BILL004(23)
Testimony

MISC. COMM. 300

COUNCIL

COUNCIL Meeting
Meeting Date: Jun 7, 2023 @ 10:00 AM
Support: 6
Oppose: 3
I wish to comment: 0

Name:	Email:	Zip:
Joy Kimura	jkimura@hawaiilecet.org	96817
Representing:	Position:	Submitted:
Hawaii LECET	Support	Jun 5, 2023 @ 01:29 PM

Name:	Email:	Zip:
Melissa Singson	melissa@tilecoinc.com	96707
Representing:	Position:	Submitted:
Tileco, Inc.	Support	Jun 5, 2023 @ 02:01 PM

Name:	Email:	Zip:
Keith DeMello	kdemello@ulupono.com	96813
Representing:	Position:	Submitted:
Ulupono Initiative	Support	Jun 6, 2023 @ 09:49 AM

Name:	Email:	Zip:
Caroline Carl	caroline.a.carl@leidos.com	96817
Representing:	Position:	Submitted:
Hawaii Energy	Support	Jun 6, 2023 @ 09:56 AM

Name:	Email:	Zip:
Jodi Robinson	jodi@blueplanetfoundation.org	96817
Representing:	Position:	Submitted:
Blue Planet Foundation	Support	Jun 6, 2023 @ 04:53 PM

Name:	Email:	Zip:
Camile Cleveland	camile@huanani.com	96816
Representing:	Position:	Submitted:
Elemental Excelerator	Support	Jun 6, 2023 @ 06:42 PM

Name:	Email:	Zip:
Nita Sawyer	imageofaloha@yahoo.com	96707
Representing:	Position:	Submitted:
Self	Oppose	Jun 6, 2023 @ 08:42 PM

Testimony:
I do not ageee with this code it is causing undue hardship to the citizens of this state by shutting down more affordable energy solutions

Name:	Email:	Zip:
Jessica Gellert	jessica@gellertmedia.com	96786
Representing:	Position:	Submitted:
Self	Oppose	Jun 7, 2023 @ 08:00 AM

Testimony:
I strongly oppose the 64% pay increase for city council members.

Oahu residents are scrambling to get by. A smaller incremental raise would be more justified and fair.

Please kill this bill and create a pay raise plan more comparable to other city workers getting paid with our tax dollars.

Name:	Email:	Zip:
Stefanie Sakamoto	ssakamoto@imanaka-asato.com	96789
Representing:	Position:	Submitted:
BIA Hawaii	Oppose	Jun 7, 2023 @ 09:11 AM

HAWAII LABORERS-EMPLOYERS COOPERATION AND EDUCATION TRUST
650 Iwilei Road, Suite 285 · Honolulu, HI 96817 · Phone: 808-845-3238 · Fax: 808-845-8300

June 5, 2023

HONOLULU CITY COUNCIL
City Council Chamber
Honolulu, Hawaii 96813
DATE: Wednesday, June 7, 2023
TIME: 10:00 a.m.

TESTIMONY ON BILL 4 CD1 (2023) - RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE

To Chair Waters, Vice Chair Kia`aina and members of the Honolulu City Council:

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 international construction trade union in the United States and Canada.

Mahalo for the opportunity to testify on Bill 4 CD1 (2023), which seeks to update the Building Energy Conservation Code of the City and County of Honolulu. We are in support of the language in CD1 regarding the exception for insulation for mass walls as it is currently written in Sections C402.2.2 and R402.2.5, as it provides a clear and concise understanding of the application of this requirement.

In addition, regarding Table R402.1.2, Insulation and Fenestration Requirements by Component, Hawaii LECET supports amending Footnote j(3) to read as follows: "Concrete, CMU and similar mass walls are 6 inches or greater in thickness and have an unpainted finish with or without a clear sealer" to be consistent with the rest of the wording in the proposed Bill 4 CD1.

We would also like to emphasize that the natural benefits of utilizing mass walls, such as superior fire and impact resistance, resistance to mold and termites, and sustainability (building envelopes can be reused and recycled), to name just a few, are negated when cost-prohibited amendments deter utilizing this building material.

Thank you for your consideration.

With respect,

Hawaii Laborers-Employers Cooperation & Education Trust

TILECO INC. 91-209 HANUA STREET | KAPOLEI, HAWAII 96707 | 808.682.5737 | info@tilecoinc.com | www.tilecoinc.com

June 5, 2023

To: Chair Tommy Waters, Vice Chair Esther Kiaʻāina, and members of the Honolulu City Council

Re: TESTIMONY IN SUPPORT OF BILL 4 CD1 (2023) RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE.

