

COUNCIL OF THE COUNTY OF MAUI
CLIMATE ACTION, RESILIENCE, AND
ENVIRONMENT COMMITTEE

October 1, 2021

Committee
Report No. 21-91

Honorable Chair and Members
of the County Council
County of Maui
Wailuku, Maui, Hawaii

Chair and Members:

Your Climate Action, Resilience, and Environment Committee, having met on August 17, 2021, and September 15, 2021, makes reference to County Communication 20-570, from Councilmember Kelly Takaya King, transmitting a proposed bill relating to energy code compliance for large residential buildings.

The purpose of the proposed bill is to require new residential buildings over 5,000 square feet to be zero net energy homes.

By correspondence dated September 7, 2021, the Department of the Corporation Counsel transmitted a revised proposed bill entitled "A BILL FOR AN ORDINANCE AMENDING SECTION 16.16B.R401.2, MAUI COUNTY CODE, RELATING TO ENERGY CODE COMPLIANCE FOR LARGE RESIDENTIAL BUILDINGS."

The purpose of the revised proposed bill is to require new one- or two-family residential buildings with 5,000 square feet or more of conditioned floor area to be verified zero net energy homes, and incorporate substantive and nonsubstantive revisions.

Your Committee received a computer-generated presentation from 3-P Consulting, and information and analysis from the Department of the Corporation Counsel; Department of Public Works; Mayor's Office of Climate Action, Sustainability, and Resilience; Climate Action Advisory Committee; Hawai'i Off-Grid LLC; Green Building Hawai'i; and the Boulder County Community Planning & Permitting Department.

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The Deputy Director and Chief Building Official from Boulder County provided a history of Boulder County's Building Code updates, including the requirement for homes over 5,000 square feet to be zero net energy homes. This has resulted in Boulder County residents building smaller homes.

A representative from Green Building Hawai'i noted many homes in Maui County over 5,000 square feet are vacation homes that are often left vacant and can more easily achieve the zero net energy requirement. The representative also said homes will be unable to be "zero net energy" if the fuel source is from a generator. Requiring large homes to be verified as zero net energy homes ensures that proper performance testing and inspections are completed.

Your Committee notes that in accordance with Section 107-24, Hawai'i Revised Statutes ("HRS"), on December 15, 2020, the Hawai'i State Building Code Council approved the International Energy Conservation Code ("IECC") 2018 edition amendment package as the State Energy Code. Each county in the State of Hawai'i must amend and adopt the 2018 IECC and attached amendments to the Code, in accordance with Section 107-28(a), HRS, no later than December 15, 2022.

The Energy Commissioner from the Mayor's Office of Climate Action, Resilience, and Sustainability said the requirement would be a pilot to eventually require all homes in Maui County to be zero net energy homes. The Energy Commissioner recommended updates to Chapter 16.16B, Maui County Code, as they relate to the adoption of the State Energy Code. He also expressed concern that the revised proposed bill may negatively impact multigenerational households that cannot afford to make their homes zero net energy.

The Director of Public Works supported clarifying the bill's purpose relating to the inclusion of garages, covered decks, or lanais within the 5,000 square foot threshold.

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The Director agreed the Department can implement the revised proposed bill as written, expressed support for it, and thanked your Committee for incorporating their recommendations.

Your Committee also heard from a representative from Hawaiian Electric who said the requirement may lead to the unintended consequence of customers investing in less expensive, fossil-fueled generators to achieve the net zero requirement and this may also discourage the use of electric vehicles.

A representative from Hawai'i Off-Grid LLC said more homeowners will be encouraged to contribute back to the grid to ensure they are covering their electric usage. The representative also noted only one of the homes they are working on now is over 5,000 square feet, and that Hawai'i Off-Grid LLC automatically accounts for electric vehicle charging when building zero net energy homes of that size.

A representative from the State Department of Business, Economic Development, and Tourism advised that the City and County of Honolulu is proposing similar legislation under Section R404.2 of the 2015 IECC and asked your Committee to consider doing the same.

The Deputy Corporation Counsel said the legislation will be a good step toward testing out stricter energy requirements before Maui County adopts the 2018 IECC.

The Deputy also noted the following:

- Under Chapter 16.16B.R406, Maui County Code, the Department of Public Works can approve the third party for verification of the zero net energy requirement.

