

2007/2008 INTERNATIONAL ENERGY CONSERVATION CODE COMMITTEE

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INTERNATIONAL ENERGY CONSERVATION CODE COMMITTEE HEARING RESULTS

EC1-07/08

Committee Action: **Disapproved**

Committee Reason: The provision proposed would state that the thermal envelope requirements of the existing building would not need to be upgraded. The committee felt that the exemption for the existing portion of the structure should also include other elements in the existing building. For instance, a water heater that would not provide hot water to the addition should not need to be upgraded to latest code requirements.

Assembly Action: **None**

EC2-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The proposal would move sections of Chapter 1 to Chapter 3, which is a more logical location for these provisions.

Assembly Action: **None**

EC3-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The code should not put manufacturers in a position to do something that is contrary to FTC rules. This type of issue should be taken up with the FTC.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The proposal addresses an issue that is adequately covered by Federal Law and should not be placed into the code.

Assembly Action: **None**

EC4-07/08

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard AAMA 507-07 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

Committee Action: **Disapproved**

Committee Reason: The proposed new standard does not have third-party oversight requirements for the manufacturers doing the determination of the fenestration ratings; therefore, the committee was uncomfortable with allowing the use of this fenestration rating system with less oversight. In addition, the standard is unclear regarding who should be qualified to do the fenestration rating calculations.

Assembly Action: **None**

EC5-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The proponent requested Disapproval of this code change based upon action already taken by the IRC B/E committee on Part II of this change.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The proposal would eliminate a reference that is needed by the Building Official in order to evaluate the R-values of some insulation.

Assembly Action: **None**

EC6-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The proposal would add a reasonable stipulation that above code programs meet the mandatory requirements of this code which are minimum requirements for certain elements that the committee believes are necessary for provisions for any energy code.

Assembly Action: **None**

EC7-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: While a detailed written analysis is necessary in the case of some unproven “above code” programs, it is not necessary for the proven programs. This would place an unnecessary burden on those proposing these proven programs. In addition, it is unclear how this should be utilized. Would third party inspection be required in all homes?

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The committee agrees vagueness exists about what is an Above Code Program and the Building Official needs guidance. The proponent should bring this back with more specific clarity and guidance. There are concerns about meeting all mandatory requirements and the mandate for third party inspection. This proposal adds more judgment. Also it is unclear what is meant by “a detailed written energy analysis” and what is meant by accredited.

Assembly Action: **None**

EC8-07/08

Committee Action: **Disapproved**

Committee Reason: This issue is more germane to the IBC and IRC, and not necessary in this code.

Assembly Action: **None**

EC9-07/08

Committee Action: **Disapproved**

Committee Reason: It is important that the IECC coordinate with ASHRAE. The code already deals with the issue of the relationship between IECC and ASHRAE 90.1.

Assembly Action: **None**

EC10-07/08

PART II – IECC

Committee Action: **Approved as Submitted**

Committee Reason: This provides a useful tool for clarification of the information on the maps.

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Submitted**

Committee Reason: This change adds clarity to the code and improves the usability since all the information is located in one table rather than two.

Assembly Action: **None**

EC11-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: This proposed provision was contained in EC10-07/08, which the committee approved.

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Submitted**

Committee Reason: This change is editorial and adds missing counties.

Assembly Action: **None**

EC12-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The proposal makes the code easier to understand and apply by rearranging the text of the definition to put up front the phrase “during the warmest six consecutive months of the year.” to allow the user to understand the definition better.

Assembly Action: **None**

EC13-07/08

Committee Action: **Disapproved**

Committee Reason: The proposed chart for international regions does not cover all international locations. In addition, the chart is not necessary at this time.

Assembly Action: **None**

EC14-07/08

Committee Action:

Disapproved

Committee Reason: The code change proposal requested changes throughout the code that would make aggressive cuts in energy uses. The committee disapproved this change because it recognized that there were other proposals for the same energy reductions in the individual areas (insulation, fenestration, etc.). The committee preferred to discuss and examine each of those individual proposals for individual items rather than approve this proposal with sweeping changes.

Assembly Action:

None

EC15-07/08

PART I – IECC

Committee Action:

Approved as Modified

Modify proposal as follows:

TABLE 402.1.1 (Supp)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a
(No change to table)

- a. *R*-values are minimums. *U*-factors and SHGC are maximums R-19 batts compressed into a nominal 2x6 framing cavity such that the *R*-value is reduced by R-1 or more shall be ~~labeled~~ marked with the compressed batt *R*-value in addition to the full thickness *R*-value.

