

BILL004(23)

Testimony

MISC. COMM. 89

HOUSING, SUSTAINABILITY AND HEALTH (HSH)

HOUSING, SUSTAINABILITY AND HEALTH (HSH) Meeting

Meeting Date: Mar 1, 2023 @ 02:30 PM

Support: 7

Oppose: 2

I wish to comment: 3

Name: Camile Cleveland	Email: camile.cleveland@gmail.com	Zip: 96816
Representing: Self	Position: Support	Submitted: Feb 26, 2023 @ 08:58 PM
Testimony: I strongly support this bill.		
Name: Melissa Miyashiro	Email: melissa@blueplanetfoundation.org	Zip: 96813
Representing: Blue Planet Foundation	Position: Support	Submitted: Feb 28, 2023 @ 06:18 AM
Name: Will Kane	Email: willk@strategies360.com	Zip: 96813
Representing: Hawaii Gas	Position: I wish to comment	Submitted: Feb 28, 2023 @ 11:07 AM
Name: June Chee	Email: june.chee@hawaiianelectric.com	Zip: 96840
Representing: Hawaiian Electric	Position: Support	Submitted: Feb 28, 2023 @ 12:06 PM
Name: Pane Meatoga III	Email: pane@hoeisf.com	Zip: 92707
Representing: Hawaii Operating Engineers Industry Stabilization Fund	Position: Oppose	Submitted: Feb 28, 2023 @ 12:17 PM
Name: Mark Glick	Email: howard.c.wiig@hawaii.gov	Zip: 96813
Representing: Hawaii State Energy Office	Position: Support	Submitted: Feb 28, 2023 @ 12:44 PM
Name: Caroline Carl	Email: caroline.a.carl@leidos.com	Zip: 96817
Representing: Hawaii Energy	Position: Support	Submitted: Feb 28, 2023 @ 12:45 PM
Name: Howard Wiig	Email: howard.c.wiig@hawaii.gov	Zip: 96813
Representing: Hawaii State Energy Office	Position: Support	Submitted: Feb 28, 2023 @ 12:53 PM
Name: Evan Oue	Email: eoue@imanaka-asato.com	Zip: 96813
Representing: NAIOP Hawaii Chapter	Position: Oppose	Submitted: Feb 28, 2023 @ 01:55 PM
Name: Joy Kimura	Email: jkimura@hawaiilecet.org	Zip: 96825
Representing: Hawaii LECET	Position: I wish to comment	Submitted: Feb 28, 2023 @ 05:15 PM
Name: Stefanie Sakamoto	Email: ssakamoto@imanaka-asato.com	Zip: 96789
Representing:	Position:	Submitted:

BIA Hawaii	I wish to comment	Feb 28, 2023 @ 08:30 PM
Name: Julia Fink	Email: julia@aiahonolulu.org	Zip: 96813
Representing: The American Institute of Architects (AIA), Honolulu Chapter	Position: Support	Submitted: Mar 1, 2023 @ 11:34 AM
Testimony: AIA Honolulu is supportive of the amendments proposed to the State Energy Code for the City & County of Honolulu. AIA has a strong focus on climate action and these amendments are a conservative step towards the energy goals of the City & County of Honolulu and the State of Hawaii as a whole.		



COMMITTEE ON HOUSING, SUSTAINABILITY & HEALTH
City & County of Honolulu
March 1, 2023, 2:30 PM

TESTIMONY IN SUPPORT OF BILL 4 (2023)

Aloha Chair Weyer, Vice Chair Kia'aina, and Committee members:

Blue Planet Foundation **supports Bill 4 (2023)**, which timely updates the City's Building Energy Conservation Code to the 2018 edition of the International Energy Conservation Code (the State Energy Code), with local amendments.

Building codes have direct and indirect impacts on our wellbeing and quality of life. By establishing and regularly updating uniform state and county building codes, the City can ensure that building design, construction, and operation address society's most important concerns, including public health and safety, environmental protection, and consumer protection against costly monthly utility bills.

Timely energy code updates support the City's climate goals and lower monthly utility bills

The primary function of energy codes is to reduce energy consumption in buildings, which reduces greenhouse gas emissions and pollution from burning fossil fuels—key priorities if we hope to achieve Hawai'i's ambitious climate goals. Energy codes can also lessen peak energy demand and reduce our reliance on imported energy sources, which increases utility system reliability and energy security, respectively. Moreover, energy codes create a more comfortable living and working environment through improved indoor air quality. They also help occupants save money by reducing monthly energy bills, which stimulates the economy.

