

MASSACHUSETTS CLEAN HEAT STANDARD

VIRTUAL COMMUNITY MEETING

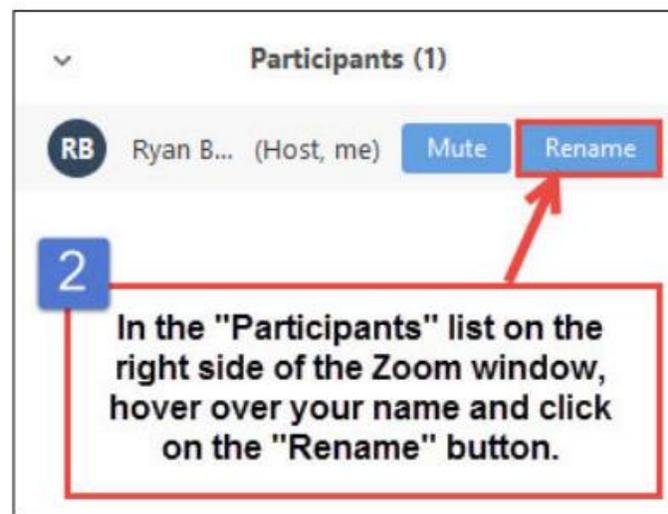
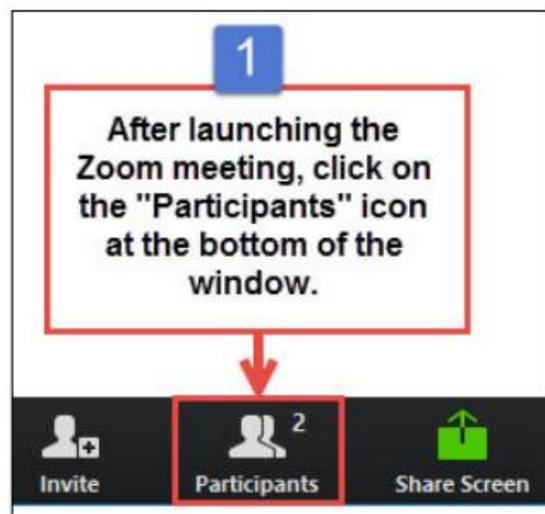
DECEMBER 2023

