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Technical Services Presentation for Vermont Climate Council

June 28, 2021

Agenda

Workplan Overview

Tasks 1-3 Detail

Additional Next Steps

Closing

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Workplan Overview

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Project Scope and Deliverables

	Phase 1 Deliverables *June-July*	**Phase 2 Deliverables** *August-September*	**Phase 3 Deliverables** *October-November*
Task 0 – Project Initiation and Management	• Project Kickoff meeting • Project workplan • Ongoing Management	• Ongoing Management	• Ongoing Management
Task 1 – Review Current GHG Inventory	• Draft and final GHG inventory report and presentation		
Task 2 – Develop Carbon Budget	• Recommendations for replicable methodology	• Carbon Inventory Report	
Task 3 – Analyze Identified Pathways	• Review of PSC Cost of Carbon Model and Report on Social Cost of Carbon	• Initial Economic analysis	• Final economic analysis
Task 4 – Research and Recommend Pathways		• Initial Pathway Analysis	• Final Pathway Analysis
Task 5 – Develop GHG tracking and reporting framework		• Draft Emissions Tracking tool	• Final emissions tracking tool

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Task 1 Overview

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Task 1 GHG Inventory

Status:

- **Kickoff meeting with ANR and DSSC Task Leads 6/23**
  - Clarify key terminologies and roles
  - Refine Consumption Based Emissions Inventory to literature review
  - Place more emphasis on consistent upstream methods as complements to inventory
- **Working Session with ANR staff to review inventory tool 6/23**
  - Discussion of matrix mapping SIT and complementary methods by sector
- **Examine Best Practices for GHG Emissions Inventory**
  - Cross walk Table Structure - NY, MA and CA
  - IPCC and EPA guidance
  - Examples:
    - GWP horizons and values from AR4 and AR5
    - Consumption based emissions inventory methods
- **Schedule**
  - July 6th follow up w ANR staff on Inventory tool
  - Initial Presentation: Week of July 12
  - Final Presentation and Report: Weeks of July 19-26

Task 2 Overview

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Task 2 Kickoff: Next Steps

Project Team Near-Term Next Steps:

- Coordinate with Task 1 on review of inventories
- Finalize integration of Dr. Jonathan Thompson into Task 2 methodology
  - For the forestry sector, utilizing FIA data and a 1605b approach to tracking harvested carbon
- Meet with appropriate stakeholders (e.g., ANR Forestry staff, VCC Agriculture & Ecosystems Co-Chairs)
  - Vet assumptions and analysis with key contacts
- Conduct research and develop carbon budget framework
  - Focus on 1990 to present stocks and fluxes per the RFP
  - For agriculture & land use change, the Ex-ACT model approach will be used (per Dr. Galford's proposal)
- Ongoing discussion about integrating future simulations
- Schedule of deliverables: data/findings in mid-July with final report in September.

Task 3 Overview

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Task 3 Social Cost of Carbon

Social Cost of Carbon

Activities underway:

- **Review Public Service Commission's Cost of Carbon Model**
- **Conduct Literature Review**
  - Resources for the Future – Social Cost of Carbon Computing Platform.
    - Evaluate social cost of carbon with varying discount rate, global/domestic, sensitivities
  - Synapse Energy Economics – Avoided Energy Supply Costs, May 2021.
  - Resources for the Future – Estimating the Value of Carbon: 2 Approaches, October 2020.
  - National Academies Press - Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide (2017).
- **Schedule**
  - Kickoff with DSSC task leads June 29th
  - Initial Presentation: Week of July 19
  - Final Presentation and Report: Week of July 26

Task 3 Cost of Carbon Model

Cost of Carbon Model

Project Team Near-Term Next Steps:

- **Review Public Service Commission's Cost of Carbon Model**
  - National Academies Press, Accelerating Decarbonization of the U.S. Energy System, 2021.
  - Princeton, Net Zero America, 2020.
  - Massachusetts Decarbonization Roadmap, 2020.
  - EIA Technology Forecast Updates, Navigant 2018. Cost and performance projections through 2050 for residential and commercial building technologies.
  - NEEP Northeastern Regional Assessment of Strategic Electrification, 2017.
- **Analyze additional Vermont empirical data on weatherization costs and savings by income group**
  - EVT data on Home Energy Loan and Income Qualified Home Energy Loan
  - OEO data on project savings and costs
- **Schedule**
  - Kickoff June 29th.
  - Initial Presentation: Week of July 19.
  - Final Presentation and Report: Week of July 26.

Task 3 Kickoff Meeting Questions to Address

Social Cost of Carbon

- For damage cost estimations we will need to select a limited set of global scenarios – level of optimism/pessimism on reductions, geophysical feedbacks, and technical, social, economic drivers. We can recommend IPCC scenarios consistent with 1.5 degree C limits and mid-level assumptions.
- We plan to conduct a complementary investigation of damage and marginal abatement cost methods.
- We plan to use global as opposed to domestic damage impacts in the analyses.

Cost of Carbon Model

- We are reviewing latest model version to identify possible gaps, measure and assumption updates
- We plan to maintain/modify template as base for inputs to LEAP model
- We plan to utilize literature-based estimates for 2025 and 2030 to measure costs and savings with interpolation between

Questions

- Do these approaches match with task lead/subcommittee expectations?
- Does the VCC have any concerns about proceeding with these approaches?
- Does the VCC have any recommendations for how we proceed with these approaches?

Additional Next Steps

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Additional Next Steps

- Reviewing approaches for Tasks 3b-5 with ANR and key staff, VCC chairs
- Developing scope of work to collaborate with SEI on LEAP modeling efforts

Closing

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