

Clean Heat Standard

Program Design Overview

May 14, 2026

Maryland
Department of
the Environment

Agenda

1. A Clean Heat Standard For Maryland
2. Dynamics of a Clean Heat Standard
3. Basics, Part 1: Clean Heat Measures
4. Basics, Part 2: Clean Heat Credits
5. Basics, Part 3: Credit Retirement Requirements

What is a Clean Heat Standard (CHS)?



A **clean heat standard**
is a market-based program to bring more clean heating solutions to Marylanders through a credit-based system.

A Clean Heat Standard for Maryland

A Program for All Marylanders: Clean Heat Standard



Increase available incentives for building efficiency upgrades and alternative heating fuels



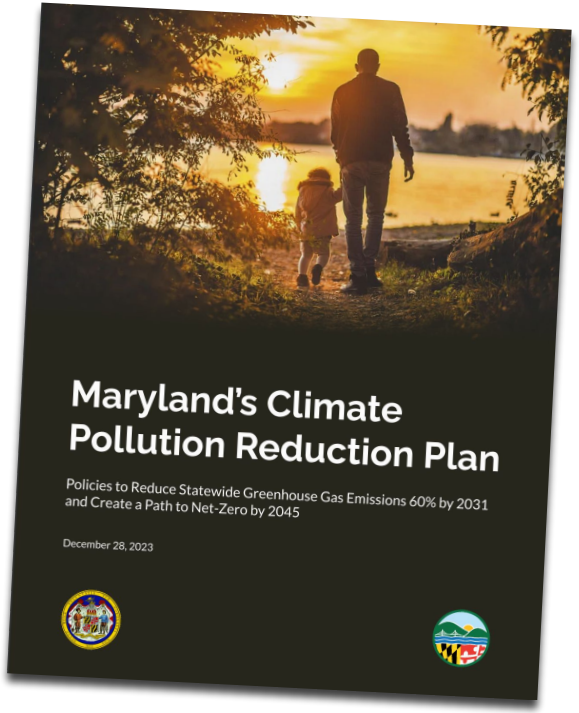
Ensure <u>all</u> Marylanders can access building upgrades that improve indoor air quality and public health



Amplify the work already being done through existing federal, state, and local programs

Clean Heat for Maryland

- State law requires that Maryland achieves net-zero climate pollution by 2045.
- The buildings sector needs new programs to achieve this substantial reduction in climate pollution.
- A June 2024 Executive Order directs MDE to propose a Clean Heat Standard as the long-term strategy to reduce climate pollution from the buildings sector.



The Benefits for Marylanders



- Reduces air pollution
- Lowers heating and cooling costs
- Increases access to incentives

Reduces Harmful Air Pollution



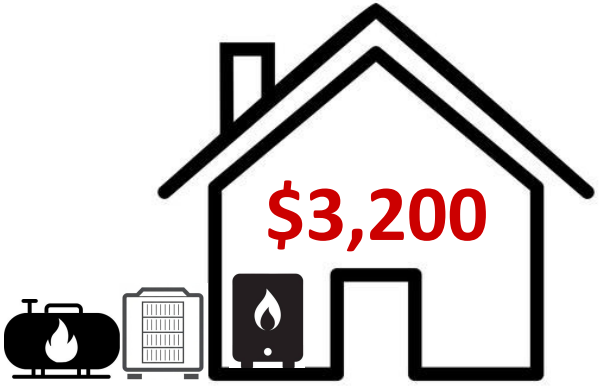
Impacts of Air Pollution

Respiratory	Other
Wheezing and coughing	Premature Death
Shortness of breath	Susceptibility to infection
Asthma attacks	Heart attacks and strokes
Worsening Chronic Obstructive Pulmonary Disease (COPD)	Preterm births and low birth weight
Lung cancer	Metabolic disorders
	Impaired cognitive functioning

Source: https://www.lung.org/research/sota/health-risks

Lowers Heating and Cooling Costs

Oil or Propane
plus air conditioner



Natural Gas
plus air conditioner



Heat Pumps
includes air conditioning



Annual space heating, space cooling, and water heating energy costs by fuel type for the average Maryland home.

Average annual energy costs are based on a study by Energy Solutions published in Model Rule 1.0: NOx and GHG Emissions Standards for Space and Water Heaters, Technical Support Document 1.2. December 12, 2024

Dynamics of a Clean Heat Standard

Who is a Heating Fuel Provider?



A **heating fuel provider** is a company that delivers heating fuel – including heating oil, propane, or natural gas – for final sale or consumption in Maryland.



