STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 23-2220-RULE

Proceeding to design the potential Clean Heat Standard	

Order entered: 11/01/2024

ORDER ADOPTING PROCESS ON PACING THE CLEAN HEAT STANDARD

I. INTRODUCTION

In Public Act 18 (2023 Vt., Bien. Sess.) ("Act 18"), the Vermont Legislature directed the Vermont Public Utility Commission ("Commission") to develop a proposed Clean Heat Standard.[1] A fundamental element of the potential Clean Heat Standard program is determining the pace of clean heat credit retirement required to meet the Vermont thermal sector's proportional greenhouse gas emission reductions required by the Global Warming Solutions Act ("GWSA").[2] The Commission has solicited public input and consulted with the Technical Advisory Group on this topic.

As required by Act 18, the Commission must determine the initial decade of emission reductions and the first-year credit retirement requirements for obligated parties.[3] This Order describes the *process* the Commission intends to use to determine the sector-wide emission reductions that would be assigned to obligated parties as a number of clean heat credits.[4] In a future order, using this process and information from the annual fuel dealer registration and reporting, the Commission will set out the obligated parties' first-year obligations and ten-year emission reduction requirements.

The following section of this order is organized by the steps of the original straw proposal. We summarize the feedback that was received on each step since the Commission

[1] For an overview of the work done to date and other information on the proposed Clean Heat Standard, please see the Commission's clean heat website at https://puc.vermont.gov/clean-heat-standard.

[2] *See* 30 V.S.A. § 8122.

[3] *See* 30 V.S.A. § 8124(a)(1).

[4] Obligated parties are defined as (a) a regulated natural gas utility serving customers in Vermont and (b) for other heating fuels, the entity that imports heating fuel for ultimate consumption within the State [of Vermont], or the entity that produces, refines, manufactures, or compounds heating fuel within the State for ultimate consumption within the State. 30 V.S.A. § 8123(12).

issued the straw proposal on pacing; identify and explain changes that have been made and respond to the feedback when no changes were made; and set out the Commission's ultimate decision on each step. In the final section of this order, we detail the revised step-by-step process for setting and adjusting the thermal sector's emission reduction requirements and assigning those requirements to obligated parties in the form of clean heat credit retirement obligations.

II. DISCUSSION OF STRAW PROPOSAL, PARTICIPANT COMMENTS, AND COMMISSION DECISION

On May 29, 2024, the Commission issued a straw proposal on pacing to solicit specific feedback from participants on this topic. The Commission received eight comments and a memo from the Technical Advisory Group ("TAG") in response to the straw proposal.

We first address the process for setting the thermal sector's emission reduction requirements.[5] Then, we discuss the process for setting and adjusting the obligated parties' annual requirements.[6] As a clarifying point, the processes below require the Commission to aggregate data from several different sources because Act 18 asks us to regulate heating fuel and affect thermal sector emissions,[7] which cannot be accounted for in a single data source.

A. Process for Setting and Adjusting the Thermal Sector's Emission Reduction Requirements

The Clean Heat Standard is designed to meet the proportional thermal sector emission reductions required by 2030 and 2050 in the GWSA.[8] Those emission levels are based on reporting done in the Greenhouse Gas Inventory ("Inventory") compiled by the Vermont Agency of Natural Resources ("ANR"). The Commission needs to establish a process for setting the emission reduction trajectory to meet the thermal sector's GWSA goals. The Inventory only counts emissions that occur within Vermont's borders, sometimes referred to as "in-boundary"

[5] Steps 2 and 5 have been combined below based on how the parties provided comments.

[6] The Commission did not receive comments on particular steps for that process, so the comments are addressed on the entire topic.

[7] Section 8123(13): "Thermal sector" has the same meaning as the "Residential, Commercial and Industrial Fuel Use" sector as used in the Vermont Greenhouse Gas Emissions Inventory and Forecast and does not include nonroad diesel or any other transportation or other fuel use categorized elsewhere in the Vermont Greenhouse Gas Emissions Inventory and Forecast.

