

MASSACHUSETTS CLEAN HEAT STANDARD

VIRTUAL COMMUNITY MEETING:
FALL AND WINTER COMMENTS

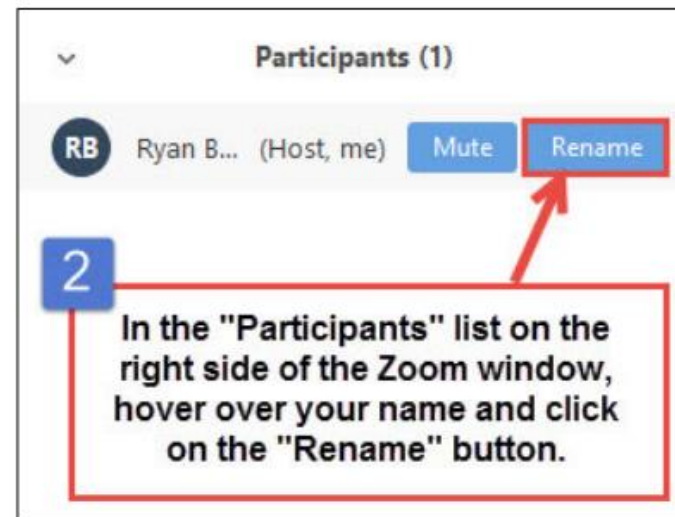
MARCH 7, 2024

MassDEP



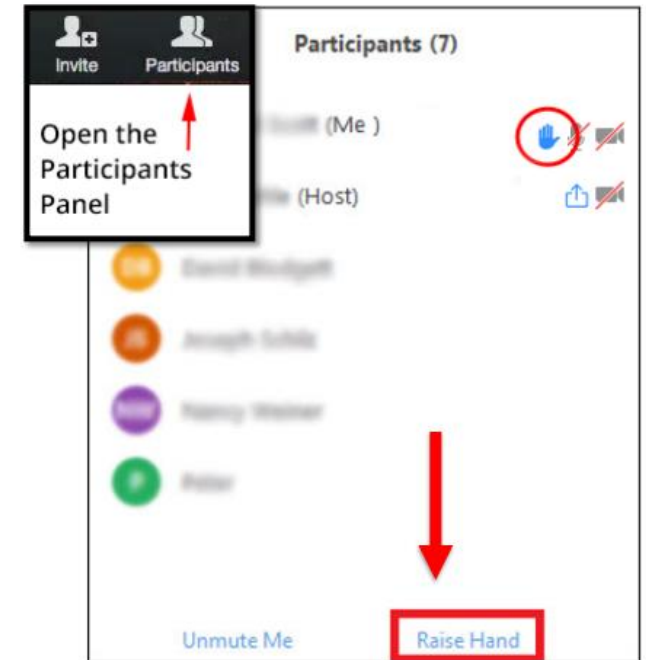
ZOOM MEETING LOGISTICS

- This meeting is being recorded
- To minimize background noise, attendees are on mute
- Please enter your full name, and affiliation if relevant, in the Participants panel