MassDEP



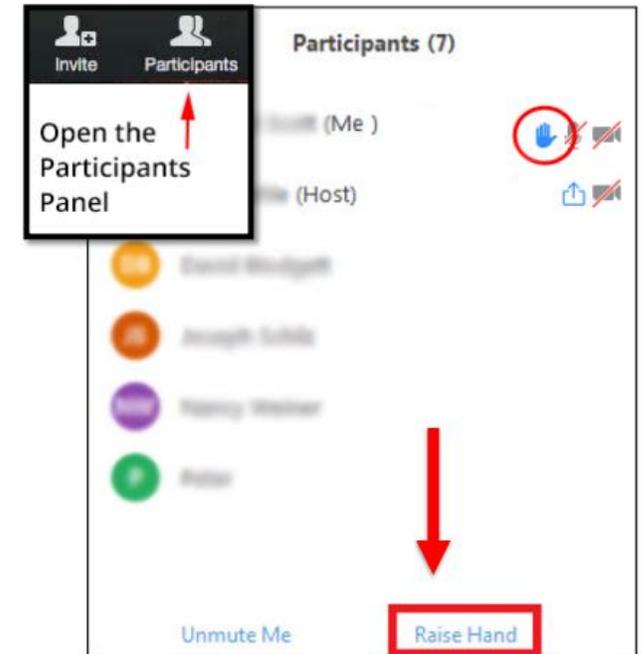
ZOOM MEETING LOGISTICS

- 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

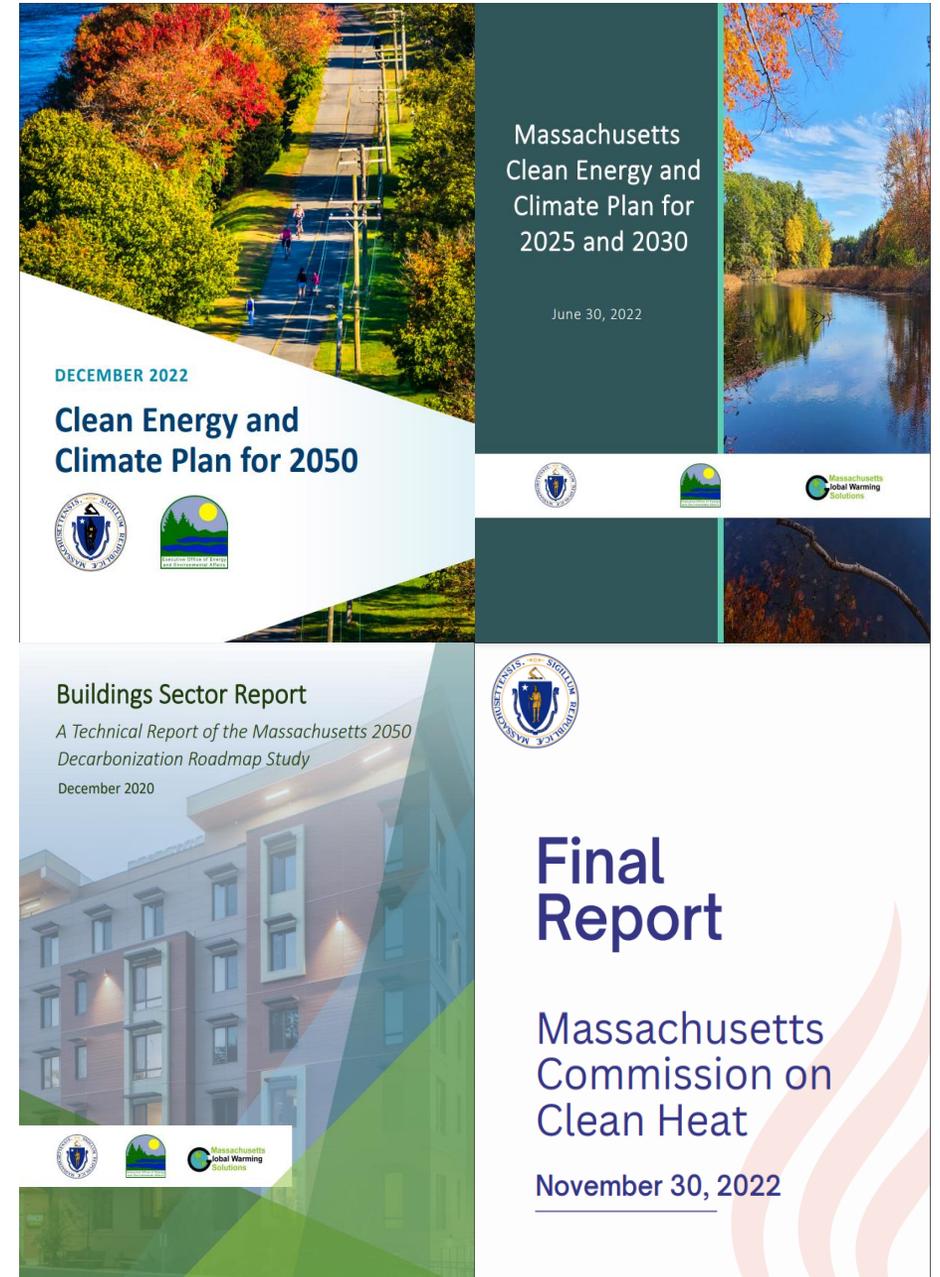
- The latter half of the presentation will be dedicated to answering both clarifying and substantive questions
- To ask a question or provide a comment, raise your hand
- When it is your turn, we will:
 - Notify you by chat
 - Announce your name
 - Unmute you and lower your raised hand



