A Clean Heat Standard for Maryland

Overview

A clean heat standard is a performance standard that would apply to providers of fossil-fuel heating energy in Maryland, notably gas utilities and importers of heating oil and propane. These **obligated parties** would be required to serve Maryland's residential and commercial customers with gradually increasing percentages of **clean heat services** so that sales of fossil fuels are phased down. Just as renewable portfolio standards require electricity providers to replace coal and gas-fired generation with wind, solar and other clean electricity generation, the clean heat standard would replace pipeline gas, fuel oil and propane heat with weatherization improvements, heat pumps, clean district energy and other verified low-carbon options. For example, a gas utility — directly or through a contractor — could help its customers better insulate their homes to reduce fossil fuel consumption.

As a performance standard, a clean heat standard works differently than a carbon price or carbon cap to drive down greenhouse gas emissions. Instead of directly taxing or limiting fossil fuels used for heating, a clean heat standard requires measured additions to the clean heat resources serving homes and commercial buildings in Maryland. The standard would replace fossil-fuel heat with clean heat to reduce carbon pollution from the thermal sector **at the pace required** by state law.

Why do we need a clean heat standard?

Maryland has ambitious goals to reduce climate pollution and to improve energy equity. Heating is one of the state's largest sources of climate pollution, accounting for about 13% of statewide direct emissions. Heating and cooling are essential services, and lower-income families and overburdened communities face higher energy burdens than other consumers. A clean heat standard can be a powerful tool toward meeting both those goals.

What about other policies? Evidence from many jurisdictions reveals that:

- Just offering incentives to building owners does not enlist customers quickly enough.
- Relying on carbon taxes alone raises prices but with relatively small reductions in heating demand, and other public funds are too limited and often too variable to meet the scale of the climate challenge.
- Building codes and heating equipment emissions standards affect only new construction and new heating equipment, and by themselves would not be fast enough to meet the state's climate goals.

To deliver large greenhouse gas savings from residential and commercial buildings on the timeline required by state law, communities need **a positive policy driver** to help building

owners improve building shells and change heating systems in the existing building stock. A clean heat standard can be that policy driver and amplify the beneficial impacts of complementary policies such as incentives, codes and standards.

What do we mean by clean heat?

A clean heat standard can be designed to promote a variety of heating technologies and fuels, in line with state policies. Clean heating choices can include:

- Weatherization and building improvements.
- Electrification for space and water heating and cooling, particularly heat pumps.
- Certain biofuels and renewable gases meeting greenhouse gas reduction and sustainability standards.
- Low-carbon district heating and geothermal systems.
- Solar thermal and advanced wood heating.
- Renewable hydrogen.

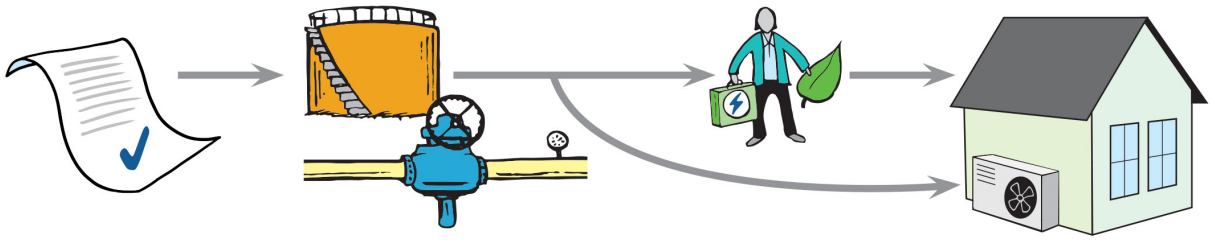
Because the main goal is to reduce climate pollution, the performance standard itself and the clean heat options are all **measured in tons of greenhouse gas emissions reduced**.

How would the clean heat standard work?

The first steps in creating a clean heat standard are to determine the pace of emissions reductions needed in the thermal sector and to identify the parties that would be obligated to deliver those reductions. State law sets requirements for emissions reductions in 2031 and 2045, but it will be necessary for the **clean heat standard program administrator** to set annual reduction goals to ensure continuous improvement and to appropriately pace the work required to transform heating fuels and systems. Over time, meeting the state's targets would require reducing greenhouse gas emissions from heating by about 5%-7% each year.