[8] 30 V.S.A. § 8124(a)(1).

emissions. Because the Clean Heat Standard is based on lifecycle-based emissions accounting, the Commission's process must also reconcile in-boundary emissions to lifecycle-based emission totals.

The following is an outline of the steps in the straw proposal related to the process for setting and adjusting the thermal sector's emission reduction requirements:

1. Establish a baseline thermal-sector emission total.
2. Using the baseline, establish a methodology for projecting the next 10 years of emission reductions.
3. Reconcile the Inventory's in-boundary emission totals to establish lifecycle-based emission totals.
4. Determine the emission limits for each of the next 10 years using the lifecycle-based trajectory for reductions.
5. Adjust the trajectory based on triennial potential studies.[9]

1. Establishing the thermal-sector baseline.

The first part of the Commission's pacing straw proposal detailed how to establish the thermal-sector baseline to anchor the trajectory of emission reductions. The Commission proposed weather-normalizing the latest Residential-Commercial-Industrial ("RCI") emissions from the Inventory as a baseline.

The Vermont Department of Public Service ("Department") and the TAG argued that the baseline data should come from the most recent fuel-tax information rather than the latest RCI emissions from the Inventory. The primary justifications for this position were that it would reflect more recent emissions data (*i.e.*, the Inventory runs on a three-year lag due to data availability for other sectors) and that the main inputs to the Inventory's RCI sector now use the fuel-tax data. The TAG specified that the Commission would need to adjust the tax data to back out dyed diesel and other non-thermal uses of propane and heating oil.

The Vermont Fuel Dealers Association ("VFDA") disagreed and commented that neither the Inventory's RCI data nor fuel-tax data would capture the "heating fuel" that the program was

[9] The potential study is a report that is to be done every three years by the Vermont Department of Public Service and is meant to serve as "an assessment and quantification of technically available, maximum achievable, and program achievable thermal resources." 30 V.S.A. § 8125(e)(1)(A).

meant to regulate. Instead, VFDA suggested the pacing trajectory be based on emission totals compiled from the fuel data we collect as part of the reporting process of the potential Clean Heat Standard. Further, VFDA urged the Commission to base obligated parties' annual clean heat credit requirements on the sales of heating fuel within the current heating season rather than prior-year sales.[10] VFDA argued that current sales data better reflect the dynamic nature of the heating fuel industry and mitigate the pitfall of imposing costs on current-year gallons based on prior-year sales.

Substantively in agreement with the concept of using the most recent Inventory data, Thomas Weiss, a participant and commenter in this proceeding, suggested using the 2022 RCI data, as it would be available for the potential start date of the Clean Heat Standard program in January 2026.

The concept of weather-normalizing the baseline year — which would adjust the year's emissions based on the year's relative number of heating degree days ("HDD") compared to the average HDD over a longer period of time — was supported by the Department, TAG, and Vermont Gas Systems, Inc. ("VGS"). VGS commented that it would be important to weather-normalize on a relatively recent basis given the trend of warmer winters. Thomas Weiss disagreed and characterized this step as unnecessary and overly complex.

After reviewing these comments, the Commission has decided that the core baseline data should come from the most recent fuel-tax information rather than the latest RCI emissions from the Inventory. The advantage of using the most recent fuel-tax data is that it captures the previous year's emissions data rather than relying on three-year-old Inventory emissions data. The tradeoff with this decision is that the Clean Heat Standard requires that the Commission determine emissions for the "thermal sector,"[11] the inputs of which are not entirely reflected in the fuel-tax data. Therefore, relying on the fuel-tax data alone leaves out certain fuels.[12] To

[10] This position was also supported by Clean Fuels Alliance America.

[11] Section 8123(13): "Thermal sector" has the same meaning as the "Residential, Commercial and Industrial Fuel Use" sector as used in the Vermont Greenhouse Gas Emissions Inventory and Forecast and does not include nonroad diesel or any other transportation or other fuel use categorized elsewhere in the Vermont Greenhouse Gas Emissions Inventory and Forecast.

