

From: Lazorchak, Jane
Sent: Friday, April 12, 2024 6:54 PM
To: Moore, Julie; Gendron, Maggie; Wolz, Marian
Cc: Coster, Billy; Woods, Brian; Stevens, Rachel; Gjessing, Catherine
Subject: RE: S.259 follow-up
Attachments: Memo_S259_ANR_Leadership.docx

Evening All,

Apologies for the late delivery but we've work collectively to prepare the attached memo for consideration by leadership as a response to Chair Sheldon's questions. Catherine and Rachel have also contributed so this represents the CAO's concerns, as well as legal's. We hope this will be helpful and of course, are happy to propose red-line edits next week if that is requested.

Have a nice weekend,
Jane

From: Lazorchak, Jane
Sent: Friday, April 12, 2024 11:38 AM
To: Moore, Julie ; Gendron, Maggie ; Wolz, Marian
Cc: Coster, Billy ; Woods, Brian ; Stevens, Rachel ; Gjessing, Catherine
Subject: RE: S.259 follow-up

Ok – will get to this group today but flagging that Catherine and Rachel will then want to add comments to it.

Thanks,
Jane

From: Moore, Julie <Julie.Moore@vermont.gov>
Sent: Friday, April 12, 2024 11:32 AM
To: Lazorchak, Jane <Jane.Lazorchak@vermont.gov>; Gendron, Maggie <Maggie.Gendron@vermont.gov>; Wolz, Marian <Marian.Wolz@vermont.gov>
Cc: Coster, Billy <Billy.Coster@vermont.gov>; Woods, Brian <Brian.Woods@vermont.gov>; Stevens, Rachel <Rachel.Stevens@vermont.gov>; Gjessing, Catherine <Catherine.Gjessing@vermont.gov>
Subject: RE: S.259 follow-up

Jane...

This is moving quickly and I really need a draft by the end of the day today.

Thank you,
Julie



Julia S. Moore, P.E. | Secretary (she/her)
Vermont Agency of Natural Resources
1 National Life Dr, Davis 2 | Montpelier, VT 05620-3901
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The Agency of Natural Resources supports telework and there are times when I may be working from another location. I am generally available to connect by phone and email during business hours. I am also available to meet in-person upon request.

Help raise money for Vermonters impacted by flood damage and show your Vermont pride with *Vermont Strong* and *Tough Too* license plates and socks. [Click here to purchase your Vermont Strong gear](#) or visit DMV.Vermont.gov/VermontStrong23.

Impacted Vermonters can find resources and referrals by visiting Vermont.Gov/Flood.

From: Lazorchak, Jane <Jane.Lazorchak@vermont.gov>
Sent: Friday, April 12, 2024 11:30 AM
To: Gendron, Maggie <Maggie.Gendron@vermont.gov>; Wolz, Marian <Marian.Wolz@vermont.gov>
Cc: Coster, Billy <Billy.Coster@vermont.gov>; Moore, Julie <Julie.Moore@vermont.gov>; Woods, Brian <Brian.Woods@vermont.gov>; Stevens, Rachel <Rachel.Stevens@vermont.gov>; Gjessing, Catherine <Catherine.Gjessing@vermont.gov>
Subject: RE: S.259 follow-up

Hi Maggie,

Brian, Marian and I met this morning and are preparing a memo that addresses these questions but want to engage with Rachel and Catherine on it. Can you please let us know when the deadline is for sharing the memo with you all? If we could have till Monday or Tuesday that would be ideal to engage with legal.

Thanks,
Jane

From: Gendron, Maggie <Maggie.Gendron@vermont.gov>
Sent: Friday, April 12, 2024 6:43 AM
To: Lazorchak, Jane <Jane.Lazorchak@vermont.gov>; Wolz, Marian <Marian.Wolz@vermont.gov>
Cc: Coster, Billy <Billy.Coster@vermont.gov>; Moore, Julie <Julie.Moore@vermont.gov>; Woods, Brian <Brian.Woods@vermont.gov>
Subject: Re: S.259 follow-up

Absolutely wonderful.