HOW TO PARTICIPATE VIRTUALLY

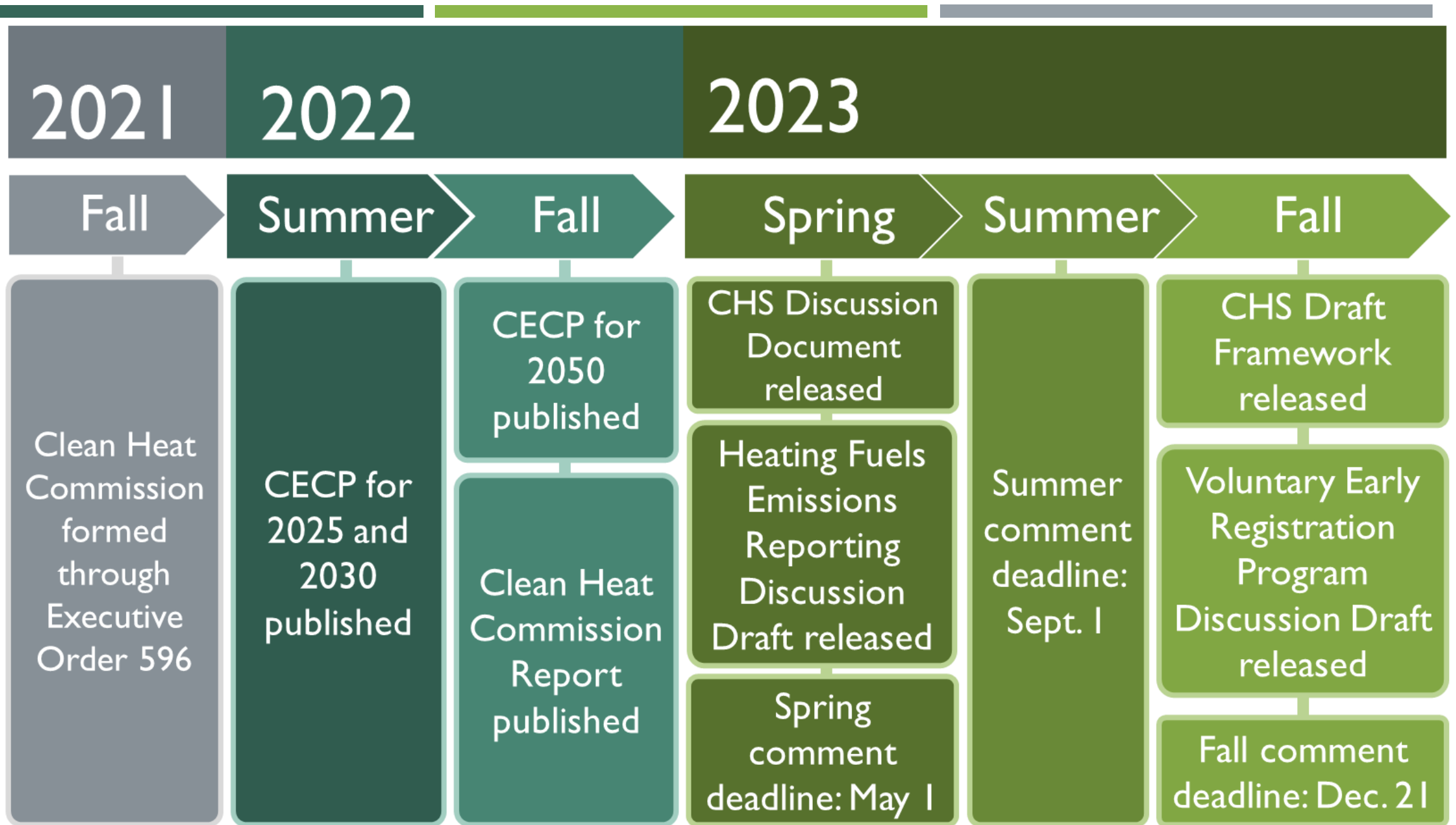
- The latter half of the presentation will be dedicated to answering both clarifying and substantive questions
- To ask a question or provide a comment, raise your hand
- When it is your turn, we will:
 - Notify you by chat
 - Announce your name
 - Unmute you and lower your raised hand



AGENDA

- Meeting logistics and updates (10 min.)
- Review of comments received during fall and winter (10 min.)
- Program design options (10 min.)
- Questions and comments (30 min.)

CHS TIMELINE



WHAT IS A CLEAN HEAT STANDARD?

- A Clean Heat Standard is a regulatory program that would require heating energy suppliers to reduce their GHG emissions over time
- Regulated companies (suppliers) would include suppliers of heating oil, propane, natural gas, and electricity
- Suppliers would demonstrate emissions reductions by holding clean heat credits
- In November 2023, MassDEP released:
 - Draft program framework addressing key policy design topics
 - “Straw” regulatory language for a voluntary early registration program

