



Shaping Tomorrow's Built Environment Today

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M. Dennis Knight
2024-2025 ASHRAE President

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September 13, 2024

Vice President Kamala Harris
Harris For President Campaign Headquarters
PO BOX 58174
Philadelphia, PA 19102

Dear Vice President Harris:

I am writing on behalf of ASHRAE, the American Society of Heating, Refrigerating, and Air Conditioning Engineers. We are a 54,000 strong professional society dedicated to energy efficiency, indoor air quality, resiliency, and sustainability in the built environment. Through our Society's research, standards writing, publishing, certification, and continuing education, ASHRAE shapes tomorrow's built environment today. As one of the premier subject matter experts on energy efficiency in the built environment, we wish to offer a recommendation regarding your [proposed policy](#) on building three million new homes to alleviate the housing affordability crisis: we recommend that the new construction from this proposed program must be built to meet modern energy efficiency standards.

One of ASHRAE's most sacred responsibilities is to write design standards to advance a safe and sustainable built environment. ASHRAE volunteers commit thousands of hours of work and lifetimes of professional expertise to develop the highest quality design standards, which then inform construction policy in the U.S. Simply put, ASHRAE standards set a mandatory minimum benchmark for building design and construction policy areas ranging from safety to indoor air quality to energy efficiency. These standards are then adopted for use in state building codes as well as being referenced in model codes.

To provide affordability over the lifetime of newly constructed housing, model energy codes and standards should be used to reduce energy consumption and ongoing energy costs. The most modern edition of an energy standard, ASHRAE 90.1-2022, represents a national average site

energy estimated savings increase of 9.8% to 14% over the 2019 edition, and a nearly 60% reduction against a 1975 baseline. Subsequently, ASHRAE recommends that any new affordable housing also meets modern energy efficiency standards. The built environment, including residential structures such as single family homes, small multifamily complexes, and larger apartment buildings, is the largest energy consuming sector of the U.S. economy. Buildings in this country are responsible for approximately 40% of the nation's energy consumption, 74% of its electricity use, and 35% of its total carbon emissions.¹ Simply put, America's buildings are a major cause of climate change and making them more energy efficient is a high impact, economically sustainable way to lower greenhouse gas emissions, create jobs, boost the economy, and increase comfort, health, and safety in the built environment. With respect to affordability, building energy efficient housing will save energy costs year after year, which is critical to the pocketbooks of Americans.

Mandating that new construction funded by your proposed programs meet minimum energy efficiency standards is in line with current policy. As part of the Biden-Harris administration's Investing in America agenda, hundreds of millions of dollars were given to state and local governments to help them adopt modern energy efficiency standards.²³ This was understood as a powerful strategy to combat climate change while also lowering utility bills for Americans, thereby boosting the economy by immediately making cash available to rate payers. The 2021 edition of the International Energy Conservation Code was cited as the relevant standard for residential construction, and ASHRAE Standard 90.1-2019, *Energy Standard for Buildings Except Low-Rise Residential* was cited as the relevant standard for commercial construction.⁴

ASHRAE's recommendation is simply that any policy, legislation or rulemaking to provide tax incentives for construction or create new subsidies for construction include requiring the use of a modern energy efficiency standard. Unfortunately, adding such an explicit energy efficiency requirement is necessary because currently many states have not adopted an up-to-date, modern edition of a relevant energy efficiency standard.⁵ This means that if the only construction requirement for these tax credits and subsidies is that they meet existing state and local building standards, then a large percentage of construction funded by these proposed

¹Review of *DOE Announces \$46 Million to Boost Energy Efficiency and Slash Emissions in Residential and Commercial Buildings*. 2027. Department of Energy. DOE. August 7, 2027. <https://www.energy.gov/articles/doe-announces-46-million-boost-energy-efficiency-and-slash-emissions-residential-and>.

² Review of *Biden-Harris Administration Announces over \$240 Million for New and Innovative Building Codes to Save Consumers Money, Reduce Impacts of Climate Change*. 2024. Department of Energy. DOE. August 27, 2024. <https://www.energy.gov/articles/biden-harris-administration-announces-over-240-million-new-and-innovative-building-codes>.