Committee Reason: The proposal recognizes that the common practice of compressing insulation into a stud cavity could cause erroneous application of insulation values to a stud wall. Therefore, it is reasonable to ask for an *R*-Value to be marked on the insulation that tells what that value is when compressed into the cavity, as is commonly done. The modification was made, given that the definition of "labeled" just approved in an earlier code change proposal requires a third party agency, which was not the intent for this proposal.

Assembly Action:

None

PART II – IRC

Committee Action:

Disapproved

Committee Reason: There is a problem with compressing insulation batts but this change does not do enough. Perhaps a table for the compressed values would help. The proponent should bring this back.

Assembly Action:

None

EC16-07/08

Committee Action:

Approved as Submitted

Committee Reason: The fenestration *U*-factors proposed are the same as those proposed in EC14-07/08 and represent the most aggressive increase in stringency for this group of values. The committee approved this code change proposal recognizing the need for aggressive reductions in energy consumption and recognizing that a sufficient amount of products are readily available to fill this need.

Assembly Action:

None

EC17-07/08

Committee Action:

Disapproved

Committee Reason: The proponent requested disapproval in light of action on EC16-07/08.

Assembly Action:

None

EC18-07/08

PART I – IECC

Committee Action:

Disapproved

Committee Reason: The committee agreed with opponents that there were a sufficient amount of impact resistant products readily available that will meet fenestration U-factors for hurricane prone regions; therefore the exception for impact resistant windows is unnecessary.

Assembly Action:

None

PART II – IRC

Committee Action:

Approved as Modified

Modify proposal as follows:

**TABLE N1102.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ^h	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^e WALL R-VALUE
1	1.2	0.75	0.40	30	13	3	13	0	0	0
2	0.55^h 0.65 ⁿ	0.75	0.40	30	13	4	13	0	0	0
3	0.55 ⁿ	0.65	0.40 ^e	30	13	5	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5 ^g	13	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13+5 ^g	15	30 ^f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19	30 ^f	10/13	10, 4 ft	10/13

a. through g. (No change to current text)

h. For impact rated glazing impact resistant fenestration complying with Section R301.2.1.2, the maximum U-factor shall be 1.20 in zone 2 and 0.70 in zone 3.

**TABLE N1102.1.2
EQUIVALENT U-FACTORS^a**

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^b	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	1.20	0.75	0.035	0.082	0.197	0.064	0.360	0.477
2	0.55 0.65	0.75	0.035	0.082	0.165	0.064	0.360	0.477
3	0.55	0.65	0.035	0.082	0.141	0.047	0.360	0.136
4 except Marine	0.40	0.60	0.030	0.082	0.141	0.047	0.059	0.065
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.033	0.059	0.065
6	0.35	0.60	0.026	0.060	0.060	0.033	0.059	0.065
7 and 8	0.35	0.60	0.026	0.057	0.057	0.033	0.059	0.065

(Footnotes remain unchanged)

Committee Reason: This change lowers the U-factor in zone 2 & 3 but retains a higher U-factor for impact rated glazing. This is a needed change for a location such as Florida where impact glazing is required.

The modification raises the U-factor which makes it less restrictive in Zone 2 & 3 and will accommodate the impact rated glazing and increase the affordability while saving energy.

Assembly Action:

None

EC19-07/08

PART I – IECC

Committee Action:

Disapproved

Committee Reason: The committee disapproved at the proponent's request, and in favor of values adopted in EC16-07/08.

Assembly Action: None

**PART II – IRC
Committee Action:** Disapproved

Committee Reason: The committee prefers the language in EC18-07/08, Part II.

Assembly Action: None

EC20-07/08

**PART I – IECC
Committee Action:** Disapproved

Committee Reason: The committee disapproved at the proponent's request, and in favor of values adopted in EC16-07/08.

Assembly Action: None

**PART II – IRC
Committee Action:** Disapproved

Committee Reason: The committee prefers the language in EC18-07/08, Part II.

Assembly Action: None

EC21-07/08

**PART I – IECC
Committee Action:** Disapproved

Committee Reason: Given that the advantages for SHGC gains depends upon the direction of the wall in which the windows are installed, the committee believed that this provision was an oversimplification of the value of the trade-off. This would be better dealt with in performance design.

Assembly Action: None

**PART II – IRC
Committee Action:** Disapproved

Committee Reason: The reason and testimony did not give enough adequate data to justify changing what is currently in the code now.

Assembly Action: None

EC22-07/08

**PART I – IECC
Committee Action:** Disapproved

Committee Reason: In anticipation of consideration of more aggressive values in EC24-07/08 and EC26-07/08.