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- The Department of Public Works can implement the provisions of the revised proposed bill and it is not necessary to move it to another section of the Energy Code.

Your Committee notes by Ordinance 4969 (2019), the Council incorporated the “2015 International Energy Conservation Code®,” (“Energy Code”) subject to local amendments in Chapter 16.16B, Maui County Code. The Energy Code defines a residential building as “detached one- and two-family dwellings and multiple single-family dwellings (townhouses) as well as Group R-2, R-3, and R-4 buildings three stories or less in height above grade plane,” and the revised proposed bill will unlikely impact multigenerational households.

Under the Energy Code’s definition of a residential building, your Committee agreed the revised proposed bill will apply to duplex homes. Your Committee noted very few areas of Maui County are zoned for duplexes.

Your Committee voted 7-0 to recommend passage of the revised proposed bill on first reading and filing of the communication. Committee Chair King, Vice-Chair Sinenci, and members Johnson, Lee, Molina, Paltin, and Sugimura voted “aye.”

Your Climate Action, Resilience, and Environment Committee RECOMMENDS the following:

1. That Bill 106 (2021), as revised herein and attached hereto, entitled “A BILL FOR AN ORDINANCE AMENDING SECTION 16.16B.R401.2, MAUI COUNTY CODE, RELATING TO ENERGY CODE COMPLIANCE FOR LARGE RESIDENTIAL BUILDINGS,” be PASSED ON FIRST READING and be ORDERED TO PRINT”; and
2. That County Communication 20-570 be FILED.

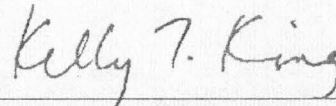
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This report is submitted in accordance with Rule 8 of the Rules of the Council.



KELLY TAKAYA KING, Chair

care:cr:21042aa:nas

ORDINANCE NO. _____

BILL NO. _____ (2021)

A BILL FOR AN ORDINANCE AMENDING SECTION 16.16B.R401.2, MAUI
COUNTY CODE, RELATING TO ENERGY CODE COMPLIANCE FOR LARGE
RESIDENTIAL BUILDINGS

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. On August 6, 2021, the United Nations' Intergovernmental Panel on Climate Change reported on the physical science basis of climate change and outlined how humans are altering the planet. Quoted as "a code red for humanity," the report showed that emissions of greenhouse gases from human activities are responsible for roughly 1.1 degrees Celsius of warming since 1850-1900, and found that global temperature averaged over the next 20 years, is expected to reach or exceed 1.5 degrees Celsius of warming.

By Ordinance 4969 (2019), the Council incorporated the "2015 *International Energy Conservation Code®*," ("Energy Code") subject to local amendments in Chapter 16.16B, Maui County Code. The Council finds that this update to the Energy Code has been effective in producing structures that are more energy efficient.

The Council further finds and declares that large, new homes, must be zero net energy to:

- Reduce the environmental impacts associated with residential energy use as it relates to contributions to climate change.

- Reduce home energy costs.
- Take a positive step to further improve the energy efficiency of the residential housing stock across Maui County.

SECTION 2. Section 16.16B.R401.2, Maui County Code, is amended to read as follows:

"16.16B.R401.2 - Subsection R401.2 amended.

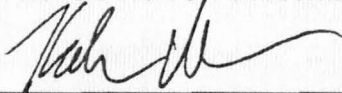
Subsection R401.2 of the International Energy Conservation Code is amended to read as follows: **R401.2 Compliance.** [Projects shall] New one- or two-family residential buildings with five thousand square feet or more of conditioned floor area must achieve a verified maximum energy rating index (ERI) score of zero. All projects must also comply with one of the following:

1. Sections R401.3 through R404.
2. Section R405 and the provisions of Sections R401 through R404 labeled "Mandatory."
3. An energy rating index (ERI) approach in Section R406.
4. The tropical zone requirements in Subsection R401.2.1."

SECTION 3. Material to be repealed is bracketed. New material is underscored. In printing this bill, the County Clerk need not include the brackets, the bracketed material, or the underscoring.

SECTION 4. This Ordinance takes effect on January 1, 2022.

APPROVED AS TO FORM AND LEGALITY:



KEOLA R. WHITTAKER
Deputy Corporation Counsel
Department of the Corporation Counsel
County of Maui

LF 2021-0007

CARE-42 2021-09-03 Ord Amd Sec 16.16.B.R401.2.docx