[12] Fuel inputs not sourced from the fuel-tax data: Residential – natural gas and wood; Commercial – motor gasoline, residual fuel, natural gas, and wood; Industrial – asphalt and road oil, lubricants, motor gasoline, residual fuel, special naphthas, natural gas, and wood.

identify the emissions for those fuels, the Commission must pull data from the Inventory or rely on different source information for these other fuels. Based on the statutory definitions and the thermal sector definition in the Inventory, the Commission will not back-out other miscellaneous fuel types or non-thermal fuel use included in the RCI sector given that the only exception mentioned in the "thermal sector" definition is nonroad diesel[13] or fuel use *categorized elsewhere* in the Inventory.[14] To accommodate the year-to-year fluctuations of RCI emissions (which typically move in line with the relative temperatures of a given year), the Commission will weather-normalize the baseline year as supported by the Department, VGS, and the TAG.

The Commission will also base credit obligations on "emissions in the previous year" in line with statute.[15] While the Commission acknowledges the acute challenges that this program design imposes on fuel dealers, the level of regulatory complexity in the potential Clean Heat Standard makes it infeasible to calculate obligations based on current heating-season sales. The following program elements, for example, would make it difficult, if not impossible, to use same-season heating fuel sales to determine credit obligations: the use of a default delivery agent ("DDA") that must budget and plan for the credits that are delegated to it in advance by obligated parties on an annual basis; tracing annual reported sales of heating fuel in Vermont to determine obligated parties and their clean heat credit requirements; and performing a lifecycle/in-boundary accounting reconciliation to establish clean heat credit requirements based on obligated parties' contribution to the thermal sector.[16]

2. Projecting ten years of emission reductions

The next step in the straw proposal outlined how to project the first ten years of emission reductions in accordance with 30 V.S.A. § 8124(a)(3). The Commission proposed a linear, or

[13] The original straw proposal included a sub-step requiring the removal of nonroad diesel from the RCI sector data. Conveniently, in the 2024 Inventory, diesel fuel used in nonroad categories, which was previously included in the RCI sector, has been removed and transferred to the Transportation/Mobile Sources sector, so this sub-step is no longer necessary. Vermont Greenhouse Gas Emissions Inventory and Forecast Methodologies, July 2024, https://outside.vermont.gov/agency/anr/climatecouncil/Shared%20Documents/1990-2021_GHG_Inventory_Uploads/_Methodology_Vermont_Greenhouse_Gas_Emissions_Inventory_1990-2021_Final.pdf.

[14] Fuel included in the RCI sector: Residential – oil, kerosene, propane, natural gas, and wood; Commercial – oil, kerosene, propane, motor gasoline, residual fuel, natural gas, and wood; Industrial – asphalt and road oil, oil, kerosene, propane, lubricants, motor gasoline, residual fuel, special naphthas, natural gas, and wood.

[15] 30 V.S.A. § 8124(a)(2).

[16] Under a less complex program, it may be possible to determine obligations closer to real-time sales.

constant, rate of decline in emissions. One rate would be set from the baseline year to the first GWSA goal year (January 1, 2030, goal met in 2029) and then another rate would be set from 2030 to the second GWSA goal year (January 1, 2050, met in 2049).[17] The straw proposal included the option to adjust the linear rate of decline if the Department's potential study indicates that the pace is infeasible or suboptimal. Most participants agreed that defaulting to a linear reduction in emissions was appropriate. However, Efficiency Vermont and VGS encouraged the Commission to remain flexible about the rate of decline,[18] adjusting the trajectory if the triennial potential study suggested an alternative rate was more appropriate.[19]

When projecting emission reductions, the Commission assumed it would tie the potential program's emission reduction requirements to a 40% and 80% reduction from the RCI sector's 1990 emissions total in years 2030 and 2050, respectively, pursuant to 10 V.S.A. § 578(a)(2) and (3). Feedback submitted by Jared Duval during the review of the Department's draft potential study suggested a different approach based on sectoral responsibility.[20] The approach, adopted by the Climate Council, established 2018 as the reference year to base the proportional share of emission reductions to be borne by each sector. With this approach, the RCI sector, which was responsible for 31% of greenhouse gas ("GHG") emissions in 2018, would be accountable for 31% of the required emission reductions in both GWSA goal years.