Established in 1967, Tileco Inc. manufactures a full range of products, including concrete masonry units, segmental retaining wall systems, landscaping units, aggregates and agricultural lime, for distribution throughout the state of Hawaii.

We are in support of the current proposed language in CD1 to Bill 4 (2023) regarding the exception for insulation in Concrete, CMU, and mass walls 6 inches or greater in thickness:

- In paragraph (16), which amends Section C402.2.2:
  (2) Replaces the language "where a natural masonry surface is used" with "and have an unpainted finish with or without a clear sealer" in Exception 3.
- In paragraph (40), which amends Section R402.2.5:
  (2) Amends Exception 3 by replacing "where a natural masonry surface is used" with "and have an unpainted finish with or without a clear sealer."
- (39) For consistency, we request that Table 402.1.2, footnote j. be updated to include the same language used in the above amendments.

Justifications:

The term “natural masonry surface” is unregulated terminology without formal definition by a governing body, and is therefore subject to interpretation. Replacing “natural masonry surface” with clarifications regarding unpainted finishes and the use of sealers will provide clear and concise compliance prescriptive options for design professionals

The proposed amendment also attempts to reconcile the discrepancy that arises between energy efficiency requirements and affordability when designing with mass walls. Although the energy efficiency of mass walls may be improved by means of solar reflectance, projection factors, and continuous insulation, these compliance options are costly deterrents for owners and developers that hinder the concrete industry’s ability to stay cost-competitive and recapture dwindling market share.

A balance between improved energy efficiency performance and affordability can be achieved by implementing a minimum requirement for wall thickness. Mass walls, unlike other building systems, have a high thermal mass that regulates indoor temperatures via thermal lag and temperature damping, which offsets the need for insulation. A minimum 6 inch width requirement ensures that mass walls will have sufficient thermal mass to be energy efficient, while eliminating the need for costly alternatives (SRI paint, overhangs, insulation etc.).

Additionally, the myriad of benefits that result from building with mass walls (*see below*) are nullified if cost-prohibitive amendments deter owners and design professionals from utilizing this building material.

Benefits of Mass Walls

Safety

- Superior fire-resistance over other wall systems (passive fire protection, compartmentation)
- Resilient (blast-and-impact-resistant; withstands hurricanes, floods, strong winds, tsunamis)
- FEMA-approved safe rooms

Health and Well-Being

- Resistance to mold and termites promotes enhanced air quality
- Natural sound-proofing provides tenant privacy and reduces excessive external noise
- Resiliency & durability offers occupants security and peace of mind against natural disasters or terrorist attacks
- High thermal mass maintains comfortable temperatures

Green

- Locally sourced materials
- Manufactured locally
- Facilities powered by PV systems, including a renewable zero-waste facility
- Byproducts of manufacturing utilized by local farming community
- Recycled materials (Solid Waste Management permit)
- Longevity and durability of buildings (materials that last)
- Building envelopes can be repurposed/reused
- Material sequesters carbon emissions
- No surface finished required (no VOC's)
- Thermal mass is energy efficient (delays peak energy load, reduces total energy load)

Note that these benefits occur as a natural result of simply building with mass walls. Concrete & CMU do not require additional materials or labor to achieve these benefits—they are an inherent part of the building material. For example, fire-resistance is achieved without the addition of coatings or sprinklers; sound-proofing is the result of the density of the material; comfortable indoor temperatures are the result of high thermal mass.

Thank you for the opportunity to provide testimony.

Respectfully,

Tileco, Inc.

Email: communications@ulupono.com

HONOLULU CITY COUNCIL
REGULAR MEETING
Wednesday, June 7, 2023 — 10 A.M.

Ulupono Initiative supports Bill 4, CD1, Relating to the Adoption of the Hawai'i State Energy Code.

Dear Chair Waters and Members of the Council:

My name is Keith DeMello, and I am the Senior Vice President of Communications and External Affairs at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy and clean transportation choices, and better management of freshwater resources.

Ulupono supports Bill 4, CD1, which updates the Building Energy Conservation Code of the City and County of Honolulu through the adoption of the Hawai'i State Energy Conservation Code.