Assembly Action: None

**PART II – IRC
Committee Action:** Disapproved

Committee Reason: There was not enough technical data presented to justify changing the SHGC in zone 1, 2 & 3 to 0.30. Also, this may limit the availability of aluminum and vinyl sashes in these zones.

Assembly Action: None

EC23-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The higher solar gain coefficients will increase energy use in northern climates.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: This change would reduce the motivation in zones 4 through 8 to utilize the orientation and location on the site to take advantage of solar heating.

Assembly Action: **None**

EC24-07/08

Committee Action: **Disapproved**

Committee Reason: This proposal was submitted as part of a series of code changes that would complement EC14-07/08. The committee felt that the proposed cuts in SHGC values were too drastic for available products at this time. In addition, these levels of SHGC values will cause a significant loss of light, thus necessitating more artificial light use.

Assembly Action: **None**

EC25-07/08

PART I – IECC

Withdrawn by Proponent

PART II – IRC

Committee Action: **Approved as Modified**

Modify proposal as follows:

TABLE N1102.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a
(No change to proposed table)

- a. through g. (No change to current text)
- h. Fenestration with a projection factor of ≥ 0.50 shall ~~be deemed to comply with the following SHGC requirements in Climate Zones 1 through 3. -Climate Zone 1 -NR; Climate Zone 2 -NR; Climate Zone 3 -NR.~~ Projection factor shall be determined using Figure N1102.1.

(Portions of proposal not shown remain unchanged)

Committee Reason: This change will allow the user of the code another design option. This will permit modification and configuration of the structure to achieve a lower SHGC. The modification makes an editorial change. The proponent is urged to address the width of the overhang and additional clarification and bring back.

Assembly Action: **None**

EC26-07/08

Committee Action:

Approved as Modified

Modify the proposal as follows:

TABLE 402.1.1 (Supp)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ^h	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^c WALL R-VALUE
1	1.20	0.75	0.35 0.30	30	13	3 / 4	13	0	0	0
2	0.75	0.75	0.35 0.30	30	13	4 / 6	13	0	0	0
3	0.65	0.65	0.35 0.30	30	13	5 / 8	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5 / 10	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5 ⁹	13 / 17	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	19 or 13+5 ⁹	15 / 19	30 ^f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19 / 21	30 ^f	10/13	10, 4 ft	10/13

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee believed that 0.30 maximum SHGC rating for fenestration in these zones to be reasonable, with ample products available that will achieve this value. The modification from 0.35 to 0.30 was suggested by the proponent as a more aggressive value that would be consistent with the level of stringency that the present concerns with energy conservation demands. The committee heard debate from industry representatives stating that .35 was more reasonable from a product availability point of view. Ultimately, the committee decided upon the more aggressive value of 0.30 with the statement that there is sufficient product availability to make this value reasonable.

Assembly Action:

None

EC27-07/08

Committee Action:

Disapproved

Committee Reason: The proponent did not provide an analysis to justify the increase in R-values. The increase in insulation in a roof-ceiling assembly could have structural implications, thus making the affordability of this increase in insulation a bigger concern.

Assembly Action:

None

EC28-07/08

PART I – IECC

Committee Action:

Approved as Modified

Modify the proposal as follows:

TABLE 402.1.1 (Supp)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^c WALL R-VALUE
1	1.2	0.75	0.40	30	13	3	13	0	0	0
2	0.75	0.75	0.40	30	13	4	13	0	0	0
3	0.65	0.65	0.40 ^c	30	13	5	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	24 ^h 20 or 13+7.5	13	30 ^f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	24 ^h 20 or 13+7.5	15	30 ^f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19	30 ^f	10/13	10, 4 ft	10/13

a. through h. (No change to current text)

~~f. R-19 spray foam or blown in (cellulose, fiberglass) wall insulation shall be deemed to meet this requirement when installed to fill wall cavities, including corners and headers, in a nominal 2X6 wood frame wall.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal represents a reasonable opportunity for raising energy conservation stringency. The modification is simply a compromise value for insulation values. The modification also deletes a footnote because it would be no longer applicable.

