

BEES – Overview of Amendments, February 2010

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In November 2006 the AHFC Board adopted the 2006 International Energy Conservation Code (IECC) with Alaska-specific amendments (see www.cchrc.org) to be the Building Energy Efficiency Standard for Alaska (BEES). This update of BEES was done to satisfy the requirement that the Standard be updated every three years (long overdue) and to restate BEES in code language with generally minor changes in the level of energy efficiency required throughout the state. The 2006 IECC was chosen because it is part of the International Code Council's family of codes (IBC, IRC, IMC, etc) that are widely adopted by Alaskan municipalities.

Additional amendments were proposed for adoption in early 2010 by an ad hoc committee of experts that met at AHFC in March 2009 to consider all of the comments received by that date concerning the amendments made in November of 2006.

The main changes from the old BEES (pre-2006) are as follows:

AHFC is authorized to modify the PUR-101 certification process so that documentation about the materials and equipment used in a new house is provided by appropriate persons and that raters are not asked to certify as to the installation of items that they cannot have observed. AHFC may also create a process to provide documentation when the prescriptive path is used.

The old BEES divided the state into five Climate Regions (1-5) from SE Alaska to the North Slope. The 2006 IECC essentially had one Climate Zone for Alaska (Zone 7). Using heating degree days as the basis, we defined four Climate Zones (6-9) for Alaska to be used with the IECC.

There are two compliance options: the prescriptive and performance paths. Table A402.1.1 summarizes the insulation requirements for the prescriptive path. With the exception of the window and skylight R-values, there are very few changes in insulation values from the old BEES and where there are changes, they are made to fit with the IECC requirements and to improve internal consistency. The performance path (energy rating) is unchanged from the old BEES.

For both paths there are mandatory provisions relating to air leakage rates (402.4), moisture control (402.5), thermostats (403.1), location and insulation of ducts and pipes (403.2-5), equipment sizing (403.6), and ventilation (403.7). The main changes in these mandatory provisions are insulating exterior ducts to the wall R-value instead of R-6 or R-8 and the adoption of ASHRAE Standard 62.2-2004 as amended as the ventilation standard, replacing the old Option I (old ASHRAE 62) or old Option II (.3 ACH).

The amended ventilation rates for Alaska are based on requiring 10 cfm per occupant instead of the 7.5 required in ASHRAE 62.2-2004. This increase is intended to compensate for the generally tighter buildings that are constructed in Alaska due to the extreme heating loads. Even with this increase, the total ventilation requirement is often less than that required by the old BEES for larger buildings with few occupants.