States and municipalities across the country use national model codes and standards—like the International Energy Conservation Code (IECC)—as a starting place for adopting state- and local-specific versions based on their unique characteristics and climates. Like other jurisdictions, Hawai'i and its four counties develop their building energy codes based upon the IECC. A governing body—the International Code Council—produces an updated version of the IECC through a democratic and deliberative process every three years. As noted by the Environmental and Energy Study Institute, "[t]he process of updating model codes every three years is optimal to ensure new technologies, materials and methods, as well as better

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approaches to health and safety, can be incorporated into the next generation of buildings with sufficient time for proof of performance.”¹

In addition to updating the City’s Building Energy Conservation Code to the State Energy Code (IECC 2018), there are a number of important local amendments proposed in Bill 4 that will support long-term affordability for Hawai’i residents and businesses while moving the City closer to achieving its goals set forth in the science-based, Council-adopted Climate Action Plan for O’ahu.

- **Adopt a voluntary stretch code:** This *100% voluntary stretch code* provides non-mandatory guidance to encourage building industry leaders who choose to go above and beyond the baseline code. The focus on the stretch code proposed in Bill 4 relates to the design of grid-interactive, efficient buildings (GEBs). As is critical in Hawai’i as we transition to 100% renewable energy, GEBs can flex their energy load depending on the time and cost of electricity throughout the day to limit costly peaks in demand on the electricity grid. Stretch codes have been used widely in other jurisdictions to help accelerate market acceptance and adoption of future versions of the energy code while maintaining flexibility for developers to plan for the future.
- **Require large, single-family homes (those over 4,000 square feet) to be highly energy-efficient:** This provision can help drive adoption of best practices that support long-term energy savings without negatively impacting affordable housing.

Finally, we urge the Committee to preserve the existing EV- and PV-ready provisions adopted in the last Energy Code update, which have been critical for accelerating affordable, clean energy for residents and building out O’ahu’s woefully inadequate electric vehicle charging network. It is essential we maintain these provisions if we are serious about meeting an equitable clean energy future. We cannot afford to backtrack on our progress towards the City’s climate, equity, and resilience goals.

Conclusion

Most individuals spend a majority of their lives inside buildings. Yet buildings are often overlooked as important levers for influencing our safety, health, and economic and environmental quality of life. Providing regular and timely updates to building codes is crucial for keeping pace with changing technology, updated health and safety standards, and the City’s clean energy and climate goals. After all, **buildings constructed today will remain in our building stock for decades to come.**

Thank you for the opportunity to provide testimony.

¹ Vaughn, Ellen and Jim Turner, *The Value and Impact of Building Codes*, 2013, <https://www.eesi.org/files/Value-and-Impact-of-Building-Codes.pdf>.



The Honorable Mathew Weyer, Chair
The Honorable Esther Kia'āina, Vice Chair
Members of the committee on Housing, Sustainability and Health

Bill 4 (2023)
Wednesday, March 1, 2023 @ 2:30 p.m.
Honolulu Hale

RE: Bill 4 (2023) - Relating to the Adoption of the State Energy Conservation Code

Chair Weyer, Vice Chair Kia'āina and members of the Committee,

Hawaii Gas **supports the intent** of Bill 4 (2023), however we have concerns about two provisions in the bill that are, as currently drafted, in direct conflict with state statute.

Bill 4's water heating provision for homes under and at 2,000 sq ft essentially eliminates gas energy, including renewable natural gas and hydrogen, as an energy choice for anyone building a new home of this size. By incorporating these provisions, the city is determining which systems will be used in new single-family home construction, and is attempting to eliminate other approved options.

In HRS 196-6.5, the state has already established the standard of a solar water heater for new home construction. Contained within that statute is a provision that allows for an exemption due to very specific reasons, that would allow other renewable energy technology systems to be used. If this bill stands as written, it will conflict with that statute by restricting the installation to solar and electric only.

To address this conflict, we request sections 35 and 36 of Bill 4 (2023), be amended as follows:

Amending item (35) to read:

“(35) Adding Section R401.3. Section R401.3 is added to read:

R401.3 Large home compliance. Single-family homes with less than 2,000 sf of conditioned space shall comply with Section R401.3.1. *This section shall not apply if the single-family home with less than 2,000 sf of conditioned space has been granted a variance under the conditions set forth in HRS 196-6.5.*



Single-family homes with 2,000 sf of conditioned space or more shall comply with Section R401.3.1 and R401.3.2. *This section shall not apply if the single-family home with 2,000 sf of conditioned space has been granted a variance under the conditions set forth in HRS 196-6.5.*

***Exception:** If an architect or mechanical engineer licensed under HRS Chapter 464 attests and demonstrates that: (1) installation is impracticable due to poor solar resource; (2) installation is cost-prohibitive based upon a life cycle cost-benefit analysis that incorporates the average residential utility bill and the cost of the new solar water heater system with a life cycle that does not exceed thirty years; (3) a renewable energy technology system, as defined in HRS Section 235-12.5, is substituted for use as the primary energy source for heating water; or (4) demand water heater device approved by CSA International is installed, provided that at least one other gas appliance is installed in the dwelling. For the purpose of this section, "demand water heater" means a gas-tankless instantaneous water heater that provides hot water only as it is needed.*