From: Lazorchak, Jane <Jane.Lazorchak@vermont.gov>
Sent: Thursday, April 11, 2024 2:57:28 PM
To: Gendron, Maggie <Maggie.Gendron@vermont.gov>; Wolz, Marian <Marian.Wolz@vermont.gov>
Cc: Coster, Billy <Billy.Coster@vermont.gov>; Moore, Julie <Julie.Moore@vermont.gov>; Woods, Brian <Brian.Woods@vermont.gov>
Subject: Re: S.259 follow-up

I think this will be best for Brian, Marian, and I to work on. We can provide answers to you all tomorrow if that works.

Thanks,
Jane

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From: Gendron, Maggie <Maggie.Gendron@vermont.gov>
Sent: Thursday, April 11, 2024 12:39:13 PM
To: Lazorchak, Jane <Jane.Lazorchak@vermont.gov>; Wolz, Marian <Marian.Wolz@vermont.gov>
Cc: Coster, Billy <Billy.Coster@vermont.gov>; Moore, Julie <Julie.Moore@vermont.gov>
Subject: S.259 follow-up

The Chair would like us to answer, to our best ability the below. Please reply to this email and I will figure out the best way to get it to the committee.

- questions or considerations ANR staff would have to take into account before making decisions on the scientific data or approach we would take to formulate the data tied to the cost assumptions
- lay out the expertise we would need to access in order for the work to be defensible and the cost associated with that.
- anything else?

Maggie Gendron | Deputy Secretary (she/her)
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1 National Life Dr, Davis 2 | Montpelier, VT 05620-3901
802-828-1294 office
Maggie.Gendron@vermont.gov
anr.vermont.gov

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Impacted Vermonters can find resources and referrals by visiting Vermont.Gov/Flood.



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

Agency of Natural Resources

To: Agency of Natural Resources Leadership
From: Climate Action Office
Date: April 12, 2024
Re: Comments on S.259 - An act relating to climate change cost recovery

In response to questions asked of the Agency of Natural Resources (ANR) by the Chair of House Committee on Environment and Energy, the Climate Action Office (CAO) in consultation with ANR's Office of General Counsel has prepared the following response around key components of the legislation pertaining to ANR. Specifically, the CAO has developed a set of questions and considerations CAO staff would have to consider before making decisions on the scientific data or approach we would take to formulate the data tied to the cost assumptions for both the damage assessment and the liability formula. In doing so, we have laid out the expertise we would need to access for the work to be defensible and the cost associated with that, as well as to justify the extended timeline and additional resources needed to do so.

Liability Formula

The bill defines responsible parties based on an emission threshold (1 billion metric tons) and nexus to Vermont. It then proposes determining each responsible party's (RPs) liability share based upon their respective share of global greenhouse gas emissions during the covered period (January 1, 1995, through December 3, 2024).

The legislature has heard testimony from Richard Heede of the Climate Accountability Institute regarding his work in identifying fossil fuel extraction and refining companies and calculating emissions from their products over time. Based on Mr. Heede's original work and available online, the [Carbon Majors database](#) traces cumulative historical greenhouse gas emissions from 1854 through 2022 from 122 oil, gas, coal, and cement producers worldwide. Annual updates are planned. It is anticipated that this database can provide an initial list of potentially responsible parties that would need to be refined. While Carbon Majors identifies extractors and refiners and associated emissions; it does not provide information on the connection of such entities to Vermont, or the impacts and costs of such emissions on Vermont.

Additional work is required within ANR to review the methodology and data sources used to develop these emission values. To the extent that the data sources utilized are public (e.g. included in financial statements prepared by investor-owned companies, or data from a government source based on company reporting) a minimum level of validation could be required. Emissions estimates based on non-public data, inferred from





other data, or calculated via an algorithm would require a higher (but at this stage unknown) level of validation to support a cost recovery demand.