Clean Heat Standard Draft Framework

Setting the Standards

Regulated Heating
Energy Suppliers

Credit Generation

Compliance Flexibility
and Revenue

STAKEHOLDER INPUT PROCESS

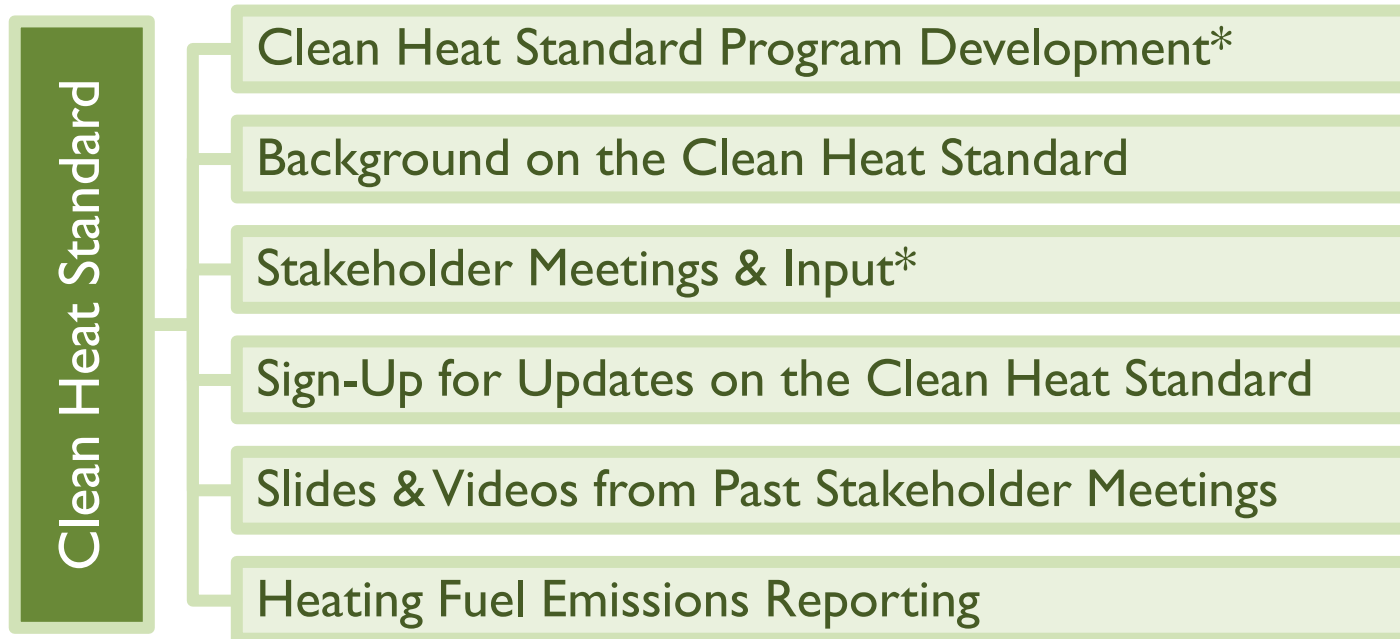
- Regular Virtual Community Meetings
 - Sessions every 4-6 weeks
 - Content for a general audience
 - Built-in time for questions and comments
 - Today:
 - March 7 at 3:00 PM and 6:00 PM
- Technical sessions on program design
 - Previous agendas included background, review of comments received, and the CHS framework



Send us an email with questions, suggestions, or comments any time at climate.strategies@mass.gov

RESOURCES FOR STAKEHOLDERS

MassDEP has updated the [Clean Heat Standard website](#):



*Recently uploaded documents include:

- Updated FAQ
- Discussion document on commercial and industrial crediting
- Comments received Fall 2023 and Winter 2024 and a summary of themes from those comments

Massachusetts Clean Heat Standard
Learn about and participate in the MassDEP initiative to develop a regulatory standard for reducing greenhouse gas emissions from fossil heating fuels.

In November 2023, MassDEP released a draft Clean Heat Standard program framework addressing key policy design topics.