AGENDA

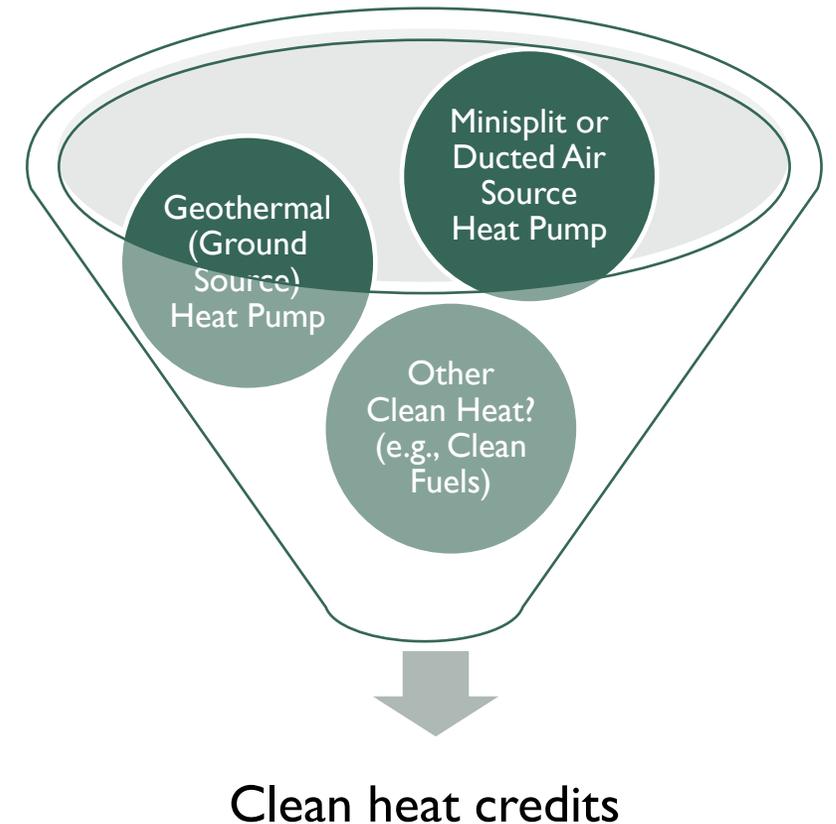
- Meeting logistics and updates (15 min.)
- Overview of Clean Heat Standard Draft Framework for Stakeholder Review (15 min.)
- Questions and comments (30 min.)

MassDEP is tasked with developing a Clean Heat Standard: “a **practical and cost-effective policy tool** to meet emissions reduction goals for the thermal sector, and it could be **implemented in a progressive, equitable manner.**”¹



WHAT IS A CLEAN HEAT STANDARD?

- A Clean Heat Standard is a regulatory program that requires heating energy suppliers to reduce their GHG emissions over time by acquiring clean heat credits
- Regulated companies (suppliers) would include suppliers of heating oil, propane, natural gas, and electricity
- Suppliers would demonstrate emissions reductions through clean heat credits
- Suppliers could implement clean heat themselves or purchase credits from third parties, such as heat pump installers
- Clean heat credits would be generated by implementing clean heat, such as electric heat pumps



MassDEP is seeking stakeholder input on the draft program framework by December 21, 2023

STAKEHOLDER INPUT PROCESS

■ Regular Virtual Community Meetings

- Two sessions, every 4-6 weeks
- Content for a general audience
- Built-in time for questions and comments
- This meeting:
 - December 11 and 14 at 6 PM



■ Technical sessions on program design

- July agendas included background, review of comments received, Q&A, and comment period
- Last meeting: December 7
 - Reviewed draft CHS framework



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

RESOURCES FOR STAKEHOLDERS

The Clean Heat Standard webpage includes

- Links to descriptions of the CHS concept (including 2-page summary)
- Translations of the 2-page summary into 5 languages
- White papers on 1) costs and emissions associated with different heating technologies; 2) existing crediting schemes for consumer-level actions, such as rooftop solar; and 3) which entities are obligated to comply
- Comments received during Spring 2023 and a brief summary of themes from those comments
- Comments received during Summer 2023 and a brief summary of themes from those comments*
- Slides and videos from June, July, and August meetings*
- Voluntary CHS Early Registration Program Discussion Draft Regulation*
- CHS Stakeholder Process Frequently Asked Questions*
- Draft Framework for Stakeholder Review*

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.

TABLE OF CONTENTS

- ▼ What is a Clean Heat Standard?
- ▼ Stakeholder Input
- ▼ Background ←
- ▼ Contact
- ▼ RELATED

Background

See **Additional Resources** below for:

- An April 2023 discussion document that includes a general description of the CHS concept, additional background information, and specific questions for stakeholders to consider.
- "Straw" regulatory language for heating fuel supplier reporting requirements in support of the CHS.
- Comments received as of May 10, 2023.
- A summary of themes from the comments received as of May 10, 2023.
- A short explanatory video on the CHS concept by the authors of the CHS Appendix to the 2025/2030 CECP
- A technical memorandum on costs and emissions associated with different heating technologies.
- A technical memorandum on existing crediting schemes for consumer-level actions.
- A technical memorandum on which entities are obligated to comply with a CHS.