After reviewing the comments, the Commission maintains the original proposal to set emission reductions at a linear pace between GWSA goal years. We adopt this approach because, in the initial years of the program, we will have limited information on which to base a different rate of decline. As step 5 of the straw proposal recognized, the Commission will evaluate whether the results of the potential study support adjustments to that trajectory, including whether a linear decline is appropriate. The Commission adopts the Climate Action

[17] The relevant GWSA emission reduction milestones are on January 1, 2030, and January 1, 2050. Emission reduction goals must then be met in the year prior: 2029 and 2049.

[18] Although no particular methodology was suggested, there are many alternatives to a linear rate of decline, which include an exponential decline (i.e., where reductions would accelerate over time), logarithmic decline (i.e., emissions decreasing rapidly at first and slowing down over time), and stepwise decline (i.e., emission reductions at certain intervals).

[19] Thomas Weiss commented that early action credits may also affect a linear trajectory but that because such credits could be sold, retired, or banked, the impact may not be very significant in the initial program year.

[20] Mr. Duval is a member of the Vermont Climate Council.

Plan's direction on sectoral responsibility. Accordingly, we set 2018 as the reference year to apply sectoral responsibility in the program's trajectory of emission reductions.

3. Reconciling emissions accounting methodology (in-boundary to lifecycle).

The next step in the Commission's straw proposal was reconciling the accounting methodology used in the Inventory (*i.e.,* counting only those emissions occurring within Vermont's borders or "in-boundary") with the accounting methodology required by the potential Clean Heat Standard (*i.e.,* emissions associated with all stages of fuel production, or in-boundary plus "upstream"[21] emissions).[22] The Commission proposed obtaining the volume of fuels that contributed to the thermal sector's baseline year, applying ANR's upstream emission factors[23] to each fuel type, and adding the upstream emissions to the sector's in-boundary emissions to arrive at a lifecycle-based total. The TAG did not fully endorse this step in the proposal, commenting that it "will likely be a complex algorithm, and cannot be defined until [the Greenhouse gases, Regulated Emissions, and Energy use in Technologies ("GREET") life cycle analysis] or equivalent analysis resource is selected and customized for Vermont, carbon intensity values are established by fuel type and paced for decline over time, and clean heat measure characterizations, measure mix data, and potential study values are available from consultant efforts currently underway." Nonetheless, the TAG continued to weigh in on subsequent steps to reconcile the two emissions accounting methods.

Efficiency Vermont, VGS, and the TAG commented that, rather than use ANR's upstream emission factors in this step, the Commission should use the lifecycle emission factors developed by the Commission's technical consultant for continuity with later steps. The Conservation Law Foundation ("CLF") argued that no lifecycle reconciliation process was needed to establish the pacing trajectory, as credits should be based only on narrow-scope (or in-boundary) emission goals.

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[21] "Upstream" emissions are emissions that are associated with the production and transport of the fuel but are not directly related to the combustion of the fuel.

[22] 30 V.S.A. § 8124(a)(1).

[23] These emission factors were prepared for ANR and developed by the Eastern Research Group, Inc. in a report titled "Vermont Energy Sector Life Cycle Assessment" (May 24, 2024), available at https://outside.vermont.gov/agency/anr/climatecouncil/Shared%20Documents/1990-2021_GHG_Inventory_Uploads/VT_GHG_EnergySector_LCA_May2024.pdf.

After consideration of the comments, the Commission modifies the reconciliation process to adopt the use of the technical consultant's lifecycle emission factors in this step for continuity in later steps. The tradeoff is that the technical consultant's emission factors were developed to align with fuels relevant to the potential Clean Heat Standard and not with the inputs to the Inventory's RCI sector. This means that a small number of inputs to the RCI sector (*e.g.,* miscellaneous fuels in the industrial subsector) will not be included in the lifecycle-based total.[24] In response to the comments from CLF, the Commission understands the Legislature's directive in Act 18 to require credit obligations to be based on a lifecycle assessment of CO2e emissions.[25] Therefore, a statutory change would be needed to take CLF's more narrow approach.

