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Comparison Between Residential 2009 IECC with St Louis amendments, the 2015 IECC, and 2015 IECC w/ Building Codes Review Committee (BCRC) proposals: Climate Zone 4

Note: This document does not contain all provisions of each code;
 Only the major portions of the code are listed below:

Insulation and Fenestration Requirements by Component	2009 IECC with St Louis Amendments	2015 IECC	2015 IECC w/ BCRC Proposed Amendments
Fenestration U-factor	0.40	0.35	<u>0.40</u>
Skylight U-factor	0.60	0.55	0.55
Glazed fenestration SHGC	NR	0.40	<u>NR</u>
Ceiling R-value	R-30	R-49	<u>R-38</u>
Wood frame wall R-value	R-13	R-20 or R-13+5	<u>R-13</u>
Mass wall R-value	5/10	8/13	8/13
Floor R-value	R-19	R-19	R-19
Basement wall R-value	R-13	10/13	<u>R-13^j</u>
Slab R-value and depth	10, 2 ft.	10, 2 ft.	10, 2 ft.
Crawl space wall R-value	R-5	10/13	<u>5^k</u>

j. Unfinished basements may have a total of 20% of the total basement wall area exposed above the outside finished grade/ground level as un-insulated concrete foundation walls. The foundation wall area above the outside finished grade/ground level that may be un-insulated is determined by the formula .20 times the basement wall height of all walls (including insulated exterior frame walls for walkout basements and walls common to both basement and attached garages) times the perimeter of these basement walls. Exposed foundation wall area above the outside finished grade/ground level exceeding 20% of the total basement wall area shall be insulated with R-5 insulation. When required in unfinished areas, the basement foundation wall insulation shall extend down to the basement floor slab or to a minimum of 24 inches below the outside finished grade when the grade is above the floor slab elevation.

k. Naturally vented crawl space wall R-value may be 0.

	2009 IECC	2015 IECC	2015 IECC w/ BCRC Proposed Amendments
Certificate (R401.3)	Deleted in St. Louis Amendments	Certificate listing EE house components required	<u>Deleted in St. Louis Proposed Amendments</u>
Eave Baffle	NO REQUIREMENT	For air permeable insulations in vented attics, a baffle shall be installed adjacent to soffit and eave vents. Baffles shall maintain an opening equal or greater size than the vent. The baffle shall extend over the top of the attic insulation. The baffle shall be permitted to be any solid material. (402.2.3)	Same as 2015 IECC (402.2.3)
Access Hatch	Access hatches (from conditioned to unconditioned spaces, like attics and crawl spaces) shall be insulated to level equivalent to insulation on surrounding surfaces (402.2.3)	Access hatches (from conditioned to unconditioned spaces, like attics and crawl spaces) shall be weather-stripped and insulated to level equivalent to insulation on surrounding surfaces (402.2.4)	<u>Same as St Louis '09 w/ Amendments (402.2.3) - no weather-stripping requirement</u>
Conditioned Basement walls	Must be insulated from top of basement wall down to 10 ft. below grade or to basement floor, whichever is less. Unconditioned basement walls must meet same requirement, unless floor overhead is insulated (402.2.7)	Same as St. Louis 2009 (402.2.9)	Same as St. Louis 2009 (402.2.9)
Crawl Space walls	Crawl space walls may be insulated when the space is not vented to the outside, as an alternative to insulating floors above crawl spaces. (402.2.9)	SAME, except requires "Class I vapor retarder in accordance with the IBC or IRC, as applicable." (402.2.11)	Same as 2015 IECC (402.2.11)
Glazed Fenestration Exemption	Up to 15 square feet of total glazing area shall be permitted to be exempt from U-factor and SHGC requirements (402.3.3)	Same as St. Louis 2009 (402.3.3)	Same as St. Louis 2009 (402.3.3)
Opaque Door Exemption	One side-hinged opaque door assembly up to 24 square feet exempted from U-factor requirement. (402.3.4)	Same as St. Louis 2009 (402.3.4)	Same as St. Louis 2009 (402.3.4)
Thermally Isolated sunroom U-factor	Maximum fenestration U-factor shall be 0.50 and maximum skylight U-factor shall be 0.75. (402.3.5)	Maximum fenestration U-factor shall be 0.45 and maximum skylight U-factor shall be 0.70. (402.3.5)	Same as 2015 IECC (402.3.5)