Ulupono Initiative supports Bill 4 (2023) and its updates to the City's Building Energy Code to the 2018 edition of the International Energy Conservation Code (the State Energy Code), with local amendments. Effectively mitigating the climate impacts of building design is crucial to meeting long-term climate objectives. According to the U.S. Energy Information Administration, U.S. residential and commercial buildings account for approximately **40% of all energy consumed**.[1] Therefore, building energy codes, which govern up to **80% of a building's energy load**,[2] increase energy efficiency and yield significant savings for home and building owners in Hawai'i.

Ulupono Initiative supports the development and inclusion of the voluntary stretch code (Item 27 Appendix CB Voluntary Stretch Code – Commercial), which provides a non-binding pathway for developers looking to exceed current code requirements in reducing the climate impact of their design. As noted by the New Buildings Institute, stretch codes give jurisdictions the ability to familiarize the design and construction communities in advanced practices before the base energy code is improved. Engineers, architects, builders, and developers can access standardized specifications and become experienced

[1] EIA Annual Energy Outlook
[2] https://www.energycodes.gov/why-building-energy-codes

with them, and in the future receive incentives for using, innovative designs, products, and practices that they might not otherwise apply. Because the base code is updated every three years, adopting a stretch code gives jurisdictions and manufacturers of building materials, mechanical systems, lighting, and other technologies time to prepare before the base code 'catches up' to the stretch code requirements (i.e., it gives them a head start)."[3] Notably, several local architecture firms recently acknowledged the need to reduce the carbon impact of building design by committing to the American Institute of Architects' 2030 commitment program, which aims to transform building design to address climate change by setting standards and goals.[4]

Ulupono Initiative also supports the intent of the minimum efficiency code requirement (Item 36 R401.3.1 minimum efficiency), as it would eventually lead to deeper integration with grid needs and potentially enable users to reduce their energy bills by reacting to grid signals. Further investigation into market availability of these appliances and their ability to integrate into upcoming utility demand response programs would improve the effectiveness of these requirements. This is important because deep integration of grid-interactive appliances will be essential to support increased renewable energy integration. Renewable energy sources like wind and solar power are inherently variable, which means that their output fluctuates based on weather conditions and other factors. This variability can make it challenging to balance electricity supply and demand on the grid, which in the worst case, could lead to issues like blackouts and brownouts. Grid-interactive appliances can help to address these challenges by enabling electricity consumers to adjust their energy use in response to grid conditions. For example, a smart water heater could delay its heating cycle during periods of high demand on the grid, reducing the need for additional power generation from fossil fuel based peak generating units. A 2019 white paper by ACEEE states that retrofitting commercial buildings with smart connected equipment can reduce total energy consumption by 8–18%, with some analysts estimating even greater energy savings in newly constructed buildings.[5] Furthermore, the use of grid-interactive appliances can also help to reduce overall electricity costs for consumers by allowing them to take advantage of lower-priced electricity during off-peak hours, or leverage grid interactive appliances to mitigate demand charges.[6]

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[3] "Stretch Codes: A Key Tool on the Path to Carbon Neutral Buildings." Jim Edelson, New Buildings Institute December 16, 2020. https://newbuildings.org/stretch-codes-a-key-tool-on-the-path-to-carbon-neutral-buildings/

[4] "6 Hawai'i-based architecture firms commit to carbon neutrality by 2030." Casey Harlow, Hawaii Public Radio April 21, 2023. https://www.hawaiipublicradio.org/local-news/2023-04-21/6-hawaii-based-architecture-firms-commit-to-carbon-neutrality-by-2030

[5] Grid-Interactive Efficient Building Utility Programs: State of the Market. Christopher Perry, Hannah Bastian, and Dan York October 2019 ACEEE White Paper. https://www.aceee.org/sites/default/files/pdfs/gebs-103019.pdf

[6] Show Me the Money: The Business Opportunity of Grid-Interactive Buildings, Cara Carmichael

