

Clean Heat Standard
2023 Initial Written Stakeholder Comments
May-August 2023

MassDEP sought initial stakeholder input to inform the development of a Clean Heat Standard (CHS) regulation during an initial comment period in April 2023. After the initial comment period, MassDEP released all [written comments](#) received through May 10, 2023, as well as a [summary](#) of the themes from those comments. In June, July, and August 2023, MassDEP held three technical sessions and three sets of morning and evening Virtual Community Meetings and posted additional resources to the [CHS webpage](#).¹ MassDEP requested feedback from stakeholders on the new materials by September 1, 2023 in order to inform development of a draft program framework.

Below, MassDEP has summarized high level themes from the comments received between May 10, 2023, and September 1, 2023. Copies of all comments received during this time have been posted on the CHS webpage and were considered along with earlier comments in developing the draft program framework. Additional comments may be submitted at any time to climate.strategies@mass.gov.

Equity Measures

One of the virtual community meetings focused on equity, and many commenters addressed this topic. Many of these commenters emphasized the need to include equity protections within the CHS program design (Acadia Center et al.). Commenters identified the following groups as priorities for equity protections: customers with the highest energy bill burden (Acadia Center et al.), low- and moderate-income (LMI) communities (Rep. Driscoll, Walker), environmental justice communities (Rep. Driscoll), renters (Walker), and public housing (BHA). Commenters also offered the following considerations related to equity within the CHS:

- Public housing should be a target for streamlined ‘early action’ crediting or financing for heat pumps, deep energy retrofits, and network geothermal (BHA)
- Energy bill relief should be considered (Walker)
- Wood pellet stoves can support rural and LMI households because pellet prices are more stable than fuel oil and pellet stoves are cheaper to operate than a heat pump (Alliance for Green Heat, Cox)
- Combined heat and power (CHP) can support equity because it provides energy cost savings and has been used successfully in public housing (NE Chapter)

Technical Session Topics

Compliance flexibility, banking, and ACP level: One commenter requested clarification on which entities would be allowed to bank clean heat credits (Vicinity). One commenter reiterated that obligated parties should have the option of paying an ACP (Vergent), while another suggested that ACPs will likely occur, particularly in the early years of the program (MCSE). Regarding the ACP level, commenters requested MassDEP identify which social cost of carbon estimate would be used to set the ACP (MEMA), consider

¹ See MassDEP’s website for recordings and slides from past CHS stakeholder meetings: <https://www.mass.gov/lists/past-clean-heat-standard-meeting-materials>

financial impacts on gas customers who remain on a gas system serving reduced customer load (Eversource), and set the ACP in units of dollars per ton of emissions reductions (Vergent). Commenters also referenced a recommendation by the Massachusetts Commission on Clean Heat to consider impacts of ACP payments on businesses and ratepayers (5 Commissioners).

Calculation of credits by technology type and hybrid heat systems: Many commenters generally supported calculating credit values based on lifecycle emissions using an existing methodology such as the GREET model (MEMA, MFA, NE Chapter, National Grid, PGANE, Vergent). Many commenters similarly suggested that credits should be calculated based on projected avoided emissions (Acadia Center et al., National Grid) whereas one commenter suggested credits should be based on measured operation of heat pumps (Eversource). One commenter specifically opposed using a ‘yardstick’ approach for credit calculations (MEMA), one specifically supported such an approach (Vicinity), and one commenter suggested credit calculations be based on benchmark carbon intensity scores for electricity, conventional gas, and delivered fuels (National Grid).

Commenters remained divided on inclusion of emissions from electricity into the calculation of credit values with some opposing their inclusion (PFPI) and others supporting their inclusion (Dell’Olio, MEMA, MFA, National Grid, NEHBPA, PGANE). Some of those supporting the inclusion of emissions from electricity referenced the Massachusetts Commissions on Clean Heat’s conclusions and provided specific recommendations for how to estimate those emissions (MEMA, National Grid).

Commenters also addressed the following topics related to credit calculations:

- Time value of carbon concept (Eversource, NE Chapter)
- Geographic scope of lifecycle emissions analysis and leakage (National Grid)
- Use of indirect ‘book-and-claim’ accounting mechanisms for the environmental attributes of alternative fuels and electricity generation (National Grid)
- Estimates of emissions reductions from liquid biofuels, including consideration of feedstocks (Green Energy Consumers)
- Estimates of emissions reductions from advanced wood heating (Alliance for Green Heat, Dell’Olio, Flat Rock Farm, Maine Pellet Fuels, MFA, Pellet Fuels Institute)

For hybrid systems, commenters noted the need for clear terminology that acknowledges the greenhouse gas emissions associated with using hybrid heating systems (Acadia Center et al.). Several commenters identified hybrid heating systems, either gas/electric (Eversource) or advanced wood heating/electric (Alliance for Green Heat, MFA, Northern Forest Center), as a way to reduce strain on electric infrastructure.

