

ENERGY CONSTRUCTION AMENDMENTS

2013 GENERAL SESSION

STATE OF UTAH

LONG TITLE**General Description:**

This bill amends the State Construction Code.

Highlighted Provisions:

This bill:

- ▶ adopts the 2012 edition of the International Energy Conservation Code.

Money Appropriated in this Bill:

None

Other Special Clauses:

This bill takes effect on July 1, 2013.

Utah Code Sections Affected:

AMENDS:

15A-2-103, as last amended by Laws of Utah 2012, Chapter 76

15A-3-701, as enacted by Laws of Utah 2011, Chapter 14

Be it enacted by the Legislature of the state of Utah:

Section 1. Section **15A-2-103** is amended to read:

15A-2-103. Specific editions adopted of construction code of a nationally recognized code authority.

(1) Subject to the other provisions of this part, the following construction codes are incorporated by reference, and together with the amendments specified in Chapter 3, Statewide Amendments to International Plumbing Code, and Chapter 4, Local Amendments Incorporated as Part of State Construction Code, are the construction standards to be applied to building construction, alteration, remodeling, and repair, and in the regulation of building construction, alteration, remodeling, and repair in the state:

(a) the 2009 edition of the International Building Code, including Appendix J, issued by the International Code Council;

(b) the 2009 edition of the International Residential Code, issued by the International

33 Code Council;

34 (c) the 2009 edition of the International Plumbing Code, issued by the International
35 Code Council;

36 (d) the 2009 edition of the International Mechanical Code, issued by the International
37 Code Council;

38 (e) the 2009 edition of the International Fuel Gas Code, issued by the International
39 Code Council;

40 (f) the 2011 edition of the National Electrical Code, issued by the National Fire
41 Protection Association;

42 (g) the ~~2009~~ 2012 edition of the International Energy Conservation Code, issued by
43 the International Code Council;

44 (h) subject to Subsection 15A-2-104(2), the HUD Code;

45 (i) subject to Subsection 15A-2-104(1), Appendix E of the 2009 edition of the
46 International Residential Code, issued by the International Code Council; and

47 (j) subject to Subsection 15A-2-104(1), the 2005 edition of the NFPA 225 Model
48 Manufactured Home Installation Standard, issued by the National Fire Protection Association.

49 (2) Consistent with Title 65A, Chapter 8, Management of Forest Lands and Fire
50 Control, the Legislature adopts the 2006 edition of the Utah Wildland Urban Interface Code,
51 issued by the International Code Council, with the alternatives or amendments approved by the
52 Utah Division of Forestry, as a construction code that may be adopted by a local compliance
53 agency by local ordinance or other similar action as a local amendment to the codes listed in
54 this section.

55 Section 2. Section **15A-3-701** is amended to read:

56 **Part 7. Statewide Amendments to IECC**

57 **15A-3-701. General provision.**

58 The following is adopted as an amendment to the IECC to be applicable statewide~~[, in~~
59 ~~IECC, Section 504.4,];~~

60 (1) In IECC, Section C202, the definition for "CONDITIONED SPACE" is deleted and
61 replaced with the following: "CONDITIONED SPACE. An area, room or space enclosed
62 within the building thermal envelop that is directly heated or cooled, or indirectly heated or
63 cooled by any of the following means:

- 64 1. Openings directly into an adjacent conditioned space.
- 65 2. An un-insulated floor, ceiling or wall adjacent to a conditioned space.
- 66 3. Un-insulated duct, piping or other heat or cooling source within the space."

67 (2) In IECC, Section C404.4, a new exception is added as follows: "Exception: Heat
 68 traps, other than the arrangement of piping and fittings, shall be prohibited unless a means of
 69 controlling thermal expansion can be ensured as required in the IPC Section 607.3."

70 (3) In IECC, Section R103.2, all words after the words "herein governed." are deleted
 71 and replaced with the following: "Construction documents include all documentation required
 72 to be submitted in order to issue a building permit."

