

LATE

Testimony of Glenn Ida  
Representing,  
The Plumbers and Fitters Union, Local 675  
1109 Bethel St., Lower Level  
Honolulu, Hi. 96813

**Comments and Proposed Amendments to SB 2290**

Before the Senate Committees on:  
Energy and Environment,  
Public Safety, Government Operations, and Military Affairs,  
Water, Land, and Housing

Tuesday, Feb. 7, 2012  
2:15 PM, Conference Room 225

Aloha Chairs Gabbard, Espero, Dela Cruz, Vice-Chairs English, Kidani, Solomon and Members of the Committees,

My name is Glenn Ida; I represent the 1300 plus active members and about 600 retirees of the Plumbers and Fitters Union, Local 675.

SB 2290 proposes the International Green Construction Code (IGCC) be included in the State Building Code. The proposed inclusions from the IGCC either changes or conflicts with the Uniform Plumbing Code (UPC), the State's mandated Plumbing Code.

State agencies and counties currently reference the UPC for checking compliance with permitting requirements. Second, The State journeymen plumbers' license exam and contractors' licenses exam are based on the contents within the UPC. Local 675's Plumbers' Apprenticeship Program utilizes the UPC as their base code book for the development of the curriculum and exams for their program.

The Green Plumbing and Mechanical Code Supplement to the UPC should be included so the standards and conditions would not be affected by the addition of the International Green Construction Code to the State Building Code.

Page 2: SB2290

See the attachment for proposed amendments to SB 2290.

Thank You for this opportunity to make comments and submit my amendments on SB2290.

Glenn Ida  
808-295-1280

**Report Title:**

International Green Construction Code; State Building Code

**Description:**

Requires the state building code to include code provisions based on the latest edition of the [Green Plumbing and Mechanical Code Supplement and] International Green Construction Code.

*The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.*

---

---

## A BILL FOR AN ACT

RELATING TO THE STATE BUILDING CODE.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

SECTION 1. The legislature finds and declares that safeguarding the environment, public health, safety, and general welfare through the establishment of building and construction requirements related to sustainability is necessary. Sustainable building and construction requirements reduce the negative potential impacts and increase the positive potential impacts of the built environment on the natural environment and building occupants.

The purpose of this Act is to require the state building code to include code provisions based on the latest edition of the International Green Construction Code.

SECTION 2. Section 107-25, Hawaii Revised Statutes, is amended to read as follows:

"**[+]§107-25[+]** **State building code; requirements.** There is established a state building code applicable to all

construction in the State of Hawaii. The state building code shall include:

- (1) The latest edition of the state fire code as adopted by the state fire council;
- (2) The latest edition of the Uniform Plumbing Code, Uniform Mechanical Code, including appendices, and the plumbing and mechanical provisions based on the latest edition of the Green Plumbing and Mechanical Code Supplement as copyrighted and published by the International Association of Plumbing and Mechanical Officials, [;] [~~including its appendices;~~]
- (3) The latest edition of the International Building Code, as published by the International Code Council;
- (4) Hawaii design standards implementing the criteria pursuant to Act 5, Special Session Laws of Hawaii, 2005, as applicable to:
  - (A) Emergency shelters built to comply with hurricane resistant criteria, including enhanced hurricane protection areas capable of withstanding a five hundred-year hurricane event as well as other storms and natural hazards; and
  - (B) Essential government facilities requiring continuity of operations; [and]

(5) Code provisions based on nationally published codes or standards that include, but are not limited to, residential and hurricane resistive standards for residential construction, fire, elevator, electrical, plumbing, mechanical, flood and tsunami, existing buildings, and energy conservation standards for building design and construction, and onsite sewage disposal~~[=]~~; and

(6) Except for the plumbing and mechanical provisions covered in (2), ~~[E]~~ code provisions based on the latest edition of the International Green Construction Code, as published by the International Code Council."

SECTION 3. Statutory material to be repealed is bracketed and stricken. New statutory material is underscored.

SECTION 4. This Act shall take effect upon its approval.

INTRODUCED BY: \_\_\_\_\_

**Report Title:**

International Green Construction Code; State Building Code

**Description:**

Requires the state building code to include code provisions based on the latest edition of the Uniform Mechanical Code, Green Plumbing and Mechanical Code Supplement and International Green Construction Code.

