

### OVERVIEW

Hawai'i County adopted the 2015 IECC with amendments on February 4, 2020, and the Hawai'i County amendments incorporate those adopted by the State of Hawaii on March 21, 2017 with some changes. This supplemental checklist includes only the requirements that differ in Hawai'i County compared to the State amendments. The complete requirements of the 2015 IECC with State amendment are described in a separate checklist.

### AMENDED TROPICAL ZONE REQUIREMENTS

Component/System	Requirement	Code Section	Plan Review Notes	Info on Plans
<b>Tropical zone qualification</b>	<ul style="list-style-type: none"> <li>▪ ≤ 50% of dwelling unit <u>area</u> has AC</li> <li>▪ No heating installed</li> <li>▪ Elevation &lt; 5,000 ft</li> </ul>	R401.2.1	Dwellings that do not meet all these criteria must use another compliance option.	<input type="checkbox"/> AC space clearly indicated (if applicable)
<b>Water heating - solar</b>	<p>Solar, wind or other renewable source supplies ≥ 90% of energy for water heating</p> <p><u>Exception: A water heating device as approved via Solar Hot Water Heater Variance by the State Energy Office</u></p>	R401.2.1		<input type="checkbox"/> Solar water heating system specs on plans
<b>Windows – solar heat gain coefficient (SHGC)</b>	<p>≤ <b>0.25</b> if projection factor &lt; 0.30                      ≤ <b>0.40</b> if projection factor 0.30-0.50                      N/A: projection factor ≥ 0.5.                      N/A: north windows if PF &gt; 0.20</p> <p><u>Jalousie windows exempt from SHGC requirement</u></p>	R401.2.1	<p>SHGC = solar heat gain factor.</p> <p>Low SHGC typically requires dual-pane glazing with a low-emittance coating that is designed to reduce solar heat gain.</p> <p>Projection factor = horizontal projection of overhang ÷ vertical distance from overhang to bottom of window.</p> <p>Overhang must extend at least 2 ft on each side of the window or to the nearest wall, whichever is less.</p>	<input type="checkbox"/> SHGC indicated on plans <input type="checkbox"/> Overhang dimensions on plans, if applicable

Component/System	Requirement	Code Section	Plan Review Notes	Info on Plans
<b>Natural ventilation</b>	<ul style="list-style-type: none"> <li>▪ Opening area <math>\geq</math> 14% of floor area in each <u>habitable room or mechanical ventilation with 2 air changes per hour</u></li> <li>▪ Bedrooms with exterior walls facing two different directions have operable fenestration facing two directions</li> <li>▪ Interior doors to bedrooms capable of being secured open</li> </ul>	R401.2.1	<p>Operable windows and/or skylights are required for natural ventilation.</p> <p>Ventilation fans can be provided as an alternative.</p> <p><u>HABITABLE SPACE. A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.</u></p>	<input type="checkbox"/> Operable openings on plans <input type="checkbox"/> Mechanical ventilation on plans (if applicable)
<b>Ceiling fans</b>	<p>Ceiling fans or rough-ins or <u>whole-house fan</u> required for:</p> <ul style="list-style-type: none"> <li>▪ Each bedroom</li> <li>▪ Largest space not used as a bedroom</li> </ul>	R401.2.1		<input type="checkbox"/> Ceiling fan locations on plans

## AMENDED PRESCRIPTIVE REQUIREMENTS

Component/System	Requirement	Code Section	Plan Review Notes	Info on Plans
<b>Low-energy use buildings</b>	<p>Exempt from envelope requirements:</p> <ol style="list-style-type: none"> <li>1. Those with a peak design rate of energy usage less than 3. 4 Btu/h•ft<sup>2</sup> (10.7 W/m<sup>2</sup>) or 1.0 watt/ft<sup>2</sup> (10. 7 W/m<sup>2</sup>) of floor area for space conditioning purposes.</li> <li>2. <u>Unconditioned space that does not contain habitable space.</u></li> <li>3. <u>Unconditioned dwellings with enclosed habitable areas less than 1,100 square feet.</u></li> <li>4. <u>Dwellings with permitted, off-grid, self supplying photovoltaic with battery back up.</u></li> </ol>	R402.1	<p><u>HABITABLE SPACE. A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.</u></p>	