Measure verification and Mass Save coordination: Several commenters identified the need for robust documentation and verification procedures for alternative fuels, including liquid biofuels, if they are included in the CHS (Green Energy Consumers, National Grid). Regarding Mass Save, one commenter requested that the CHS work in coordination with Mass Save, including promoting clear messaging to the public and contractors to avoid confusion (Eversource), whereas another commenter suggested that allowing projects to participate in both programs would result in double incentives for some customers at the expense of others (MCSE).

Other Topics

Stakeholder process: Several commenters provided feedback and requests regarding the stakeholder process, particularly around technical aspects of program design. Commenters requested that stakeholders be given ample time to comment on detailed policy proposals (Eversource) and that MassDEP solicit input from all impacted parties (MCSE), especially LMI and EJ communities (Rep. Driscoll) and low-income and housing justice advocates (Walker). One group of commenters requested an additional technical session on the scientific rationale for including biodiesel, including a discussion of supply, feedstocks, and costs (Acadia Center et al.). The same group of commenters suggested MassDEP improve stakeholder engagement on technical topics by 1) hiring a consultant to assist with the stakeholder process; 2) presenting detailed information for stakeholders to respond to; and 3) forming a technical working group with 8-12 members representing a wide range of stakeholder interests (Acadia Center et al.).

Setting the standard: One commenter reiterated that the CHS should be expressed in greenhouse gas emissions reductions (NE Chapter), and another noted that the standard should be set in line with Massachusetts' emissions reductions requirements and increase in stringency each year (Vergent). One commenter requested MassDEP explain how the compliance obligation would accommodate customer switching between obligated entities (National Grid). The same commenter also asked MassDEP to consider weather variability when setting compliance obligations (National Grid).

Eligibility of fuels/technologies: As in the first round of written comments, there were two main points of view regarding which technologies and fuels should be included: that the CHS should only include non-combustion technologies (Acadia Center et al., PFPI, Rep. Driscoll) or that the CHS should include all technologies and fuels that reduce emissions (Cox, 5 Commissioners, Dennis, Dell'Olio, Eversource, 1000+ homeowners, MCSE, MEMA, MFA, National Grid, NE Chapter, PGANE, Sen. O'Connor, Sumner, Tarm Biomass, Vicinity). Supporters of broad eligibility cited the CHS Appendix to the Massachusetts Clean Energy and Climate Plan for 2025 and 2030, which discusses focusing on reducing emissions, not "certain technologies" (MEMA). Commenters expressed the following opinions on specific technologies and fuels:

- Weatherization and energy efficiency
 - Support inclusion (Acadia Center et al., Alliance for Green Heat, Green Energy Consumers, National Grid, PFPI, Walker)
- Renewable natural gas (RNG) and hydrogen
 - Support inclusion (5 Commissioners, Eversource, LIUNA, Local 4, Local 51, Local 104, Local 550, National Grid, NE Chapter, NEGWA, PCA, United Association)
 - Support inclusion for hard to decarbonize sectors (Vergent)
 - Oppose inclusion (Acadia Center et al., Green Energy Consumers, Walker)
- Liquid biofuels
 - Support inclusion of all liquid biofuels, regardless of feedstock (5 Commissioners, Dennis, 1000+ homeowners, MEMA, NEHPBA, Patrick, Sen. O'Connor)
 - Support inclusion of certain biofuels (NE Chapter)
 - Support further analysis and a focus on waste-derived fuels (Green Energy Consumers)
 - Ensure that analysis relies on sound science not false claims. (Acadian Center et al.)
- Wood
 - Support inclusion of advanced wood heating (Alliance for Green Heat, BTEC, Cary, Cox, Dell'Olio, Flat Rock Farm, MESYS, Maine Pellet Fuels, MFA, Northern Forest Center, Pellet Fuels Institute, Tarm Biomass)

- Oppose inclusion of all wood biomass (PFPI)
- Combined heat and power (CHP)
 - Support inclusion (NE Chapter, Vergent, Vicinity)
- Propane
 - Support inclusion (Johnson, NEHPBA, PGANE)
- Geothermal
 - Support inclusion (PFPI, United Association)

Additionally, one commenter suggested energy efficiency criteria should be required for electrification technologies credited under the CHS (PFPI).