Heating fuel providers must annually report their fuel delivered in Maryland to Maryland Department of the Environment.

Who is a Clean Heat Provider?



A **clean heat provider** is a company or contractor that installs, sells, leases, or delivers a clean heat measure to a building in Maryland.



Who is a Clean Heat Provider?

Heating Fuel Provider	Delivering alternative heating fuels or installing building efficiency upgrades
Weatherization, HVAC, or Plumbing Contractor	Installing building efficiency upgrades
Utilities with Incentive Programs (e.g. EmPOWER)	Incentivizing building efficiency upgrades
Builder or Developer of New Construction Projects	Installing efficient equipment and high-performance insulation

How Does a Clean Heat Standard Work?



1. Track Climate Pollution



2. Earn Clean Heat Credits



3. Retire Clean Heat Credits

How Does a Clean Heat Standard Work?

1

Track Climate Pollution

Heating fuel providers annually report their delivered fuel in Maryland for MDE to calculate the associated climate pollution.

2

Earn Clean Heat Credits

Clean heat providers – including heating fuel providers – earn credits for installing or delivering clean heat measures.

3

Retire Clean Heat Credits

Heating fuel providers retire credits to reduce their associated climate pollution over time.

Basics, Part 1:
Clean Heat Measures

Types of Clean Heat Measures



Installed Measures



Delivered Measures

Eligible Installed Clean Heat Measures (part 1 of 2)

- Building weatherization (i.e., insulation, air sealing, and other thermal efficiency improvements)
- Electric heat pumps (i.e., air-source, water-source, geothermal), heat pump water heaters, heat pump clothes dryers, and heat pump washer/dryers
- Non-combustion or alternative-fuel-based district heating systems and components



Eligible Installed Clean Heat Measures (part 2 of 2)



- Advanced wood heating systems
- Solar space heating and water heating systems
- Complete manufactured home replacement

Photo: Biodiesel Magazine, Alliance for Clean Heat (Maryland)

Eligible Delivered Alternative Fuels



- Liquid biofuels
- Renewable methane gas
- Green hydrogen created through electrolysis with renewable electricity

Switching from one fossil fuel to another non-alternative fuel is not creditable.

Photo: Maryland Soybean Board

Basics, Part 2:
Clean Heat Credits

What is a Clean Heat Credit?

A **clean heat credit** represents one metric ton of avoided climate pollution.



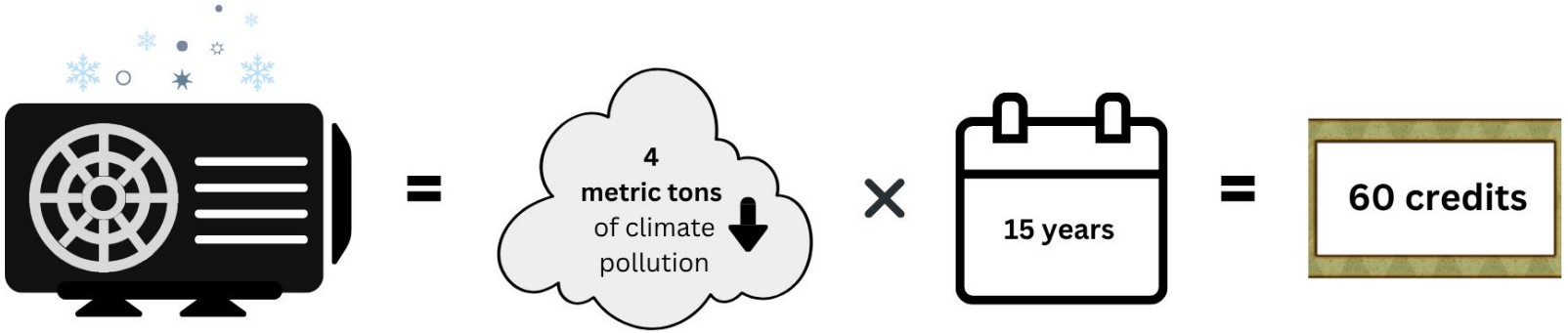
Types of Clean Heat Credits

There are three types of clean heat credits that can be earned by installing or delivering eligible measures:

- A **low-income credit** – a residential building where at least 51% of households are low-income;
- A **moderate-income credit** – a residential building where at least 51% of households are low- or moderate-income; and
- A **regular credit** – for all other buildings, including commercial, industrial, and other residential buildings

Earning Credits for Installed Measures

A cold-climate heat pump is installed in a single-family home. This heat pump will reduce climate pollution by 4 tons per year during its expected 15-year lifespan. 60 credits are earned for this project.



