### DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

Repeal of Chapter 3-181

and

Adoption of Chapter 3-181.1

Hawaii Administrative Rules

February 10, 2016

### SUMMARY

- 1. Chapter 3-181, Hawaii Administrative Rules, entitled "State Energy Conservation Code" adopting and amending the "International Energy Conservation Code, 2006 Edition", is repealed. [
- 2. Chapter 3-181.1, Hawaii Administrative Rules, entitled "State Energy Conservation Code" adopting and amending the "International Energy Conservation Code, 2015 Edition", is adopted. [ ]

# DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES Adoption of Chapter 3-181.1

Hawaii Administrative Rules

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### "HAWAII ADMINISTRATIVE RULES

### TITLE 3

### DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

### SUBTITLE 14

### STATE BUILDING CODE COUNCIL

### CHAPTER 181.1

### STATE ENERGY CONSERVATION CODE

### Subchapter 1 Rules of General Applicability

§3-181.1-1	Purpose
§3-181.1-2	Scope
§3-181.1-3	Definitions
§3-181.1-4	Adoption of the <i>International Energy</i>
	Conservation Code
§3-181.1-5	Permit authorization

## Subchapter 2 Amendments to the 2015 ICC International Energy Conservation Code

\$3-181.1-6 \$3-181.1-7 \$3-181.1-8 \$3-181.1-9 \$3-181.1-10 \$3-181.1-11 \$3-181.1-12 \$3-181.1-13 \$3-181.1-14 \$3-181.1-15 \$3-181.1-16 \$3-181.1-17 \$3-181.1-18 \$3-181.1-19 \$3-181.1-20	Title General Low-energy use buildings Thermal resistance of above-grade walls Area-weighted SHGC Door switches Specific application controls Sub-metering (mandatory) Compliance Roof replacement General Compliance Tropical zone General (prescriptive) Specific insulation requirements
\$3-181.1-21 \$3-181.1-22 \$3-181.1-23 \$3-181.1-24 \$3-181.1-25 \$3-181.1-26 \$3-181.1-27	<pre>(prescriptive) Fenestration (prescriptive) Solar water heating Ceiling fans (mandatory) Simulated performance alternative Points option Compliance Building envelope</pre>

### SUBCHAPTER 1

### RULES OF GENERAL APPLICABILITY

§3-181.1-1 Purpose. The purpose of this chapter is to adopt the state energy conservation code as required by section 107-25, Hawaii Revised Statutes (HRS). [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

- §3-181.1-2 Scope. This chapter sets forth minimum requirements for the design and construction of buildings for the effective use of energy and is intended to provide flexibility to allow the use of innovative approaches and techniques to achieve the effective use of energy. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)
- §3-181.1-3 Definitions. In this chapter, unless the context otherwise requires:

"ICC" means the International Code Council.
"IECC Section" means a section of a chapter of the International Energy Conservation Code.

"IECC" means the ICC, International Energy
Conservation Code, 2015 edition, as copyrighted by the
International Code Council. [Eff 5/24/10; am and comp
] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

- §3-181.1-4 Adoption of the International Energy Conservation Code. The International Energy Conservation Code, 2015 Edition as copyrighted and published in 2015 by International Code Council, Incorporated, 500 New Jersey Avenue, 6th Floor, Washington, DC 20001, is adopted by reference and made a part of this chapter. This incorporation by reference includes all parts of the International Energy Conservation Code subject to the amendments hereinafter set forth. The appendices of the ICC, IECC are not adopted except as provided in this chapter. [Eff 5/24/10; am and comp ]

  (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)
- §3-181.1-5 Permit authorization. Each county may, by ordinance, require that a permit be obtained from the building official for any area regulated by this chapter. [Eff 5/24/10; am and comp ] ((Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

#### SUBCHAPTER 2

The 2006 Energy Conservation Code of the State of Hawaii shall be deleted in its entirety and replaced by the 2015 International Energy Conservation Code with the proposed amendments.

