



March 8, 2023

Environment and Transportation Committee
House Office Building, Room 251
Annapolis, Maryland 21401

IN RE: HB 1134 Concerning Maryland Building Performance Standards – Fossil Fuel Use and Electric-Ready Standards

Dear Chair Barve, Vice Chair Stein, and Members of the Committee:

The American Petroleum Institute (API)¹ opposes a ban on the use of natural gas in new building construction and encourages the legislature to preserve consumer choice with respect to heating and cooking options. Policymakers should appreciate the value natural gas has demonstrated in reducing emissions as well as the pivotal role this fuel can provide in ensuring a diverse and reliable fuel mix while facilitating the state's energy transition. API believes legislative and regulatory efforts to ban natural gas use are premature and not prudent. While API understands the desire to act – we believe that effective and equitable environmental policy must be flexible and technology neutral – allowing residents to choose the solution which best works for them.

Consumers Should Have Right To Choose

Policymakers should strive to give consumers options. Competition is imperative to protect consumers while driving innovation, ingenuity, and progress. Policymakers should not pick winners and losers but should allow resources and technologies to compete. Free market policies provide the consumer with options to select what best fits their unique requirements. An all-electrification requirement would remove natural gas from the heating and cooking markets, stripping the consumer of the right to select the heating fuel that best suits their needs. A ban on heating fuels represents the worst type of policy because it effectively affords consumers only one option – electricity – with respect to heating and cooking. The state should not voluntarily develop a policy which relies on only one fuel. Additionally, requiring all-electric heating, cooling, and cooking in new buildings is presently most viable in new buildings located in milder climates - where a single electric heat pump can replace both existing heating and cooling units that are at or near retirement - and especially where local gas infrastructure installation costs can be avoided.²

The Role of Natural Gas in Reducing Emissions and Balancing the Power System

Broad electrification could negatively impact the power grid. Policymakers should fully and carefully consider the grid impacts that could result from the changing magnitude and pattern of load associated with electrification. In recent years the state has moved toward electrification in the transportation and building sectors by encouraging electric vehicles as well as home appliance and heating conversions. These policies can increase the demand for electricity significantly with no assurances that there will be sufficient resources in place to meet this incremental demand. This means that the state may be forced to rely on the use of older and less efficient power plants and import electricity from other regional power systems that may also utilize less efficient power plants. Building new and efficient gas-fired power plants can provide a pivotal solution.

Moving to all-electric heating without any new gas-fired power plants can stifle the market forces which drive an increasingly efficient power system, and can result in more emissions rather than less.³ It would be prudent for the state to encourage the construction of new highly efficient gas-fired power plants as these facilities would reduce the use (and likely hasten the retirement) of older, dirtier, less-efficient and more expensive power plants.

The quick-start nature of natural gas-fired power plants coupled with their ability to almost instantaneously ramp up and down make these resources a great complement to wind turbines and solar panels. The state should not pass any bill that stigmatizes or bans the use of natural gas. Rather, policymakers should encourage the use of natural gas as a means to

¹ The American Petroleum Institute represents all segments of America's natural gas and oil industry, which supports more than 11 million U.S. jobs. Our nearly 600 members produce, process, and distribute the majority of the nation's energy. API members participate in API Energy Excellence, through which they commit to a systematic approach to safeguard our employees, environment, and the communities in which they operate. Formed in 1919 as a standards-setting organization, API has developed more than 700 standards to enhance operational and environmental safety, efficiency, and sustainability.

² Deason, J., Borgeson, M. Electrification of Buildings: Potential, Challenges, and Outlook. Current Sustainable Renewable Energy Rep 6, 131–139 (2019).

³ As a point of reference, technological improvements over the past decade have reduced the carbon emission rate of new gas plants by 12 percent, which means that over the course of a year, a typical baseload gas plant built in 2020 emits 170,000 tons less carbon than one built in 2009.



facilitate the integration of renewables.⁴ Additionally, natural gas has long been valuable in reducing emissions from the power sector and ensuring a reliable system while providing reserve and regulation support.⁵

A Ban Inappropriately Closes the Door on Prospect of Renewable Natural Gas and Potentially Emerging Technologies

API and its members are committed to delivering solutions that reduce the risks of climate change while meeting society's growing energy and electricity needs. The industry is working on the development of cleaner fuels including renewable natural gas and hydrogen. A fossil-fuel free building requirement creates a disincentive for investment in these promising technologies.