Amending item (36) to read:

(36) Adding Subsection R401.3.1. Subsection 401.3.1 is added to read:

R401.3.1 Minimum efficiency. Buildings shall comply with the following requirements. These measures shall be treated as mandatory, and no credit shall be taken for the measures in the compliance path selected for compliance with R401.2:

(a) Electric storage water heaters with a rated water storage volume of 40 gallons (150L) to 120 gallons (450L) and a nameplate input rating equal to or less than 12kW shall be provided with demand responsive controls in accordance with ANSI/CTA-2045-B, Level 2.

(b) Installed appliances shall be smart appliances capable of responding to grid signals.

(c) Section R401.3.1 and R401.2 shall not apply if the building has been granted a variance under the conditions set forth in HRS 196-6.5.

***Exception:** If an architect or mechanical engineer licensed under HRS Chapter 464 attests and demonstrates that: (1) installation is impracticable due to poor solar resource; (2) installation is cost-prohibitive based upon a life cycle cost-benefit analysis that incorporates the average residential utility bill and the cost of the new solar water heater system with a life cycle that does not exceed thirty years; (3) a renewable energy technology system, as defined in HRS Section 235-12.5, is substituted for use as the primary energy source for heating water; or (4) demand water heater device approved*



by CSA International is installed, provided that at least one other gas appliance is installed in the dwelling. For the purpose of this section, "demand water heater" means a gas-tankless instantaneous water heater that provides hot water only as it is needed.

Hawaii Gas is committed to doing our part to reduce the effects of climate change on our state, and the planet, and we are making great strides. We have been proactively working on initiatives to reduce our carbon footprint even prior to the state passing a law in 2018 to be carbon neutral by 2045. In fact, we have the LOWEST carbon footprint of any energy utility in the state.

We already produce clean, renewable, affordable and reliable energy, including solar. HG currently generates Renewable Natural Gas (RNG) at the Honouliuli Wastewater Treatment Plant, as well as hydrogen at our Synthetic Natural Gas (SNG) facility in Campbell Industrial Park. We are turning your waste into a renewable gas resource, which is being used to power the very efficient, affordable on demand gas water heaters Bill 4 (2023) seeks to eliminate.

The cost of housing in Hawaii is already outrageous. For some residents, the added cost of a solar water heater, instead of a gas option, is just too much. Gas water heaters offer an affordable, reliable and CLEAN and now RENEWABLE choice.

We strongly support the mission to help Hawaii reach its clean energy goals. Our actions prove that and will continue to do so, as we look forward to working with the City and County and private entities on more RNG projects. Our current biogas facility at Honouliuli Wastewater Treatment Plant removes the greenhouse gas equivalent of 400 cars from our roads annually and eliminates the need for 15,000 barrels of oil. As we develop more of these opportunities, those numbers will only grow. The Waimanalo Gulch landfill and Sand Island wastewater treatment plant are sources of biogas that exist today, which we are more than willing to partner with the City and County of Honolulu to develop into renewable natural gas as soon as possible. In turn, this will increase HG's renewable content, provide the City and County of Honolulu with a new revenue source, and further reduce greenhouse gas emissions for our state. This is a win-win-win for everyone.

The renewable energy field is a big one. Hawaii Gas believes there is a role for solar, wind—and gas energy, including an increasing role for renewable natural gas and hydrogen, but that option only exists if the laws passed don't short circuit their use.

Mahalo for the opportunity to testify on Bill 4 (2023).



**Hawaiian
Electric**

**WRITTEN TESTIMONY BEFORE THE HONOLULU CITY COUNCIL
COMMITTEE ON HOUSING, SUSTANABILITY AND HEALTH**

**BILL 4 (2023), Proposed CD1
Relating to the Adoption of the State Energy Conservation Code
March 1, 2023
2:30 p.m.
City Council Chamber**

**June Chee
Program Manager, Electrification of Transportation
Hawaiian Electric**

Chair Weyer, Vice Chair Kia'āina, and Members of the Committee:

My name is June Chee, and I am testifying on behalf of Hawaiian Electric in support of Bill 4 (2023), Proposed CD1, relating to the adoption of the State Energy Conservation Code (2018).

Bill 4 (2023), Proposed CD1 seeks to update the City and County of Honolulu Building Energy Conservation Code through the adoption of the Hawaii State Energy Conservation Code. One of the amendments included in the proposed measure integrates electric vehicle (EV) readiness pathways for newly constructed residential multi-unit and commercial buildings. Bill 4 (2023), Proposed CD1 is consistent with the City and County of Honolulu Ordinance 20-10, which updated the City and County of Honolulu energy code to the State Energy Conservation Code (2017). The current energy code includes several local amendments to expand access to energy efficiency improvements, solar power, and electric vehicles for O'ahu residents and should remain as proposed in Bill 4 (2023), Proposed CD1.