4. Setting the lifecycle-based emission reduction trajectory.

In the final step, the Commission proposed to use the same rate of decrease as required in the Inventory-based calculations to determine the lifecycle-based trajectory. This step was generally supported or left unmentioned in most participants' filings.[26]

The Commission maintains the position in the straw proposal to use the same year-over-year rate of decrease in the lifecycle trajectory as in the in-boundary trajectory to meet GWSA goals. The Commission will monitor the relative impact this has on actual RCI emissions in the Inventory by way of assessing and revising the potential program's emission reduction requirements triennially.[27]

B. Process for setting and adjusting obligated parties' annual requirements

The Commission's straw proposal also explained how the trajectory of lifecycle-based emission reductions would then be assigned to obligated parties as a number of clean heat credits. The Commission proposed a multi-step process to arrive at clean heat credit assignments. The proposed steps are as follows:

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[24] Inputs without lifecycle emission factors include: motor gasoline, residual fuel, and special naphthas.

[25] 30 V.S.A. § 8124(a)(1)-(2); 30 V.S.A. § 8127(c); 30 V.S.A. § 8128(a)(1).

[26] However, Thomas Weiss commented, "It is possible that other measures will also have a significant mismatch between life-cycle emissions and inventory emissions. It will be necessary to wait until the reports on measure characterizations, upstream emissions, and potential are complete to see whether using the same rate for the two types of emissions is feasible."

[27] 30 V.S.A. § 8124(a)(3).

1. Use the lifecycle emission rates developed by the Commission's technical consultant to convert the fuel sales reporting from the previous year into a lifecycle-based emissions total for all fuel reported (and for each individual obligated party).
2. Calculate each obligated party's proportional contribution to the total annual emissions reported.
3. Assign each obligated party's proportional contribution to the lifecycle-based baseline year – assigning each obligated party a portion of the baseline year's emissions.
4. Apply the percent decrease required by the trajectory to each obligated party's emissions amount. This reduction in CO_2e emissions is the obligated party's proportion of emission reduction that is then translated to clean heat credits by assuming one metric ton of CO_2e = one clean heat credit.

The Commission then proposed assigning a decade's worth of credit requirements based on the annual percent decrease required to meet GWSA emission limits, recalibrating every three years to reflect the latest Inventory and fuel reporting data. The Commission acknowledged that this process relied, in part, on near-perfect annual reporting by fuel dealers[28] and specifically asked participants to comment on how to assign credit obligations in a scenario where annual reporting was imperfect or incomplete.

The Department and VGS generally supported the Commission's proposal to allocate sector-wide emission reductions to obligated parties based on their proportional contribution to the previous year's fuel reporting. These entities agreed that incomplete fuel dealer registration would require adjustments to the process. Under incomplete registration conditions, the Department recommended only allocating credit obligations to obligated parties in proportion to the reported registration data. The TAG was also generally in agreement with this part of the proposal with an acknowledgment that some adjustment of obligations may be necessary to ensure that the impact on the thermal sector is sufficient to meet GWSA goals.

VGS suggested that relying on imperfect fuel dealer reporting could be mitigated by using the comprehensive data available through the fuel tax information in combination with the

[28] Also, near perfect determination of obligated parties from that fuel sales reporting.

up- and downstream fuel reporting within the program. By leveraging these two data sources, VGS suggested compliance and assigning obligations could be better achieved.