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Modified**

Modify proposal as follows:

**TABLE N1102.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^e WALL R-VALUE
1	1.2	0.75	0.40	30	13	3	13	0	0	0
2	0.75	0.75	0.40	30	13	4	13	0	0	0
3	0.65	0.65	0.40 ^c	30	13	5	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	5	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.35	0.60	NR	38	24 ^h 20 or 13+7 5	13	30f	10/13	10, 2 ft	10/13
6	0.35	0.60	NR	49	24 ^h 20 or 13+7 5	15	30 f	10/13	10, 4 ft	10/13
7 and 8	0.35	0.60	NR	49	21	19	30 f	10/13	10, 4 ft	10/13

a. through g. (No change to current text)

~~h. R-19 spray foam or blown in (cellulose, fiberglass) wall insulation shall be deemed to meet this requirement when installed to fill wall cavities, including corners and headers, in a nominal 2X6 wood frame wall.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: This change will improve the energy efficiency for wood frame walls and all insulation manufacturers agree that they can meet. The modification eliminates the footnote that would give an advantage to certain insulation products.

Assembly Action: **None**

EC29-07/08

Committee Action: **Disapproved**

Committee Reason: The committee considered some extensive modifications and there was concern that the code change proposal was not complete and prepared enough. Further study is necessary.

Assembly Action: **None**

EC30-07/08

Committee Action: **Disapproved**

Committee Reason: The proponent requested disapproval. See EC31-07/08.

Assembly Action: **None**

EC31-07/08

Committee Action: **Disapproved**

Committee Reason: The increase in R-values proposed would require a change in depth of studs from 2 x 4 to 2 x 6 construction. At this point, the revision is not cost effective.

Assembly Action: **None**

EC32-07/08

Committee Action: **Disapproved**

Committee Reason: The proponent requested disapproval of this code change proposal.

Assembly Action: **None**

EC33-07/08

Committee Action: **Approved as Submitted**

Committee Reason: This represents an opportunity for energy savings in insulating basements, an important area for energy conservation concerns.

Assembly Action: **None**

EC34-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The proposed language on the footnote is not clear. This states what the minimum insulation is for up to 25% of the wall area. What is then required for the rest of the wall area. Is this a minimum? Or is this a required minimum?

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: This change replaces structural sheathing with insulating sheathing and it is unclear what impact this has on the bracing sections of the code.

Assembly Action: **None**

EC35-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The IECC presently is lagging behind the state energy code for the State of Alaska. It is appropriate to make aggressive changes in these very cold climates, given that the local practices are more stringent than that of the national code.

Assembly Action: **None**

EC36-07/08

PART I - IECC

Committee Action: **Approved as Submitted**

Committee Reason: This is a needed energy conservation measure for this region, the top of Zone 3. While there is argument as to affordability, the committee noted that this would be cost effective within the life of the project.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: There is not enough numerical data to support the cost benefit to justify this change. It is too subjective for the Building Official to determine the warm-humid location in zone 3.

Assembly Action: **None**

EC37-07/08

PART I – IECC

Committee Action: **Approved as Modified**

Modify the proposal as follows:

TABLE 402.1.1 (Supp)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a
(No change to table entries)

- a. through c. (No change to current text)
- d. R-5 shall be added to the required slab edge *R*-values for heated slabs. Insulation depth shall be the depth of the footing or 2 ft, whichever is less in zones 1 through 3 for heated slabs.
- e. through h. (No change to current text)

Committee Reason: The code, as written does not clarify what the needed amount of insulation is, in terms of depth into the ground. This proposal provides that clarification. The modification was added to limit depth to the depth of the footing, because it does not make sense to extend insulation beyond that depth.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The committee would like to see data for cost benefit and pay back. The 2 feet depth for zones 1 through 3 is unclear. The slab *R*-value and depth is zero as now shown due to termites in zones 1, 2 and 3. The footnote should only be located in cells that contain value. This change needs to be reworked and brought back.

Assembly Action: **None**

EC38-07/08

Committee Action: **Disapproved**

Committee Reason: The proposed values would not be consistent with ASHRAE.

Assembly Action: **None**

EC39-07/08

Committee Action: **Disapproved**

Committee Reason: The proposed values would not be consistent with ASHRAE.

Assembly Action: **None**

EC40-07/08

Committee Action:

Approved as Submitted

Committee Reason: This proposal would appropriately make mass wall values for marine zone 4 and zone 5 equivalent, consistent with the way the code deals with these two zones.

Assembly Action:

None

EC41-07/08

Withdrawn by Proponent

Explanation: This code change proposal is a duplicate of EC40-07/08 and was inadvertently installed in the code change monograph.