Existing multi-unit residences and commercial buildings face expensive retrofits to include EV charging infrastructure in their parking facilities. For new construction,

installing EV charging capability during the initial construction of a building mitigates and avoids the increased cost of retrofitting. Hawaiian Electric supports the measure's flexible and creative compliance pathways that help manage developers' costs associated with meeting the bill's EV-ready objectives.

Furthermore, while the bill proposes EV ready infrastructure exemptions for new affordable housing rentals, it is important to ensure equitable access to electric vehicles for all as the affordability for electric vehicles improves. Recently, the Public Utilities Commission opened Docket No. 2022-0250 to investigate how to better integrate energy equity and justice considerations across Commission work given its role overseeing and regulating the functions of public utilities. One of the focus areas of this docket is equitable access to clean energy.

The need for more EV charging stations on O'ahu continues to grow. In January 2023, the number of EVs in the state was 22,806, a 26.2 percent increase from the previous year.¹ On O'ahu, EV ownership is forecasted to increase to approximately 430,000 vehicles by 2045 making 55 percent of light-duty vehicles on O'ahu roads fully electric.² Including EV-ready infrastructure in new building construction is crucial to ensure equitable access to Hawaii's clean transportation future

Accordingly, Hawaiian Electric supports Bill 4(2023), Proposed CD1 . Thank you for this opportunity to testify.

¹ Hawaii State Department of Business, Economic Development and Tourism, Monthly Energy Trends, January 2023 [Energy Trend.pdf \(hawaii.gov\)](#)

² Hawaiian Electric. [Electrification of Transportation Strategic Roadmap \(hawaiianelectric.com\)](#)



Hawaii Operating Engineers
Industry Stabilization Fund
2181 Lauwiliwili Street
Kapolei, HI 96707
Phone: (808) 845-6221
Website: www.hoeisf.com

February 28, 2023

Honorable, Matt Weyer, Honolulu City Council Committee on Housing, Sustainability and Health, Chair
Honorable, Esther Kia'aina, Vice Chair
Honorable Members of the Honolulu City Council Committee on Housing, Sustainability and Health

RE: BILL 4 (2023) – RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE. UPDATING THE BUILDING ENERGY CONSERVATION CODE OF THE CITY AND COUNTY OF HONOLULU THROUGH THE ADOPTION OF THE HAWAII STATE ENERGY CONSERVATION CODE. (BILL PASSED FIRST READING ON 2/22/23)

Dear Chair, Weyer, Vice Chair Kia'aina and Members of the Committee,

My name is Pane Meatoga III and I am the Community Liaison representing the Hawaii Operating Engineers Industry Stabilization Fund (HOEISF). We are a labor management fund representing 3000 unionized members in heavy engineering site work and 500 general contractors specializing in heavy site and vertical construction. Our organization would like to offer our testimony in opposition to Bill 4.

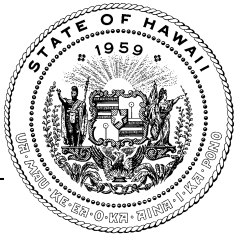
Our organization understand the need for having a uniform energy conservation code, but we are opposed to amendments to the 2021 IECC that will add unnecessary costs to housing. In our opinion, there is no good reason to exceed the current code requirements. An analysis of the true cost to housing of each proposed amendment should be conducted before adoption.

As we all know, Hawai'i is facing a housing crisis. Our young people – the future of our state – are leaving Hawai'i because they cannot afford to live here and there is lack of affordable housing. Adding restrictive codes that drive up the costs of housing is not what the City and County of Honolulu needs to do right now. It should be looking at ways to increase the housing supply.

We respectfully ask that the Committee on Housing, Sustainability and Health hold this bill in committee.

Mahalo,

Pane Meatoga III
Community Liaison
Hawaii Operating Engineers Industry Stabilization Fund



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

JOSH GREEN, M.D.
GOVERNOR

MARK B. GLICK
CHIEF ENERGY OFFICER

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energy.hawaii.gov

Testimony of
MARK B. GLICK, Chief Energy Officer

before the
CITY COUNCIL, CITY AND COUNTY OF HONOLULU

Wednesday, March 1, 2023
2:30 PM
City Council Chamber and Videoconference

In Support of
Bill 4 (2023), CD1

RELATING TO ADOPTION OF THE STATE ENERGY CONSERVATION CODE.

Chair Waters, Vice Chair Kia'āina, and Members of the Council, the Hawai'i State Energy Office supports the adoption of Bill 4 (2023), relating to the adoption of the 2018 State Energy Conservation Code.

