Shaping Tomorrow's Built Environment Today

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January 23, 2025

The Honorable Glenn Wakai
The Honorable Brandon Elefante
Senate Committee on Public Safety, Intergovernmental and Military Affairs
Hawai‘i State Capitol
415 South Beretania St.
Honolulu, HI 96813

RE: Opposition to Senate Bill 120 “Relating To Building Codes”

Dear Senator Wakai and Senator Elefante:

I am writing on behalf of ASHRAE, the American Society of Heating, Refrigerating, and Air Conditioning Engineers. We are a professional and technical society of more than 54,000 members 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 global built environment today. As one of the premier subject matter experts on the built environment, and on behalf of our 250 members in the state of Hawai‘i, we wish to convey our opposition to Hawai‘i Senate Bill 120 and advocate for its tabling in your committee.

While well intentioned, as we certainly sympathize with the stated goal of bringing down housing costs in Hawai‘i , we believe that this legislation will weaken any future attempts to update the state’s energy codes. The idea underpinning this legislation, that Hawai‘i ’s adoption of modern building codes and energy standards is responsible for high housings costs, and that ceasing to adopt up-to-date building codes and energy standards will bring down housing costs, is incorrect. The actual outcome of this legislation would be a failure to update the International Energy Conservation Code and ASHRAE’s Standard 90.1 *Energy Standard for Buildings Except Low-Rise Residential Buildings*, which are published on a three-year cycle that syncs up with HI’s code updates, and in turn would cause:

- Energy efficiency gains to be left on the table along with the opportunity for operating cost reductions
- Business owners, homeowners, and tenants to pay in sum nearly $3 million in higher utility bills every year.
- Thousands of tons of greenhouse gas emissions to go unmitigated.
- Greater difficulty meeting HI's 2030 and 2045 climate targets.
- Failure to create jobs associated with energy code adoption.
- No significant reduction in housing purchase costs.

There are four separate but complementary reasons why we believe this legislation will lead to fewer building code and energy standard updates.

First, this legislation removes the language that causes the state's building codes to be updated on a regular basis. This is a radical departure from the nationally recognized best practice that Hawai‘i currently follows.

Second, this legislation will lead to fewer codes being updated less often in HI, which will negatively impact building occupants. By eliminating the appointment of a subcommittee comprised of county building officials whose duties are to recommend changes, authority is taken away from Hawai‘i's county building officials, the very people who are experts on building code updates. Instead, the bill would require consultation with developers that have financial interests and who do not have to face the long-term implications of buildings that are not built to modern building codes. Rather than focusing on cost implications to developers, it is more important to consider the resiliency and safety of building projects and impacts on occupants.

Third, the Hawai‘i Building Codes Council is under resourced. They currently struggle to fulfil their duties, and they lack the administrative and financial support that they are empowered by statute to receive. Adding additional administrative requirements without additional resources will serve as a de facto barrier to future code and standard adoption.

Lastly, requiring cost/benefit analysis consultation with developers, contractors, and builders, and requiring the inclusion of a report from the same groups regarding code and standard updates is a departure from the current balanced and fair process. Privileging the voices of one coalition in this complex process could throw future energy standard and building code updates into jeopardy. An amendment requiring additional consultation with energy efficiency advocates and building science and technology organizations such as ASHRAE would help the Council remain balanced but would still impose burdensome administrative work on the group.

We also wish to inform you that rigorous studies on the financial and environmental impact of energy code and standard adoption are already produced by the United States Department of Energy and the Pacific Northwest National Laboratory. These reports are an unbiased, science-based analysis of the costs and benefits of updating Hawai‘i 's energy codes and standards. The two most relevant reports for your attention are:

- Cost-Effectiveness of ANSI/ASHRAE/IES Standard 90.1-2019 for Hawai'i: this study shows the costs and benefits of updating the state's commercial building energy code. In summary, no increase in construction costs are expected.
- Cost-Effectiveness of the 2021 IECC for Residential Buildings in Hawai'i: this study shows the costs and benefits of updating the state's residential building energy code. In summary, homeowners can expect to be cashflow positive inside the first year.

There are many causes of high housing costs, and it would be outside our area of professional expertise to speak authoritatively on them. However, we can point to many counter examples of states that adopt the newest energy standard on cycle and have substantially lower housing and construction costs than Hawai'i , indicating that at most energy standards and codes are a marginal factor in Hawai'i 's housing crisis. For example, Montana, Florida, and Oregon all update to the newest edition of ASHRAE's 90.1 energy standard every three years. This legislation cites the median price of a single-family home in Hawai'i as $825,000. This can be compared to $609,900 in Montana, $405,00 in Florida, and $490,200 in Oregon.[1] More generally, we know that there is a substantial return on investment when it comes to building codes: up to date model building codes save $11 for every $1 invested through disaster mitigation benefits.[2] Additionally, a study has shown that the lower utility bills delivered by using up-to-date energy codes reduce mortgage default rates by about a third. Finally, numerous case studies have shown that updating to modern and more stringent building safety codes and energy codes is not associated with an increase in housing and construction costs.[3,4,5]

In conclusion, ASHRAE opposes HI SB 120, and urges the swift dismissal of this legislation in the Senate Committee on Public Safety, Intergovernmental and Military Affairs. 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. We can be reached at GovAffairs@ashrae.org. On behalf of our 54,000 members worldwide and our 250 members in HI, thank you for your consideration of our comments.

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[1] McMillin, David. 2024. "Median Home Prices in Every State." Bankrate. January 3, 2024. https://www.bankrate.com/real-estate/median-home-price/#median-price-by-state.

[2] "PROTECTING COMMUNITIES AND SAVING MONEY The Case for Adopting Building Codes." FEMA, November 2020. Accessed January 23, 2025. https://www.fema.gov/sites/default/files/2020-11/fema_building-codes-save_brochure.pdf.

[3] National Institute of Standards and Technology. "Cost Analyses and Benefit Studies for Earthquake-Resistant Construction in Memphis, Tennessee." NEHRP, December 2013. Accessed January 23, 2025. https://nehrp.gov/pdf/NIST%20GCR%2014-917-26_CostAnalysesandBenefitStudiesforEarthquake-ResistantConstructioninMemphisTennessee.pdf.

[4] Simmons, Kevin M., and Paul Kovacs. 2018. "Real Estate Market Response to Enhanced Building Codes in Moore, OK." *International Journal of Disaster Risk Reduction* 27 (March): 85–93. https://doi.org/10.1016/j.ijdrr.2017.09.040.

[5] Quarles, Stephen, Ph.D., and Kelly Pohl M.Sc. "Building a Wildfire-Resistant Home: Codes and Costs." Headwater Economics, November 2018. https://headwaterseconomics.org/wp-content/uploads/building-costs-codes-report.pdf.

Sincerely,

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