EC42-07/08

PART I – IECC

Committee Action:

Approved as Modified

Modify the proposal as follows:

**TABLE 402.1.3 (Supp)
EQUIVALENT U-FACTORS^a**

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^b	Floor U-Factor	Basement Wall U-Factor ^c	Crawl Space Wall U-Factor ^c
1	1.20	0.75	0.035	0.082	0.197	0.064	0.948	0.948
2	0.75	0.75	0.035	0.082	0.165	0.064	0.948	0.948
3	0.65	0.65	0.035	0.082	0.141	0.047	0.948	0.192
4 except Marine	0.40	0.60	0.030	0.082	0.141	0.047	0.084	0.084
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.033	0.084	0.084
6	0.35	0.60	0.026	0.060	0.060	0.033	0.084	0.084
7 and 8	0.35	0.60	0.026	0.057	0.057	0.033	0.084	0.084

- Non-fenestration U-factors shall be obtained from measurement, calculation or an approved source.
- When more than half the insulation is on the interior, the mass wall U-factors shall be 0.17 in zone 1, 0.14 in zone 2, 0.12 in zone 3, 0.10 in zone 4 and the same as the wood frame wall in zones 5 through 8.
- Foundation U-factor requirements shown in Table 402.1.3 include wall construction and interior air films but exclude soil conductivity and exterior air films. U-factors for determining code compliance via Section 402.1.4 (Total UA alternative) of Section 405 (Simulated Performance Alternative) shall be modified to include soil conductivity and exterior air films.

**TABLE 404.5.2(1) (Supp)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS.**

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Foundations	Type: same as proposed foundation wall area above and below grade <u>and soil</u> characteristics: same as proposed	As proposed As proposed

(Portions of table and footnotes not shown remain unchanged)

Committee Reason: This approach makes the application of code requirements simpler. The modification makes the approach clearer, with an explanation in the footnotes that is consistent with ASHRAE 25.

Assembly Action:

None

PART II – IRC

Committee Action:

Disapproved

Committee Reason: The proposal needs to be reworked and brought back to include the modification that was ruled out of order.

Assembly Action:

None

EC43-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: Based upon IRC B/E Committee action on Part II, and in accordance with the proponent's request.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The committee has multiple issues with this proposal. There was no data provided that this was a cost savings. An oil furnace only has AFUE of 85. Why was 90 AFUE set as the limit? Are the tradeoffs equivalent? This should be reworked and brought back.

Assembly Action: **None**

EC44-07/08

Committee Action: **Disapproved**

Committee Reason: This proposal would inappropriately limit performance trade-offs.

Assembly Action: **None**

EC45-07/08

PART I – IECC

Committee Action: **Approved as Submitted**

Committee Reason: This proposed language closes a loophole in the application of the U-factor alternative approach and the UA alternative.

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Submitted**

Committee Reason: This change provides clarification to the code as stated in the proponent's published reason.

Assembly Action: **None**

EC46-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The reduction in insulation R-value needs to be limited. On small residences, such as 1000 sq. ft. residences, this is a major reduction in insulation for the entire structure.

Assembly Action: **None**

EC47-07/08

PART I – IECC

Withdrawn by Proponent

PART II – IRC

Committee Action:

Disapproved

Committee Reason: The committee prefers the language in EC48-07/08, Part II.

Assembly Action:

None

EC48-07/08

PART I – IECC

Committee Action:

Disapproved

Committee Reason: The committee felt that the language proposed was unclear. What is the minimum required rating of the adjacent thermal envelope? The present code language simply makes the hatch meet the same insulation values for the surrounding assembly. This is simple, and cost effective. In addition, the proposal would eliminate weatherstripping requirements for these assemblies.

Assembly Action:

None

PART II – IRC

Committee Action:

Approved as Modified

Modify proposal as follows:

N1102.2.3 (Supp) Access hatches. Access hatches from conditioned spaces to unconditioned spaces (e.g., attics and crawl spaces) shall be insulated to the required minimum insulation rating of the adjacent thermal envelope. A wood framed or equivalent baffle or retainer shall be installed to prevent loose fill insulation from spilling into the conditioned space when the hatch is opened.

Exception: Vertically installed access doors, from conditioned spaces to unconditioned spaces, shall meet the requirements of ~~typical~~ this code for exterior doors.

Committee Reason: This change clearly states the requirement when access is by hatch or by door. The modification removes the ambiguity caused by the word "typical".

Assembly Action:

None

EC49-07/08

PART I – IECC

Committee Action:

Disapproved

Committee Reason: The proposal would allow a single R-value to be used, which may or may not be appropriate in some applications. The committee prefers that these access hatches have the same insulation value as the surrounding assemblies, as is required presently by the code.