HSEO's testimony is guided by its mission to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy, decarbonized economy.

As affordable housing is an imperative for both state and city officials, allow us to highlight several initiatives in Bill 4 aimed at reducing construction costs.

C402.2.2, Above grade walls, exempts builders from the 2018 IECC requirement of specifying R 5.7 continuous insulation on the exterior of mass (concrete) walls by allowing three alternative compliance paths. This provision takes advantage of Hawai'i's mild climate.

C 405.2, Lighting controls, exempts builders from installing expensive lighting controls involving time switching and daylighting by specifying lighting power density that is twenty percent lower than 2018 IECC levels. Given the significant improvements to LED lamps, a twenty percent improvement in efficacy is readily achievable..

R402.2.5 Mass walls, allows exterior residential walls to comply via three alternate paths, taking advantage of Hawai'i's mild climate.

Table R 402.1.3 (d), Floor R-value, eliminates the requirement for R-13 insulation in residential floors in recognition of Hawai'i's very low temperature difference between interior and exterior temperatures and reduces construction costs by several thousand dollars.

R404.1.2, High-efficiency lamps, raises the minimum efficiency of common service lamps (light bulbs) above 2018 IECC levels. Higher efficiency allows specification of lower-wattage lamps or fewer lighting fixtures, both of which lower construction costs and take advantage of the rapid improvement of LED lamps.

Thank you for the opportunity to testify on this bill.



Hawai'i Energy

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Before the Honolulu City Council – Committee on Housing, Sustainability and Health
Wednesday, March 1, 2023 at 2:30 p.m.

Testimony on Bill 4 relating to the Adoption of the State Energy Conservation Code.

Chair Weyer, Vice Chair Kia'aina, and Members of the Committee:

Thank you for the opportunity to provide comments in support of Bill 4.

Hawai'i Energy works to empower island families and businesses on behalf of the Hawai'i Public Utilities Commission (PUC) to make smart energy choices to reduce energy consumption, save money, and pursue a 100% clean energy future. Energy efficiency – the energy we do not use – is the cheapest option to help us achieve our 100% clean energy goal by eliminating waste and being more efficient. We believe updated energy codes are critical in this effort and part of a global movement of make progress on climate change mitigation through codes and standards.

International Energy Conservation Code (IECC) 2018 represents the latest opportunity for the Honolulu City Council to update building codes, as required by state law, with local amendments. We applaud the Council's efforts in 2020 to update its energy codes for the first time in more than a decade, and we support the ongoing effort to develop Bill 4 with building industry stakeholders to ensure the updated codes make sense for the City and County of Honolulu.

The amended IECC 2018 will promote greater energy resilience and help Hawai'i reach our statewide commitment to achieve 100 percent clean energy by 2045. The O'ahu amendments were carefully developed with the input of many agencies, organizations and the design and construction industry to minimize unintended consequences such as increased construction, materials and labor costs – while assuring occupants the benefits of high-performance buildings that consume less electricity.

Hawai'i Energy supports the adjustments to IECC 2018 to ensure the code actually makes sense for Hawai'i, including keeping us aligned with the market's shift to LEDs, provisions to reduce unnecessary heat gain in new buildings, and simplifications of the code for our unique market. We also support the intent of the energy stretch code amendments to open up opportunity of increased collaboration between building development teams and the electricity sector to enable high performance buildings to better support the grid and the large volume of renewable energy being added annually, and the increased energy performance requirements for larger homes.

Thank you for the opportunity to testify in support of Bill 4. The sensible energy code amendments in the proposed Building Energy Conservation Code of the City and County of Honolulu are a critical chance for O'ahu to take another step forward in the transition to 100 percent clean energy. They will provide lasting economic benefits to residents and businesses who are already burdened with high costs. We encourage the Committee to pass the adoption of these provisions. If you have any questions on Hawai'i Energy's programs or our work toward the adoption of stronger energy codes, please do not hesitate to contact me.

Sincerely,

Caroline Carl
Executive Director
Hawai'i Energy

HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
CITY COUNCIL, CITY AND COUNTY OF HONOLULU

Wednesday, March 1, 2023
2:30 PM
City Council Chamber and Videoconference

In Support of
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Thank you for the opportunity to testify on this bill.



February 28, 2023

Councilmember Matt Weyer, Chair
Councilmember Esther Kia'aina, Vice Chair
Members of the Committee on Housing Sustainability
and Health

RE: **Bill 4 – RELATING TO THE ADOPTION OF THE STATE ENERGY
CONSERVATION CODE.**
Hearing date – March 1, 2023 at 2:30 p.m.

Aloha Chair Weyer, Vice Chair Kia'aina and members of the Committee,

Thank you for allowing NAIOP Hawaii to submit testimony in **OPPOSITION TO BILL 4 – RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE**. NAIOP Hawaii is the Hawaii chapter of the nation's leading organization for office, industrial, retail, residential and mixed-use real estate. NAIOP Hawaii has over 200 members in the State including local developers, owners, investors, asset managers, lenders and other professionals.

