

CHS TAG

Pacing Recommendations

13 June 24

PUC April Pacing Straw Proposal

<http://epuc.vermont.gov/?q=downloadfile/719139/190907>

Background and Context for Pacing – Part I

April 19, 2024 Order Communicating Workplan

Order	Category	Task	Order	Category	Task
1	Credit Creation	<ul style="list-style-type: none">Ownership rules	5	Credits – definition, administration, use	<ul style="list-style-type: none">CO2e value, rules, records, time stamp, RNG
2	Pacing	<ul style="list-style-type: none">Process for setting CHS credit retirement schedule	6	Plan Review & Compliance	<ul style="list-style-type: none">Credit fulfillment, rules, DDA details
3	Pacing – part I	<ul style="list-style-type: none">Four processesLMI equitable distribution	7	Pacing – part II	<ul style="list-style-type: none">Setting declining CO2e valuesSetting retirement schedule
4	Obligated Parties	<ul style="list-style-type: none">DeterminationRegistration	8	Post-implementation	<ul style="list-style-type: none">New CHMsReview CHM consequencesTrading platform

PUC Public Process Complete. Awaiting advisory group feedback.

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- Regular Review & Update of **Emissions Schedule** *(defined in statute)*
- **Carbon Intensity Values** *(targets in statute)*
- Thermal Sector **Emissions Reduction Requirements** *(required by statute)*
- Annual **Obligated Party** Requirements *(defined in statute)*
- Ensure **LMI Equitable Distribution** *(not addressed at this time)*

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I. Emissions Schedule : 3-year and 10-year reviews, projections, updates

The PUC is tasked with 1) establishing a lifecycle emissions schedule, or list of lifecycle emissions rates for heating fuels and any fuel used in a clean heat measure and 2) reviewing and updating that emissions schedule every 3 years. The schedule must be based on GREET, IPCC modeling, or something of comparable analytical rigor to fit the Vermont thermal context.

COMMENTS:

- The TAG is generally in agreement and see this as in keeping with statute language and goals.
- Consider clarification of language, to help define “schedule” in this usage as the table and tallies of lifecycle emissions established for each clean heat measure and the associated fuels, not a timeline or trajectory.
- Consider adding language to acknowledge applicability to custom and prescriptive clean heat measures alike, with review of custom Clean Heat measures comparable to the proposal and verification steps currently applied under Energy Efficiency and Tier III programs in Vermont.
- The 3- and 10-year adjustment cycles are per statute and appropriate for keeping Clean Heat credit documentation and tracking up to date and reflecting evolving technologies, legal requirements, and any new evidence on emissions through 2050.

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II. Setting Declining Carbon Intensity (CI) Values: set rate of decline & trajectory

“Carbon intensity value” is defined in statute as the amount of lifecycle greenhouse gas emissions per unit of energy of fuel expressed in grams of carbon dioxide equivalent per megajoule (gCO₂e/MJ).

Thresholds defined in statute: below 80 in 2025, below 60 in 2030, below 20 in 2050.

PUC proposes step change for first 5 years.

COMMENTS:

- This carbon intensity value is one of several data inputs for valuing and calculating the Clean Heat Credits that will be tracked and retired through the course of implementation through 2050. PUC proposes step change for first 5 years.
- Using a step change for declining carbon intensity values for the initial period of CHS implementation between 2025 and 2030 provides a simple and predictable target for the marketplace, and might have value in the years that follow as well. We like that PUC incorporates opportunity for public input, and the ability to apply insight gained over the initial years of implementation to the carbon intensity values applied in future years.
- Consider adding language to clarify that per cited statute section, declining carbon intensity values discussed here apply to “liquid and/or gaseous clean heat measures”; wood fuels and electricity are not impacted by these adjustments to carbon intensity values.

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II. Setting Declining Carbon Intensity (CI) Values: set rate of decline & trajectory

COMMENTS (continued):

- Our understanding of the proposed approach defines the carbon intensity values from a 2025 starting point (below 80) through 2029, then below 60 starting in 2030. While statute defines a value below 20 for 2050, PUC has left open for exploration what the trajectory will be in those later years of CHS implementation, between 2031 and 2050.
- It will be helpful to clarify further that this step change is different from the trajectory for emissions reduction and point out that there is value in prioritizing lower CI-value fuels early in the process.

As written the proposal effectively creates a declining CI requirement that lags the emissions reduction requirement.

As a hypothetical, significantly lagging measures would receive credits but could contribute inadequate emissions reductions to keep pace with the RCI sector requirement. If the majority of the measure mix was significantly lagging measures the sector requirement would not be met.