A clean heat standard gives energy suppliers a broad range of options for meeting their obligation, but the logic of the standard is straightforward.

Elements of a clean heat standard



A state-specific rule

Placing a quantitative obligation on fossil heating companies, including:
- Gas utilities
- Heating fuel importers

To create clean heat credits by delivering clean heat services directly or through a third party. Examples:
- Building insulation
- Heat pumps for space and water heating
- Low-emissions fuels
- Other measures in residential and commercial buildings

The obligated parties would include pipeline gas utilities and companies that import or sell liquid fossil heating fuels in Maryland. Fossil fuel sales for transportation, off-road vehicles and industrial heating would not be covered by the performance standard. Because electric utilities are already lowering their emissions through renewable energy and efficiency mandates, and because electricity will be increasingly fossil-free, the clean heat standard focuses responsibility on providers of fossil-fuel heat.

Each year, the obligated parties would need to demonstrate that they have earned or acquired enough **clean heat credits** to meet their annual responsibilities to reduce greenhouse gas emissions. They can meet their obligation by delivering cleaner fuels, helping customers install qualified clean heat measures, or purchasing clean heat credits from others who have delivered those solutions.

A wide range of eligible service providers — not just obligated parties — can earn clean heat credits. This is an important feature of the clean heat standard, given the magnitude of the thermal challenge, and it allows a **market for clean heat credits** to evolve. Thus, weatherization providers, EmPOWER programs, HVAC contractors, housing authorities, utilities and fuel dealers can all earn credits if they deliver verifiable greenhouse gas reductions through approved clean heat measures. Obligated parties also can earn credits by delivering savings to any end-use customer, not just their existing customers.

Importantly, the clean heat standard does not require homeowners or businesses to make any particular clean heat choices. While customers will likely receive incentives, information and support, they will have flexibility on choosing their heating options and the timing for making switches and upgrading their buildings.

How are equity and environmental guardrails built into a clean heat standard?

One advantage of a performance standard like the clean heat standard is that specific provisions to promote equity and environmental sustainability can be built into its architecture from the outset. **To ensure that lower-income households and energy-burdened communities are not left behind**, the program administrator should involve those communities in program design from the start and require that a substantial fraction of clean heat credits each year be secured by delivering services to those customers.

Environmental guidelines are also important. The standard should not credit emissions reductions in buildings in Maryland if they are achieved via measures whose emissions occur elsewhere, such as switching to cleaner-burning fuels whose production emissions occurred in other states. For this reason, certain clean heat solutions, particularly fuel substitutions, should be **tested on a life cycle basis**. The program administrator can, by rule, adopt a process for assessing different clean heat measures so they would earn credits only for their verifiable life cycle greenhouse gas emissions reductions. This is similar to the process used to award credits under low-carbon fuel standards in other states.

How would the clean heat standard support other heating sector policies?

It's going to take a suite of complementary policies to transform the heating sector in Maryland. Other policies could include energy-saving programs from EmPOWER, weatherization programs, fossil-fuel equipment standards and building codes, and the tax credits and grants from state programs and the new federal Inflation Reduction Act. Maryland's Building Energy Performance Standards will also encourage building owners to improve their energy use. The clean heat standard is designed to work with all these other programs. Clean heat measures that are delivered by any of these programs could also earn clean heat credits, which can be sold to obligated parties to satisfy their annual obligations. This umbrella approach creates a broader array of ways to reach and assist customers and would speed up the heating transition required by the CSNA.

How do clean heat standards in other states provide experience to draw on?

Although the clean heat standard is a relatively new policy tool, energy performance standards are common in the United States and elsewhere. At least 30 states have renewable portfolio standards for electricity, and 25 states have energy efficiency performance standards. Many of these measures have been in place for decades. Clean fuel standards for transportation fuels are well-tested in the Western U.S. More recently, Colorado has adopted a clean heat requirement for pipeline gas companies; Vermont is creating a clean heat standard for both its gas utility and providers of delivered heating fuels. Oregon and Massachusetts are considering clean heat rules for all fossil-fuel heat providers. Maryland can find insights and experience from these jurisdictions as it develops a clean heat standard tailored to the state's heating markets, climate and policy goals.