The Commission acknowledges that incomplete fuel dealer reporting is problematic when allocating sector-wide credit obligations to registered obligated parties. We agree that obligations should be assigned based on the true proportional contribution of each obligated party to the total fuel consumed within the state but do not believe we will be able to close the entire gap by leveraging the data sources available to us. To alleviate much of the gap in data (between actual sales and reported sales), the Commission would need to rely on the up- and downstream reporting of fuel under this program (*i.e.*, registrants reporting both suppliers and customers) – identifying any fuel that is not traceable downstream to consumption or traceable upstream to the appropriate obligated party. Ideally, the Commission would identify and isolate the fuel that is not traceable and reserve those units of fuel as unassigned. That volume of unassigned fuel would then be calculated as a proportion of the overall reported total and allocated to a set of not-yet-identified obligated parties. The Commission would then investigate how these unassigned credits should be allocated by following up with the last known owner of the fuel. The remaining gap would be fuel that goes wholly unreported (*i.e.,* the scenario where neither its transport into the state nor end-use consumption is reported). Because future fuel-tax information would be in the aggregate, we would have a sense of the magnitude of missing fuel but would be unable to identify which units of fuel were unreported and by whom. This could be addressed with improved registration and reporting compliance. To address comments related to incorporating adjustments that might be needed to ultimately affect change in the RCI sector, the Commission points out that the sector-wide emissions trajectory will be revisited every three years, with annual fuel sales reporting driving credit obligations every year.[29] This cadence of review should serve as a natural "check" on whether the program is lowering RCI emissions at the intended pace to achieve the GWSA goals.

III. CONCLUSION AND FINAL PROCESS

The Commission appreciates the thoughtful and varied feedback submitted by participants in this proceeding and by the TAG. As noted above, the Commission has

[29] 30 V.S.A. § 8124(a)(3).

incorporated several proposed changes to arrive at the pacing process that we adopt in this Order. The Commission intends to follow the revised process as outlined below.

Process for setting and adjusting the sector's emission reduction requirements

Approach: The Commission will determine the pace required of the potential Clean Heat Standard to meet the Vermont thermal sector's proportional greenhouse gas emission reductions obligated by the Global Warming Solutions Act (GWSA) in compliance with 30 V.S.A. § 8122. The Commission will, with assistance from the Technical Advisory Group, reconcile the reductions necessary in the Greenhouse Gas Inventory ("Inventory") with lifecycle-based emissions that can then be translated into clean heat credits. The Commission will implement the following process:

1. Establish the thermal sector baseline to anchor the trajectory of emission reductions. Use the previous year's fuel tax data from the Tax Department in addition to projected or known emission totals from non-tax data RCI inputs.
    a. Weather-normalize the thermal sector baseline year using a 5-year average of heating degree days.
2. From the established baseline, linearly project the next 10 years of emission reductions, with the 2030 obligation met in 2029, and later years linearly tied to meeting 2050's obligation in 2049.[30]
    a. Apply sectoral responsibility: the 2029 and 2049 goals will be based on the RCI sector's share of emissions in reference year 2018, as directed by the Vermont Climate Council.
    b. This step will identify the limits of the million metric tons (MMT) of CO_2e *Inventory-based* emissions that would be allowed in each of the next 10 years.
3. Reconcile the Inventory's in-boundary (*i.e.*, within Vermont's borders) emission totals to lifecycle-based emission totals.
    a. Using the volumes of fuel reported in the fuel tax data, in addition to any RCI input that has been reported or can be extrapolated from the most recent Inventory year, apply the "emission factors" developed for the Clean Heat Standard by the Commission's technical consultant (which include both combustion and upstream emissions) to determine the lifecycle-based emissions of each fuel type based on their respective volumes. Sum all lifecycle-based fuel emissions to arrive at the sector's lifecycle-based emissions total.
4. Use the same rate of decrease as required in the Inventory-based calculations in the lifecycle-based trajectory. This results in the lifecycle-based emission limits (and total credit requirements) for each of the next 10 years. This sector-wide emission reduction calculation will be conducted triennially.[31]

[30] The relevant GWSA emission reduction milestones are on January 1, 2030, and January 1, 2050. Emission reduction goals must then be met in the year prior: 2029 and 2049.

[31] 30 V.S.A. § 8124(a)(3).

5. When updating and extending the decade projection of credit requirements every three years, the Commission will consider whether to adjust the linear trajectory based on the results of the Department's triennial potential study and evidence of external factors that may affect the clean heat credit market. Examples include:
    a. Relevant policies that may affect emission levels in the RCI sector and therefore should affect credit requirements (*e.g.*, housing-related).
    b. Relevant economic constraints (*e.g.*, workforce, overall health of the economy, product availability) that may affect the ability to obtain and retire credits.