Component/System	Requirement	Code Section	Plan Review Notes	Info on Plans
<b>Wall</b> – mass (CMU or concrete)	<input type="checkbox"/> <b>R-3</b> exterior, <b>R-4</b> interior or <b>U-0.197</b> <input type="checkbox"/> <i>Total UA alternative, or</i> <input type="checkbox"/> <i>Points option</i> <input type="checkbox"/> <u>Exception: No insulation required if reflectance <math>\geq 0.64</math>, shading <math>PF \geq 0.3</math>, or <math>\geq 6</math> inches thick</u>	R402.1	<p>Requires either exterior or interior insulation, typically foam board. CMU integral insulation does not comply.</p> <p>No insulation is required if the mass wall has an exterior visible light reflectance of at least 64% or the wall is shaded with overhangs with projection that is at least 0.3 times the height of the wall, <u>or the wall is at least 6 inches thick.</u></p>	<input type="checkbox"/> Insulation location on plans <input type="checkbox"/> Insulation R-value on plans <input type="checkbox"/> Wall surface visible light reflectance on plans (if applicable)
<b>Raised floor</b> – wood or concrete	<u>No requirement</u>	R402.1		
<b>Raised floor</b> – metal frame	<u>No requirement</u>	R402.1		
<b>Windows &amp; skylights</b>	<p>SHGC <math>\leq 0.25</math>  Area-weighted average permitted as long as no window or skylight has SHGC <math>&gt; 0.50</math>.  Up to 15 ft<sup>2</sup> exempt.  <u>Jalousie windows exempt</u></p>	R402.3	<p>SHGC is solar heat gain coefficient. Typically requires dual-pane glazing with a low-emittance coating that is designed to reduce solar heat gain.  The 15 ft<sup>2</sup> exemption allows a small amount of clear glazing.</p>	<input type="checkbox"/> SHGC indicated on plans
<b>Air leakage - testing</b>	<u>Optional</u> Leakage $\leq 5$ air changes per hour tested at pressure of 0.2 in. w.g. (50 Pascals)	R402.4.1.2	<p>Written report required.  Test is typically performed using a blower door.</p>	<input type="checkbox"/> Plan notes indicate testing requirements
<b>Ceiling fans</b>	<u>Optional</u>	R404.2		
<b>Electric vehicle charger power</b>	<u>An electrical rough-in of a 30 amp circuit for future electrical vehicle charger may be installed in garage/ carport area.</u>	R404.3	Optional	

## AMENDED POINT SYSTEM

Component/System	Requirement	Code Section	Plan Review Notes	Info on Plans
<b>Additional point option</b>	Reduce fenestration from 14% to 10%. Equal to -1 point for Tropical Home	Table R407.1	Allows smaller natural ventilation opening area if point total $\geq 0$ . Other measures in Table 407.1 could be applied to offset the -1 point for this reduction in natural ventilation opening area.	

## ADDITIONS AND ALTERATIONS

Component/System	Requirement	Code Section	Plan Review Notes	Info on Plans
<b>Additions - compliance</b>	<p><u>Exceptions:</u></p> <ol style="list-style-type: none"> <li>1. When addition includes <u>unconditioned space that does not contain habitable space.</u></li> <li>2. When both the existing building and addition are entirely comprised of <u>habitable unconditioned space if total square footage does not increase more than 1,100 square feet.</u></li> </ol>	R502.1	<p>Exempts additions when</p> <ol style="list-style-type: none"> <li>1. They are unconditioned and contain no habitable space. Examples include storage and utility spaces.</li> <li>2. When the existing building and addition are both unconditioned, and the total building area including addition is <math>\leq 1,100</math> ft<sup>2</sup></li> </ol>	
<b>Alterations – roof replacement</b>	<p>Replacement of uninsulated roofs include at least one of the following:</p> <ul style="list-style-type: none"> <li>▪ <u>EnergyStar compliant covering</u></li> <li>▪ <u>Radiant barrier, or</u></li> </ul> <ol style="list-style-type: none"> <li>1. <u>Attic ventilation via solar fan(s), ridge ventilation or gable vents</u></li> </ol>	R503.1.1	<ul style="list-style-type: none"> <li>• Any new roof must meet the requirements for a new roof.</li> <li>• No requirements for roof recover.</li> </ul>	

Component/System	Requirement	Code Section	Plan Review Notes	Info on Plans
<b>Changes in space conditioning</b>	<p>A non-conditioned space that is altered to become air conditioned shall be brought into full compliance.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> <li>1. Where the simulated performance option in Section R405 is used to comply with this section, the annual energy cost of the proposed design is permitted to be 110 percent of the annual energy cost otherwise allowed by Section R405. 3.</li> <li>2. <u>When specified in the tropical zone, and the total conditioned space does not exceed 50% of the habitable floor area, and, R- 19 is installed over the conditioned space, and Split ductless air conditioner systems with a SEER rating in the top 25% of readily available units are installed.</u></li> </ol>	R503.2	<p>This amendment allows the addition of AC to a previously unconditioned dwelling if the following conditions are met.</p> <ol style="list-style-type: none"> <li>1. The AC serves no more than 50% of the habitable floor area</li> <li>2. The AC spaces have R-19 insulation above</li> <li>3. The AC is a ductless split system with SEER in the top 25%.</li> </ol>	

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