Other programs: One commenter stated that the CHS should not modify the extent or reach of existing programs and further that a CHS should only be implemented if it fills a policy gap that is not covered by other programs, including those at DOER and those put forth by the legislature (MCSE). Some commenters emphasized the need for the various programs addressing building decarbonization to work well together (5 Commissioners). Many commenters suggested MassDEP coordinate with DPU and DOER on understanding potential impacts on the electric grid (Dell’Olio) and on complementary strategies for equity protections including rate design, the APS, and a managed transition away from the gas distribution system (Acadia Center et al.). Some commenters suggested credits from the APS should be counted directly towards the CHS (MESYS, MFA) or that credits should smoothly transition from the APS to the CHS if the APS is phased out (Vicinity). One commenter suggested specific changes to the APS eligibility criteria for large, water-source heat pumps and DOER’s Clean Peak Standard (Vicinity).

Economic impacts: Commenters raised concerns about the economic impacts of the CHS (Barrett, 5 Commissioners, Cooke, Dennis, Johnson, LIUNA, Local 4, Local 51, Local 104, Local 550, NEGWA, NEHPBA, NFIB, Paine, PCA, United Association) and one suggested MassDEP consider an overall program cost cap to protect consumers (National Grid). One commenter stated that the CHS will put small delivered fuel companies out of business (NEHPBA). A few commenters provided specific data points related to costs for MassDEP to consider (Johnson, National Grid, NFIB). Commenters requested additional information and analysis from MassDEP related to:

- Costs to consumers, particularly low-income consumers (Eversource, MCSE, NFIB, Sumner)
- Impact on heating oil, propane, and natural gas prices (MEMA, Sumner)
- Impact on the local job market (LIUNA, Local 4, Local 51, Local 104, Local 550, NEGWA, NFIB, PCA, United Association)
- Supply constraints and cost premiums for higher volumes of biofuels (Green Energy Consumers)

Commenters also noted that 1) including alternative fuels and energy efficiency measures could increase the supply of credits, lowering compliance costs (National Grid); the CHS must leverage available grants, loans, and tax incentives, which could require adjustments to the existing Mass Save program (5 Commissioners); and 3) wood pellet prices are relatively stable (Cox, Tarm Biomass).

Grid impacts: Several commenters expressed concern that electrification supported by the CHS would increase the burden on the electric grid (Eversource, NEHPBA, Sen. O’Connor, Sumner), negatively impact energy security during power outages and in rural areas with limited electric infrastructure (Cox, Johnson, MFA, NEHPBA), and increase the carbon intensity of the grid by increasing winter peak demand (Dell’Olio, MEMA). One commenter noted the need for better planning to manage the decrease in

demand for gas and concurrent increase in demand for electricity (Eversource). Many commenters expressed skepticism about the pace of development of the renewable electricity needed to power electrification (1000+ homeowners). One commenter suggested that grid emissions impacts should be considered when evaluating CHS program performance but not when calculating credit values (PFPI).

Other: Commenters raised a variety of other topics, as summarized below:

- The CHS should not be used to implement a ban on new natural gas hookups (LIUNA, Local 4, Local 51, Local 104, Local 550, NEGWA, NFIB, PCA, United Association), remove existing infrastructure (MCSE), or ban fossil fuels (Patrick)
- MassDEP should consider gas customers' right to service, particularly for non-heating applications (Eversource)
- MassDEP should not tell consumers how to heat their buildings (Hamel, NEHPBA, Vergent) and restricting consumers' right to choose their energy source is a violation of the Dormant Commerce Clause (MEMA, PGANE)
- MassDEP should consider the health impacts of other of air pollution from different technologies and fuels (Acadia Center et al., Dell'Olio, MFA)
- MassDEP should consider greenhouse gas emissions from refrigerant leakage associated with heat pumps (MEMA, PGANE)
- The CHS should be implemented in a phased manner and periodically evaluated (Eversource)
- MassDEP should focus on planting "Living Carbon" trees as a carbon sink rather than a CHS (Cooke)
- A CHS may not be legal due to impacts on small business competitiveness (Turner)
- Some seasonal facilities at State Parks and Forests use propane (Barrett)

List of Commenters

- Acadia Center joined by 30 organizations and 34 individuals (Acadia Center et al.)²
- Alliance for Green Heat
- Biomass Thermal Energy Council (BTEC)
- Boston Housing Authority (BHA)
- Barrett, Bruce (Barrett)
- Cary, Charlie (Cary)
- Cooke, James (Cooke)
- Cox, Gregory (Cox)
- Dell'Olio, Evan (Dell'Olio)
- Dennis, Lester (Dennis)
- Eversource Energy (Eversource)
- Five Clean Heat Commissioners (5 Commissioners)³
- Flat Rock Farm
- Form letter submitted by over 1000 individual homeowners (1000+ homeowners)
- Greater Boston Plumbing Contractors Association (PCA)
- Green Energy Consumers Alliance (Green Energy Consumers)
- Hamel, Laura (Hamel)
- Johnson, Timothy (Johnson)
- Laborers' International Union of North America (LIUNA), New England Region
- Maine Energy Systems (MESYS)
- Maine Pellet Fuels Association (Maine Pellet Fuels)

