

CADMUS

Task 1: Greenhouse Gas Inventory Review Data & Science Subcommittee

August 4, 2021





Objectives

GHG Inventory Review Scope of Work

Task 1a

Current Inventory Scope and Methods

Review and identify method and data sources by sector

Compare to EPA and IPCC Guidelines

Compare with MA, NY, and CA

Cross Walk Table

Identify opportunities for modifications, complements or supplemental analyses

Task 1b

Consumption based and upstream inventory methodologies

Literature review for Consumption Based Emissions Inventory (CBEI) in MN and OR

Inputs from stakeholders on additional issues and opportunities

Deliverable

10-15 page report

Summarize findings from Tasks 1a and 1b

Presentation

Methods

- Remote review meetings and follow-on questions with ANR staff
- Literature review for Intergovernmental Panel on Climate Change (IPCC) and Environmental Protection Agency (EPA) Guidance.
- Literature review for comparison states (CA, MA, NY) based on discussion with DSSC task leads.
- Discussion with Massachusetts DEC staff working on regional electric sector accounting.
- Literature review of CBEI for OR and MN

Key Findings and Recommendations

Based on our Task 1 research and the interactions we have had with the Climate Council Subcommittees and other stakeholders, we offer the following key findings and recommendations for consideration of the ANR and the VCC.

These findings and recommendations are those of the report authors, and do not necessarily reflect the views of all members of the technical consultant team.



Key Findings

Key Findings (1)

- Vermont's current inventory methods are generally consistent with guidelines from the EPA, IPCC and with the practices of California, New York, and Massachusetts. They are also consistent with the primary inventory methods for Oregon and Minnesota.
- Vermont can demonstrate leadership in the development of an actionable Climate Action Plan, and its implementation based on the current GHG inventory, and its methods.
- Vermont's current sector-based inventory method does not represent, nor claim to be representing, life cycle accounting of greenhouse gas emissions. Upstream and lifecycle emissions can be analyzed to inform decision making without necessarily including them in the Inventory.

Key Findings (2)

- Supplemental approaches and analyses are being used by other jurisdictions to complement a sector-based inventory method. Examples include CBEI in Oregon & Minnesota, and the reporting on short-lived climate pollutant impacts (SLCP) in California.
- There are important opportunities to complement the inventory with supplemental analyses to inform decision making and the development and implementation of mitigation policies, strategies, and actions.
- The IPCC, while not recommending lifecycle accounting as a greenhouse gas inventory method, does recommend lifecycle analyses, and consideration of impacts on emissions outside of jurisdictional boundaries, as important elements in mitigation analyses.

Key Findings (3)

- The complexities of full life cycle inventory accounting and reporting are immense and could divert resources from inventory and mitigation efforts that have more direct and practical connections to actions that reduce emissions.
- Public awareness and education are foundational for inclusivity.



Recommendations

Recommendations (1)

- Vermont should maintain primary inventory consistency with international and national level guidelines and the practices of other leading states. Vermont can contribute to the development and implementation of supplemental analyses at the same time.
- The development and adoption of a CBEI for Vermont should not, and cannot, replace the sector-based emissions inventory and the associated reporting. The GWSA targets are based on the sector-based reporting, and Vermont should maintain a primary annual inventory reporting method and accounting that is consistent with national and international guidelines.
- Vermont should acknowledge the scope and ongoing scale of scientific and international community efforts to create a complete and non-duplicative accounting framework.

Recommendations (2)

- Clarifying and indicating that the Inventory is not used for all purposes, and that upstream emissions can be considered without being counted in the inventory may be helpful.
- Vermont should remain open to change as new data and methods emerge.
- Vermont should conduct and maintain key category analyses, and summary reporting by GHG.
- Each Inventory should also contain a sector-based summary of existing and emerging issues, possible changes to data and methods, and a discussion of supplemental analyses that can inform decision making.

Recommendations (3)

- Examples of supplemental analyses include reporting on the impacts from shorter time horizons and GWP modifications for methane, and accounting for upstream emissions from fossil fuels and hydro.
- Literature and tools for lifecycle analyses should be used to analyze the relative impacts of mitigation pathways and consideration of policy and behavior without becoming the basis for the inventory.
- Upstream emissions estimates should be applied as sensitivities and to inform mitigation pathway analyses without being adopted as formal inventory protocols.

Recommendations (4)

- Increased staffing and resources devoted to maintaining, updating, and communicating results from the Inventory are warranted.
- Increasing public understanding and familiarity with the Inventory will help with the development and implementation of mitigation policy action and strategies.



Next Steps

Feedback and Finalizing Inventory Report

- Please provide red line edits or comments (directly to EFG and cc to Jane at ANR) by Friday 8/6: Subcommittee members with an opportunity to propose revisions or areas to clarify
- 8/9: Revisions provided to Subcommittee
- 8/11: Full Discussion and framing of consensus recommendation to full VCC (e.g. are we recommending the report in full, or creating an addendum with recommendations) or process for articulating non-consensus position
- 8/11-8/18: Task Group lead frame up any written recommendations necessary
- 8/18: Final discussion and decision on what to provide full council

- Thank you for your continued participation and contributions to this work!