

Vermont Transportation Emissions Reduction Scope of Work

APRIL 2024

INTRODUCTION AND BACKGROUND

The Vermont Agency of Transportation (VTrans) is seeking a comprehensive analysis of transportation emissions reduction policy(ies) with a focus on economic modeling to understand and compare the impacts of Vermont participating in a cap and invest program, such as the Western Climate Initiative or the forthcoming New York Cap and Invest Program, as well as possible other complementary emission reduction programs.

Vermont's Act 153(2020) – the Global Warming Solutions Act, or GWSA – establishes greenhouse gas emissions reduction targets and required the development of the Initial Vermont Climate Action Plan ('the Plan' or CAP) which was adopted on December 1, 2021. The Plan identifies specific initiatives, programs and strategies necessary to achieve the State's greenhouse gas (GHG) emission reduction requirements, enhance carbon storage and sequestration, achieve net zero emissions by 2050, and build resilience and adaptation in our natural systems and built environment.

Specifically, the GWSA requires that Vermont reduce its gross greenhouse gas emissions at least 26% below 2005 levels by 2025; 40% below 1990 levels by 2030; and 80% below 1990 levels by 2050. The Vermont Climate Council (VCC) agreed on October 26, 2021, to utilize 2018 as the reference year for assessing sectoral proportionality in regards to the GWSA emissions reduction requirements. As of the latest Vermont Greenhouse Gas Inventory, the transportation sector makes up approximately 40% of Vermont's climate pollution. This means the CAP should aim to achieve a minimum of 40% of Vermont's required emissions reductions from the Transportation sector. Transportation costs also make up largest share of the energy cost burden facing Vermonters (45% of total energy expenditures).

The initial CAP primarily focuses on the initiatives, programs and strategies necessary to achieve the reductions required by 2025 and 2030. Statewide emissions will need to be equal to or less than 7.27 MMTCO_{2e} by January 1, 2025, a reduction of 1.56 MMTCO_{2e} from 2018 reference year emissions. The transportation sector's share of this reduction should be approximately 40%, or 0.49 MMTCO_{2e} by January 1, 2025. This will require transportation sector emissions to be no higher than 2.93 MMTCO_{2e} in 2025. Statewide emissions will need to be equal to or less than 5.18 MMTCO_{2e} by January 1, 2030, a reduction of 3.46 MMTCO_{2e} from 2018 levels. The transportation sector's share of this reduction should again be approximately 40%, or 1.38 MMTCO_{2e}. This will require transportation sector emissions to be no higher than 2.05 MMTCO_{2e} in 2029.

The Initial CAP provides recommended pathways and strategies to achieve these emissions reductions. Many pathways and strategies laid out for the transportation sector align with programs that VTrans is currently implementing. The CAP also recommended the adoption and implementation of the Advanced Clean Cars II (ACCII) and Advanced Clean Trucks (ACT) rules. Based on preliminary modeling, the Vermont Department of Environmental Conservation estimates that ACCII and ACT will achieve 34% of the transportation sector GHG emissions reductions needed by 2030. The purpose of ACCII and ACT is to make electric vehicles available for sale in Vermont; however, the reductions estimated by DEC depend on the vehicles being purchased replacing internal combustion engine vehicle miles traveled. VTrans's Capital Program includes funding for several programs that incentivize the purchase of new and used electric vehicles, and for the deployment of electric vehicle charging stations. While these policies and investments are a strong start towards getting cleaner and more efficient vehicles on the road and reducing the GHG emissions from the transportation sector, additional complementary policies and actions are needed.

The 2021 Vermont Climate Council adopted Climate Action Plan includes a recommendation that Vermont participate in the Transportation & Climate Initiative Program (TCI-P) – a regional cap-and-invest program – as a lead policy and regulatory approach to reduce emissions from the transportation sector. Just weeks prior to the Climate Action Plan (CAP) adoption, TCI-P became unviable, and the Climate Council agreed to include a notice in the Climate Action Plan that the VCC would continue work on an alternative recommended policy or set of policies to make up for the lack of sufficient transportation emissions reduction policy recommendations – as well as pursue TCI-P if it again became viable.