Based on GREET lifecycle emissions framework developed for Maryland in the Alternative Fuels and Technologies Working Group.

Preliminary Results

Earning Credits for Delivered Alternative Fuels

A heating fuel provider delivers 500 gallons of biofuel. This biofuel delivery replaces the delivery of an equivalent amount of home heating oil – reducing climate pollution by 4 metric tons. As a result, 4 credits are earned for this biofuel delivery.



Based on GREET lifecycle emissions framework developed for Maryland in the Alternative Fuels and Technologies Working Group.

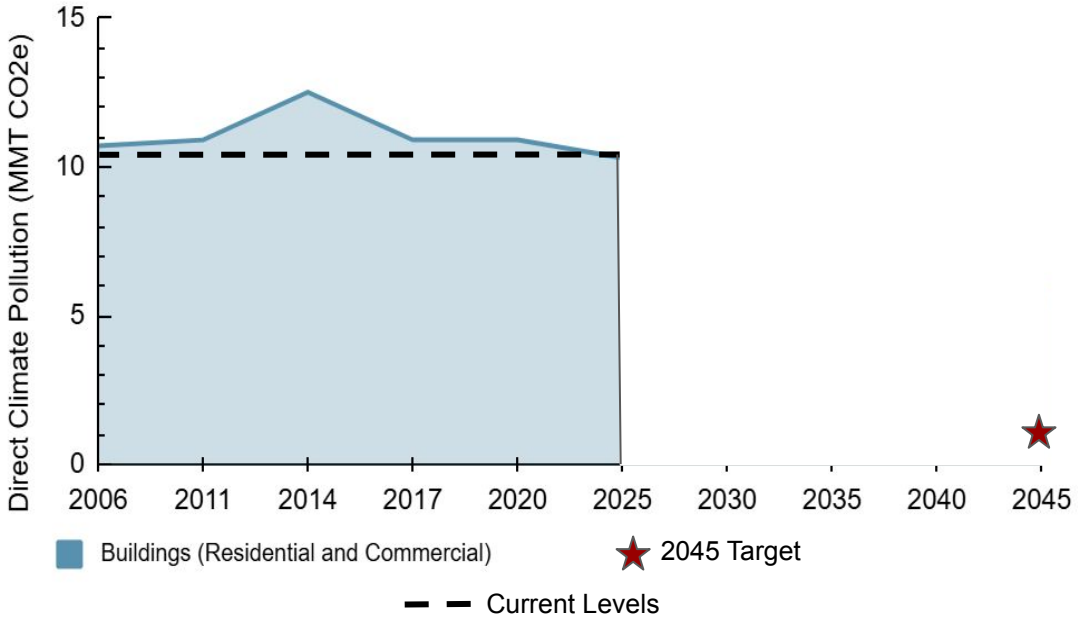
Preliminary Results

Basics, Part 3:
Credit Retirement Requirements

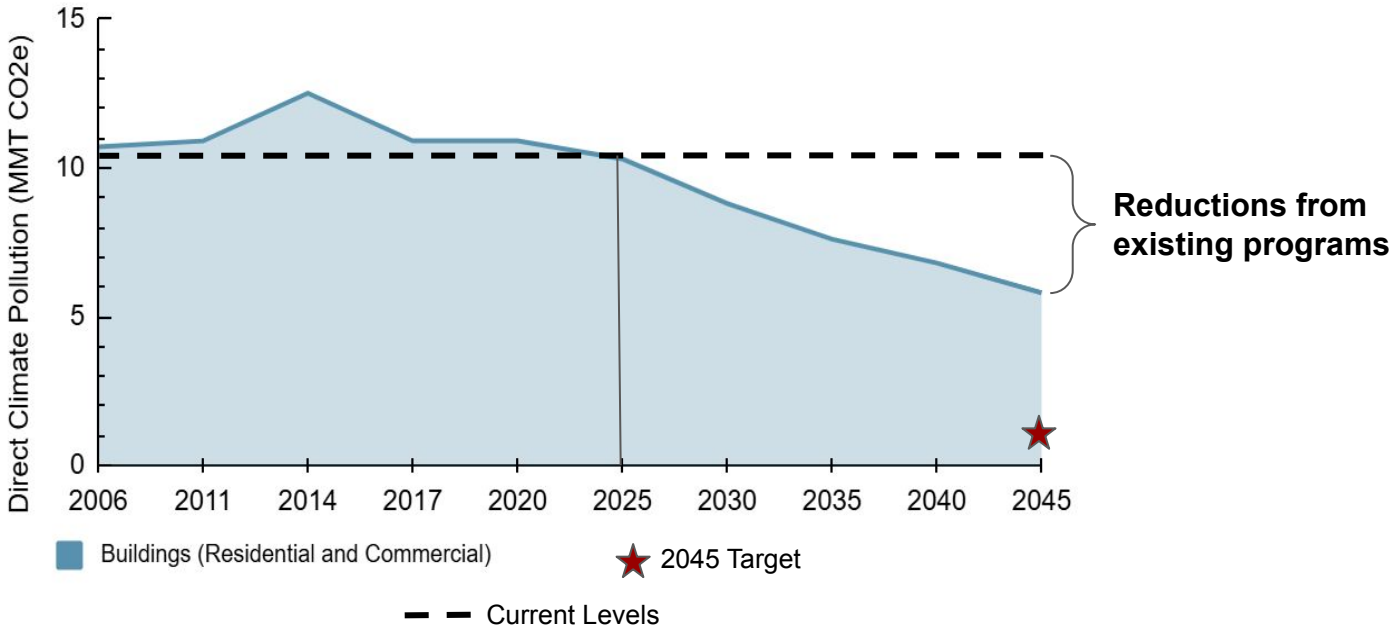
Pollution Reductions and Credit Retirements

