

CHANGES TO ENERGY CODES COULD AFFECT LOUISIANA

by
Billy Williamson, Engineer Intern

The International Codes Council began Final Action Hearings on proposed changes to the ICC codes on September 17 in the Minneapolis Convention Center. Discussion of proposed changes to the energy efficiency requirements was scheduled for September 21. However, lengthy discussions on several unrelated changes delayed the start of discussion on the energy efficiency requirements until after 9:00 p.m.

During the proceedings, a total of 37 energy code changes which might affect Louisiana were passed. These changes, along with brief summaries for each, are listed in the table on the following page. Separate proposals which made similar changes to the IECC and IRC were grouped. Proposals beginning with "RE" affect the energy efficiency provisions of the IRC. Proposals beginning with "EC" either affect the IECC or both the IECC and the IRC energy conservation provisions. Of the proposals which were passed, a few made very significant changes affecting possible future codes in Louisiana.

EC 22 part 2 and EC 26 make similar changes to the IRC and IECC. EC 22 part 2 updates the IRC, reducing the allowable solar heat gain coefficient (SHGC) in climate zones 1, 2, and 3 from 0.40 to 0.35. It also allows a SHGC of 0.40 to be used for impact-rated fenestration (windows and doors). EC 26 updates the IECC, reducing the allowable SHGC in the same climate zones from 0.40 to 0.30 and does not allow higher SHGC for impact-rated fenestration. These changes mark a significant difference between the two codes. Instead of the two codes being consistent, SHGC requirements of the IECC are more stringent than those of the IRC. This could lead to confusion in compliance and enforcement. EC 18, parts 1 and 2, reduce the allowable U-factors for fenestration to 0.65 and 0.50 for climate zones 2 and 3, respectively, and allows U-factors of 0.75 and 0.65 in those zones for impact-rated fenestration.

Several changes also affected the performance path of compliance. EC 91 removes the references to federal minimum appliance efficiencies from the performance path. Instead of comparing efficiencies to minimum levels, the IECC now references the IRC for proper sizing of mechanical equipment. Also dealing with the performance path, EC 92 reduces the amount of glazing area in the standard reference design from 18% to 15%, which was considered a more accurate estimate. EC 99 disallows the use of site energy and allows source energy for performance calculations. This eliminates problems associated with the use of mixed fuel sources in performance calculations.

The changes made to the IECC and IRC will be included in the 2009 versions of both codes. The Louisiana State Uniform Construction Code Council then has 2 years to review the updated codes. After this time, the state can either adopt the new codes or continue using the present statewide codes. If the new codes are adopted, they will represent significant increase in stringency of the statewide energy codes. They will also present new challenges to the officials tasked with enforcing the codes.

Energy Code Changes Affecting Louisiana

Proposal	Summary	CODE
RE 6	Moves equivalent U-factors and mass-wall R factors into tables	IRC
RE 8	Requires that all recessed luminaires be IC-rated	IRC
EC 84 pt 2	Requires that at least 50% of all luminaires must be high-efficacy; defines of high-efficacy lamps	IRC
EC 15 pt 1	Requires that R-19 batts be labeled with full R-value and R-value if compressed into 5-1/2 inch cavity depth.	IECC
EC 15 pt 2		IRC
EC 18 pt 1	Reduces U-factor allowances to 0.65, 0.50, and 0.35 for zones 2, 3, and 4, respectively. Allows impact rated fenestration u-factors of 0.75 and 0.65 in zones 2 and 3	IECC
EC 18 pt 2		IRC
EC 22 pt 2	Reduces SHGC from 0.40 to 0.35 in climate zones 1, 2, and 3. Allows SHGC of 0.40 for impact rated fenestration	IRC
EC 26	Reduces SHGC from 0.40 to 0.30 in climate zones 1, 2, and 3.	IECC
EC 36 pt 1	Adds basement wall insulation of R-5/13 for climate zone 3. Adds exception to the requirement for warm, humid climates	IECC
EC 36 pt 2		IRC
EC 37 pt 1	Limits the R-5 requirement for heated slab insulation to 2 ft or the depth of the footing, which ever is less.	IECC
EC 37 pt 2		IRC
EC 50 pt 1	Reduces requirement for continuous insulation to R-3 in climate zones 1 & 2 for steel-framed buildings.	IECC
EC 50 pt 2		IRC
EC 51 pt 1	Adds the option for 0 cavity insulation and R-10 continuous insulation in steel framed buildings where R-13 is required for wood frames.	IECC
EC 51 pt 2		IRC
EC 58 pt 1	Limits the opaque door exemption to one side-hinged, opaque door assembly up to 24 square feet.	IECC
EC 58 pt 2		IRC
EC 60 pt 1	Adds rim joist junctions to the list of sealing requirements	IECC
EC 60 pt 2		IRC
EC 64 pt 1	Adds air barrier and insulation inspection checklist and testing definition	IECC
EC 64 pt 2		IRC
EC 67	Requires a minimum R-6 duct insulation when using the performance path	IECC
EC 68 pt 1	Requires the installation of a programmable thermostat where primary heating is from a forced air furnace.	IECC
EC 68 pt 2		IRC
EC 71 pt 1	Requires that duct tightness be verified by testing at rough-in stage or during post-construction. Maximum leakage rates are specified.	IECC
EC 71 pt 2		IRC
EC 74 pt 1	Increases the minimum mechanical system piping insulation to R-3 from R-2.	IECC
EC 74 pt 2		IRC
EC 81 pt 2	Requires pool heaters to have readily accessible on-off switch and time switches. Also requires vapor-retarder pool covers for heated pools	IRC
EC 82		IECC
EC 86	Modifies thermostat setpoints for performance calculations to 75/72 from 78/68	IECC
EC 91	Removes reference to federal minimum appliance efficiencies from the performance path. Makes the IECC reference the IRC for sizing.	IECC
EC 92	Reduces the glazing amount in the standard reference design to 15% from 18%	IECC
EC 99	Disallows the use of site energy and allows "source energy" for performance calculation.	IECC
EC 101	Permits code officials to require documentation of values used in software calculations for proposed design.	IECC