Reliability Concerns

A move to all-electric heating and cooking will leave Maryland residents at the mercy of a power grid that is increasingly reliant on intermittent resources. The state should strive for a diversified portfolio of energy resources, and lawmakers should thoroughly comprehend the grid impacts that could result from comprehensive economy-wide electrification efforts.

Unintended Consequences

Legislators should appreciate that moving the state to electric heat and heat pumps can have the unintended consequence of incentivizing customers to purchase and use backup generators that run on fossil fuels. The state must first understand and appreciate the potential economic and environmental consequences of additional backup generators before embarking on a future of only electric heat in new construction.

Cost

Good public policy considers cost impacts on consumers, especially those in overburdened communities. All-electric legislation will likely increase costs. According to research conducted for the National Association of Home Builders, all-electric homes cost more upfront in comparison to gas homes.⁶ Specifically, the overall range of estimated electrification costs for an electric reference house compared to a baseline gas reference house is \$10,866 and \$15,100 in a cold climate (Denver and Minneapolis). The higher costs in colder, heating-dominated climates are due to the need for more expensive heat pumps rated to operate in colder temperatures. The more expensive electric equipment can also result in higher energy use costs by \$84 to \$404 annually compared to a baseline gas house, and by \$238 to \$650 annually compared to a gas house with high efficiency equipment. Consumers in colder climates will likely be faced with higher upfront construction costs and higher operating costs throughout the life of the equipment.⁷ State policymakers should also consider that increased electricity use will also impact the need for additional electric bill assistance.

Bill is Premature

API believes that the bill is premature and the very language of the bill validates this assertion. Section 2 of the bill requires state agencies to report back to ensure that the changes required by it "do not diminish the availability of affordable housing or the affordability of electricity for customers in all-electric buildings." Section 2 is an admission that the exact impacts of the legislation are unknown. API recommends that before passing this legislation that lawmakers should be certain that the bill will not impose costs on the consumer and have an adverse impact on grid reliability.

Additionally, last year SB 528 was codified into law.⁸ Among other things this bill effectively delayed activity on electrification policy until the "Building Energy Transition Implementation Task Force ... on or before December 1, 2023, ... shall report its plan to the governor and ... the general assembly." No such task force report has been submitted.

Conclusion

For the reasons outlined above, API respectfully opposes HB 1134, which removes consumer choice and bans the use of all fossil fuels in new building construction.

⁴ Natural gas combusted on-site is currently cleaner per unit of energy than electricity from the grid because of the energy losses occurring during the generation, transmission, and distribution of electricity. See City of New York Mayor's Office of Sustainability, *One City Built to Last: Transforming New York City Buildings for a Low-Carbon Future*, 34 (2016).

⁵ The electric generation sector has significantly decreased greenhouse gas emissions. Emission reductions in this sector are greater than any other sector of the economy. Using data from the U.S. Energy Information Administration, API estimates that carbon emissions from New York's power generation sector have plummeted 56 percent since 2000. Most of this decline can be attributed to the switch from coal and oil to natural gas. See also The North American Electric Reliability Corporation, the standard bearer for reliability of the continent's bulk power systems, concluded that flexible, fast-ramping natural gas generators will be needed to maintain reliability as intermittent renewable resources become more prevalent.

⁶ See <https://www.nahb.org/-/media/NAHB/nahb-community/docs/committees/construction-codes-and-standards-committee/home-innovation-electrification-report-2021.pdf>.

⁷ *Ibid.* Climate zone had a strong influence on both construction costs and energy use costs. In colder climates, heat pumps with variable refrigerant flow rated for operation during low outdoor temperatures are needed. Often referred to as cold climate heat pumps, these systems are more expensive: \$8,000-\$9,000 more compared to a gas furnace.

⁸ See https://mgaleg.maryland.gov/2022rs/bills_noln/sb/tsb0528.pdf.