

HIGHLIGHTS OF CHANGES BETWEEN 2006 & 2009

Hawaii amendments indicated in italics¹

General Requirements

- Roof insulation compliance is now required when the sheathing or insulation is exposed during a re-roofing project (101.4.3)
- Commercial lighting compliance is triggered with a change in occupancy if the space usage changes (101.4.4)
- Full compliance is triggered by a change from unconditioned to conditioned space (101.4.5)
- *Envelope requirements apply also to unconditioned, habitable spaces (HI amendment to 101.5.2)*

Residential Requirements

- Residential window solar heat gain coefficient (SHGC) limit is reduced from 0.40 to 0.30 (402.3)
- *Hawaii amendments provide alternatives for residential envelope compliance:*
 - *Wall insulation tradeoffs (HI amendment to Table 402.1.1)*
 - *Ceiling insulation alternatives (new section 402.1.6)*
 - *Steel-frame wall insulation alternatives (HI amendment to 402.2.5)*
 - *Exemption for north-facing and well-shaded windows (HI amendment to 402.3.3)*
 - *Air leakage exemption for unconditioned dwellings (HI amendment to 402.4.1.1)*
 - *Air leakage allowance for jalousie windows (HI amendment to 402.4.4)*
- Building envelope tightness verification is required for air-conditioned dwellings (402.4.2)
- Duct leakage pressure testing is required for new duct systems (403.2)
- High-efficacy lighting is required for a minimum of 50% of the lamps in permanently installed lighting fixtures (404.1)
- Pool covers are required for heated pools without solar heating or waste heat recovery (403.9)

Commercial Requirements

- The commercial compliance alternative has been updated from ASHRAE Standard 90.1-2004 to 90.1-2007 (501.1)

¹ Hawaii amendments referenced in this document were approved by the Hawaii State Building Code Council in February 2012. Individual County amendments may be different.

- Separate opaque envelope insulation requirements are added for high-rise residential buildings vs. other commercial buildings (502.1.1)
- *No roof insulation is required in a commercial building roof that has a qualifying cool roof membrane, at elevations below 2,400 ft. (HI amendment to 502.2.1)*
- *An area weighted average is allowed for commercial window SHGC compliance (HI amendment to 502.3.3)*
- Skylight requirements are more stringent. New requirements for all skylights are U-factor of 0.75 and SHGC of 0.35. Requirements in 2006 were 1.9/0.40 for glass skylights and 1.9/0.35 for plastic skylights (502.3)
- HVAC equipment efficiency tables are updated with greater stringency in most cases (503.2.3)
- Demand control ventilation is now required for systems serving some spaces such as theaters (503.2.5.1)
- *Mechanical systems commissioning and completion requirements. The designer is required to provide a written statement of system completion (HI amendment to 503.2.9)*
- HVAC fan power limits are established for systems with total fan motor size greater than 5hp (503.2.10)
- Supply air temperature reset is required for variable air volume (VAV) systems (503.4.5.4)
- High-efficacy lighting is required for a minimum of 50% of the permanently installed lighting fixtures in dwelling units (505.1)
- Separate control is now required for lighting fixtures located in daylight zones, in order to allow occupants to turn off lights during the day (505.2.2.3)
- *Hotel thermostat and lighting controls. Automatic controls are required that detect whether the room is occupied and adjust the thermostat and lighting accordingly. Interlock switches are also required on lanai doors to shut off AC when the door is open (HI amendment to 505.2.3)*
- An expanded list of indoor lighting applications are now exempted from the lighting power requirements (505.5.1)
- The additional retail lighting power allowance is revised (505.5.2)
- Exterior lighting power limits are significantly revised, including different limits for rural and urban areas (505.6.2)
- *Tenant electrical submetering is required for tenants occupying 1,000 ft² or more (HI amendment to 505.7)*
- The calculation rules for commercial Total Building Performance calculations have been revised and expanded (506)