- To reduce climate pollution from Maryland's buildings, the Clean Heat Standard will require heating fuel providers to retire clean heat credits each program year.
- Heating fuel providers can obtain credits when they:
    - **Directly install or deliver** eligible clean heat measures,
    - **Contract with a separate clean heat provider** (e.g. HVAC technician) who installs the clean heat measures on their behalf,
    - **Trade credits on the Clean Heat Marketplace**, or
    - **Establish an agreement with a Clean Heat Agency** to satisfy all or a portion of their credit retirement requirement.

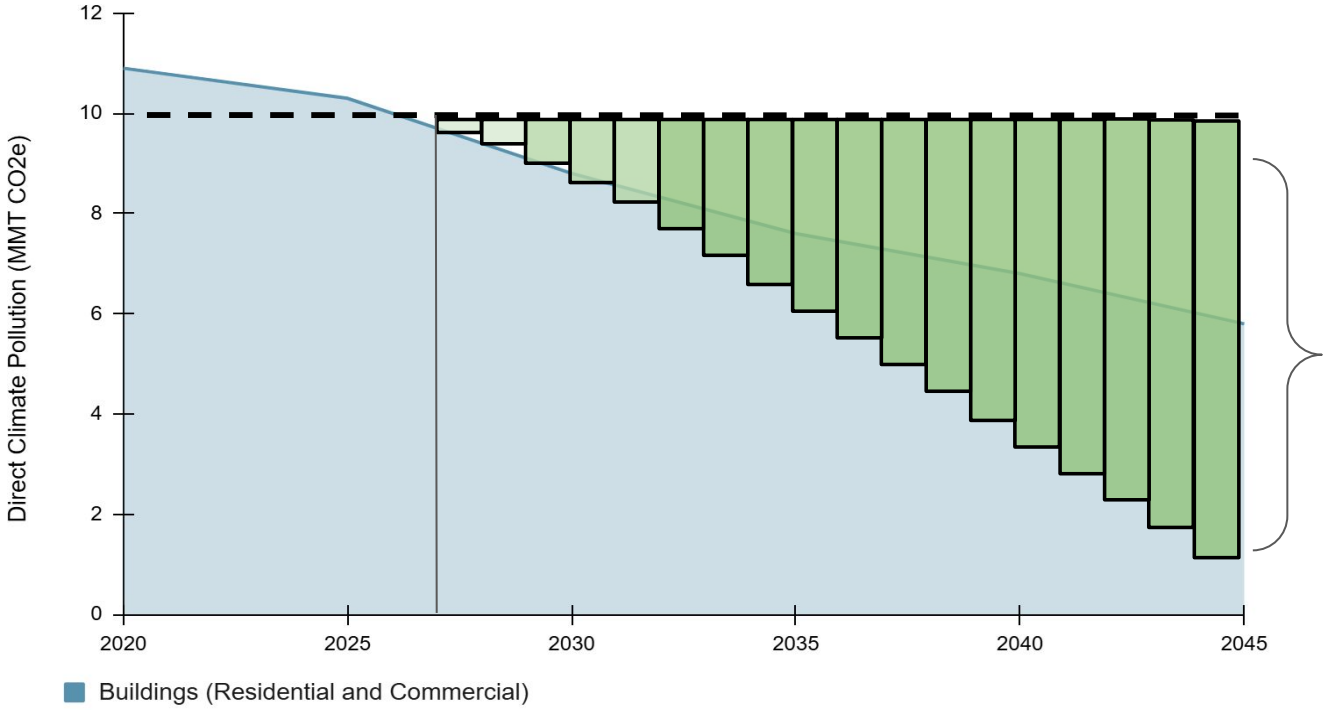
Climate Pollution Reductions Needed in Buildings by 2045



