The Massachusetts Clean Heat Standard

Report Prepared For:

SNEEC

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What Happens in MA…

At Climate Week in NYC last week, Governors from 25 states collectively pledged to install 20 million heat pumps by 2030.

- Vermont (CHS passed legislatively)
- Massachusetts (Rulemaking)
- New Jersey (Executive Order to explore CHS)
- Governors from eight states committed to explore the development of Clean Heat Standards last week:
  - CT
  - RI
  - NY
  - PA
  - MD

Source: Diversified Energy Specialists Research & Analysis

Clean Heat Standard - Summary

The Massachusetts Clean Heat Standard will impact every heating fuel retailer, wholesaler, and customer

- 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 possibly 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

Source: Diversified Energy Specialists Research & Analysis

Obligated Parties

The state will enforce a compliance obligation on the fossil fuel industry that will penalize a level of the supply chain if the overall greenhouse gas emissions are not reduced

Obligated Parties

- Regulated investor-owned gas utilities
- Fuel providers of delivered fuels, with the compliance obligation applied at the retail level (MA) or the first point of sale in the state (could also be applied at the retail level instead of the wholesale level – TBD in the rulemaking process)
- Fossil heat providers that are not any of the above listed parties, including competitive gas suppliers
- Electricity suppliers (Utilities), either on their own or together with other heating suppliers (potentially excluded)

"Other categories that may warrant consideration include"

- Large commercial properties above a set threshold of fuel usage (to prevent individual homeowners from an individual obligation)
- Municipalities, or municipal gas companies as obligated parties, perhaps with municipal electric companies having the option of creating and selling credits

Source: Diversified Energy Specialists Research & Analysis

Compliance Obligation

The obligated parties in the CHS will need to reduce their greenhouse gas emissions by either lowering the carbon intensity of their fuel or by selling less fuel

Compliance Obligation

- The compliance obligation will align with the goals set by the MA GWSA and the 2021 Climate Roadmap:
  - **29% below 1990 levels by 2025 (approximately 20% below 2020 levels)**
  - **49% below 1990 levels by 2030 (approximately 40% below 2020 levels)**
  - 75% below 1990 levels by 2040 (approximately 66% below 2020 levels)
  - 85% below 1990 levels by 2050 (approximately 76% below 2020 levels)

- The annual obligation increases will be linear. The GWSA outlines the MA economywide goals as:
  - 4% per year until 2025
  - 5% per year between 2025 and 2030
  - 3% per year from 2030 to 2050

Source: Diversified Energy Specialists Research & Analysis

Actions to Meet Compliance

An obligated party will have many options to meet their compliance obligation

Compliance

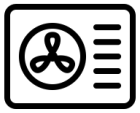
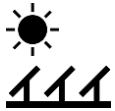
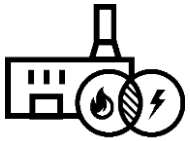
An obligated party may obtain and retire the obligated amount of clean heat credits annually through:

- Generating credits through the direct delivery of eligible clean heat measures
- Hiring contractors to install clean heat measures on its behalf
- Purchasing Clean Heat Credits on the open market
- Paying an Alternative Compliance Payment (ACP) per clean heat credit needed to meet its obligation

Source: Diversified Energy Specialists Research & Analysis

Eligible Generating Technologies

The technologies listed have been proposed as eligible technologies in the Clean Heat Standard, with some technologies (in green) listed as potential technologies

					
Air-source Heat Pumps	**Geothermal Heat Pumps**	**Weatherization**	**Energy Efficiency**	**Solar Thermal**	**Clean District Energy** (CHP w/ renewables)
					
Demand-Side Efficiency (thermostat control during peak)	**Wood Pellets**	**Biodiesel**	**Renewable Diesel**	**Renewable Natural Gas**	**Clean Hydrogen**

Source: Diversified Energy Specialists Research & Analysis

Generating Parties

The generators of Clean Heat Credits will be the end user or the party that delivers the clean heat measure directly to the end user for use in Massachusetts

Generators

- Homeowner or Building Owner
  - The owner of the property or business that is being upgraded would be the default owner of clean heat credits generated from on-site projects.
  - "It is important to note that as a starting provision, ownership of clean heat credits should begin with the end-use customer whose fossil heat consumption has been reduced. That customer can decide whether to transfer the credits to the contractor, installer or fuel supplier who provided the clean heat services; or to sell them in the market; or to hold them for future use. In many, if not most, cases we can expect the provider of the service to contract with the customer for ownership of any credits and would likely offer an incentive payment or discount on the service provided.