### AMENDMENTS TO THE 2015 ICC INTERNATIONAL ENERGY CONSERVATION CODE

- §3-181.1-6 Title. IECC 101.1 is amended to read as follows:
- 101.1 Title. This code shall be known as the Energy Conservation Code of the State of Hawaii, and shall be cited as such. It is referred to herein as "this code." [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)
- §3-181.1-7 General. IECC section C103.1 is deleted in its entirety and replaced with the following:
- 103.1 General. When the requirements in this code apply to a building as specified in Section C101.4, plans, specifications or other construction documents submitted for a building, electrical or plumbing permit required by the jurisdiction shall comply with this code and shall be prepared, designed, approved and observed by a design professional. The responsible design professional shall provide on the plans a signed statement certifying that the project is in compliance with this code.

**Exception:** Any building, electrical or plumbing work that is not required to be prepared, designed, approved or observed by a licensed professional architect or engineer pursuant to chapter 464 Hawaii Revised Statutes. [Eff 5/24/10; am and comp

] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

§3-181.1-8 Low-energy use buildings. IECC section C402.1.1 is amended to read as follows:

C402.1.1 Low-energy use buildings. The following low energy buildings, or portions thereof separated from the remainder of the building by building thermal envelope assemblies complying with this section, shall be exempt from the building thermal envelope provisions of Section C402.

- 1. Those with a peak design rate of energy usage less than 3.4 Btu/h-ft2 (10.7 W/m2) or 1.0 watt per square foot (10.7 W/m2) of floor area for space conditioning purposes.
- 2. Unconditioned space that does not contain habitable space.
- 3. Greenhouses.

[Eff 5/24/10; am and comp ] (Auth: HRS \$107-29) (Imp: HRS \$107-24, 107-25)

§3-181.1-9 Thermal resistance of above-grade walls. IECC section C402.2.3 is amended to read as follows:

C402.2.3 Thermal resistance of above-grade walls. The minimum thermal resistance (R-value) of materials installed in the wall cavity between framing members and continuously on the walls shall be as specific in Table C402.3, based on framing type and construction materials used in the wall assembly.

### Exceptions:

Continuous insulation for wood and metal framed walls are not required when one of the following conditions are met:

- 1. Walls have a covering with a reflectance of  $\geq$  0.64; or
- 2. Walls have overhangs with a projection factor equal to or greater than 0.3. The projection factor is the horizontal distance from the

surface of the wall to the farthest most point of the overhang divided by the vertical distance from the first floor level to the bottom most point of the overhang.

The R-value of integral insulation installed in concrete masonry units shall not be used in determining compliance with Table C402.1.3.

Mass walls shall include walls:

- 1. Weighing not less than 35 psf  $(170 \text{ kg/m}^2)$  of wall surface area.
- 2. Weighing not less than 25 psf (120 kg/m<sup>2</sup>) of wall surface area where the material weight is not more than 120 pcf (1900 kg/m<sup>3</sup>).
- 3. Having a heat capacity exceeding 7 Btu/ft<sup>2</sup>.°F (144 cage/m<sup>2</sup>·K).
- 4. Having a heat capacity exceeding 5 Btu/ft $^2$ ·°F (103 kJ/m $^2$ ·K), where the material weight is not more than 120 pcf (1900 kg/m $^3$ .

[Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

- §3-181.1-10 Area-weighted SHGC. Section C402.4.3.5 is added to the IECC to read as follows:
- C402.4.3.5 Area-weighted SHGC. In commercial buildings, an area-weighted average of fenestration products shall be permitted to satisfy SHGC requirements.

  [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)
- §3-181.1-11 Door switches. Section C403.2.4.2.3 is added to the IECC to read as follows:
- **C403.2.4.2.4 Door switches.** Opaque and glass doors opening to the outdoors in hotel and motel sleeping units, guest suites and time-share condominiums, shall be provided with controls that disable the mechanical cooling, or reset

the cooling setpoint to 90° F or greater within five minutes of the door opening. Mechanical cooling may remain enabled if the outdoor air temperature is below the space temperature. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)

§3-181.1-12 Specific application controls. IECC section C405.2.4 is amended to read as follows:

C405.2.4 Specific application controls. Specific application controls shall be provided for the following:

- 1. Display and accent light shall be controlled by a dedicated control that is independent of the controls for other lighting within the room or space.
- 2. Lighting in cases used for display case purposes shall be controlled by a dedicated control that is independent of the controls for other lighting within the room or space.
- 3. Hotel and motel sleeping units, guest suites and timeshare condominiums shall have a master control device that is capable of automatically switching off all installed luminaires and switched receptacles within 20 minutes after all occupants leave the room.