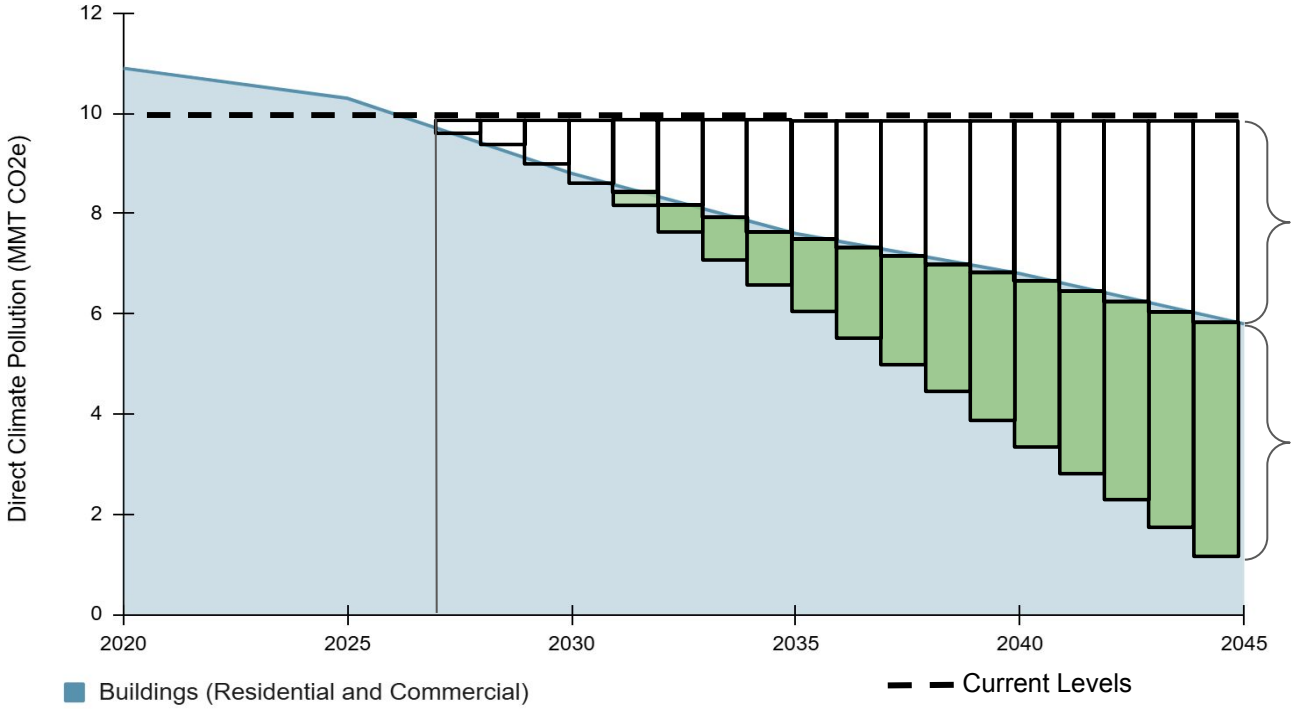
Climate Pollution Reductions Needed in Buildings by 2045



Climate Pollution Reductions Needed in Buildings by 2045



Clean Heat Standard Boosts the Climate Pollution Reductions of Existing Programs



Closing Thoughts

Clean Heat Standard Review



The Maryland Department of Environment tracks climate pollution from the heating fuels used in residential and commercial buildings.



Clean heat providers – including heating fuel providers – install or deliver clean heat measures to generate clean heat credits.



Heating fuel providers retire credits to ensure all Marylanders benefit from healthier, cleaner air.

Join us in our coming clean heat topic discussion sessions:

- **Measures and Credits**, May 28
- **Credit Retirement**, TBA
- **Credit Retirement Support**, TBA

Questions?
Feedback?

