DANNY A. MATEO
County Clerk

JOSIAH K. NISHITA
Deputy County Clerk



**OFFICE OF THE COUNTY CLERK**
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793
www.mauicounty.gov/county/clerk

September 22, 2017

Honorable Don S. Guzman, Chair
Parks, Recreation, Energy
and Legal Affairs Committee
Council of the County of Maui
Wailuku, Hawaii 96793

Dear Chair Guzman:

Respectfully transmitted is a copy of GENERAL COMMUNICATION NO. 17-10, from David Cohan, Program Manager, U.S. Department of Energy, that was referred to your Committee by the Council of the County of Maui at its meeting of September 22, 2017.

Respectfully,

JOSIAH K. NISHITA
Deputy County Clerk

/lks

Enclosure

cc: Director of Council Services

**Department of Energy**
Washington, DC 20585



August 23, 2017

Mike White, Maui County Council Chairman
200 South High St.
Wailuku, HI 96793

Re: Maui County Adoption of the Hawaii State Energy Conservation Code

Dear Chairman White:

The State of Hawaii recently adopted a new State Energy Conservation Code, replacing the previous one which was more than ten years old. However, the new code applies only to state buildings until it is adopted individually by each county.

The U.S. Department of Energy (DOE) encourages the adoption of the most recent model energy codes where they have been found cost-effective. Under the direction of DOE, Pacific Northwest National Laboratory conducted a customized analysis for Hawaii to determine the impacts of adopting the 2015 International Energy Conservation Code (2015 IECC) for residential buildings and ASHRAE Standard 90.1-2013 for commercial buildings. These are the codes that underlie the Hawaii State Energy Conservation Code. It was found that they would provide positive economic benefits to the citizens of your state. Because all of Hawaii is in the same climate zone, these results are equally applicable to Maui County.

Specifically, the analysis of the 2015 IECC concluded that moving to this code from the 2006 IECC base code is cost-effective for residential buildings throughout Hawaii. The average statewide economic impact per dwelling unit of upgrading to the 2015 IECC is shown in Table 1. The full report is available at https://www.energycodes.gov/sites/default/files/documents/HawaiiResidentialCostEffectiveness_2015.pdf

Table 1. Economic impacts per dwelling unit from adopting the 2015 IECC

| Metric | Compared to the 2006 IECC |
|---|---|
| Life-cycle cost savings of the 2015 IECC | $12,612.63 |
| Simple payback period of the 2015 IECC | 4.3 years |
| Net annual consumer cash flow in year 1 of the 2015 IECC | $747.82 |
| Annual (first year) energy cost savings of the 2015 IECC ($) | $1,097.31 |
| Annual (first year) energy cost savings of the 2015 IECC (%) | 21.1% |

Moving to the ASHRAE Standard 90.1-2013 edition from Standard 90.1-2010 is also cost-effective. Table 2 shows the average state-wide economic impacts per square foot that would result from this change in terms of the annual energy cost savings in dollars, additional construction cost, and life-cycle cost (LCC). These results are weighted averages for all building types throughout the state. The full report can be found at https://www.energycodes.gov/sites/default/files/documents/Cost-effectiveness_of_ASHRAE_Standard_90-1-2013-Hawaii.pdf

Table 2. Economic impacts per square foot from adopting ASHRAE 90.1-2013.

| Metric | Compared to ASHRAE 90.1-2010 |
|---|---|
| Annual Cost Savings, $/ft$^2$ | $0.593 |
| Added Construction Cost, $/ft$^2$ | ($0.000) |
| Publicly-owned scenario LCC Savings, $/ft$^2$ | $11.43 |
| Privately-owned scenario LCC Savings, $/ft$^2$ | $9.71 |

Based on the benefits the new code would deliver to Maui County's citizens, DOE encourages you to move forward with adoption of the new Hawaii State Energy Conservation Code.

Sincerely,

David Cohan

David Cohan
Building Energy Codes Program Manager
US Department of Energy, Building Technologies Office
david.cohan@ee.doe.gov
503-477-0851