² Acadia Center joined by the following organizations and individuals: Conservation Law Foundation, Green Energy Consumers, HEET, Pipe Line Awareness Network for the Northeast (PLAN-NE), Sierra Club Environmental Law Program, 350 Mass, AFWOG.org, Behavioral Healing Services I, Inc., Berkshire Environmental Action Team (BEAT), Better Future Project, Boston Catholic Climate Movement, Boston Housing Authority, Ceres, Climate Code Blue, Environmental League of Massachusetts, Epstein & August, LLP, Fore River Residents Against the Compressor Station, Future Health, LLC, Health Care Without Harm, League of Women Voters of Massachusetts, LISC Boston, Longmeadow Energy and Sustainability Committee, Longmeadow Pipeline Awareness Group, Massachusetts Climate Action Network, No Fracked Gas in Mass, Northeast Clean Energy Council, Salem Alliance for the Environment – SAFE, Sierra Club Massachusetts, South Coast Neighbors United, Springfield Climate Justice Coalition, The Nature Conservancy, Union of Concerned Scientists, Vineyard Power, Vote Solar, Western Mass Green Rainbow Party Chapter, ZeroCarbonMA, An Rocco, Ana Nuncio (member, SAFE), Anita Roy Dobbs, Anne Wright (member, Mothers Out Front Massachusetts), Bryant Miller, Carol Hautau (member, SAFE), Cynthia Sommer, Deborah Sirulnik (member, LPAG), Elizabeth Elam, Jacqueline Pleet (member, Springfield Climate Justice Coalition), Jeff Cohen (member, Salem City Council), John Metzger (member, UU Mass Action), Judith Gitelson (member 350MABerkshire), June Greig (member, LPAG), Karen Kraut (member, Brookline Mothers Out Front and Gas Transition Allies), Kate Enderlin (member, SAFE), Kathy Mullins, Kimberly Barton (member, Longmeadow Pipeline Awareness Group), Laura Broad (member, Longmeadow Pipeline Awareness Group), Martyn Roetter (member, Gas Transition Allies), Mary Wambui, Michele Marantz (member, Longmeadow Pipeline Awareness Group), Nathan G. Phillips, Nick Pacella (member, 350.org), Sharon deVos (member, Mothers Out Front), Shyla Ruiz Kachwaha (member, Youth Climate Action Now), Steven Marantz, Susan Joel (member, Forest Park Civic Association), Susan Purser, Susanne Walker (member, 350MA), T. Stephen Jones, MD, Verne McArthur (member, Springfield Climate Justice Coalition), Vick Mohanka, Walter May (member, SCJC).

³ Tamara C. Small, NAIOP Massachusetts, Richard Sullivan, Jr., Economic Development Council of Western Massachusetts, Charles Uglietto, Cubby Oil and Energy, Emerson Clauss III, Landmark Associates General Contracting, Robert A. Rio, Esq., RAR Strategies, LLC.

- Mass Coalition for Sustainable Energy (MCSE)
- Massachusetts Energy Marketers Association (MEMA)
- Massachusetts Forest Alliance (MFA)
- National Federation of Independent Business (NFIB)
- National Grid
- New England Gas Workers Alliance (NEGWA)
- Northeast Chapter of the Combined Heat and Power Alliance (NE Chapter)
- Northeast Hearth, Patio & Barbeque Association (NEHPBA)
- Northern Forest Center
- Paine, Jeremy (Paine)
- Partnership for Policy Integrity (PFPI)
- Patrick, Jim (Patrick)
- Pelland, Peter (Pelland)
- Pellet Fuels Institute
- Plumbers and Pipefitters Local 104 of Springfield (Local 104)
- Plumbers and Pipefitters Local 51 (Local 51)
- Plumbers and Pipefitters Union of Worcester Local 4 (Local 4)
- Propane Gas Association of New England (PGANE)
- Representative William Driscoll (Rep. Driscoll)
- Senator Patrick O'Connor (Sen. O'Connor)
- Sprinkler Fitters Local 550 of Boston (Local 550)
- Sumner Heating Co, Inc. (Sumner)
- Tarm Biomass
- United Association of Plumbers, Pipefitters, Sprinklerfitters, HVAC Techs, and Apprentices of MA (United Association)
- Vergent Power Solutions (Vergent)
- Vicinity Energy Inc. (Vicinity)
- Walker, Carol (Walker)