	2009 IECC	2015 IECC	2015 IECC w/ BCRC Proposed Amendments
Replacement Fenestration	Where some or all of an existing fenestration unit is replaced, including sash and glazing, the replacement fenestration unit shall meet the applicable U-factor and SHGC requirements. (402.3.6)	Same as St. Louis 2009 (503.1.1.1)	Same as St. Louis 2009 (503.1.1.1)
Building Thermal Envelope Sealing	List of measures that must be caulked, gasketed, weather-stripped, or other wise sealed at (402.4.1)	The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.4 (402.4)	The building thermal envelope <u>may be designed</u> and constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.4 (402.4)
Thermal envelope testing	Deleted in St Louis amendments (402.4.2.1)	Must follow Table R402.4.1.1 and ALSO use blower door test to confirm air leakage of less than 3 ACH50. Where required by the code official, testing shall be conducted by approved third party. (402.4.1.2)	<u>May</u> follow Table R402.4.1.1 and <u>may</u> use blower door test to confirm air leakage of less than <u>5</u> ACH50. Where required by the code official, testing shall be conducted by approved third party. (402.4.1.2)
Air Barrier and Insulation Installation Table (402.4.1.1)	Deleted in St Louis amendments (402.4.2)	Table 402.4.1.1	<u>Deleted air barrier and insulation recommendations for shafts/penetration, recessed lighting, and HVAC register boots components</u>
Fireplaces	Deleted in St Louis amendments(402.4.3)	New wood-burning fireplaces shall have tight-fitting flue dampers and outdoor combustion air. (402.4.2)	<u>Deleted in St. Louis Proposed Amendments</u>
Recessed Lighting Sealing	Recessed luminaries installed in the building thermal envelope shall be sealed... All recessed luminaries shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) of air movement from the conditioned space to ceiling cavity. All recessed luminaries shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering. (402.4.5)	“ “ ...when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaries shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering. (402.4.5)	<u>Voluntary – changed shall to may (402.4.5)</u>

	2009 IECC	2015 IECC	2015 IECC w/ BCRC Proposed Amendments
Maximum fenestration U-factor and SHGC	Area-weighted average maximum fenestration U-factor permitted using tradeoffs from section 402.1.4 or 404 shall be 0.48 for vertical fenestration, and 0.75 for skylights. (402.6)	Same as St. Louis 2009 (402.5)	Same as St. Louis 2009 (402.5)
Programmable Thermostat	NO REQUIREMENT	Thermostat controlling the primary heating or cooling systems of the dwelling unit shall be capable of controlling the heating or cooling system on a daily schedule to maintain different temperature set points at different times of the day. (403.1.1)	<u>Deleted in St. Louis Proposed Amendments</u>
Duct Insulation	Supply ducts in attics shall be insulated to a minimum of R-4. <u>Exception:</u> Ducts or portions thereof located completely inside the building thermal envelope (403.2.1)	Supply and Return ducts in attics shall be insulated to a minimum of R-6 or R-8, depending on diameter. All other ducts shall be insulated to a minimum of R-6 or R-4.2. <u>Exception:</u> Ducts or portions thereof located completely inside the building thermal envelope (403.3.1)	Same as 2015 IECC (403.3.1)
Duct Sealing	Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with IMC; (403.2.2)	Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with either IMC or IRC; (403.2.2)	Same as 2015 IECC (403.2.2)
Duct Testing	<u>Post construction:</u> Leakage to Outdoors: 8 cfm/100 sq. ft. Total Leakage: 12 cfm/100 sq. ft. <u>Rough-in:</u> Total Leakage: 6 cfm/100 sq. ft. Exception: Duct tightness test not required if most ducts located entirely within building envelope. (403.2.2)	<u>Post construction:</u> Total Leakage: 4 cfm/100 sq. ft. <u>Rough-in:</u> Total Leakage: 4 cfm/100 sq. ft. Exception: Duct tightness test not required if all ducts located entirely within building envelope. (403.3.4)	<u>Deleted in St. Louis Proposed Amendments</u>

	2009 IECC	2015 IECC	2015 IECC w/ BCRC Proposed Amendments
Building Cavities	Building framing cavities shall not be used as supply ducts. (403.2.3)	Building framing cavities shall not be used as ducts or plenums. (403.3.5)	Building framing cavities shall not be used for <u>supply air</u> . (403.3.5)
Mechanical system piping insulation	Mechanical system piping shall be insulated to minimum of R-2. (403.3)	Mechanical system piping shall be insulated to minimum of R-3. (403.4)	Same as 2015 IECC (403.4)
Protection of piping insulation	NO REQUIREMENT	Piping insulation exposed to weather shall be protected from damage; Adhesive tape not permitted. (403.4.1)	<u>Deleted in St. Louis Proposed Amendments</u>
Circulating hot water systems	Piping insulated to at least R-2. (403.4)	Requirements at (403.5.1.1)	Same as 2015 IECC (403.5.1.1)
Hot water pipe insulation	NO REQUIREMENT	Insulated to R-3, with exceptions (403.5.3)	Same as 2015 IECC (403.5.3)
Mechanical Ventilation	No whole-house continuous ventilation requirement	Requirement for mechanical ventilation that meets requirements of IRC or IMC. (403.6)	<u>Deleted in St. Louis Proposed Amendments</u>
Equipment sizing	Heating and cooling equipment shall be sized in accordance with ASHRAE Fundamentals. (403.6)	Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. (403.7)	TBD – tabled until Mechanical Code Review Committee
Systems serving multiple dwelling units	NO REQUIREMENT	Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the IECC- Commercial provisions in lieu of Section R403. (403.8)	Same as 2015 IECC (403.8)
Lighting Equipment	Minimum 50 percent high-efficacy lamps (404.1)	Minimum 75 percent high-efficacy lamps (404.1)	<u>Deleted in St. Louis Proposed Amendments</u>
Snow melt system controls	NO REQUIREMENT	Requirement at (403.9)	Same as 2015 IECC (403.9)