(* = new material since previous meeting)

NEXT STEPS

- Currently accepting comments on:
 - CHS Draft Framework for Stakeholder Review
 - Deadline: **December 21, 2023**
 - Voluntary Early Registration Program Discussion Draft Regulation
 - Stakeholder meetings and comment deadline to be announced in early 2024
- Propose fuel supplier emissions reporting regulation
- Update the CHS FAQ document as needed
- Continue holding regular Virtual Community Meetings and Technical Sessions



**HIGHLIGHTS FROM
COMMENTS RECEIVED
SUMMER 2023**

HIGHLIGHTS FROM SUMMER COMMENTS

Commenters discussed many topics, including:

- The need to include equity protections within the CHS
- Methods for calculating credits, such as using the GREET model or projected avoided emissions
- Ways to improve stakeholder engagement on technical topics
- Which fuels should be credited, such as only non-combustion technologies or all technologies and fuels that reduce emissions
- Coordination with DPU and DOER to pursue complementary and equitable emission reduction strategies
- Concerns about the economic impacts of the CHS
- Concerns about the pace of renewable electricity development to power electrification

A full summary of all comments received is available on the [CHS webpage](#)



**REVIEW OF
CLEAN HEAT STANDARD
DRAFT FRAMEWORK**

DRAFT FRAMEWORK OVERVIEW

- The draft CHS framework is a document outlining key elements of the CHS to support further stakeholder discussion and refinement of the projected program
- The CHS framework is **not** a regulation or a proposed regulation
- The draft CHS framework contains four sections:

Setting the
Standards

Regulated
Heating Energy
Suppliers

Credit
Generation

Compliance
Flexibility and
Revenue

- For a more detailed explanation of the CHS Framework, please refer to the [12/7 Virtual Technical Session recording and slides](#)

DRAFT FRAMEWORK OVERVIEW

Setting the Standards

- 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

- 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

- 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

- 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.

DRAFT FRAMEWORK OVERVIEW

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- The CHS would require annual emission reductions from the thermal sector while ensuring ongoing progress toward full electrification of buildings

Clean Heat Standard

Emission Reduction Standard

The emission reduction standard would require an increasing amount of GHG emission reductions each year from 2026 through 2050

Full Electrification Standard

The full electrification standard would require the electrification of a set number of residences each year, and **25% of full electrifications must serve low-income customers**

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Heating Energy Suppliers

- Regulated entities would include retail sellers of **electricity, natural gas, heating oil, and propane**
- Each regulated entity would have both an emission reduction and **full electrification** obligation each year

Regulated Heating Energy Suppliers

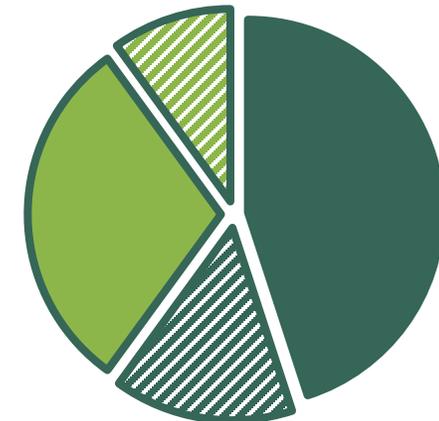
Electricity

Natural gas

Heating oil

Propane

Full Electrification Compliance Obligation for All Heating Energy Suppliers in 2030



- Full electrification - fuel suppliers
- ▣ Equity carve out - fuel suppliers
- Full electrification - electricity suppliers
- ▣ Equity carve out - electricity suppliers

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Clean Heat Credits (CHCs)

Emission Reduction CHCs

Generated each year from using clean heat from an eligible technology or fuel:

- **Full electrification projects**
- **Hybrid systems** retaining fossil backup systems
- **Documented delivery of eligible liquid biofuels** by heating oil suppliers

Full Electrification CHCs

Generated one time upon installation of residential full electrification projects that:

- Install **electric heat pumps** capable of meeting **100% of space heating needs**; and
- **Remove all combustion space heating equipment** or commit to limiting use of fossil equipment to backup or emergency use

Regulated energy suppliers would obtain CHCs by

- 1 Implementing clean heat themselves
- 2 Purchasing credits from third parties, such as heat pump installers

DRAFT FRAMEWORK OVERVIEW

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Voluntary Early Action Registration Program

- Would encourage early action by registering **residential full electrification projects** that are completed before the final CHS regulations are in place
- Administrative support would offer resources targeted toward registering equity carve out projects

Evaluating Other Actions for Crediting

- MassDEP must consider crediting other fuels in the **2028 program review** and **future program reviews every 5 years** thereafter
- Fuels would be evaluated based on the following considerations:



Lifecycle analysis of
GHG emissions



Detailed analysis of
fuel availability



Any local air
pollution impacts

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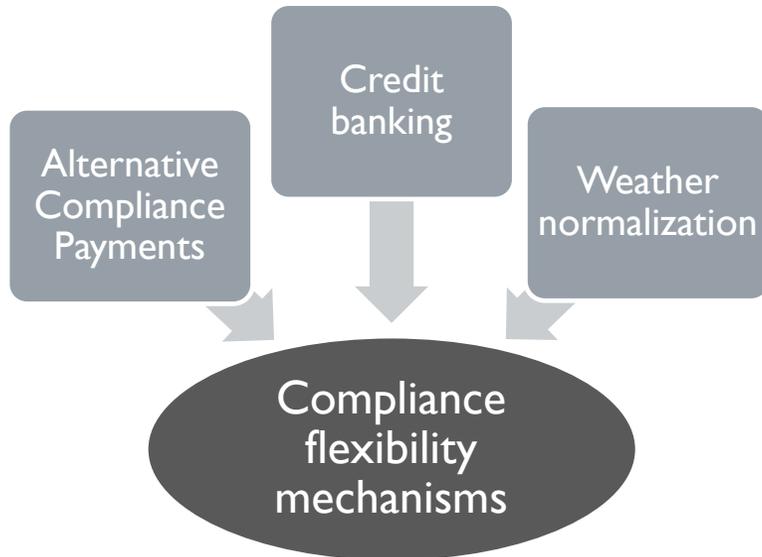
Setting the Standards

Regulated Heating Energy Suppliers

Credit Generation

Compliance Flexibility and Revenue

The CHS would include several **compliance flexibility mechanisms**



Several CHS provisions could result in **revenue**, creating an opportunity to **promote equitable outcomes**

Alternative Compliance Payments

ACP revenue would primarily support future clean heat and credits
All ACP funds from the equity carve out would support future low-income full electrifications

Just transition fee

Full electrifications not eligible for the equity carve out would pay a fee on the first transfer of each credit
Funds would assist low-income consumers during the clean heat transition

Other support

MassDEP may offer additional support to low-income households
This support could be funded by ACP or just transition fee revenue, other MassDEP revenue, or other state programs

DRAFT FRAMEWORK OVERVIEW

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ANY QUESTIONS OR COMMENTS ON THE
CLEAN HEAT STANDARD
DRAFT FRAMEWORK?

For a more detailed explanation of
the CHS Framework, please refer to the
[12/7 Virtual Technical Session recording and slides](#)

GENERAL QUESTIONS AND COMMENTS



MassDEP [CHS web page](#)



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



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

GLOSSARY OF TERMS

- **Alternative Compliance Payments (ACPs):** in the CHS, the ACP would be a payment of a certain dollar amount per required number of full electrifications or MT of emission reductions as appropriate, which a retail heating energy supplier may submit to MassDEP in lieu of providing CHCs required under the CHS.
- **Carve out:** a requirement that a certain percent of a compliance obligation falls into a specified category. In the CHS, 25% of homes electrified by energy suppliers must serve low-income households.
- **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 track CHC generation and ownership under a CHS.
- **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.
- **CHS Draft Framework:** a document outlining key elements of the CHS to support further stakeholder discussion and program refinement.
- **Compliance flexibility mechanisms:** features of a regulatory program that allow obligated entities to comply in different ways, allowing for variability in circumstance and resources.
- **Credit banking:** storing credits earned or purchased in one year to use for compliance in a different, future year
- **Full electrification:** full displacement of fossil heating with electric heat pumps.
- **Hybrid systems:** heating systems where an electric heat pump is supplemented by a secondary fossil system.
- **Just Transition Fee:** a fee on credit transfers that supports an equitable outcome for the program.
- **Lifecycle analysis:** an analysis that considers GHG emissions occurring throughout the lifetime of a substance or object. In the CHS, a lifecycle analysis would consider emissions associated with fuel production and use.
- **Liquid biofuel:** a liquid fuel produced from biomass that has analogous chemical properties to a liquid fossil fuel.
- **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.
- **Residence:** a permanent dwelling unit, including, but not limited to, single-family homes, apartments, condos, duplexes, and triple-deckers.
- **Weather normalization:** incorporating the effect of weather fluctuations into CHC values, such as by using a credit multiplier.