DRAFT FRAMEWORK OVERVIEW

Setting the Standards	<ul style="list-style-type: none">Includes separate standards for "full electrification" projects (including a low-income "carve-out"), and annual emission reductions for clean heat.The full electrification standard phases in gradually over time, starting at a level consistent with the current pace of heat pump deployment in Massachusetts.
Regulated Heating Energy Suppliers	<ul style="list-style-type: none">Includes annual requirements for electricity, natural gas, heating oil, and propane suppliers.The electricity supplier obligation starts small but increases over time as more customers electrify.
Credit Generation	<ul style="list-style-type: none">Limits crediting to electrification and liquid biofuels at program startup, with a scheduled 2028 program review to evaluate revising eligibility based on specific criteria.Full electrifications are limited to residences that install electric heat pumps capable of meeting 100% of space heating needs.
Compliance, Flexibility and Revenue	<ul style="list-style-type: none">Includes credit banking, an alternative compliance payment (ACP) option with revenue dedicated to supporting future clean heat projects, and a "just transition fee" on the initial sale of certain credits to support equitable outcomes.

Framework Resources

- Clean Heat Standard (CHS) Draft Framework +
- Presentation: Framework Technical Session Slides +
- MassDEP YouTube: Video of 12/7/2023 Technical Session +

Program Information

- Clean Heat Standard Program Development +
- Background on the Clean Heat Standard +
- Stakeholder Meetings and Input +
- Sign-up for Updates on the Clean Heat Standard +
- Slides & Videos from Past Stakeholder Meetings +
- Heating Fuel Emissions Reporting +

Clean Heat Standard Questions or Comments +

CHSTIMELINE

2024

Winter

Spring

Fall

Draft Heating Fuels Emissions Reporting Regulation proposed: Jan. 5

Voluntary Early Registration Program comment deadline: Feb. 16

Draft Reporting Regulation comment deadline: Feb. 23

Release Discussion Document on Commercial and Industrial Crediting

Final written comment deadline for informal stakeholder process

Finalize fuel supplier emissions reporting regulation

Propose comprehensive CHS regulation



REVIEW OF
FALL & WINTER
COMMENTS ON THE
CLEAN HEAT STANDARD

COMMENT SUMMARY OVERVIEW

- MassDEP released a draft Clean Heat Standard program framework in November 2023 and requested feedback on the framework by December 21, 2023
- The following is a review of the high-level themes from the comments received between September 2 and February 5
- Next comment deadline: April 5 at 5:00 PM

Setting the
Standards

Regulated
Heating Energy
Suppliers

Credit
Generation

Compliance
Flexibility and
Revenue

COMMENT SUMMARY: SETTING THE STANDARD

Setting the Standards

Full electrification standard

Equity carve-out

Emission reduction standard

Draft Framework

Includes separate standards for full electrification projects (including a low-income carve-out), and annual emission reductions for clean heat

COMMENT SUMMARY: SETTING THE STANDARD

General comments

- Basis for setting the standard as well as goals the standard could aim to achieve

Full electrification standard

- Support for the full electrification requirement for the residential sector as well as some opposition
- Suggestions to develop a similar full electrification requirement for non-residential sectors

Equity carve out

- Expand the scope of residences eligible for the equity carve out to include moderate-income households, geographic identifiers, or large multifamily buildings
- Size of the carve out and how to implement protections for renters and low-income customers

Emission reduction standard

- Stringency and timing of the emission reduction requirements

COMMENT SUMMARY: REGULATED HEATING ENERGY SUPPLIERS

Regulated Heating
Energy Suppliers

Electricity Suppliers

Municipal Light Plants

Delivered Fuels

Draft Framework

Includes annual requirements for
electricity, natural gas, heating oil,
and propane suppliers

COMMENT SUMMARY: REGULATED HEATING ENERGY SUPPLIERS

Electricity suppliers

- The pace and method of shifting of the compliance obligation from fuel suppliers to the electric sector over time
- Requests for additional rationale for the inclusion of electricity sellers as an obligated entity
- Raising the price of electricity is counterproductive to building electrification

Municipal Light Plants (MLPs)

- MassDEP's legal authority to regulate MLPs in the CHS
- Support for including MLPs as obligated entities in the CHS

Delivered fuels

- Logistic challenges and technical complexities in regulating different delivered fuels