In addition, the current bill text indicates that climate change adaptation projects (projects eligible for cost recovery, defined very broadly) are only those projects that were or are necessary for damages or conditions beyond what would have been expected absent the presence of greenhouse gases in the atmosphere emitted by products extracted or refined by the RPs during the covered period.

ANR will have to determine which entities are liable, for how much, and whether such entities are responsible parties that meet the legal requirements for a defensible cost recovery demand. This determination involves technical and legal expertise which the Agency currently does not possess and will have to develop or acquire, without sufficient additional resources. Given the importance of this work and the likelihood that it will establish legal precedent, we need sufficient time and resources to gather relevant data, formulate technical standards and promulgate effective rules. In addition to building technical expertise, this will require coordination with other states to ensure alignment on process to bolster the defensibility of the work.

Damage Cost Assessment

Section 599c of the bill requires the State Treasurer, in consultation with the Interagency Advisory Board to the Climate Action office, to submit to the Senate and House committees of jurisdiction an assessment of the cost to the State of Vermont and its residents of the emissions of covered greenhouse gas emissions for the covered period. The CAO chairs the Interagency Advisory Board, and we expect that the CAO would be the lead for collaboration and coordination amongst the members of the Interagency Advisory Board and other experts to inform the assessment the State Treasurer is required to complete. The Clean Water Report as required by Act 64 of 2015, developed by the State Treasurer in close consultation with the Department of Environmental Conservation, is a similar report that ANR sees as a model for the workload that may be expected of the CAO to support the damage cost assessment required of the Treasurer in this bill. In review of that work, ANR carried out the bulk of the technical work and coordination in service of the Office of the Treasurer.

The cost assessment required in S.259 has three components detailed below and raises a series of questions about expertise and time commitment for the CAO to support this work. Specifically, the CAO is only obligated on the first component but we believe that tasks 1-3 are interconnected in a way that the CAO will be obligated throughout.

- (1) The first component of the cost assessment requires the Treasurer, in consultation with the CAO, to deliver a summary of the various cost-driving effects of covered greenhouse gas emissions on the State of Vermont, including effects on public health, natural resources, biodiversity, agriculture, economic development, flood preparedness and safety, housing, and any other effects determined



relevant by the State Treasurer in consultation with the CAO. To complete this assessment, the CAO as the technical agency supporting the State Treasurer, will need to coordinate with various State agencies; federal Agencies such as FEMA, EPA, CDC, HUD; researchers and other experts to compile evidence that show the nexus between greenhouse gas emissions and increasing costs on the sectors listed. Some of this evidence could be gathered through attribution science that Professor Justin Mankin testified on to the legislature, but more information would need to be gathered and studied to ensure a nexus between greenhouse gas emissions and cost driving effects could be drawn between the sectors listed and any others determined by the State Treasurer.

- (2) The cost assessment requires the State Treasurer to provide a categorized calculation of the costs that have been incurred and are projected to be incurred in the future within the State of Vermont for each of the sectors identified under the previous subsection. Compiling this calculation of costs would require working closely with various state agencies, researchers, and other experts to determine the effects of greenhouse gas emissions from the covered period on both acute¹ and chronic² stressors of climate change that have occurred since January 1, 1993, project out those costs, and categories those costs by sector. Some of the data on costs associated with public infrastructure and individual home damages could be acquired through the Vermont Division of Emergency Management, but quantifiable damages associated with biodiversity, economic development, and natural resources, for example, could be more difficult to obtain. The CAO does not currently have the expertise to support the State Treasurer in determining the cost incurred due directly to the impacts of greenhouse gas emissions from the covered period, so would need to consult with others to inform the development of that calculation.
- (3) The cost assessment also requires the State Treasurer to provide a categorized calculation of costs that have been incurred and are projected to be incurred in the future within the State of Vermont to abate the effects of covered greenhouse gas emissions from the covered period. This calculation requires a wholistic assessment of the costs to adapt to climate change due to the greenhouse gases emitted during the covered period. The Resilience Implementation Strategy will provide cost estimates for prioritized measures but will not be an assessment of the cost of every measure needed to adapt to climate change. To complete this portion of the assessment, expenditures already incurred on climate adaptation projects would need to be calculated, and the future impacts and potential damages would need to be clearly articulated. Extensive engagement with State agencies, municipalities, non-governmental organizations, business, and individuals would need to be completed to determine the cost needed to fully adapt to the impacts of greenhouse gasses emitted during the covered period.