With respect to the electric vehicle (EV) ready code update included in the bill, Ulupono supports the baseline percentage electric vehicle readiness compliance path, and we support the expansion of the applicability of EV ready requirements to all existing residential multi-family buildings and existing commercial buildings that add 8 or more new parking stalls in multi-family buildings and 12 or more new parking stalls in commercial buildings, identified in Section 409.1. If triggered under this requirement, at least 25% of the newly-added parking stalls would need to be EV charger ready for residential multi-family buildings and existing commercial buildings. This amendment eliminates the carveout for EV ready from compliance originally included in Bill 25 (2019) and increases EV charging infrastructure deployment opportunities in the future. There is a significant and growing need for EV charging infrastructure as numerous forecasts project an ever-increasing density of EVs on the road in the coming decade. A report by Allied Market Research predicts that the U.S. EV market will grow at a compound annual growth rate (CAGR) of 22.6% from 2020 to 2027, reaching $535.6 billion by 2027.[7] Another study by the National Renewable Energy Laboratory (NREL) forecasts that battery-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) could represent 34% of all light-duty vehicle sales in the United States by 2030. A more recent forecast by S&P Global Mobility projects electric vehicle sales in the United States to reach 40% of total passenger car sales by 2030, with more optimistic projections showing electric vehicle sales surpassing 50% by 2030.[8] The relatively long lifespan of buildings requires careful planning when it comes to facilitating and enabling an electrified future. Adding EV-ready provisions makes it easier and less costly to add EV-charging amenities in the future.

Thank you for the opportunity to testify.

Respectfully,

Keith DeMello
Senior Vice President, Communications & External Affairs

July 17, 2018 Rocky Mountain Institute. https://rmi.org/show-me-the-money-the-business-opportunity-of-grid-interactive-buildings/

[7] (Source: Allied Market Research, "Electric Vehicle Market by Type, Vehicle Class, and Propulsion System: Global Opportunity Analysis and Industry Forecast, 2020–2027," March 2021).

[8] Stephanie Brinley, "EV chargers: How many do we need?" S&P Global Mobility, January 9, 2023, https://www.spglobal.com/mobility/en/research-analysis/ev-chargers-how-many-do-we-need.html; and Michael Wayland, "Auto executives say more than half of U.S. car sales will be EVs by 2030, KPMG survey shows," *CNBC*, November 30, 2021, https://www.cnbc.com/2021/11/30/auto-executives-say-more-than-half-of-us-car-sales-will-be-evs-by-2030-kpmg-survey-shows.html.

Hawai'i Energy

45 North King Street, Suite 500 • Honolulu, Hawai'i 96817 • HawaiiEnergy.com • P: (808) 839-8880 • F: (808) 441-6068

Before the Honolulu City Council
Wednesday, June 7, 2023 at 10:00 a.m.

Testimony in SUPPORT of BILL 4 CD1 (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 Hawai'i State Conservation Code.

Chair Waters, Vice Chair Kia'āina, and members of the Honolulu City Council:

Thank you for the opportunity to provide comments in support of Bill 4 CD1.

Hawai'i Energy works to empower island families and businesses on behalf of the Hawai'i Public Utilities Commission 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 and refine Bill 4 with building industry stakeholders to ensure the updated codes make sense for O'ahu.

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 for 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 CD1. 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. 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

HONOLULU CITY COUNCIL
Council Agenda
June 7, 2023, 10:00 AM

TESTIMONY IN SUPPORT OF BILL 4 (2023) CD1-
RELATING TO THE ADOPTION OF THE STATE ENERGY CONSERVATION CODE

Aloha Chair Waters, Vice Chair Kiaʻāina, and Committee members:

Blue Planet Foundation **supports Bill 4 (2023)**, **CD1,** which timely updates the City's Building Energy 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 conserve energy 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 Hawaiʻi'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, Hawaiʻi 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

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

Local code amendments address City's climate goals

In addition to updating the City's Building Energy 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 of the stretch code proposed in Bill 4 relates to the design of grid-interactive, efficient buildings (GEBs). As is critical in Hawai'i's 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 includes provisions that would require installed electric water heaters, electric spas, and large air conditioning systems to be "smart appliances" capable of responding to grid signals, as well as code requirements for solar reflectivity and insulation. This provision can help drive adoption of best practices that support long-term energy savings, without negatively impacting affordable housing.

Although Blue Planet largely supports these proposed local amendments to the code, we do have **concerns of the Proposed CD1 relating to the C402.2.2 Above-grade wall and R402.2.5 Mass walls (Bill 4 items 9 and 40, respectively).** Exception #3 would allow certain buildings constructed with concrete walls to be exempt from insulation requirements. As Hawai'i experiences more frequent and intense warmer temperatures due to climate change, the insulation of buildings is critical to keep interior temperatures cool and comfortable. By insulating our homes, we not only reduce energy use and electricity costs, but can prevent heat-related illness and death—particularly in multi-unit dwellings that are occupied by children, the elderly, and others susceptible to illness. We urge the committee to further refine the code language in these sections to ensure adequate insulation in O'ahu's buildings.