COMMENT SUMMARY: CREDIT GENERATION

Credit Generation

Full electrification credits

Emission reduction credits

Eligibility

Fuels and technologies

Other

Draft Framework

Limits crediting to electrification and liquid biofuels at program startup, with a scheduled 2028 program review to evaluate revising eligibility based on specific criteria

Limits full electrifications to residences that install electric heat pumps capable of meeting 100% of space heating needs

COMMENT SUMMARY: CREDIT GENERATION

Full electrification credits

- Commenters offered different perspectives on handling fossil fuel backup heating systems
- Requiring other appliances for full electrification crediting: heat pump water heaters, induction stoves, clothes driers

Emission reduction credits

- Concerns and questions about assigning a default 5 MT of emission reduction credits per home
- The CHS should not ignore the carbon intensity of electricity generation

COMMENT SUMMARY: CREDIT GENERATION

Determination of eligibility

- Support for both a technology neutral CHS as well as support for electrification goals
- The contribution of lifecycle GHG emissions and other metrics to determine fuel eligibility
- The timing and frequency of evaluating fuel and technology eligibility

Fuels and technologies

- Additional comments regarding specific fuels and technologies

Weatherization
and energy
efficiency

Hybrid heating
systems

Water heaters
and other
appliances

Propane and
renewable
propane

Renewable
gaseous fuels

Other fuels
and
technologies

Other

- Specific feedback on verification measures
- Questions, concerns, or recommendations regarding CHETS

COMMENT SUMMARY: COMPLIANCE FLEXIBILITY AND REVENUE

Compliance
Flexibility and
Revenue

Alternative Compliance
Payments and revenue

Mass Save and other
programs

Draft Framework

Includes credit banking, an alternative compliance payment (ACP) option with revenue dedicated to supporting future clean heat projects, and a just transition fee on the initial sale of certain credits to support equitable outcomes

COMMENT SUMMARY: COMPLIANCE FLEXIBILITY AND REVENUE

Alternative Compliance Payments and revenue

- The ACP level at specific times during the program and for different types of credits
- Requests for additional quantitative analysis
- How and where ACP would be collected and how the funds should be used
- General support for a Just Transition Fee and requests for details about use of revenue

Mass Save and other programs

- Potential interactions and alignment with the existing Mass Save program, including emissions and equity targets and combining incentives
- Concerns about how the CHS would coordinate with existing and upcoming state and federal programs

COMMENT SUMMARY: OTHER COMMENTS



COMMENT SUMMARY: OTHER COMMENTS

Economic impacts

- Operational affordability and ways to financially support customers
- Electrification costs for both existing and new buildings

Complementary policies

- Complementary or alternative policies, such as a fossil fuel surcharge, carbon pricing, a heat pump electric rate, or an appliance standard for heat pump water heaters

Other

- Concerns about the electric grid's ability to support widespread electrification and related grid issues
- Potential impacts on small businesses and the workforce

PROGRAM DESIGN OPTIONS

- All stakeholder comments are currently under consideration, and we welcome additional comments
- No final decisions have been made regarding the content of proposed CHS regulations
- In response to stakeholder input and ongoing internal analysis, MassDEP is considering some changes to the draft framework for potential inclusion in a proposed CHS regulations (See Q0 on p. 3 of the FAQ)

Setting the
Standards

Regulated
Heating Energy
Suppliers

Credit
Generation

Compliance
Flexibility and
Revenue

PROGRAM DESIGN OPTIONS (SEE FAQ Q0)

Setting the Standard

- Adjust the emission reduction standard and per-home full electrification crediting rate downward to acknowledge that the CHS does not address water heating, etc.
- Hold the annual emission reduction standard constant after 2030 and limit emission reduction credit generation from heat pumps to no more than five years after initial registration

Regulated Heating Energy Suppliers

- Delay the emission reduction credit holding requirement for electricity sellers from 2031 until 2035

Credit Generation

- Do not allow emission reduction CHCs for renewable diesel or biodiesel blends above B20 unless waste-derived
- Assign default ownership of emission reduction CHCs from heat pumps operation to electricity suppliers instead of homeowners