Process for setting and adjusting obligated parties' annual requirements

Approach: The Commission will "establish the number of clean heat credits that each obligated party is required to retire each calendar year."[32] An obligated party's annual credit requirement will "be expressed as a percent of each obligated party's contribution to the thermal sector's lifecycle CO_2e emissions in the previous year. The annual percentage reduction shall be the same for all obligated parties."[33] The Commission will implement the following process:

1. After calculating lifecycle emission limits for the entire sector (see above), the year-by-year reductions will need to be translated to credits and distributed to obligated parties.
2. Using the lifecycle emission rates[34] developed by the Commission's technical consultant, convert fuel sales reporting from the previous year into a lifecycle emissions total for all fuel reported and for each obligated party.
    a. Example: Volumes of fuel reported in the previous year equate to 2.5 MMT of CO_2e (unevenly distributed among reporting entities); Company A is responsible for .5 of those MMT of CO_2e.[35]
    b. To accommodate imperfect registration data, identify all units of fuel that cannot be assigned to an obligated party (*e.g.,* fuel that cannot be traced upstream to the ultimate obligated party). The credits resulting from the lifecycle emissions of this fuel will not be assigned until the appropriate obligated party(ies) is identified.
3. Calculate each obligated party's proportional contribution to the total emissions reported.

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[32] 30 V.S.A. § 8124(a)(1).
[33] 30 V.S.A. § 8124(a)(2).
[34] Known as the "emissions schedule" in 30 V.S.A. § 8127(g): "a schedule of lifecycle emission rates for heating fuels and any fuel that is used in a clean heat measure, including electricity, or is itself a clean heat measure, including biofuels."
[35] The examples offered in this step are solely provided to serve as an aid to understanding the process. The numbers are not real and should not be taken literally.

   a. Example: Proportionally, Company A is responsible for 20% of reported lifecycle emissions (.5 of 2.5 MMT of CO_2e).
4. Assign each obligated party's proportional contribution to the lifecycle-based baseline year.
   a. Example: The lifecycle-based translation of the Inventory baseline year equals 3 MMT of CO_2e. Company A now "owns" 20% of the baseline emissions total, or .6 MMT of CO_2e.
   b. NOTE: There is a fundamental conflict with 30 V.S.A. § 8124(a)(2). Credits cannot be expressed as a "percent of each obligated party's contribution to the thermal sector's lifecycle CO_2e emissions *in the previous year*" because there is a lag in Inventory reporting data.[36] Additionally, given that the Commission must publish a decade's worth of credit requirements at a time, the credits for future years cannot be based on the "previous year." A statutory amendment is required to tie credit requirements to the "most recent or projected Inventory data" instead.
5. Apply the percent decrease required by the lifecycle trajectory.
   a. Example: If the lifecycle-based emissions trajectory requires a 10% decrease across the sector in year one, a 10% reduction of Company A's .6 MMT equates to a 0.06 MMT of CO_2e reduction in year one.
   b. NOTE: This satisfies the requirement that the "annual percentage reduction shall be the same for all obligated parties."
6. This reduction in CO_2e emissions is the obligated party's proportion of emission reductions that must be translated to clean heat credits.
   a. Example: If one clean heat credit = one metric ton of CO_2e, Company A must retire 60,000 credits in year one.
7. Assign a single year's worth of credit requirements to each obligated party based on the percent decrease required in the lifecycle-based Inventory limit.
   a. The Commission will use annual fuel sales reporting data to assign the credit requirements of the sector in any given year.

SO ORDERED.

[36] A reminder that "'thermal sector' has the same meaning as the 'Residential, Commercial and Industrial Fuel Use' sector as used in the Vermont Greenhouse Gas Emissions Inventory and Forecast. 30 V.S.A. § 8123(13).

Dated at Montpelier, Vermont, this 1st day of November, 2024.

Edward McNamara	)	PUBLIC UTILITY
Margaret Cheney	)	COMMISSION
J. Riley Allen	)	OF VERMONT

OFFICE OF THE CLERK

Filed: November 1, 2024

Attest: _____
Clerk of the Commission

Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Commission (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: puc.clerk@vermont.gov)

PUC Case No. 23-2220-RULE - SERVICE LIST

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