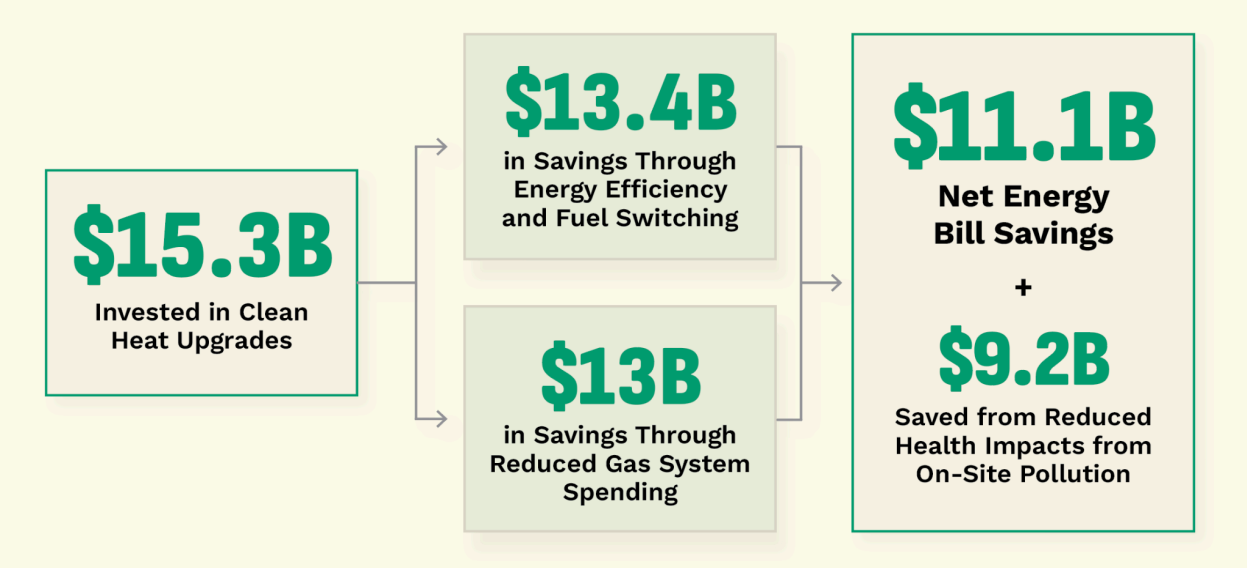
Evergreen Collaborative

Affordable Clean Heat

An Opportunity for Maryland

Maryland is facing an energy affordability crisis, with utility bills increasing rapidly and putting a strain on families. It is essential that Maryland find ways to reduce energy bills for households and businesses, while still maintaining reliability.

Simultaneously, Maryland must also continue its push to reduce climate pollution from burning fossil fuels in buildings and meet its climate emissions targets. Climate change is already raising everyday costs for households and driving more and more severe weather related disasters. Additionally, direct combustion of fossil fuels in buildings is a major source of health-harming nitrogen oxide (NOx) pollution, which contributes to the state's inability to meet federal air quality standards[1]. This pollution is already costing Marylanders $1.3 billion[2] in health impacts annually.

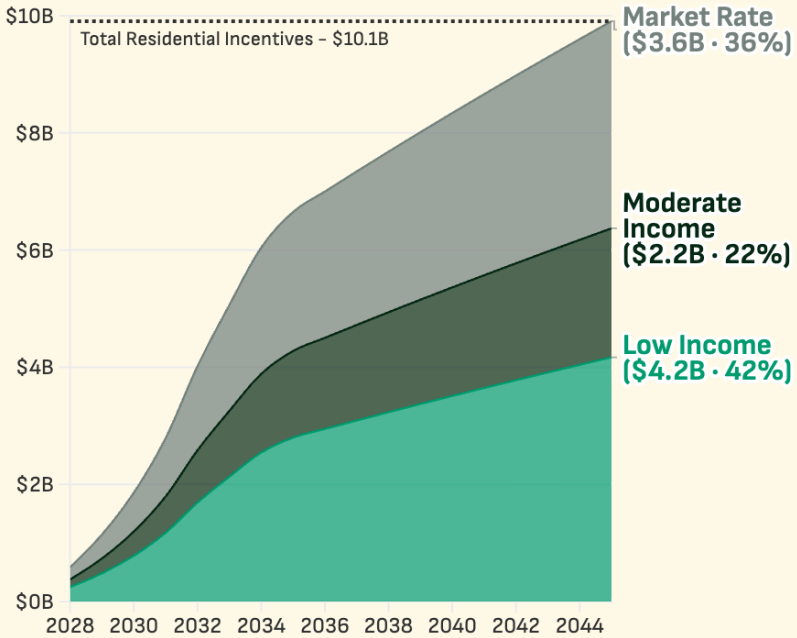


[1] EPA: Current Nonattainment Counties for All Criteria Pollutants
[2] Green and Healthy Homes: Cutting through the Smog.