Compliance Flexibility and Revenue

- Refine the applicability of the just transition fee

Other: Mass Save Interaction

- Refine full electrification crediting to better align the CHS with Mass Save

PROGRAM DESIGN OPTIONS (SEE FAQ Q0): CREDIT GENERATION: HEAT PUMPS

Draft framework

5 MT credited per fully electrified residence each year

2.5 MT for other home heat pump systems

Potential changes to the draft framework

4 MT credited per fully electrified residence each year to acknowledge that the CHS does not address all sources of emissions from buildings and residences (e.g. water heaters)

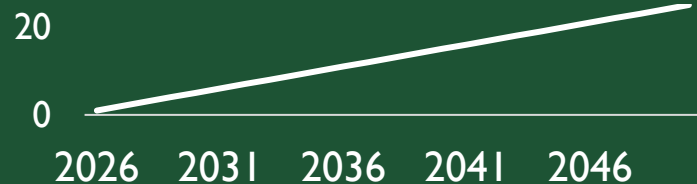
2 MT for other home heat pump systems

PROGRAM DESIGN OPTIONS (SEE FAQ Q0): SETTING THE STANDARD

Draft framework

The emission reduction standard would require that GHG emissions reductions increase by 1 MMT each year 2026-2050

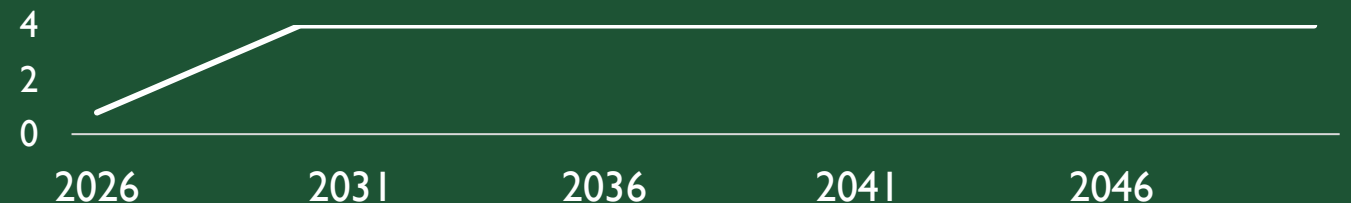
No end date for credit generation by clean heat systems



Potential changes to the draft framework

Adjust the annual rate of increase to 0.8 MMT to acknowledge that the CHS does not address all building emissions

Limit credit generation to no more than 5 years after initial registration for any clean heat system and hold the annual emission reduction standard constant after 2030



PROGRAM DESIGN OPTIONS (SEE FAQ Q0): REGULATED HEATING ENERGY SUPPLIERS

Draft framework

For electricity sellers, the emission reduction CHC holding requirement would begin in 2031

Potential changes to the draft framework

For electricity sellers, the emission reduction CHC holding requirement would be delayed until 2035 in response to stakeholder comments addressing the potential regulatory burden on electricity sellers

PROGRAM DESIGN OPTIONS (SEE FAQ Q0): CREDIT GENERATION: ELIGIBLE LIQUID BIOFUELS

Draft framework

Eligible waste-based liquid biofuels would be credited based on the assumed avoidance of heating oil emissions

Potential changes to the draft framework

Renewable diesel or biodiesel blends above B20 would not be eligible for crediting unless derived from waste feedstocks to help direct capital investments related to biofuels and address stakeholder concerns regarding lifecycle emissions from biofuels

PROGRAM DESIGN OPTIONS (SEE FAQ Q0): CREDIT GENERATION: ANNUAL CREDITING

Draft framework

Property owners would own CHCs generated by residential operation of heat pumps by default

Potential changes to the draft framework

Electricity suppliers could own annual emission reduction CHCs generated by residential operation of heat pumps

PROGRAM DESIGN OPTIONS (SEE FAQ Q0): COMPLIANCE FLEXIBILITY & REVENUE: JUST TRANSITION FEE

Draft framework

A just transition fee would be paid on the first transfer of each full electrification CHC generated by projects not eligible for the equity carve out

Potential changes to the draft framework

Refine applicability of the just transition fee to potentially exclude projects that meet certain geographic, income, home size, or other equity criteria

