct and indirect sources of emissions, including fuel suppliers, and to ensure adequate resourcing.

Resource Requirements

The establishment and operation of a greenhouse gas reporting program requires significant investment, especially in the program's early years. Estimates of required resources have been developed based on conversations with the New York State Department of Environmental Conservation, the Massachusetts Department of Environmental Protection, the Department of Environmental Conservation's Air Quality and Climate Division, the Department of Motor Vehicles, and the Tax Department. These estimates are outlined in Table 1. They suggest that a GHG reporting program will require two full-time employees (FTEs), requiring an increase in the ANR base budget of $300,000 to fund long-term. In addition to these staffing needs, the program will require $300,000 in one-time costs to develop a reporting platform and $200,000 in base funding to support annual maintenance and third-party verification expenses.

Required resources are divided among the following four tasks:

> *Program Establishment & Management:* This task initially focuses on rulemaking and entity registration, then turns to ongoing activities such as providing technical assistance, preparing educational materials, managing contracts and budgets, drafting annual reports and periodically reassessing program scope.
>
> *Platform Development & Maintenance:* This task involves the development, launch, and continued operation of a platform for submitting, storing, and analyzing data from covered entities. An external-facing submission portal for

[3] https://www.epa.gov/newsreleases/epa-releases-proposal-end-burdensome-costly-greenhouse-gas-reporting-program-saving-24

covered entities will be linked to an internal database. ANR would need to contract with a third-party to develop the platform.

Data Analysis & Verification: This task features review and analysis of submitted data. Issues with data quality will be flagged for follow-up with covered entities. Additionally, an equitable verification process will be developed and managed by ANR—likely with the support of a third-party verifier—to ensure accuracy of submissions.

Compliance & Enforcement: This task encompasses engagement with covered entities to ensure compliance with the reporting program. In the program's initial years, the CAO will lead compliance efforts, with a focus on outreach and education. Once the program is firmly established, a formal enforcement process will be developed.

Table 1: Estimated Resource Requirements for GHG Reporting Program

Task	Program Establishment & Management	Platform Development & Maintenance	Data Analysis & Verification	Compliance & Enforcement	Totals
Staff Time (FTEs)	1 FTE	0.25 FTE	0.25 FTE	0.5 FTE	**2 FTEs = $300,000** *Base funding increase*
One-time Costs	N/A	$300,000 for platform development	N/A	N/A	**$300,000** *One-time*
Ongoing Annual Costs	N/A	$100,000 for platform maintenance each reporting year	$100,000 for third-party verification each reporting year	N/A	**$200,000** *Base funding increase*

Adequately resourcing this effort is critical, as it will determine the quality of the data that is reported. A high-quality dataset is critical to Vermont's ability to fully understand and evaluate the costs and benefits of emissions reduction efforts and inform future policy discussions, and to ensure program design is truly able to meet the needs of low- and middle-income Vermonters. It is particularly important to adequately resource compliance efforts. Chair McNamara makes this point in the Vermont Public Utility Commission's January

15, 2025, report to the Legislature on the Clean Heat Standard, in which he cites the challenges of standing up their reporting program due to inadequate funding.[4]

A further point on compliance, if some covered entities are reporting while others are not, there is not only incomplete data, but also an inequitable system. Prioritizing equity among covered entities, while reducing their reporting burden to the greatest extent possible, needs to be a priority, including allowing adequate time to directly engage prospective covered entities in GHG reporting program design.

Program Scope

The Legislature will need to determine the scope of the GHG reporting program. At minimum, the program should cover the transportation and the residential, commercial, and industrial (RCI) sectors. Together, transportation and RCI represent 70% of statewide emissions, as accounted for in the state's GHG Inventory.[5] Covered entities would be suppliers of transportation and heating fuels. This scope is consistent with the findings of the 2025 study *Assessment of a Cap-and-Invest Program for Vermont.*[6] The Legislature may wish to explore the costs and challenges associated with broadening the scope to cover non-energy industrial process emissions and to accommodate voluntary reporting in other sectors. Any expansion, however, would likely require additional staff and contract resources at ANR to implement beyond those presented in this memo.