Hawaii is facing a severe housing affordability crisis. The building of affordable housing in Hawaii has become increasingly more difficult. Currently, interest rates for 30 years fixed residential mortgages have significantly risen from 3.07% to 6.90% within the past 2 years representing a near 150% increase. This has led to a dramatic increase in monthly costs of owning a home in Hawaii. Moreover, construction loan interest rates have increased from .05% to 3.81% representing a nearly seventy-five-fold increase which dramatically increase the costs of building residential units.

In addition, during this high-cost period, building codes have created additional challenges for home building. The simple reality is that the building codes have changed from minimum standards for the health and safety of building occupants to a regressive tax on housing.

Accordingly, NAIOP Hawaii opposes proposed amendments to the 2021 IECC which will add unnecessary costs to housing. Specifically, cost benefit analysis shows that there is no good reason to exceed the current code requirements especially during a severe housing affordability crisis.

Councilmember Matt Weyer, Chair
Councilmember Esther Kiaʻaina, Vice Chair
Members of the Committee on Housing Sustainability
And Health
February 28, 2023

An analysis of the true cost to housing of each proposed amendment should be conducted by the SBCC prior to adoption. Consequently, we have identified the following areas of specific issues where NAIOP Hawaii requests that the SBCC reject the proposed code amendments for the following reasons:

- 1) The change to **C405.2 Lighting controls**: Multifamily Residential Common Areas such as corridors and lobbies, should be excluded from occupancy controls. Justification: Lighting controls add significant upfront cost to the price of housing and often yield minimal energy savings. Based on our calculations on the cost of the lighting control system for the corridors and lobbies to the residential Buyers our typical five-story multifamily building, the payback period for the cost of the system is between 8 and 9 years.
- 2) Response to **C405.12 End-use metering**: This chapter is new to the 2021 IECC. As it applies to multifamily R-2 Occupancies, we are interpreting this additional end-use metering to encompass spaces that are metered off the HECO “House Meter”. Spaces include, but are not limited to, lobbies, corridors, stairwells, trash rooms, elevators, mail rooms, manager’s office, amenity spaces, etc. The separate categories for sub-metering these spaces are as indicated in Table C405.12.2 (HVAC system(s), Interior lighting, Exterior lighting, Plug loads, Process loads, and Building operations and other miscellaneous loads). It is our opinion that multifamily residential should be exempt from C405.12. Justification: Submetering electrical for these categories within the common area of multifamily residential will add significant upfront cost for the infrastructure, for the on-going monitoring, and storing and reporting of data. *(Per section C405.12.4 and 5, data must be kept for each end-use category required for at least each hour, day, month and year for the previous 36 months)*. The data obtained by sub-metering the common area electrical is easily estimated by other means. For new condominiums, the estimated monthly electrical costs are calculated when developing the overall maintenance cost of the building, and the electrical cost for the spaces and the categories are typically consistent from month to month, with very little variance. If the electrical consumption for these spaces is inconsistent with the estimated consumption, an electrical audit would easily and much more cost effectively be done to verify the electrical consumption by category. In the example of our five-story multi-family buildings, this may include 30 or more sub-metered circuits, per building, larger and more costly electrical circuit boxes that will accommodate the CT readers, additional equipment to receive the data and a dedicated computer to store the data.

Suggested response to SBCC amendments to **C406.3.1 Reduced lighting power by more than 10 percent**: The SBCC’s proposed amendment further reduces the allowable interior lighting power to 20 percent, from the 10 percent allowed by the 2021 IECC. Our opinion is that the C406.3.1 should remain as written in the 2021 IECC, without amendments. Justification: the 2021 IECC is the latest version of the energy code, and thus is the version in which the lighting manufacturers are working to comply with. Thus, any additional reduction will limit the lighting SKUs available to cost effectively meet the new code requirements and may create supply issues. The additional reduction proposed by the SBCC appears to be arbitrary and not based on actual information or costs from lighting manufacturers.