**Exception:** Lighting and switched receptacles controlled by captive key systems.

- 4. Supplemental task lighting, including permanently installed under-shelf or under cabinet lighting, shall have a control device integral to the luminaires or be controlled by a wall-mounted control device provided that the control device is readily accessible.
- 5. Lighting for nonvisual applications, such as plant growth and food warming, shall be controlled by a dedicated control that is independent of the controls for other lighting within the room or space.
- 6. Lighting equipment that is for sale or for demonstrations in lighting education shall be controlled by a dedicated control that is independent

of the controls for other lighting within the room or space. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)

- §3-181.1-13 Sub-metering (Mandatory). Section C405.10 is added to the IECC to read as follows:
- C405.10 Sub-metering (Mandatory). In new buildings with tenants, metering shall be collected for the entire building and individually for each tenant occupying 1,000 ft² (total enclosed and unenclosed) (93 m²) or more. Tenants shall have access to data collected for their space. A tenant is defined as "one who rents or leases from a landlord." [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)
- §3-181.1-14 Compliance. IECC section C501.4 is amended to read as follows:
- C501.4 Compliance. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions and regulations for alterations, repairs, additions and changes of occupancy or relocation, as adopted by the authorities having jurisdiction. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)
- §3-181.1-15 Roof replacement. Section C503.3.1 is amended to read as follows (note that options are provided for this amendment):
- C503.3.1 Roof replacement. Roof replacements shall comply with Table C402.1.3 or C402.1.4 where the existing roof assembly is uninsulated and is part of the building thermal envelope. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)

§3-181.1-16 General. IECC section R103.1 is deleted in its entirety and replaced with the following:

R103.1 General. When the requirements in this code apply to a building as specified in Section R101.4, plans, specifications or other construction documents submitted for a building, electrical or plumbing permit required by the jurisdiction shall comply with this code and shall be prepared, designed, approved and observed by a design professional. The responsible design professional shall provide on the plans a signed statement certifying that the project is in compliance with this code.

Exception: Any building, electrical or plumbing work that is not required to be prepared, designed, approved or observed by a licensed professional architect or engineer pursuant to chapter 464 Hawaii Revised Statutes. [Eff 5/24/10; am and comp

[ (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

§3-181.1-17 Compliance. IECC section R401.2 is amended to read as follows:

R401.2 Compliance. Projects shall comply with one of the following:

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

[Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)

§3-181.1-18 Tropical zone. IECC Section R401.2.1 is amended to read as follows:

**R401.2.1 Tropical zone.** Residential buildings in the tropical zone at elevations below 2,400 feet (731.5 m) above sea level shall be deemed to comply with this chapter where the following conditions are met:

- 1. Not more than one-half of the *dwelling unit* is air conditioned
- 2. The dwelling unit is not heated.
- 3. Solar, wind or other renewable energy source supplies not less than 90 percent of the energy for service water heating.
- 4. Glazing in *dwelling units* shall have a maximum solar heat gain coefficient as specified in Table R402.2.1.

Table R402.2.1. Window SHGC Requirements

Projection Factor of overhang from base of average window sill <sup>b</sup>	SHGC
< .30	.25
.3050	.40
≥.50	N/A

b.Exception: North-facing windows with pf > .20 are exempt from the SHGC requirement. Overhangs shall extend 2 feet on each side of window or to nearest wall, whichever is less.

- 5. Skylights in dwelling units shall have a maximum U-factor as specified in Table R402.1.2.
- 6. Permanently installed lighting is in accordance with Section R404.
- 7. The roof/ceiling complies with one of the following options:

- 1. Comply with one of the roof surface options in Table C402.3 and install R-13 insulation or greater.
- 2. Install R-19 insulation or greater.