- Distributors of delivered fuels (directly to end user in MA)
  - Biodiesel and renewable diesel retailers
  - Renewable Propane retailers?
  - Renewable natural gas utilities

Source: Diversified Energy Specialists Research & Analysis

Credit System

Tradeable Clean Heat Credits

- The program will establish a system of tradable clean heat credits that may be earned by reducing greenhouse gas emissions through resources and projects qualified by the Clean Heat Standard.
- The underlying value of these credits shall be based on units of carbon dioxide emissions avoided (1 Ton of CO2 avoided will equal 1 clean heat credit).
  - "A crediting system that focuses on counting tons of GHG reductions would ensure that emissions reductions are prioritized and quantified."
  - This thought process has now changed to a "yard-stick" approach
- The Commission will establish a process for the recognition, approval, and monitoring of the clean heat credits through an exchange.

Source: Diversified Energy Specialists Research & Analysis

Tiers, Caps & Carve-Outs

These market mechanisms would further complicate a Clean Heat Standard and only one was recommended by the Commission on Clean Heat

Tiers

- Long-term vs. short-term solutions

Caps

- Biofuels
- RNG
- Long-term vs. short-term solutions

Carve-Outs

- Environmental Justice

Source: Diversified Energy Specialists Research & Analysis

Other Design Components of Note

Market Mechanisms

- **Retroactive generation**
  - Potential “early action credits” in MA for electrification only
- **Banking**
  - Obligated parties will be able to purchase more credits than they are obligated on an annual basis and use those additional credits to meet their compliance obligation in future years
  - Any party that isn’t obligated will not be able to bank credits, including generators
- **Fuel Switching**
  - Switching from propane, natural gas, or heating oil to another fossil technology will not generate credits or be considered a clean heat action
- **Non-compliance**
  - If an obligated party fails to obtain and retire the required number of Clean Heat Credits in a given year, they shall make a non-compliance payment at a per credit rate of three times the ACP
- **Lifetime credit generation for installations of clean heat measures**
  - MA has discussed annual minting over a 15-year period for ASHP installations vs. forward minting in year 1
  - TBD whether there will be forward minting or annual minting for long-term solutions

Source: Diversified Energy Specialists Research & Analysis

Massachusetts CHS - Concerns

Fossil fuel retailers should have several concerns about the pending MA CHS

Design Concerns

- 3% Conversion
- Zero-carbon electricity scoring
- Electricity Suppliers (LSE's) not obligated
- Carbon Scoring – GREET? Own model?
- Alternative Compliance Payment Price
- Obligation: retailers? Wholesalers?
- "Yard-stick" credit value method

Source: Diversified Energy Specialists Research & Analysis

Implementation Timeline

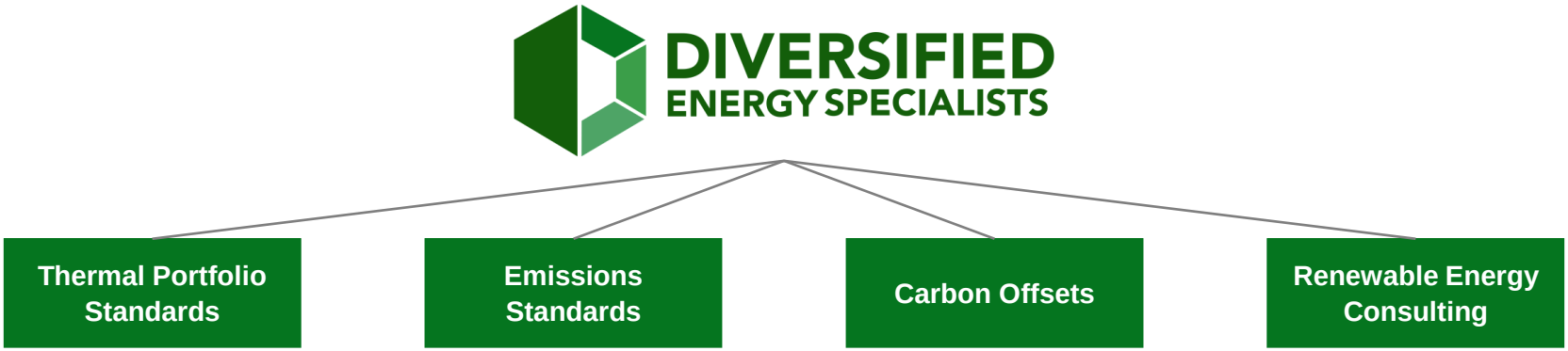
Massachusetts plans to implement a CHS in 2024 and Vermont will trail by a couple of years

Massachusetts Timeline

- Clean Heat Commission recommended a Clean Heat Standard in December 2022
- The Massachusetts DEP released a discussion document in April 2023, with public comments due May 1, 2023
  - 57 public comments submitted
- MA DEP released additional “white paper” documents in June 2023
- Regular virtual community meetings every 4-6 weeks
- Public technical sessions on program design in Summer 2023
- The MA DEP goal is to publish draft regulations by the end of 2023 and implement the program in the winter of 2024-2025

Source: Diversified Energy Specialists Research & Analysis

Background & Contact Information



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