*The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.*

LATE



Testimony to the Senate Committees on Energy and Environment, Public Safety,  
Government Operations, and Military Affairs, and Water, Land & Housing  
Tuesday, February 14, 2012  
2:50 PM  
State Capitol, Conference Room 225

**RE: S.B. 2290 Relating to Building Codes**

Hawaii Steel Alliance, Inc.

P. O. Box 2880

Aiea, HI 96701

(808) 728-7142

(808) 356-0396 fax

www.hawaiisteel.com

info@hawaiisteel.com

Dear Chairs Gabbard, Espero, and Dela Cruz; Vice Chairs English, Kidani, and Solomon, and members of the committees:

I am Tim Waite, President of the Hawaii Steel Alliance (HSA), a 501(c)(6) nonprofit organization established in May 1997 to encourage and promote the widespread, practical and economic use of cold-formed steel framing for residential and light commercial construction in the Pacific Rim. Our membership comprises the majority of the builder, engineers, suppliers, and framing contractors responsible for over 70 percent of residential construction in Hawaii. Steel framing is a green material comprised from recycled material; the most recycled material in the world.

**The Hawaii Steel Alliance is opposed to SB 2290**, which proposes to require the State Building Code to include code provisions based on the latest edition of the International Green Construction Code. We oppose the IgCC for the following reasons:

1. Cost effectiveness was never considered in any way in establishing the prescriptive IgCC energy provisions. They simply set a naïve standard that requires the U-factors to be a certain percentage (10%) higher than those in the IECC it uses as a base document. After a certain point already reached for all practical purposes in the IECC base document, the addition of more insulation is much less cost effective than other energy efficiency improvements. The IgCC fails to recognize the most efficient ways available to builders and designers. We agree that a green code should set a higher standard but it should still be economical and not just resort to the same old methods that are no longer cost effective and offer marginal benefit.
2. The drafting committee seems to not realize that there is not a linear relationship between U-Factors and energy performance of the overall building. This is a critical error in the requirements of the IgCC. Simply requiring more insulation may sell a lot more insulation but it does not translate into an efficient overall building. It also does not allow a typical Hawaii home to 'breathe' and may subject the home to excessive moisture and allow the growth of mold.
3. Simply requiring a U factor to be 10% lower translates into a different standard for different materials. The U-factors in the IECC were established in such a way that they differ for each climate zone and within climate zones for different materials. Thus a 10% modification has a greater net impact the higher the U-factor is in the base document (IECC).



4. The IgCC adopts a new and more complicated method for compliance rather than using the proven and effective methods in the IECC. Builders, designer, code officials, and others will need to learn a new system and terminology. It will require energy simulation software developers to revise their software with no apparent improvement over the IECC methods.
5. One such example is the use of Zero energy Performance Index (zEPI) as the metric in the energy section of the IgCC. zEPI is an absolute scale for determining how energy efficiency levels are measured and compared in commercial buildings and is very different than the current methods in energy codes and standards. Inspectors will need to enforce this system and the IECC system in order to show compliance with the codes. Further, determination of the true zEPI score requires the use of both asset and operational ratings. Operational ratings can only be obtained after the certificate of occupancy has been issued and the local jurisdictions' authority ends.
6. The scope of the energy provisions includes other items outside of the authority of the code official. For example, the IgCC has pages of commissioning requirements that occur after the certificate of occupancy is issued. Further, the commissioning requirements are vague and subjective and can't be uniformly enforced. It even requires commissioning activities as much as 2 years after occupancy. The commissioning requirements cross over into establishing contractual issues between the building owner, designer, and the builder.
7. The IgCC requires building air tightness testing that has not been proven feasible for larger buildings. It is also questionable that the duct leakage testing requirement in the IgCC can be conducted without resorting to heroic measures on larger buildings with extensive duct systems.
8. The IgCC is not a traditional code in that it offers a variety of optional requirements for both builders and jurisdictions to select. Its enforcement will be a nightmare for building officials.

It is for these reasons the Hawaii Steel Alliance opposes S.B. 2290.

Respectfully,



Tim Waite  
President