If present, attics above the insulation are vented and attics below the insulation are unvented.

**Exception:** The roof/ceiling assembly are permitted to comply with Section R407.

- 8. Roof surfaces have a minimum slope of ¼ inch per foot of run. The finished roof does not have water accumulation areas.
- 9. Operable fenestration provides ventilation area equal to not less than 14 percent of the floor area in each room. Alternatively, equivalent ventilation is provided by a ventilation fan.
- 10. Bedrooms with exterior walls facing two different direction have operable fenestration or exterior walls facing two different directions.
- 11. Interior doors to bedrooms are capable of being secured in the open position.
- 12. A ceiling fan or ceiling fan rough-in is provided for bedrooms and the largest space that is not used as bedroom.
- 13. Jalousie windows shall have an air infiltration rate of no more than 1.2 cfm per square foot (6.1  $L/s/m^2$ ).
- 14. Walls, floors and ceilings separating air conditioned spaces from non-air conditioned spaces shall be constructed to limit air leakage in accordance with the requirements in Table R402.4.1.1. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

## §3-181.1-19 General (Prescriptive). IECC section R402.1 is amended to read as follows:

C402.1.1 Low-energy use buildings. The following low energy buildings, or portions thereof separated from the remainder of the building by building thermal envelope assemblies complying with this section, shall be exempt

from the building thermal envelope provisions of Section R402.

- 1. Those with a peak design rate of energy usage less than 3.4 Btu/h-ft2 (10.7 W/m2) or 1.0 watt per square foot (10.7 W/m2) of floor area for space conditioning purposes.
- 2. Unconditioned space that does not contain habitable space.

[Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)

§3-181.1-20 Specific insulation requirements (Prescriptive). IECC section R402.2 is amended to read as follows:

## R402.2 Specific insulation requirements (Prescriptive). In addition to the requirements of Section

R402.1, insulation shall meet the specific requirements of Sections R402.2.1 through R402.2.13.

### Exception:

Above-grade walls and ceilings shall be permitted to comply with Section R407.

[Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

- §3-181.1-21 Fenestration (prescriptive). IECC section R402.3.2 is amended to read as follows:
- R402.3.2 Glazed fenestration SHGC. Fenestration—shall have a maximum solar heat gain coefficient as specified in Table R402.1.2. An area-weighted average of fenestration products more than 50-percent glazed shall be permitted to satisfy the SHGC requirements.

Dynamic glazing shall be permitted to satisfy the SHGC requirements of Table R402.1.2 provided the ratio of the higher to lower labeled SHGC is greater than the or

equal to 2.4 and the *dynamic glazing* is automatically controlled to modulate the amount of solar gain into the space in multiple steps. *Dynamic glazing* shall be considered separately from other fenestration, and areaweighted averaging with other fenestration that is not *dynamic glazing* shall not be permitted.

Exception: Dynamic glazing is not required to comply with this section when both the lower and higher labeled SHGC already comply with the requirements of Table R402.1.1. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

§3-181.1-22 Solar water heating. Section R403.5.4 is added to the IECC to read as follows:

Section R403.5.5 Solar water heating. Solar water heating systems are required for new single-family residential construction pursuant to section 196-6.5, HRS. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §§107-24, 107-25)

§3-181.1-23 Ceiling fans (mandatory). IECC section R404.2 is added to read as follows:

R404.2 Ceiling fans (mandatory). A ceiling fan or ceiling fan rough-in is provided for bedrooms and the largest space that is not used as bedroom. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §107-24, 107-25)

§3-181.1-24 Simulated performance alternative. IECC Table R405.5.2(1) is amended to read as follows:

	Table P405 5 2(1)		
Table R405.5.2(1) SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED			
DI LICITIONI I	DESIGNS	SH THID TROTOBLE	
BUILDING			
COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN	
Heating Systems	[As proposed for other than electric heating without without a heat pump, where the proposed design utilizes electric heating without a heat pump the standard reference design shall be an air source heat pump meeting the requirements of section C403 of the ICC-Commercial Provisions.]		
	Fuel type: same as proposed design	As proposed	
	Efficiencies: Electric: Air-source heat pump with	As proposed	
	prevailing federal minimum standards Nonelectric furnaces: natural gas furnace	As proposed	
	with prevailing federal minimum standards Nonelectric boilers: natural gas boiler	As proposed	
	with prevailing federal minimum standards	As proposed	
	Capacity: sized in accordance with Section R403.7		
Cooling systems	[As proposed] Fuel type: Electric		
	Efficiency: in accordance with prevailing federal minimum standards	As proposed	
	Capacity: sized in accordance with Section R403.7	As proposed	
Service water heating	[As proposed] Fuel type: same as proposed design Efficiency: in accordance with prevailing federal minimum standards	As proposed As proposed	
	Use: Same as proposed design	gal/day = 30 + (10x Nbr)	

[Eff 5/24/10; am and comp

] (Auth: HRS §107-

29) (Imp: HRS §§107-24, 107-25)

§3-181.1-25 Points option. Section R407 is added to the IECC to read as follows:

### SECTION R407

### POINTS OPTION

- R407.1 General (Prescriptive). Above-grade walls and roofs are permitted to comply with the points option as an alternative to complying with Section R401.2.1 and R402.2.
- R407.2 Requirements. One or more efficiency measures shall be selected for roof and above-grade wall systems from Table R407.1 that cumulatively equal or exceed 0 (zero) points.

As an alternative, above-grade walls and roofs are permitted to comply separately by scoring 0 (zero) or greater.

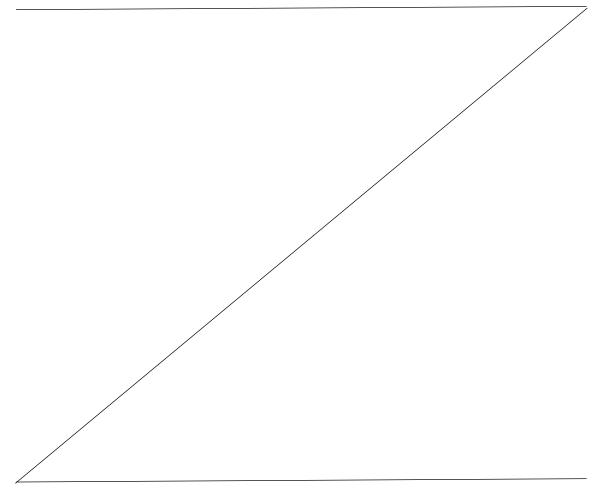


TABLE R407.1
POINTS OPTION

Walls		Standard Home	Tropical Home
		Points	Points
Wood Frame	ed	1	
	R-13 Cavity Wall	0	1
	Insulation		
	R-19 Roof Insulation	-1	0
	R-19 Roof Insulation + Cool roof membrane <sup>1</sup> or Radiant Barrier <sup>3</sup>	0	1
	R-19 Roof Insulation + Attic Venting <sup>2</sup>	0	1
	R-30 Roof Insulation	0	1
	R-13 Wall Insulation + high reflectance walls <sup>4</sup>	1	2
	R-13 Wall insulation + 90% high efficacy lighting and Energy Star Appliances <sup>5</sup>	1	2
	R-13 Wall Insulation + exterior shading wpf=0.36	1	2
	Ductless Air Conditioner7	1	1
	1.071 X Federal Minimum SEER for Air Conditioner	1	1
	1.142 X Federal Minimum SEER for Air Conditioner	2	2
	No air conditioning installed	Not Applicable	2
	House floor area $\leq 1,000$ ft <sup>2</sup>	1	1
	House floor area $\geq 2,500$ ft <sup>2</sup>	-1	-1
	Energy Star Fans <sup>8</sup>	1	1
	Install 1 kW or greater of solar electric	1	1
Metal Framed			
	R-13 +R 3 Wall Insulation	0	1
	R-13 cavity Wall insulation + R-0	-1	0
	R-13 Wall Insulation + high reflectance walls4	0	1