Finally, we urge the Committee **to preserve the existing EV- and solar 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

[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.

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.

Testimony of Elemental Excelerator to the City & County of Honolulu City Council in consideration of Bill 4 (2023), CD1, June 7, 2023

Dear Chair Waters, Vice Chair Kiaʻāina, and distinguished Members of the City Council:

Elemental Excelerator respectfully submits our **support for Bill 4 (2023), CD1** relating to the adoption of the State Energy Conservation Code.

Elemental Excelerator is a Honolulu-based non-profit organization that supports climate positive startup companies that help solve Hawaiʻi's most urgent environmental problems. Each year we select 15-20 companies that advance climate technology and social equity, then fund each company with up to $1 million in investment and support. To date, we have awarded over $50 million to 150+ companies, and additionally supported more than 100 new tech demonstration projects right here in Hawaiʻi & the Asia Pacific.

Bill 4 CD1 will adopt the State Energy Conservation Code with the inclusion of Oʻahu-specific amendments. The State Energy Conservation Code was adopted by the Hawaiʻi State Building Code Council in 2020, and was derived from the 2018 International Energy Conservation Code (IECC) with the addition of state amendments. Per state law, the City must now update its Building Energy Conservation Code to adhere to the State Energy Conservation Code with any further amendments to fit the island's local context.

According to the State's 2017 Greenhouse Gas (GHG) Inventory, 35% of Hawaiʻi's total emissions comes from electricity generation to power homes and buildings.[1] One of the strategies in Oʻahu's Climate Action Plan to reduce its GHG emissions is to "Reduce Energy Demand by Increasing Energy Efficiency," largely accomplished through building energy code updates.[2] Bill 4 CD1 would do just that, resulting in lowered construction and energy costs for Oʻahu residents, simultaneously addressing climate action and housing affordability. We appreciate and support the following provisions in particular:

- **Voluntary stretch code** (Item 27 - Appendix CB Voluntary Stretch Code - Commercial) which creates an optional pathway for commercial building developers to accelerate energy savings by exceeding current code requirements.
- **Increased efficiency requirements for large homes** (Item 35 - R401.3 Large Home Compliance) which would result in long-term energy savings without affecting affordable housing.
- **Electric vehicle-ready and solar-ready provisions** (Item 48 - Section R408 Solar and Electric Vehicle Readiness) which would require certain residential new construction to

[1] https://health.hawaii.gov/cab/files/2021/04/2017-Inventory_Final-Report_April-2021.pdf
[2] https://www.resilientoahu.org/climate-action-plan

meet criteria for potential future solar panel and electric vehicle charging system installation.

Each of these measures is critical to reducing the cost of living and reaching Hawai‘i’s GHG emissions targets.

Aside from being a critical tool to advance equitable climate solutions in Hawai‘i, Bill 4 CD 1 will also enable O‘ahu to leverage federal funds to help our residents. The federal Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) have the potential to offer hundreds of millions in federal funding to help Hawai‘i residents - particularly those with low- and moderate-income - benefit from the clean energy transition in the short and medium term. Additional benefits from these federal climate funds include less pollution in communities, reduced energy and transportation costs, an increase in good jobs, investment in the local economy rather than spending on imported oil, and reducing dangerous greenhouse gas emissions. The IRA in particular includes tax credits for new efficient homes and renewable energy, grants for adopting and implementing updated codes, and an energy efficiency rebate program, among other cost-saving provisions relating to energy efficiency and building code upgrades. Further, the IIJA and IRA also contain funding specifically for implementing new building codes.

Enabling state and local policies are necessary, however, to ensure that these federal funds (especially competitive funds) can be secured and expeditiously deployed in Hawai‘i versus flowing to other jurisdictions. Most federal funds under the IIJA and IRA will be distributed over the next five years. We are now in the formative period of this deployment, and it is essential to ensure conditions are set for successful competition and implementation here on O‘ahu. The timing is therefore essential to address barriers and to prepare for future rounds of funding.

Bill 4 CD1 will also promote entrepreneurship and jobs through the development of innovative energy efficiency and building technologies, such as our portfolio companies Pono Home and BlocPower are addressing. Elemental Excelerator has helped support dozens of climate tech companies that create solid jobs, transition our economy to 100% clean energy, and accelerate energy efficiency retrofits and technologies. This bill will update standards for energy efficiency which will result in energy and cost savings for residents, continued innovation of energy and climate technologies, and improved climate and health benefits. This bill also lays important groundwork for the City to apply for and receive federal funding from the IIJA and IRA.