Assembly Action:

None

PART II – IRC

Committee Action:

Disapproved

Committee Reason: The committee prefers the language in EC48-07/08, Part II. Also, this proposal would limit the options.

Assembly Action:

None

EC50-07/08

PART I – IECC

Committee Action:

Approved as Modified

Modify the proposal as follows:

402.2.4 Steel-frame ceilings, walls, and floors. Steel frame ceilings, walls, and floors shall meet the insulation requirements of Table 402.2.4 or shall meet the U-factor requirements in Table 402.1.3. The calculation of the U-factor for a steel frame envelope assembly shall use a series-parallel path calculation method.

Exception: In climate zones 1 and 2, the continuous insulation requirements in Table 402.2.4 shall not be required shall be permitted to be reduced to R-3 for steel frame wall assemblies with studs spaced at 24 inches on center.

Committee Reason: The proposal would enable a wider choice of materials that can be used in this application. The modification would limit the reduction in insulation to R-3 rather than not require any insulation at all.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: Steel framing is very conductive and there was no information provided to justify the elimination of continuous insulation.

Assembly Action: **None**

EC51-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The committee believed that the concept of this proposal was good, but was concern that the values were calculated correctly. (Should the value be R-0 +10?)

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Submitted**

Committee Reason: This change is an improvement to the code and add the option of continuous insulation for cold-formed steel framed walls.

Assembly Action: **None**

EC52-07/08

Committee Action: **Disapproved**

Committee Reason: The committee disagreed with the claimed calculated values for credit for the air space given in the proponent's reason statement. There is no definition for this reflective insulation, nor is there a standard reference. Therefore the potential exists for abuse of the code.

Assembly Action: **None**

EC53-07/08

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard ASTM C 1549-04 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The committee was uncertain as to whether the reflectivity chart was accurate. In addition, there was concern regarding the availability of products. Finally, the text needed some definitions added for some of the technology.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: There are too many unanswered questions concerning the science and technical data on roof reflectance. Also, the ways to measure the reflectance is uncertain. There are maintenance issues to consider for three years after installation.

Assembly Action: **None**

EC54-07/08

Committee Action: **Disapproved**

Committee Reason: See EC55-07/08.

Assembly Action: **None**

EC55-07/08

Committee Action: **Disapproved**

Committee Reason: The concept of shading as a trade-off for SHGC values needs to be dealt with on a case-by-case basis in the performance provisions. The variables that were not included were related to direction that the walls face. The concerns were that this proposal would allow a trade-off where the energy use was not actually equivalent.

Assembly Action: **None**

EC56-07/08

PART I – IECC

Committee Action: **Approved as Submitted**

Committee Reason: This ensures the correct application of the code, that the exemption does not apply to applications where the UA alternative is utilized.

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Submitted**

Committee Reason: This change clarifies that the U-factor exemption in Sections N1102.3.3 and N1102.3.4 do not apply if the U-factor alternative in Section N1102.1.2 and the UA alternative in Section N1102.1.3 are utilized.

Assembly Action: **None**

EC57-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: Based upon action taken on EC66-07/087.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: There was no documentation submitted to substantiate the change from 15 sq. ft. to 25 sq. ft. Also, there is a problem with the language and the opponent has offered to work with the proponent and bring this back.

Assembly Action: **None**

EC58-07/08

PART I – IECC

Committee Action: **Approved as Modified**

Modify the proposal as follows:

402.3.4 Opaque door exemption. One side-hinged opaque door assembly up to 24 square feet (2.22 m²) in area is exempted from the *U*-factor requirement in Section 402.1.1.

Committee Reason: The amount of door area that qualifies for this exemption should be limited, to prevent the application of the exemption to large doors. The modification further restricts the application of this exemption.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The current code language is too broad and a limit on size is needed. Different sizes were suggested but no documentation or justification was provided. The inclusion of assembly in the size limit might be a cause for confusion. The proponent needs to rework and bring back.

Assembly Action: **None**

EC59-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: Proponent requested disapproval based upon action on EC21-07/08.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: Based upon the proponent's request for disapproval. Based upon the committees' previous action on EC21-07/08, Part II.

Assembly Action: **None**

EC60-07/08

PART I – IECC

Committee Action: **Approved as Modified**

Modify the proposal as follows:

402.4.1 (Supp) Building thermal envelope. The building thermal envelope shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material:

1. All joints, seams and penetrations.
2. Site-built windows, doors and skylights.
3. Openings between window and door assemblies and their respective jambs and framing.
4. Utility penetrations.