³ Review of *Biden-Harris Administration Announces \$90 Million to Support Resilient and Efficient Building Energy Codes and Save American Families Money*. 2023. Department of Energy. DOE. July 12, 2023. <https://www.energy.gov/articles/biden-harris-administration-announces-90-million-support-resilient-and-efficient-building>.

⁴ Review of *Biden-Harris Administration Announces \$530 Million for Building Energy Efficiency and Resilience to Cut Consumer Costs*. 2023. Department of Energy. DOE. December 18, 2023. <https://www.energy.gov/articles/biden-harris-administration-announces-530-million-building-energy-efficiency-and>.

⁵ Review of *Building Energy Codes Program - State Portal - Commercial Buildings*. 2024. Department of Energy. DOE. June 28, 2024. <https://www.energycodes.gov/state-portal>.

programs would be built to outdated standards and would subsequently be less efficient, would increase greenhouse gas emissions, and would cost building owners, tenants, businesses, and landlords extra money each month when their energy bills are due. Recently in Wisconsin, the state legislature blocked the adoption of a new building energy efficiency code. Now, without a mandate that the construction funded by your proposed programs meet a strong standard, anything built in Wisconsin would incur unnecessarily high carbon and financial costs in operation. To provide a sense of how great the potential losses from not requiring that the proposed new construction be up to code would be, a full-scale national adoption of modern energy codes is estimated to save \$138 billion through 2040 and mitigate 900 million metric tons of CO₂ emissions. Mandating the use of modern building energy standards in housing constructed through new government programs and incentives would realize a portion of those savings without meaningfully increasing construction costs.

In our experience advocating for the use of energy efficiency standards, we find that concerns over increasing the cost of construction are common, even if they are not always made in good faith. Let our Society of subject matter experts on building energy efficiency and building sciences assure you: adopting modern energy efficiency standards does not meaningfully raise construction costs. We can look to states like Florida, Washington, Montana, and Oregon that all adopt the modern editions of ASHRAE's 90.1 energy efficiency standard; the construction costs both within and between these states vary widely, which shows that the use of a strong energy standard is only one of many factors that determine construction costs. More importantly, we can also point to a wealth of studies from the Department of Energy that show strong return on investment for energy code adoption, short payback periods, job creation, and feasibility.^{6,7} Additionally, we know that energy code adoption is associated with lower rates of mortgage defaults and lowers the casualty rate during heatwaves.^{8,9}

In conclusion, ASHRAE strongly recommends that any subsidy of construction be paired with a requirement that the new construction meet the relevant modern energy efficiency code and standard. Furthermore, ASHRAE believes that the continued timely adoption and use of modern energy efficiency standards is a crucial component of our nation's climate change mitigation efforts. We are at your disposal to answer any questions, and to address any comments or concerns you might have. We also wish to make ourselves available to you at any time if you find yourself in need of subject matter expertise on building sciences and the built environment.

⁶ "Impact Analysis | Building Energy Codes Program." 2020. Energycodes.gov. 2020.

<https://www.energycodes.gov/impact-analysis>.

⁷ "National and State Analysis | Building Energy Codes Program." 2019. Energycodes.gov. 2019.

<https://www.energycodes.gov/national-and-state-analysis>.

⁸ Quercia, Roberto, Robert Sahadi, and Sarah Stellberg. 2013. *Review of Home Energy Efficiency and Mortgage Risks*. Institute for Market Transformation. https://imt.org/wp-content/uploads/2018/02/IMT_UNC_HomeEEMortgageRisksfinal.pdf.

⁹ Franconi, Ellen, Luke Troup, Mark Weimar, Yunyang Ye, Chitra Nambiar, Jeremy Lerond, Eliza Hotchkiss, et al. 2023. *Review of Enhancing Resilience in Buildings through Energy Efficiency*. U.S. Department of Energy. https://www.energycodes.gov/sites/default/files/2023-07/Efficiency_for_Building_Resilience_PNNL-32727_Rev1.pdf.

We can be reached at GovAffairs@ashrae.org. On behalf of our 54,000 members, thank you for your consideration of our comments.

Sincerely,

A handwritten signature in blue ink that reads "M. Dennis Knight". The signature is written in a cursive style with a large, stylized initial "M".

M. Dennis Knight
2024-2025 ASHRAE President

cc: Becca Siegel, Harris Campaign Senior Advisor