4 https://outside.vermont.gov/agency/anr/climatecouncil/Shared%20Documents/Vermont_Climate_Council/Second%20Checkback%20Report%20on%20Clean%20Heat%20Standard.pdf

5 https://climatechange.vermont.gov/climateactionoffice/greenhouse-gas-inventory

6 https://climatechange.vermont.gov/cap-and-invest-study

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Appendix A: Supplemental Tables

Table 2: State GHG Reporting Programs

State	Sectors Covered	Reporting Thresholds	Supports GHG Reduction Policy?
California	Industrial facilities, electricity generators and importers, fuel suppliers, and corporations with over $1 billion in revenue (SB 253).	**General:** 10,000 MT CO2e. **Corporate (SB 253):** Over $1 billion revenue for Scope 1, 2, and 3. **Financial Risk (SB 261):** Over $500 million revenue for climate-related financial risk.	Yes, supports cap-and-trade and the Global Warming Solutions Act.
Colorado	Electric service providers or utilities. Natural gas local distribution companies. Industrial waste landfills. Municipal waste landfills, including closed landfills with a gas collection system and destruction device(s) in place. Industrial wastewater treatment operations. Underground coal mines.	None	Yes, supports inventory and Greenhouse Gas Emissions and Energy Management for Manufacturing rule
Maryland	Methane facilities, and state operations.	**Methane:** 100+ tons annually.	Yes, guides policy for net-zero by 2045.
Massachusetts	CAA Title V facilities; other facilities over threshold; Retail electricity sellers; Heating fuel suppliers.	**Facilities:** Title V, or >5,000 short tons/year CO2e **Retail electricity sellers:** All sales. **Heating fuel:** Report any amount.	Yes, supports Global Warming Solutions Act targets and draft Clean Heat Standard.

New Jersey	Methane facilities, high-GWP refrigerant users, and natural gas utilities.	**Methane:** 100+ tons annually. **Refrigerants:** 50+ pounds of high-GWP refrigerants.	Tracks progress for Global Warming Response Act.
New York	Large sources, fuel suppliers, waste haulers, electric power entities, agricultural lime and fertilizer suppliers.	**Large sources:** 10,000 MT CO2e/year. **Fuel/Electricity/Waste/Fertilizer:** Report any amount.	Yes, informs Climate Leadership and Community Protection Act and potential cap-and-invest.
Oregon	Industrial facilities, fuel suppliers, and electricity suppliers.	**Facilities:** 2,500 MT CO2e/year. **Fuel/Electricity:** Specified levels.	Yes, supports Climate Protection Program market-based reductions.
Washington	Industrial facilities, fuel suppliers, and electric power entities.	**Reporting:** 10,000 MT CO2e/year. **Cap-and-Invest:** 25,000 MT CO2e/year.	Yes, supports Cap-and-Invest Program under the Climate Commitment Act.
RGGI (CT, DE, ME, MD, MA, NH, NJ, NY, RI, VT)	Fossil-fuel electricity generators (25 MW+).	25 MW capacity / NY 15MW capacity	Yes, through RGGI power sector cap-and-trade.

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Table 3: Vermont GHG Emissions by Sector[7]

Sector	Sources	% of 2022 total emissions
Transportation	Motor gasoline, diesel, hydrocarbon gas liquids, residual fuels, natural gas, jet fuel, aviation gasoline, lubricants	40.2%
Residential-Commercial-Industrial Buildings (RCI)	Coal, natural gas, oil, propane, other petroleum, [wood[8]]	30.7%
Agriculture	Enteric fermentation, manure management, agricultural soils, liming and urea fertilization	15.7%
Industrial Processes	ODS Substitutes, SF6, HFCs, PFCs, limestone/dolomite, soda ash, urea consumption	7.1%
Electricity Supply and Demand	Electricity generation (based on contracted generation mix, not in-state emissions)	3.0%
Waste Management	Solid waste, composting, wastewater	2.7%
Fossil Fuel Industry	Natural gas distribution and transmission	0.004%

[7] Vermont Greenhouse Gas Inventory and Forecast 1990-2022
[8] Enumerated in inventory but CO2 emissions not included in emission total

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Table 4: Proposed Program: Sectors and Scope