5. Dropped ceilings or chases adjacent to the thermal envelope.
6. Knee walls.
7. Walls and ceilings separating a garage from conditioned spaces.
8. Behind tubs and showers on exterior walls.
9. Common walls between dwelling units.
10. Attic access openings.
11. Rim joists junction.
12. Other sources of infiltration.

Committee Reason: The rim joist area is a source of a large amount of air leakage that requires sealing. The modification better describes what is to be sealed; it is not possible to seal the rim joist itself, but it is possible to seal the junction of the rim joist to the bottom plate and to the sheathing.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The proposal is not clear on how or where the rim joist is to be sealed.

Assembly Action: **None**

EC61-07/08

Committee Action: **Disapproved**

Committee Reason: Consistent with action taken on EC64-07/08, which was discussed before EC61-07/08.

Assembly Action: **None**

EC62-07/08

PART I – IECC **Withdrawn by Proponent**

PART II – IRC **Withdrawn by Proponent**

EC63-07/08

PART I – IECC **Withdrawn by Proponent**

PART II – IRC **Withdrawn by Proponent**

EC64-07/08

PART I – IECC

Committee Action: **Approved as Modified**

Modify the proposal as follows:

**TABLE 402.4.2
AIR BARRIER AND INSULATION INSPECTION**

COMPONENT	CRITERIA
Air barrier and thermal barrier	Exterior thermal <u>envelope</u> insulation <u>for framed walls</u> is installed in substantial contact and continuous alignment with building envelope air barrier. Breaks or joints in the air barrier are filled or repaired. Air permeable insulation is not used as a sealing material. Air permeable insulation is inside of an air barrier.
Ceiling / attic	Air barrier in any dropped ceiling / soffit is substantially aligned with insulation and any gaps are sealed. Attic access (except unvented attic), knee wall door, or drop down stair is sealed.
Walls	Corners and headers are insulated. Junction of foundation and sill plate is sealed.
Windows and doors	Space between window/door jambs and framing is sealed.
Rim joists	Rim joists are insulated and include an air barrier.

COMPONENT	CRITERIA
Floors (including above garage and cantilevered floors)	Insulation is installed to maintain permanent contact with underside of subfloor decking. Air barrier is installed at any exposed edge of insulation.
Crawlspace walls	Insulation is permanently attached to walls. Exposed earth in unvented crawlspaces is covered with class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, knee walls, and flue shafts opening to exterior or unconditioned space are sealed.
Narrow cavities	Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.
Garage separation	Air sealing is provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures are airtight, IC rated, and sealed to drywall. Exception-- fixtures in conditioned space.
Plumbing and Wiring	Insulation is placed between outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.
Shower / tub on exterior wall	Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.
Electrical / phone box on exterior walls	Air barrier extends behind boxes or an air sealed type boxes are installed.
Common wall	Air barrier is installed in common wall between dwelling units.
HVAC register boots	HVAC register boots that penetrate building envelope are sealed to subfloor or drywall.
Fireplace	Fireplace walls include an air barrier.

(Portions of proposal not shown remain unchanged)

Committee Reason: The code change proposal will add some clarity to inspection requirements of the code for insulation and air barriers. The modification clarifies that the issue for air barrier and thermal barrier requirements relate to framed walls.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: This proposal would make it extremely difficult or impossible to achieve 7 ACH with a blower door test after rough in. The issue of air quality needs to be considered. The test method is not stated. The visual option would require returning to the site 5 or 6 times or obtain a third party and would be added expense for the local jurisdiction.

Assembly Action: **None**

EC65-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The committee believed that the language of the standard could be construed to mean that no IC rating is required for cans that penetrate the ceiling membrane.

Assembly Action: **None**

PART II – IRC

Withdrawn by Proponent

EC66-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The present code language is confusing and it does not allow flexibility in the choice of materials in the thermal envelope.

Assembly Action: **None**

EC67-07/08

Committee Action:

Approved as Modified

Modify the proposal as follows:

401.2 Compliance. Projects shall comply with Sections 401, 402.4, 402.5, 402.6 and ~~403~~ 403.1, 403.2.2, 403.2.3, and 403.3 through 403.6 (referred to as the mandatory provisions) and either:

1. Sections 402.1 through 402.3, 403.2.1, and 404.1 (prescriptive); or
2. Section ~~404~~ 405 (performance).

403.2.1 Insulation. (Supp) (Prescriptive) Supply ducts in attics shall be insulated to a minimum of R-8. All other ducts shall be insulated to a minimum of R-6.

Exception: Ducts or portions thereof located completely inside the building thermal envelope.