A Clean Heat Standard (CHS) is a solution that can help address the affordability and climate crises at the same time by turning the tide on energy costs, climate pollution, and air pollution in Maryland. A CHS is an energy performance standard that would require companies providing fossil fuels used for heating (methane gas, propane, fuel oil, etc.) to provide a gradually increasing amount of "clean heat." Clean heat can include heat provided by electric heating systems such as heat pumps, heat provided by low-emission fuels, or weatherization of buildings to reduce their energy use.

Evergreen commissioned Current Energy Group to create a model of a Clean Heat Standard for Maryland to examine the impacts of such a policy on heating equipment sales and stock, fuel usage, greenhouse gas (GHG) emissions, and utility bills (see the appendix for methodology). The model shows that a CHS can save Maryland ratepayers between $6.1 and $11.1 billion on utility bills between now and 2045, by upgrading both fossil fuel and electric resistance heating in Maryland to clean and efficient heat pumps. Such a program would support households in installing over 2.4 million residential space-heating heat pumps and 2.6 million residential heat pump water heaters. Climate and air pollution from buildings would be reduced by 90% by 2045, helping to achieve Maryland's climate goals for the buildings sector.

Cumulative clean heat incentives for residential dwellings by income



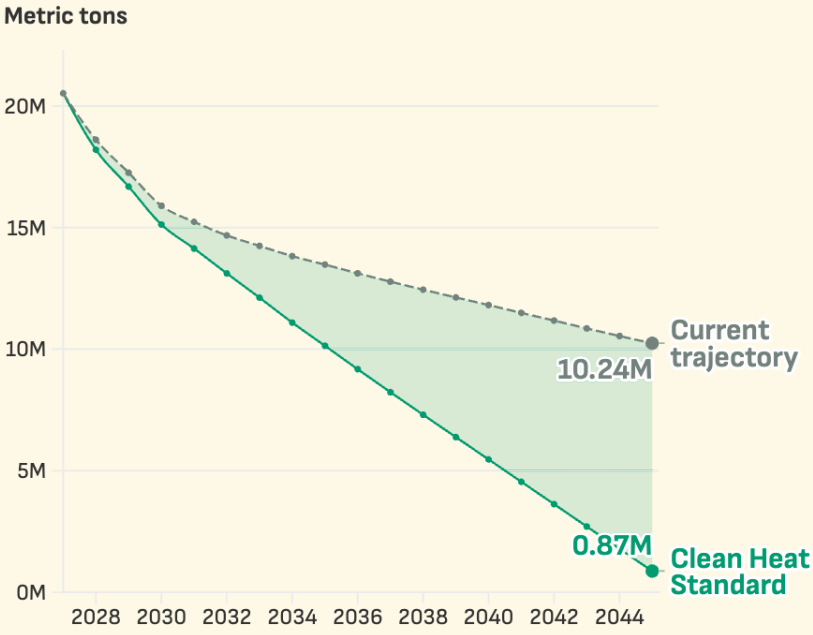
Source: Current Energy, Evergreen Collaborative

Cost savings with a CHS come from reducing household energy use via efficient heat pump heating, from reducing or eliminating methane gas and fuel bills, and from system-wide savings from avoided spending on the methane gas distribution system, while keeping electric system costs similar due to greater efficiency. These savings more than offset the cost of providing

incentives through the CHS, lowering utility bills for Marylanders while upgrading homes to increase comfort and resiliency. Additional savings of $9.2B from avoided health impacts are expected and would add to these benefits.

Careful design and complementary policies will help a CHS be more effective at reducing costs and lowering emissions. The model shows that a swift market transformation to heat pumps for space and water heating will reduce costs and is essential to meeting emissions targets. This means that near-term requirements in the CHS need to be set high enough to drive that rapid transformation. Further, the CHS should be a part of a cohesive clean heat and efficiency strategy for the state — one that includes updated building energy codes, energy efficiency incentives, utility regulatory directives, and equipment standards. The Maryland Public Service Commission (PSC) should require regulated utilities to submit long term clean heat plans and gas system plans that optimize for the lowest cost for ratepayers while maintaining safety and reliability. The PSC should make sure EmPOWER Maryland participants coordinate their programs with the CHS program and utilize any clean heat credits earned to lower costs for their electric ratepayers. State building energy efficiency codes should be updated to set a strong baseline for efficiency which will reduce costs for the clean heat standard.

Total cumulative climate pollution from building heating and hot water systems



Source: Current Energy, Evergreen Collaborative

A Clean Heat Standard is a key policy that can deliver lower utility bills, more comfortable and resilient buildings, cleaner air and improved health, and lower climate emissions. Maryland should move swiftly to adopt a Clean Heat Standard so Marylanders can reap the financial, health, and climate benefits of clean heat.