Alternatively, the rate of CI reduction could lead the rate of RCI emissions reductions. In this “leading” case all fuel measures would be both creditable and contribute to meeting the RCI pace of emissions reductions. A leading CI requirement would be more stringent than a lagging CI requirement and could result in higher compliance costs.

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III. Setting and Adjusting Thermal Sector Emissions Reduction Requirements

Proposing to set baseline and goals based on GWSA emissions tracking and translate/reconcile annual GHG data with lifecycle carbon emissions to establish reduction requirements

Commission Proposed Steps + TAG Pacing Comments

1. Establish a baseline to anchor the trajectory of emissions reductions.

- Agrees with approach to establish baseline year that is weather-normalized and linked to the year of most recent fuel tax data, adjusted for non-road diesel and other transportation fuels.
- VT fuel tax data is available the year following the reporting period; GHG inventory has a 3-year lag.

2. From the established baseline, linearly project the next 10 years of emissions reductions, with the 2030 obligation met in 2029 and later years linearly tied to meeting 2050's obligation in 2049.

- Agrees with approach to at least initially establish linear projections for the required 10-year periods.
- Consider clarifying language to explain how first leg would be 2025-2030, then continue on in 10-year projections.
- This is the trajectory for the required emissions based on the GHG inventory. *Next* step is to incorporate lifecycle based emissions.
- Note that the GHG inventory analysis will be evolving to consider fossil fuels sales data.

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III. Setting and Adjusting Thermal Sector Emissions Reduction Requirements

3. Reconcile the inventory's in-boundary (i.e. within Vermont's borders) emissions totals to lifecycle-based emissions totals.

- This will be a complex algorithm, based on GREET figures, CI values, CHMs, and emissions schedule...all yet TBD.
- Linear trajectory a good first approach; subsequent 10-yr periods will be informed by first years of CHS implementation.
- The TAG recommends using the emissions schedule (see Process I) rather than the PUC suggested emissions factors from the ANR lifecycle-based supplement. Goal: a lifecycle accounting methodology consistent across CHS requirements, credit valuation, and reporting.

4. Use the same rate of decrease as required in the inventory-based calculations [GWSA] in the lifecycle-based trajectory.

This results in the lifecycle-based emission limits for each of the next 10 years.

- TAG agrees with applying same trajectory from GHG emissions decrease identified in step 2.

5. Use the results of the triennial potential study to determine whether it is appropriate to adjust the decade trajectory to something other than a linear decrease in emissions.

- Note that this is different from step 4 in that this stage recognizes the impact of measure mix and biofuels and evolution over time.
- Consider adding language to clarify that incorporation of the CHS elements not included in GWSA analyses may result in two differing trajectories for the GHG emissions and CHS lifecycle-based emissions targets.

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IV. Setting and Adjusting Annual Obligated Party (OP) Requirements

Credit requirements defined in statute to be expressed as a % of each OP's contribution to emissions the previous year.

Commission Proposed Steps TAG Pacing Comments on next slide

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 entities.
2. Using the lifecycle emission rates developed by the technical consultant, convert fuel sales reporting from the previous year into a lifecycle emission total for all fuel reported and for each obligated party;
3. Calculate each obligated party's proportional contribution to the total emissions reported.
4. Assign each obligated party's proportional contribution to the lifecycle-based baseline year.
5. Apply the percent decrease required by the lifecycle trajectory.
6. This reduction in CO₂e emissions is the obligated entity's proportion of emission reduction that must be translated to clean heat credits.
7. Assign a decade's worth of credit requirements based on the percent decrease required in the lifecycle-based inventory limits, updated and recalibrated every 3 years.
8. When updating and extending the decade projection of credit requirements every 3 years, the Commission will consider external factors that may affect the clean heat credit market.

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IV. Setting and Adjusting Annual Obligated Party Requirements

COMMENTS:

- The TAG is generally in agreement with the process above as extracted from statute.
- More data needed to understand how this across-the-board flat % figure works out for the smaller obligated parties.
- The PUC has noted potential fundamental conflict with statute language that bases credit requirements based on the thermal sector emissions *“in the previous year”*.
 - The GHG inventory is generally up to three years behind the current calendar year.
 - Thermal sector tax and emissions data will likely be available by February of the following year, though unclear if that is aggregated tax data or broken out by fuel type.
 - TAG has not come to consensus yet on whether to recommend a statute amendment or whether CHS can clarify/stipulate a definition for *“...the previous year”*.
 - If the fuel tax data alternative is selected as an effective proxy for the inventory, or is adopted by the inventory itself, this issue can be resolved. It is unclear if the Commission or ANR through some supplemental document to the inventory or very-preliminary results has discretion to *“deem”* fuel tax data values those used in the Inventory’s *“previous year”*.

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Additional Questions