¹ [Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, heat or cold waves, or floods.](#)

² [Chronic physical risks refer to longer-term shifts in climate patterns \(e.g., sustained higher temperatures, sea level rise, changing precipitation patterns\) that may cause sea level rise or chronic heat waves.](#)





Timeline and Resources

Resources

ANR is currently allocated a limited-service position for three years to support, as well as \$300,000 to support both the position and technical analyses. We are currently budgeting \$120,000 annually for a position so this funding will not even cover the position, let alone any technical resources we would need to contract out to support the work. It is important to note that both the hiring of staff and the procurement process for contractual services take a minimum of six months to advance. If this bill passes, we cannot expect any of the components of work tied to new staff or contracts to begin before January 1, 2025. In addition, Vermont's implementation of this program will be strengthened through relationships and collaborations with other states working on similar analyses. Coordination and capacity building in that space will draw on additional capacity and resources and extend timelines.

Rulemaking

The bill directs ANR to adopt several rules necessary to implement the chapter, including:

- (1) adopting methodologies using the best available science and publicly available data to identify responsible parties and determine their applicable share of covered greenhouse gas emissions;
- (2) requirements for registering entities that are responsible parties and issuing notices of cost recovery demands under the Cost Recovery Program; and
- (3) the Resilience Implementation Strategy.

The bill requires ANR to file the proposed rule for the adoption of the Resilience Implementation Strategy with the Interagency Committee on Administrative Rules (ICAR) by July 1, 2025, and adopt the final rule by January 1, 2026.

Before a rule can be filed with ICAR, ANR must follow the substantive and procedural steps and associated timelines required by the Vermont Administrative Procedures Act, 3 V.S.A. Chapter 25. In addition to these APA requirements, the bill requires ANR's rule for the Resilience Implementation Strategy to meet the following additional procedural steps for consultation and public engagement:

- (1) consult with the Environmental Justice Advisory Council;
- (2) in consultation with other State agencies and departments, including the Department of Public Safety's Division of Vermont Emergency Management,





assess the adaptation needs and vulnerabilities of various areas vital to the State's economy, normal functioning, and the health and well-being of Vermonters;

(3) consult with stakeholders, including local governments, businesses, environmental advocates, relevant subject area experts, and representatives of environmental justice focus populations; and

(4) conduct public engagement in areas and communities that have the most significant exposure to the impacts of climate change, including disadvantaged, low-income, and rural communities and areas.

Given the consultation and public engagement requirements imposed by the bill, the relatively new requirements associated with the Resilience Implementation Strategy, and other rulemaking commitments, ANR will need additional time to complete the rulemaking. Promulgating effective new rules and ensuring that the rule is subject to robust public input and engagement will require a potentially significant amount of technical and legal staff time. Rulemaking generally takes at least 6 to 8 months and sometimes longer, especially if the rule is novel, of great public interest, or controversial. As such, the bill should require ANR to file the proposed rule for the adoption of the Resilience Implementation Strategy with ICAR by July 1, 2026, and adopt the final rule by April 1, 2027. In addition, the bill should require ANR to file the rules required pursuant to 10 V.S.A. § 599a(b)(1) and 9 (b)(2), with ICAR on or before July 1, 2027; and to adopt the final rule on or before April 1, 2028.