Bill 4 CD1 is a key piece of climate and community legislation, and we believe it is critical to pass to ensure we meet the climate and clean economy goals the City and State have established. **Elemental Excelerator strongly supports the passage of Bill 4 CD1**, to update the City’s Energy Code**.**

Thank you for the opportunity to testify.

HONOLULU CITY COUNCIL
Honolulu Hale
10:00 AM

June 7, 2023

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

Chair Waters, 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 opposes all code amendments that make our local codes more stringent than the national model codes or the State Building Code. It is our position that local amendments should first and foremost address housing affordability. By adopting codes that are more stringent and therefore more expensive we diminish our ability to construct affordable housing. We also create a disincentive for the people of Oahu to upgrade our existing older homes to newer more resilient and efficient homes. True energy efficiency can only be met through incentivizing energy efficiency upgrades in older homes, not heaping more and more penalties onto the construction of newer housing. BIA Hawaii encourages the Committee to require those that propose code amendments to provide local based cost/benefit analysis before any code amendment is considered.

While we object to all code amendments that make our code more stringent, we are particularly concerned with the following amendments –

C109.1(e) Electric Vehicle Ready Space (EV Ready Space): We support the proposed language with the following amendment to accommodate varying parking lot design configurations: “ELECTRIC VEHICLE READY SPACE (EV READY SPACE) means a designated parking stall that is provided with a dedicated circuit for future Level 2 EVSE. The circuit shall terminate in a suitable termination point such as a receptacle, pullbox, handhole or junction box located in close proximity to the proposed location of the EV parking stall.”

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 section R103.2 Information on construction documents. This section is requiring that additional design and calculations for electrical and mechanical scopes of work be added to construction documents. Since electrical and mechanical engineering are typically not required for single family permits, the builder/homeowner will now be required to contract two additional engineering disciplines for design consulting fees and additional errors and omission insurance.

We have COMMENTS ON R402.1.3 Sampling: Bill 4 deletes the sampling allowance that was added in Bill 25 (2019). BIA STRONGLY ENCOURAGES this section to be restored. The deletion of sample testing will increase the cost of production housing as it will now require every single house to be tested, increasing the cost of housing by $200-300 per house. Sampling allows similar plan types to be randomly tested per RESNET standards.

We STRONGLY OBJECT to the entire R401.3 section concerning Large Home Compliance. Adding this language is nothing more than the "foot in the door" to gradually impose these standards on all homes. The requirements of this section are drastically expensive and are being sold under the guise of a greenhouse gas tax on the wealthy that build large homes. Each ensuing code cycle the argument will be made to continue to lower the bar on this square footage threshold. Furthermore there has been no evidence offered that there is a nexus between SF and energy consumption. In actuality, the number of occupants is a far better indicator of energy consumption. Would the Council support taxing people that are forced through economic necessity to live in multi-generational households? Because that is ultimately what this measure will do. This is by far the worst of all the proposed amendments.

R403.5.3 Hot Water Pipe Insulation: The proposed language in this section goes above and beyond the model ICC code. We believe the intent of this section is to achieve energy savings for centralized water systems serving entire buildings and was not meant to be applied to unitized/individualized water systems serving a single multi-family, single-family and duplex dwelling unit. We agree with the data and further testimony of DR Horton on this section.

R408.1 Solar-Ready Zone: The proposed language in this section goes above and beyond the 2018 model ICC code. More importantly, it is proposing to transfer scopes of work and liability that are the responsibility of solar contractors to the builder/homeowner, such as R408.1.1 Construction document requirements for solar ready zone, R408.1.5 Shading, R408.1.6 Capped roof penetration sleeve and R408.1.10 Construction documentation certificate. This section is also proposing to unnecessarily transfer both the design engineering and actual construction costs of the solar contractor's scopes of work to the builder/homeowner. The decision to incur this cost should be provided to and made by the individual homeowner installing a photovoltaic system on their home. The approved solar readiness language adopted with Ordinance 20-10, aka Bill 25 (2019), has proven to be adequate to encourage PV installation penetration in production home building. We agree with the testimony of DR Horton, and recommend the entire R408.1 Solar-Ready Zone be deleted and replaced with the currently approved R404.2 Solar conduit and electrical panel readiness of Ordinance 20-10.

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). Thus, we strongly oppose provisions that will unnecessarily raise the cost of much-needed housing on Oahu.

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

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