Sector	Reporting Entity	Reporting Requirements	Reporting Threshold	Include in Program
Transportation	Distributors of liquid or gaseous fuels used for transportation (both on road and offroad).	Volume of transportation fuels sold in or delivered for use in VT. Gasoline and gasoline blends, diesel and diesel blends, ethanol, biodiesel, renewable diesel, CNG.	None	Yes
Residential	Distributors of fuels used for residential heating.	Gallons of heating oil, propane, kerosene, dyed diesel; Mcf of natural gas; short tons of coal (FGR-615); wood fuel?	None	Yes
Commercial	Distributors of fuels used for commercial heating.	Same as above.	None	Yes
Industrial	Distributors of fuels used for industrial heating.	Same as above.	None	Yes
Industrial Processes (Stationary Non-Energy)	Industrial facilities, fuel suppliers, and electricity suppliers.	Volume or mass of GHGs released as a result of facility operations.	Recommendation Forthcoming	
Electricity	Owners of solid, liquid, or gaseous fueled electric generation units.	Volume or mass of fuel used for generation of electricity. Currently reported to and available from EIA (Form 923).	None	Not at this time
Waste	Landfills, methane digesters, wastewater treatment plants	Volume of GHGs released as a result of facility operations.		Not at this time
Agriculture	Not covered	N/A	N/A	Not at this time

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Table 5: Existing Reporting Requirements for VT Entities

Requirement	Description	Status
Transportation Fuel Tax (DMV)	Licensed distributors report volumes of aviation gasoline, biodiesel (B2, B10, B20), denatured ethanol, ethanol (10%), gasohol blend, gasoline, Low Sulfur Diesel #2/Undyed/Blended Biodiesel (B20 B10 B5 B2), R50, R99, renewable diesel, kerosene (undyed).	Active
Fuel Gross Receipts Tax (Tax Department)	Distributors report volumes of heating oil, propane, kerosene, dyed diesel; natural gas; mass coal. No breakout for biofuel; wood not reported.	Active
Air Pollution Control Permits (DEC)	Facilities emitting 5 or more tons/year of air pollutants are required to register and report. GHG emissions not included.	Active
EPA Greenhouse Gas Reporting Program	Facilities emitting [threshold] required to report. For 2023 includes Global Foundries, NEWSVT Coventry, Omya, UVM, Vermont Gas Systems, Westrock Converting.	Active but likely to be terminated
VT CO2 Budget Trading Regulations	Fossil-fueled electric generation facilities >= 25MW capacity report CO2 emissions to EPA Clean Air Markets Program. Two VT fossil fueled facilities (out of seven) subject to this regulation.	Active
Energy Information Administration Form 923 – Power Plant Operations Report	Mandatory report for grid-connected electric power plants >=1MW capacity. Includes type and amount of fuel consumed which can be converted to GHG emissions.	Active
Prime Supplier Reporting (PSD)	Regulation implementing provisions of the Emergency Petroleum Set-Aside Act. Requires monthly reporting on supplies of liquid petroleum fuels stored in VT as determined necessary by the commissioner.	Currently not active
Clean Heat Standard Registration (PUC)	Annual reporting of volume/mass of heating fuels imported into or produced, refined, manufactured or compounded in VT.	Reporting is currently voluntary

Appendix B: Comparison of Data Collection Strategies

We have considered the benefits and challenges associated with harmonization and standalone reporting rule approaches. These are summarized in Table 6 below. This summary was informed by conversations with the Department of Motor Vehicles, the Tax Department, the Public Service Department, the New York State Department of Environmental Conservation, and the Massachusetts Department of Environmental Protection.

Table 6: Benefits and Challenges of Data Collection Strategies

Strategy	Benefits	Challenges
Harmonization	Minimizes duplicate reporting requirements for covered entities and overlapping administrative efforts by state agencies.	Data scope: data currently collected lacks adequate detail on types and amounts of biofuels delivered.
		Data access: DMV and the Tax Department consider data identifying distributors and fuel volumes to be confidential business information.
		Data reconciliation & verification: significant resources required to ensure data quality (consistency, accuracy), esp. when communicating with covered entities through other departments.
		Compliance & enforcement: substantially or wholly delegates enforcement authority to other state agencies that may not be sufficiently resourced for a robust response.
Standalone Reporting Rule	ANR is able to: • Define precise data needs, • Benefit from full data access, • Amend or expand the scope of data collection to support future policies and programs, and • Engage covered entities early in the process.	Resourcing: significant investment required for program establishment and management; platform development and maintenance; data analysis and verification; and compliance and enforcement. *Discussed below.*
		Duplicate reporting: some overlap in data covered entities would be reporting to ANR, DMV, and Tax Department.