- 3) Response to SBCC amendments to **C406.3.2 Reduced lighting power by more than 15 percent**: The SBCC’s proposed amendment further reduces the allowable interior lighting power to 25 percent, from the 15 percent allowed by the 2021 IECC. Our opinion is that the C406.3.2 should remain as written in the 2021 IECC, without amendments. Justification: the 2021 IECC is the latest version of the energy code, and thus is the version in which the lighting manufacturers are working to meet. Thus, any additional reduction will limit the lighting SKUs available to cost effectively meet the new code requirements and may create supply issues. The additional reduction proposed by the SBCC appears to be arbitrary and not based on actual information or costs from lighting manufacturers.
- 4) Response to SBCC amendments to **C406.3.3 Lamp efficacy**: The SBCC’s proposed amendment increases the lumens per watt allowed beyond what is written on the 2021 IECC. Our opinion is that C406.3.3 should remain as written in the 2021 IECC, without further amendments. Justification: the 2021 IECC is the latest version of the energy code, and thus is the version in which the lighting manufacturers are working to meet. Any additional reduction will limit the lighting SKUs available to cost effectively meet the new code requirements and may create supply issues. The additional reduction proposed by the SBCC appears to be arbitrary and not based on actual information from lighting manufacturers. The proposed efficacy is well beyond what is available today in cost-efficient builder-series lighting.
- 5) Response to SBCC’s proposed addition of **C409 Electric Vehicle Efficiency**: Our opinion is that it is best to leave the EV issue with the Counties, rather than included in the State’s Energy Code. Justification: These requirements are already included in Honolulu’s version of the Energy Code (Chapter 32 – Article 1. Building Energy Conservation Code). What works for Honolulu, may not

work for other counties. If the SBCC does leave the Electric Vehicle requirements into the State's version of the IECC, they should further replicate the language in the current version of the C&C of Honolulu's Building Energy Conservation Code. The SBCC's version removes the language regarding Developer's flexibility to aggregate the points across multiple projects and phases; provided that each individual project achieves no less than 10 percent compliance or adds a minimum of one electric vehicle charger ready parking space per project, whatever is greater.

- 6) Response to proposed amendments to **R407.2 Tropical climate Item 11. AND R409 Points option, Item 11 (ceiling fans):** The SBCC should leave the original language as written from the 2021 IECC. Justification: Ceiling fans add significant upfront cost to new housing. Currently, developers install junction boxes for a ceiling fan to allow the home buyer to choose the ceiling fan that best matches their home décor and personal preference since choosing a ceiling fan is personal. Ceiling fans are easy to install by the homeowner after move-in. Ceiling fans, more than lighting, are a personal decorator item that is best left to the homeowner to buy and install. The expected replacement of the builder-provided ceiling fans is expected to be prevalent, resulting in ceiling fans in landfills.
- 7) Comment on the **R409 Points option for both Standard Home Points and Tropical Home Points:** It appears that on table 409.1 Points Option, that on the Wood Frame, "No air conditioning install," the 2 points previously provided in the Tropical Home Points has been eliminated. This may be an error on the draft proposed amendments, but this needs clarification.
- 8) Response on proposed revision of **R409.2 Requirements:** The cumulative points that previously were 0 (zero) has been arbitrarily increased to 2 (two) points. This is problematic and will result in additional cost of homes. The justification that the SBCC has provided is that "*Building technologies have improved since the section was written. Achieving two points is readily achievable in a cost-effective manner.*" We disagree that this is cost-effective, there will be added cost as a result of moving the goal line. We recommend leaving the point system as is.
- 9) Response to amendments in **R401.3.1 (b) relating to installation of smart appliances capable of responding to grid signals.** The primary concern is that no manufacturer currently has product to fulfill this requirement. Mandating a product that is currently not available is impracticable and impossible to comply with.

Councilmember Matt Weyer, Chair
Councilmember Esther Kia'aina, Vice Chair
Members of the Committee on Housing Sustainability
and Health
February 28, 2023

10) Response to amendments to **Section 408 relating to Solar and EV readiness.**

The city is asking that plans show all design details for a 5KW system. Currently, permitted plans do not have stamps from electrical consultants which would increase costs for developers to hire such a consultant to draw the plans. Further, architects that design the plan will not warrant said plans if another contractor installs the system. Moreover, PV and solar contractors will not utilize the conduit installed by another contractor and will not warrant conduit that they did not install. Lastly, the measure mandates the installation of 1.5" PVC conduit which is too rigid and will not snake through the house. Ultimately, these mandates operate as another tax on our residents and will only further increase the cost to build homes in Hawaii.

We strongly encourage the SBCC to refrain from moving forward with any decision making on this code until a cost benefit analysis is done on each of the proposed amendments. We appreciate your consideration of our comments and hope to work with you to do the analysis necessary to fully vet and consider the true cost impact of the proposed amendments so that such impacts may be weighed against the perceived benefits of the proposed changes. We would be happy to discuss our comments with you and any questions you may have.

Accordingly, NAIOP Hawaii opposes this measure due to the impacts that it will have on getting homes built for our residents. Thank you for the opportunity to testify on this measure.