73 (4) In IECC, Section R202, the definition for "CONDITIONED SPACE" is deleted and
 74 replaced with the following: "CONDITIONED SPACE. An area, room or space enclosed
 75 within the building thermal envelop that is directly heated or cooled, or indirectly heated or
 76 cooled by any of the following means:

- 77 1. Openings directly into an adjacent conditioned space.
- 78 2. An un-insulated floor, ceiling or wall adjacent to a conditioned space.
- 79 3. Un-insulated duct, piping or other heat or cooling source within the space."

80 (5) In IECC, Section R303.3, all wording after the first sentence is deleted.

81 (6) In IECC, Table R402.1.1 and Table R402.1.3, the rows for "climate zone 3",
 82 "climate zone 5 and Marine 4, and climate zone 6" are deleted and replaced and a new footnote
 83 j is added as follows:

<u>"TABLE R402.1.1</u>										
<u>INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a</u>										
<u>CLIMATE</u> <u>ZONE</u>	<u>FENESTRATION</u> <u>U-FACTOR^b</u>	<u>SKYLIGHT^b</u> <u>U-FACTOR</u>	<u>GLAZED</u> <u>FENESTRATION</u> <u>SHGC^{b,c}</u>	<u>CEILING</u> <u>R-VALUE</u>	<u>WOOD</u> <u>FRAME</u> <u>WALL</u> <u>R-VALUE</u>	<u>MASS</u> <u>WALL</u> <u>R-VALUE^{l,j}</u>	<u>FLOOR</u> <u>R-VALUE</u>	<u>BASEMENT^s</u> <u>WALL</u> <u>R-VALUE</u>	<u>SLAB^d</u> <u>R-VALUE</u> <u>& DEPTH</u>	<u>CRAWL</u> <u>SPACE^e</u> <u>WALL</u> <u>R-VALUE</u>
<u>3</u>	<u>0.65</u>	<u>0.65</u>	<u>0.40</u>	<u>30</u>	<u>15</u>	<u>5</u>	<u>19</u>	<u>0</u>	<u>0</u>	<u>5/13</u>
<u>5 and</u> <u>Marine 4</u>	<u>0.35</u>	<u>0.60</u>	<u>NR</u>	<u>38</u>	<u>19 or 13 +</u> <u>5^h</u>	<u>13</u>	<u>30^g</u>	<u>10/13</u>	<u>10, 2 ft</u>	<u>10/13</u>
<u>6</u>	<u>0.35</u>	<u>0.60</u>	<u>NR</u>	<u>49</u>	<u>19 or 13 +</u> <u>5^h</u>	<u>15</u>	<u>30^g</u>	<u>10/13</u>	<u>10, 4 ft</u>	<u>10/13</u>

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j. Log walls complying with ICC400 and with a minimum average wall thickness of 5" or greater shall be permitted in Zones 5-8 when overall window glazing is .31 U-factor or lower, minimum heating equipment efficiency is 90 AFUE (gas) or 84 AFUE (oil), and all other component requirements are met.

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TABLE R402.1.3 EQUIVALENT U-FACTORS^a

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<u>CLIMATE ZONE</u>	<u>FENESTRATION U-FACTOR</u>	<u>SKYLIGHT U-FACTOR</u>	<u>CEILING U-FACTOR</u>	<u>FRAME WALL U-FACTOR</u>	<u>MASS WALL U-FACTOR^b</u>	<u>FLOOR U-FACTOR</u>	<u>BASEMENT WALL U-FACTOR</u>	<u>CRAWL SPACE WALL U-FACTOR</u>
	<u>3</u>	<u>0.65</u>	<u>0.65</u>	<u>0.035</u>	<u>0.082</u>	<u>0.141</u>	<u>0.047</u>	<u>0.360</u>
<u>5 and Marine 4</u>	<u>0.35</u>	<u>0.60</u>	<u>0.030</u>	<u>0.060</u>	<u>0.082</u>	<u>0.033</u>	<u>0.059</u>	<u>0.065</u>
<u>6</u>	<u>0.35</u>	<u>0.60</u>	<u>0.026</u>	<u>0.060</u>	<u>0.060</u>	<u>0.033</u>	<u>0.059</u>	<u>0.065</u>

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(7) In IECC, Section R402.2.1, the last sentence is deleted.