The Carbon Reduction Strategy (CRS) developed pursuant to the Infrastructure Investment and Jobs Act Carbon

Reduction Program, and its accompanying planning and public engagement process provided Vermont a timely opportunity to undertake additional analysis to quantify the gap that exists between emissions reductions expected from current policies and the implementation of other potential strategies and the required reductions of the GWSA.

In November, 2023, the Agency of Transportation delivered the final Carbon Reduction Strategy to the Federal Highway Administration. The CRS analysis indicates that Vermont may meet its 2025 reduction requirement in the transportation sector. However, even with additional investments for programmatic, policy, and regulatory options, the modeling shows a gap between projected “business as usual” emissions in the transportation sector vs. the portion of GWSA emission reduction requirements for 2030 and 2050 that are attributable to the transportation sector. The CRS found that without adoption of additional policies this portion of the required emissions reductions in the GWSA will not be met and states that:

“Of the additional programs, a cap-and-invest and/or Clean Transportation Standard program are likely the two most promising options to close the gap in projected emissions vs. required emissions levels for the transportation sector.”

While the CRS provides considerations for actions towards those additional policy options, it did not include a detailed analysis of the design or potential outcomes for such options and thus, does not recommend which of those two approaches Vermont should take.

Vermonters with lower incomes are disproportionately burdened by energy costs. Vermont households with lower incomes typically use less energy than those with higher incomes. Households with lower incomes, on average, face far higher energy burdens, meaning they spend a larger share of their income on energy. In the transportation sector, when we look at the “all-in” costs, including vehicle purchase, fuel, and maintenance, we can see that there is a significant geographic disparity in transportation energy burden throughout the state, with higher burdens in the Northeast Kingdom and Southern Vermont. Averaged across Vermont, households with lower incomes (80% of the area median income, or AMI) spend, on average, 30% of their income on these “all-in” transportation costs, compared to 25% for Vermonters at the state median income. The scenarios explored in this scope of work should consider the degree and distribution of the transportation energy burden for Vermonters, and how a cap and invest program revenue could be allocated to address these disproportionate impacts.

The analysis described in the Scope of Services will build off existing data and analyses and some that are currently under development, as listed below.

Existing programs, data, analyses, and tools can be used to inform the analysis:

- 1) The Vermont Carbon Reduction Strategy
- 2) The Vermont Thermal Analysis of Buildings/Thermal Energy Sector Emissions Reduction Policies for Vermont (November 2023), prepared by the Energy Futures Group
 - a. This analysis updated the Business As Usual Scenario originally included in the Vermont Pathways Analysis Report (see below).
- 3) The Vermont Pathways Analysis Report 2.0 (February 2022), prepared by Cadmus and the Energy Futures Group
 - a. This analysis includes detailed scenario modeling using the Low Emissions Analysis Platform.
- 4) The 2022 Vermont Comprehensive Energy Plan, written and updated by the Vermont Public Service Department, as well as the 2023 and 2024 Annual Energy Report.
- 5) The Vermont Energy Action Network Annual Progress Reports, published by the Energy Action Network.
- 6) An analysis of decarbonization methods in Vermont, prepared by Resources for the Future for the Vermont Legislature’s Joint Fiscal Office.
- 7) New York Department of Environmental Conservation’s Climate Affordability Study.
- 8) New York Department of Environmental Conservation’s Cap and Invest Pre-proposal outline.
- 9) California’s Cap and Trade Regulatory and Program resource documents.
- 10) California’s Low Carbon Fuel Standard Regulatory and Program resource documents.
- 11) Oregon’s Clean Fuels Standard Regulatory and Program resource documents.
- 12) Quebec Environment Ministry Cap and Trade Regulatory and Program resource documents.