Mahalo for your consideration,



Jennifer Camp, President
NAIOP Hawaii



HAWAII LABORERS-EMPLOYERS COOPERATION AND EDUCATION TRUST

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February 28, 2023

**HONOLULU CITY COUNCIL
Committee on Housing, Sustainability and Health
City Council Chamber
Honolulu, Hawaii 96813
DATE: Wednesday, March 1, 2023
TIME: 2:30 p.m.**

TESTIMONY ON BILL 4 (2023) - RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE

**To Committee Chair Weyer, Vice Chair Kia`aina and members of the Honolulu City
Council Committee on Housing, Sustainability and Health:**

Hawaii LECET is a labor-management partnership between the Hawaii Laborers' International Union of North America, Local 368, its' 5000+ members and its' 250+ unionized contractors. The Laborers' International Union of North America is the largest construction union in the United States.

Mahalo for the opportunity to testify on Bill 4 (2023), which seeks to update the Building Energy Conservation Code of the City and County of Honolulu. We ask that the Committee on Housing, Sustainability and Health defer Bill 4 (2023) at this time, to allow interested parties time to discuss sections of this Bill that are of concern.

Thank you for your consideration and support.

With respect,

Hawaii Laborers-Employers Cooperation & Education Trust



**HONOLULU CITY COUNCIL
COMMITTEE ON HOUSING AND SUSTAINABILITY
Honolulu Hale
2:30 PM**

March 1, 2023

RE: Bill 4 (2023) - RELATING TO THE STATE ENERGY CONSERVATION CODE

Chair Weyer, Vice Chair Kiaaina, and members of the Council:

My name is Greg Thielen, Codes Committee Chair of the Building Industry Association of Hawaii (BIA-Hawaii). Chartered in 1955, the Building Industry Association of Hawaii is a professional trade organization affiliated with the National Association of Home Builders, representing the building industry and its associates. BIA-Hawaii takes a leadership role in unifying and promoting the interests of the industry to enhance the quality of life for the people of Hawaii. Our members build the communities we all call home.

BIA Hawaii is in opposition to portions of the proposed Energy Code, and offers the following comments to address these objections.

BIA Hawaii and our individual members have been engaged with the Office of Climate Change Sustainability and Resilience (OCCSR) on these Energy Code amendments for the last 7 months. We appreciate the level of outreach OCCSR provided as well as our successful collaboration on much of what is now being proposed. Nevertheless, we continue to take issue with some of this Energy Code as written. The bottom line is that all of these amendments are more stringent than both the original model code as well as the State of Hawaii approved Energy Code. More stringent equals more expensive and we can't afford to make housing more expensive than we must. Despite the added cost, BIA only objects to the following specific amendments:

We OBJECT to sections C402.2.2 and R402.2.5 as written. These sections deal with thermal resistive value of above grade walls. We have two objections to these portions as written. First, exception 1 should change the words "solar reflectance" to "light resistive value" (LRV). While these words have substantially similar meanings, every paint manufacturer assigns and lists the LRV of each paint color. This simple change will make the code and compliance simpler and more effective. Secondly, exception 3 should be modified to delete the words "where a natural masonry surface is used". There is no accepted definition of a natural masonry surface leaving this portion open to interpretation.

We STRONGLY OBJECT to section 408.2.4.1 Acceptance of Reports and section 408.3.1 Functional Testing. These two mandated steps will add significant consulting cost and slow the already cumbersome Certificate of Occupancy process.

We OBJECT to Appendix CB Honolulu Stretch Code. We recognize this code is optional, however the intention behind this portion of the code was to offer a "carrot and stick" approach. Where is the carrot?

We STRONGLY OBJECT to the entire R401.3 Large Home Compliance section. First off, this portion as written can apply to any home of any size provided even one room has air conditioning. This means very small homes are affected by the Large Home Compliance Section. Secondly, there is no nexus between

home size and energy consumption. It is our experience that many Oahu home owners are turning to multi-generational homes in the face of our increasing housing crisis and those people will be the most

affected by this language. Finally, some of the mandates in this section do not even exist, such as smart appliances capable of responding to grid signals.

We STRONGLY OBJECT to section 408 Solar and Electric Vehicle Readiness as written. To be clear, most of the actual field work required is not objectionable, but the construction documentation requirements are both expensive and impractical. There are two very relevant points when reviewing this section. First and foremost the lack of “readiness” in existing homes does not hinder the installation of PV systems and vehicle chargers. This is clear, as the vast majority of work this industry performs is on homes that aren’t readiness-equipped. Secondly, these mandates are a tax on all new homes, but only the wealthy that can afford PV and Tesla’s will avail themselves of this benefit. BIA Hawaii is willing to work with other stakeholders on arriving at more acceptable language for this section.

The state of Hawaii is in a dire housing crisis. As the Honolulu City Council is aware, the cost of housing in Hawaii is extremely high, with Oahu’s median price of homes being currently over \$1 million. Approximately 153,967 U.S. households are priced out of buying a home for every \$1000 increase in price, according to the National Association of Home Builders (NAHB).

We appreciate the opportunity to express our concerns on Bill 4.

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