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(8) In IECC, Section R402.2.2, the last sentence is deleted.

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(9) In IECC, Section R402.3.3, the last sentence is deleted.

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(10) In IECC, Section R402.3.4, the last sentence is deleted.

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(11) In IECC, Section R402.4.1, in the first sentence, the word "and" is deleted and

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replaced with the word "or".

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(12) In IECC, Section R402.4.1.1, the last sentence is deleted and replaced with the

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following: "Where allowed by the building official, the builder may certify compliance to

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components criteria for items which may not be inspected during regularly scheduled

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inspections."

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(13) In IECC, Section R402.4.1.2, the following changes are made:

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a. "In the first sentence, the words "in Zones 1 and 2, and 3 air changes per hour in Zone 3

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through 8" are deleted.

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b. In the third sentence, the words "Where required by the building official," and the word

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"third" are deleted.

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c. The following sentence is inserted after the third sentence: "The following parties shall be

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approved to conduct testing: Parties certified by BPI or RESNET, or licensed contractors who

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have completed training provided by Blower Door Test equipment manufacturers or other

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comparable training."

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(14) In IECC, Section R402.4.4, the last sentence is deleted.

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(15) In IECC, Section R403.2.2, the exception for total leakage testing is deleted and

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replaced with the following: "Exception: The total leakage test is not required for systems with

118 air handlers and at least 85% of ducts (measured by length) located entirely within the building
119 thermal envelope."

120 (16) In IECC, Section R403.2.3, the words "or plenums" are deleted.

121 (17) In IECC, Section R403.4.2, the sentences for "3." and "9." and the last sentence
122 are deleted.

123 (18) In IECC, Section R403.5, the first sentence is deleted.

124 (19) IECC, Section R404.1 and the exception are deleted and R404.1.1 becomes
125 R404.1.

126 (20) In IECC, Table R405.5.2(1), the following changes are made under the column
127 STANDARD REFERENCE DESIGN:

128 a. In the row "Air exchange rate", the words "in Zones 1 and 2, and 3 air changes per hour in
129 Zones 3 through 8" are deleted.

130 b. In the row "Heating systems^{f, g}", the standard reference design is deleted and replaced with
131 the following:

132 "Fuel Type: same as proposed design

133 Efficiencies:

134 Electric: air source heat pump with prevailing federal minimum efficiencies

135 Nonelectric furnaces: natural gas furnace with prevailing federal minimum efficiencies

136 Nonelectric boilers: natural gas boiler with prevailing federal minimum efficiencies

137 Capacity: sized in accordance with Section N1103.6"

138 c. In the row "Cooling systems^{f, h}" the words "As proposed" are deleted and replaced with the
139 following:

140 "Fuel Type: Electric

141 Efficiency: in accordance with prevailing federal minimum standards"

142 d. In the row "Service water heating^{f, g, h, i}", the words "As proposed" are deleted and replaced
143 with the following:

144 "Fuel Type: same as proposed design

145 Efficiency: in accordance with prevailing federal minimum standards

146 Tank Temperature: 120o F"

147 e. In the row "Thermal distribution systems" the word "none" is deleted and replaced with the
148 following: "Thermal distribution system efficiency (DSE) of .080 shall be applied to both the

149 heating and cooling system efficiencies."

150 (21) In IECC, Table R405.5.2(2) the number "0.80" is inserted under "Forced air
151 systems" for "Distribution system components located in unconditioned space".

152 Section 3. **Effective date.**

153 This bill takes effect on July 1, 2013.