Data, analyses, and tools used by other Departments of Transportation or State Environmental Agencies in the investigation or implementation of policy and program options should also be considered to inform this analysis.

SCOPE OF SERVICES

The primary objective of this analysis is to determine the effects and key considerations of Vermont participating in a cap and invest program, specifically a) The Western Climate Initiative (WCI) cap-and-invest program with Quebec, California and Washington State, or b) New York's proposed cap-and-invest program (NYCI). The analysis should include the following scenarios:

- 1) Vermont's participation in the cap and invest programs described above, where only emissions from Vermont's transportation sector are included under the cap.
- 2) Vermont's participation in the cap and invest programs described above, where emissions from all fuels and stationary sources are included under the cap.
- 3) Vermont's implementation of or participation in a low carbon fuel standard, as complementary to participation in each of the cap and invest programs identified above.

The analysis should also provide for opportunities for public engagement to hear from key stakeholders, including the Cross Sector Mitigation Subcommittee of the Vermont Climate Council; policy makers; and Vermonters on program choice, design options, and implementation. The mandatory update to Vermont's Climate Action Plan (CAP) will be occurring parallel to this analysis, and therefore this analysis will likely inform the development of and update to the CAP.

The analysis should conclude with a recommendation and rationale for a potential preferred policy or policies.

The work will be conducted with oversight from a State Project Team including staff from the Agencies of Natural Resources and Transportation. The work will also be informed by a Technical Advisory Committee (TAC) comprised of the State Project Team, representation from the State Treasurers Office, and identified members of the Vermont Climate Council.

The tasks in the scope of work outline key considerations and desired outcomes but are not meant to be prescriptive on methods and deliverables. The scenario development proposal should describe the general approach, provide details on how the analysis method (for both GHG and economic effects) will be developed, describe deliverables and an associated timeline for those deliverables, and identify meetings associated with each task. Technical memorandums should be provided at appropriate milestones prior to scheduled meetings. Consultants may organize, sequence, or combine the tasks in the technical proposal based on their expertise and experience. The budget and schedule shall account for regular check-in meetings with the State Project Team.

TASK I: PROJECT INITIATION; WORK PLAN

Project Initiation will include, at a minimum, the meetings proposed below. The technical proposal should identify other meetings recommended by the consultant for this task. As noted above, regular check-in meetings between the consultant team and State Project Team must be included throughout the project.

- Conduct a pre-project meeting with the State Project Team to review proposed Work Plan including the scope, approach, milestones, schedule, and to establish roles and lines of communication for the project.
- Conduct a kick-off meeting with the TAC to provide an overview of the Work Plan and gather members' comments on available information and key considerations.
- Conduct a follow-up meeting with the State Project Team to summarize any proposed revisions to the Work Plan based on those meetings.

Deliverables:

- Written summaries of both the pre-project and kick-off meetings.
- Final Work Plan.

TASK II: SCENARIO ANALYSIS

- Review the policy approaches of WCI and NYCI cap and invest programs, as currently implemented, or proposed, and a low carbon fuel standard and analyze them under the three policy scenarios listed

above. Policy scenarios may be reviewed independently or in coordination with other proposed and analyzed policy options. Analysis should also consider the work related to this project, listed above, and other state and federal policies that may impact transportation emissions in Vermont. The consultant should use policy impact modeling and other available/appropriate models, methods, and tools to determine outcomes of the policy scenarios listed above. The proposal shall include a description of intended models and methodologies. Each policy scenario should consider the following elements:

- The likelihood of achieving the required emissions reductions in each scenario's regulated sectors in accordance with the GWSA 2030 target year, and the ability to achieve the reduction requirement of the 2030 GWSA target year, but in a later year,
 - Projected revenue generation, potential allocations, and the effectiveness of the investment of resulting revenues for timely and equitable emissions reductions;
 - Projected cost per ton/per pollution allowance over time in each scenario;
 - Projected implementation/administrative costs to the State and to covered entities, including auction process, allowance compliance and tracking platform, and increased capacity;
 - Projected impacts and benefits to Vermonters, including economic benefits and costs accruing to Vermonters by income range/bracket and environmental justice focus population, and health benefits;
 - Recommended timeline for program participation, implementation, and the timing of making investments with resulting revenue.
- Submit weekly reports to the State Project Team, including tasks completed, tasks in progress, review of the schedule, and budget status.
 - Hold project update meetings, as frequently as weekly and at minimum bi-weekly, with State Project Team based on the weekly reports submitted as described above.
 - Facilitate two to three meetings with the TAC. At a minimum, one to review and receive input on proposed scenarios, models, and methodologies and one to review and receive input on analysis findings. Meetings summaries shall be provided to TAC.
 - Present analysis findings to CSM. The additional TAC meeting may be combined with this presentation.

Deliverables:

- Weekly updates.
- Written summaries of TAC Meetings.
- Presentation for analysis findings.

TASK III: STAKEHOLDER AND PUBLIC ENGAGEMENT

The State Project Team envisions an engagement process to hear from the Vermont Climate Council Cross-Sector Mitigation Sub-committee, partner agencies, and other stakeholder groups and the public. The technical proposal must specify the stakeholder groups envisioned for involvement, where throughout the work the various outreach activities will occur, and the methods that will be used to encourage meaningful engagement.

- Include two rounds of focus group meetings with no less than four (CSM included) and up to six stakeholder groups to be identified in the proposal and confirmed with input from the TAC. The purpose of the first round is to gather input on issues and concerns and the second round may either be used to gather feedback on the analysis of the scenarios and/or to gather comments on the draft recommendation(s).
- In collaboration with ANR's ongoing public engagement plan and the Climate Action Office, facilitate a minimum of two, statewide public meetings to gather initial input and to gather feedback on a draft of the recommendation(s). The statewide meetings shall be conducted in a hybrid format with options for participation in person and virtually. The technical proposal should specify any methods the selected consultant will use to carry out productive meetings that creatively and effectively engage participants. Presentations shall be provided to State Project Team for review and input.
- Develop and maintain website content to communicate project information and receive input.
- Develop and distribute public engagement materials, press releases and content for social media posts and updates to the project website.
- The selected contractor shall also participate with the State Project Team to provide a required status update to the Vermont General Assembly, due on November 15, 2024.

Deliverables:

- Round 1 presentation and meeting summary.
- Round 2 presentation and meeting summary.
- Press releases; social media posts; website announcement, updates, postings.

TASK IV: RECOMMENDED POLICY APPROACH

- Finalize the analysis based on TAC and CSM Subcommittee feedback from Task II and stakeholder and public engagement from Task III.
- Prepare a Draft Scenarios Report and deliver to TAC by December 31, 2024. The Draft Report shall provide a recommendation for a preferred policy approach based on TAC and CSM Subcommittee feedback from Task II and stakeholder and public engagement from Task III.
- Deliver Final Report to TAC on or before February 1, 2025.
- Make up to four presentations of the final report and recommendations. Presentations shall be provided to State Project Team for review and input.

Deliverables:

- Draft Scenarios Report.
- Final Report.
- Final Report Presentations.

PROJECT TIMELINE

Consultants shall prepare a project schedule as part of their proposal which encompasses all the Tasks identified in this scope. The anticipated start is June 2024, and the project end date will be March 2025. Major milestones for the project shall include scenario development, analysis, delivery of draft and final recommendations, and presentations. These milestones as well as the State Project Team, TAC, stakeholder, and public engagement meetings shall be clearly reflected in the proposal.

EVALUATION OF PROPOSALS

Proposals will be evaluated according to the following criteria:

1. Consultant Qualifications and Experience with Similar Projects - 40%
2. Overall Project Approach, including Methodology, Public Engagement, and Proposed Schedule of Tasks - 25%
3. Overall Quality, Completeness and Clarity of the Proposal - 20%
4. Price – 15%