	R-13 wall insulation + 90%	1	2
	high efficacy lighting and		
	Energy Star Appliances <sup>5</sup>		
	R-13 Wall Insulation +	0	1
	exterior shading wpf=0.36		
	R-30 Roof Insulation	0	1
	R-19 Roof Insulation	-1	0
	R-19 + Cool roof membrane <sup>1</sup>	0	1
	or Radiant Barrier <sup>3</sup>		
	R-19 Roof Insulation +	0	1
	Attic Venting <sup>2</sup>		
	Ductless Air Conditioner 7	1	1
	1.071 X Federal Minimum	1	1
	SEER for Air Conditioner		
	1.142 X Federal Minimum	2	2
	SEER for Air Conditioner		
	No air conditioning	Not	2
	installed	Applicable	
	House floor area ≤ 1,000	1	1
	ft <sup>2</sup>		
	House floor area $\geq 2,500$	-1	-1
	ft <sup>2</sup>		
	Energy Star Fans <sup>7</sup>	1	1
	Install 1 kW or greater of	1	1
	solar electric		
1 Cool roof with three-year aged solar reflectance of 0.55 and 3-year aged			

<sup>&</sup>lt;sup>1</sup>Cool roof with three-year aged solar reflectance of 0.55 and 3-year aged thermal emittance of 0.75 or 3-year aged solar reflectance index of 64.

credit.

[Eff 5/24/10; am and comp ] (Auth: HRS §107-

29) (Imp: HRS §§107-24, 107-25)

<sup>&</sup>lt;sup>2</sup> One cfm/ft<sup>2</sup> attic venting.

 $<sup>^3</sup>$  Radiant barrier shall have an emissivity of no greater than 0.05 as tested in accordance with ASTM E-408. The radiant barrier shall be installed in accordance with the manufacturer's installation instructions.

 $<sup>^4</sup>$  Walls with covering with a reflectance of  $\ge$  0.64.

 $<sup>^5</sup>$  Energy Star rated appliances include refrigerators, dishwashers, and clothes washers and must be installed for the Certificate of Occupancy

 $<sup>^6</sup>$  The wall projection factor is equal to the horizontal distance from the surface of the wall to the farthest most point of the overhang divided by the vertical distance from the first floor level to the bottom most point of the overhang.  $^7$  All air conditioning systems in the house must be ductless to qualify for this

 $<sup>^{\</sup>rm 8}$  Install ceiling fans in all bedrooms and the largest space that is not used as a bedroom.

- §3-181.1-26 Compliance. IECC section R501.4 is amended to read as follows:
- R501.4 Compliance. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions and regulations for alterations, repairs, additions and changes of occupancy or relocation, as adopted by the authorities having jurisdiction. [Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)
- §3-181.1-27 Building envelope. IECC section R503.1.1 is amended to read as follows:

### R503.1.1 Building envelope.

- 5. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during a roof replacement shall meet one of the following:
  - 1. R-30 cavity insulation or the cool roof requirements in Section C402.3 for residential buildings.
  - 2. R-19 cavity insulation or the cool roof requirements in Section C402.3 for Tropical Zone residential buildings."

[Eff 5/24/10; am and comp ] (Auth: HRS §107-29) (Imp: HRS §\$107-24, 107-25)

### DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

Code" adopting and amending the Conservation Code, 2006 Edition 181.1, "State Energy Conservate" International Energy Conservate Administrative Rules, on the Second Park Rules, was adopted to the Edition of the Editi	on," and the adoption of chapter 3- tion Code" adopting and amending the ation Code, 2015 Edition," Hawaii Summary Page dated ted on,
Code" adopting and amending the Conservation Code, 2006 Edition 181.1, "State Energy Conservate "International Energy Conservate"	on," and the adoption of chapter 3- tion Code" adopting and amending the ation Code, 2015 Edition," Hawaii ake effect ten days after filing
	GAUR JOHNSON, Chairperson State Building Code Council
	DOUGLAS MURDOCK, State Comptroller Department of Accounting and General Services
APPROVED AS TO FORM:	
Deputy Attorney General	_
	DAVID Y. IGE
	Governor State of Hawaii
	Dated:
	Dateu.
	Filed