

MassDEP Stakeholder Discussion Document
MA Clean Heat Standard
Crediting for Non-residential Buildings
March 2024

In November 2023, MassDEP released a [draft program framework](#), addressing key policy design topics for a Clean Heat Standard in Massachusetts. The draft framework included four sections: setting the standard, regulated heating energy suppliers, credit generation, and compliance flexibility and revenue. The purpose of this document is to elaborate on the concepts included in the draft framework with respect to clean heat credit generation for non-residential (i.e. commercial and industrial) buildings and solicit stakeholder feedback. Written comments are requested by April 5, 2024, and should be submitted via email to climate.strategies@mass.gov. Questions may also be addressed to that email at any time.

The draft framework includes two types of credits: full electrification credits created from converting a residence to an electric heat pump, and annual emission reduction credits from using clean heat. Full electrification credits are only available for residential electric heat pumps. For emission reduction credits, the framework limits eligibility to electricity and liquid biofuels and includes a set of simplifying assumptions to assign a default volume of emission reduction credits to 1) each residence that uses an electric heat pump for heating, and 2) each gallon of eligible liquid biofuel delivered to end-use customers in MA (including commercial and industrial customers).

For non-residential buildings, the framework states:

Non-residential commercial projects would receive emission reduction credits based on demonstrated implementation of clean heat and emission reductions. Crediting would be consistent with methods used by the Massachusetts Department of Energy Resources (DOER) or MassDEP's greenhouse gas emissions reporting regulation for facilities.

This discussion document provides additional detail on how annual emission reduction credits could be generated from non-residential commercial and industrial buildings and identifies key topics for stakeholder consideration.

MassDEP is considering two potential mechanisms for emission reduction credit generation in non-residential buildings: 1) electrification, and 2) certain non-pipeline clean fuels. Each is discussed in more detail below.

Electrification

For electrification, non-residential buildings would generate emission reduction credits by installing an electric heat pump for space heating¹ and demonstrating reductions in on-site emissions using data collected under a new building energy reporting program that will be established by DOER.² Buildings under the size threshold for DOER's building energy reporting program would voluntarily report the same information to receive emission reduction credits.

Key topics for establishing emission reduction credits from electrification:

- *Setting a baseline*: To quantify emission reductions, reported emissions must be compared to a baseline. Conceptually, a baseline can be set based on historic data of past emissions or based on modeled estimates of emissions.
- *Weather normalization*: Emissions from heating vary each year depending on the weather. Crediting based on actual reported emissions compared to a historic baseline could include weather normalization to account for differences in heating requirements year-over-year.
- *Measure verification*: MassDEP will need to determine appropriate measure verification procedures for the installation of new electric heating equipment in non-residential buildings.

One simple option for documenting reductions could be to use historic emissions from on-site fossil fuel combustion for each building as the baseline and then award credits each year based on actual reported emission reductions compared to the baseline. Under this approach, it might be appropriate to use a weather normalization factor based on heating degree days for the years used to set the baseline compared to the heating degree days for the year for which the credits are being generated. Note that, while the use of clean heat would be required, emission reductions would be credited based on the full amount of emission reductions realized on site, including emission reductions resulting from weatherization measures and electrification of water heating.

Non-pipeline clean fuels

MassDEP would allow crediting for eligible liquid biofuels delivered to non-residential buildings, as laid out in the draft framework, with credits earned by the fuel supplier. In addition, MassDEP is considering whether to allow crediting for reductions in emissions from fossil fuel combustion resulting from the substitution of renewable natural gas and hydrogen produced

¹ Buildings that electrify water heating could also be eligible in cases where water heating accounts for the majority of on-site fuel combustion.

² The 2022 Climate and Clean Energy Bill includes a requirement that DOER establish a building energy reporting program that requires annual reporting to DOER of energy usage by buildings greater than 20,000 square feet. The data gathered under this program will be made publicly available. <https://malegislature.gov/Bills/192/H5060>

using renewable electricity, as long as they are not blended with fossil fuels. Crediting could be based on data reported to the DOER building energy reporting program and credits would be earned by the building owner not the supplier of the fuel.

Questions for stakeholder consideration

- How should MassDEP leverage existing policies, programs, and measurement methodologies for non-residential emission reductions, such as EnergyStar Portfolio Manager, Mass Save Energy Efficiency Programs for commercial and industrial customers, local building performance standards (i.e., BERDO, BEUDO), and the 10-community fossil free pilot?
- Should crediting rely on a modeled emissions baseline rather than a measured emissions baseline?
- Should the baseline year for crediting be the year immediately before the clean heat project is completed or an earlier year, such as 2024 or 2025?
- Are there certain types of buildings and/or thermal loads that would need special accommodations or administrative support (i.e., small buildings, schools, mixed-use buildings)?
- Are there additional commercial and industrial emission reductions measures that should be considered for crediting?
- Should some minimum level of emission reduction be required, such as a 75% reduction from baseline or 5 MT?