PROGRAM DESIGN OPTIONS (SEE FAQ Q0): OTHER: MASS SAVE INTERACTION

Draft framework

Credits completed under Mass Save would be assigned to retail electricity or natural gas sellers in proportion to their compliance obligations

Potential changes to the draft framework

MassDEP is committed to ensuring that CHS implementation is fully compatible with Mass Save

May refine the full electrification crediting process for residences with access to Mass Save incentives

Calibrate program stringency, ACP levels, and detailed requirements for full electrification with reference to the three-year plan process

RECAP

- MassDEP released the draft CHS program framework in November 2023 and requested feedback by December 21, 2023
- Commenters provided a wide range of feedback on different elements of the draft CHS framework
- Based on stakeholder feedback and ongoing internal analysis, MassDEP is considering making some changes to the draft CHS framework for potential inclusion in a proposed Clean Heat Standard regulation
- No final decisions have been made regarding the content of proposed CHS regulations, and MassDEP welcomes additional comment



ANY QUESTIONS OR COMMENTS ON THE
CLEAN HEAT STANDARD?



GENERAL QUESTIONS AND COMMENTS



MassDEP [CHS web page](#)



Submit comments and questions
to climate.strategies@mass.gov



[Sign up](#) for the CHS email list

Comment deadline:
April 5 at 5:00 PM

GLOSSARY OF TERMS

- **Air Source Heat Pump (ASHP):** An electric heating system that uses compression and evaporation to transfer thermal energy from the ambient outdoor environment to a thermal load.
- **Authorized agent:** An individual that serves under an agreement entered into by each owner of a clean heat system for all dealings with the Department related to the Voluntary Clean Heat Standard Early Registration Program.
- **Clean heat system:** Equipment serving a residence's annual space heating load that meets the eligibility criteria in the Voluntary CHS Early Registration Program.
- **CHC:** Clean Heat Credits or "checks" would be used to count the implementation of clean heat in a uniform manner.
- **CHETS:** An online platform designed to be used to track clean heat credit generation and ownership under a Clean Heat Standard.
- **CHS:** The Clean Heat Standard is a potential future program from MassDEP to reduce GHG emissions from the building sector and increase the implementation of clean heat throughout the state. This strategy was described in the [MA CECP for 2025/2030](#) and the [MA CECP for 2050](#).
- **CHS Draft Framework:** a document outlining key elements of the CHS to support further stakeholder discussion and program refinement.
- **Complementary Programs:** The Department of Energy Resources' Alternative Portfolio Standard, the Mass Save Energy Efficiency Programs, and the Department of Energy Resources Building Benchmarking Program.
- **Electric Distribution Company (EDC):** A company that distributes electricity or owns, operates or controls distribution facilities as defined in [M.G.L. c. 164, § 1](#).
- **End-use customer:** A person or entity in Massachusetts that purchases electrical energy from an electric distribution company.
- **Equity full electrification CHCs:** Full Electrification CHCs that are generated by a clean heat system serving an end-use customer that is eligible for a low-income discounted rate of an electric distribution company.
- **Full electrification:** full displacement of fossil heating with electric heat pumps.
- **Full electrification CHCs:** Electronic records produced and tracked by the Clean Heat and Emissions Tracking System that identify the installation of a qualified clean heat system that meets the full electrification eligibility requirements set forth in the Voluntary Clean Heat Standard Early Registration Program at a location in MA.
- **Ground Source Heat Pump (GSHP):** An electric heating system that uses compression and evaporation to transfer thermal energy from the ambient underground or water environment to a thermal load.
- **Hybrid systems:** heating systems where an electric heat pump is supplemented by a secondary fossil system.
- **Obligated entities:** the parties that must comply with a regulatory program. In the CHS, obligated entities would be electricity, natural gas, propane, and fuel oil suppliers. *The Voluntary Early Registration Program does not include a compliance obligation.*
- **Owner:** Any individual or entity that, alone or in conjunction with others, has legal ownership over the real property upon which a clean heat system is located, including, without limitation, a duly authorized agent of the owner.
- **Residence:** a permanent dwelling unit, including, but not limited to, single-family homes, apartments, condos, duplexes, and triple-deckers.