404.2 Mandatory Requirements. Compliance with this section requires that the mandatory provisions identified in Section 401.2 be met. All supply and return ducts not completely inside the building thermal envelope shall be insulated to a minimum of ~~R-4~~ R-6.

Committee Reason: The primary modification to the original proposal was to require a minimum insulation of R-6, instead of the proposed R-4. The committee agreed with the proponent that a minimum amount of insulation should be specified for the performance path. However, given that, in the prescriptive path the minimum insulation specified is R-6, the committee was more comfortable with R-6 as opposed to R-4.

Assembly Action:

None

EC68-07/08

PART I – IECC

Committee Action:

Approved as Modified

Modify proposal as follows:

403.1.1 Programmable thermostat. Where the primary heating system is a forced air furnace, at least one thermostat per dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule to maintain different temperature set points at different times of the day. This thermostat shall include the capability to set back or temporarily operate the system to maintain zone temperatures down to 55°F (13°C) or up to 85°F (29°C). The thermostat shall initially be programmed with a heating temperature set point no higher than 70°F (21°C) and a cooling temperature set point no lower than 78°F (26°C).

(Renumber subsequent sections)

Committee Reason: Programmable thermostats represent a good opportunity for energy savings. The modification limits the requirement to forced air furnaces because the application of this type of requirement is practical with this type of equipment.

Assembly Action:

None

PART II – IRC

Committee Action:

Disapproved

Committee Reason: There is no documented evidence that programmable thermostats save energy.

Assembly Action:

None

EC69-07/08

PART I – IECC

Committee Action:

Approved as Modified

Modify proposal as follows:

403.2 Furnace electricity ratio. Where not prohibited by Federal law, the furnace electricity ratio shall not be greater than 2% and include a manufacturer's designation of the furnace electricity ratio.

(Renumber subsequent sections)

(Portions of proposal not shown remain unchanged)

Committee Reason: This is a feasible and practical requirement that is in use in many areas. The modification simply stipulates that the manufacturer provide the furnace electricity ratio.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: This proposal is premature. It is ahead of what industry and DOE is doing. This is a manufacturing issue and the code should not dictate how manufacturer build appliances. This is not clear that it applies only to fossil-fuel fired furnaces. This would add a requirement that can only apply if a Federal Law authorizes it.

Assembly Action: **None**

EC70-07/08

PART I – IECC

Committee Action: **Approved as Submitted**

Committee Reason: This proposal provides a useful and practical method for checking for adequate sealing of air handling equipment.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: The test standard is under development but is not completed. This proposal relies on a Florida Building Code Test Standard that may not be appropriate.

Assembly Action: **None**

EC71-07/08

PART I – IECC

Committee Action: **Approved as Submitted**

Committee Reason: This code change proposal represents an opportunity for large energy savings using readily available technology.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: It is unclear what is required by the testing procedure. Verification of duct sealing can be achieved with a visual inspection.

Assembly Action: **None**

EC72-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: In accordance with the proponent's request.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: This proposal would ban the use of framing cavities as return plenums. Where the ducts are within the conditioned space there should be no problem using frame cavities as ducts. Framing cavities are required to be used on occasion.

Assembly Action: **None**

PART III – IRC-M

Committee Action: **Disapproved**

Committee Reason: There was no technical justification for disallowing a longstanding practice in home construction. This prohibition should have been limited to exterior wall cavities. Any air leakage from interior wall or interstitial floor cavities will be returning to the conditioned space, therefore there is little impact to the energy consumption.

Assembly Action: **None**

PART IV – IMC

Committee Action: **Disapproved**

Committee Reason: This code change should have been limited to plenums in exterior wall cavities. The use of interior wall cavities and space between floors is a longstanding practice in building construction.

Assembly Action: **None**

EC73-07/08

Committee Action: **Disapproved**

Committee Reason: In accordance with the proponent's request.

Assembly Action: **None**

EC74-07/08

PART I – IECC

Committee Action: **Approved as Submitted**

Committee Reason: Insulation of hot water piping is an opportunity for large energy savings. This increase in minimum R-value is reasonably affordable.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: There was no technical data provided to justify changing the minimum from R-2 to R-3.

Assembly Action: **None**

EC75-07/08

Committee Action: **Disapproved**

Committee Reason: This proposal has questionable benefits, given the cost and the difficulty of getting the equipment installed. In addition, such a proposal should be linked to different zones.

Assembly Action: **None**

EC76-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: This provision belongs in the mechanical code, if it belongs anywhere. The provision would incur unnecessary cost increases with questionable benefit.

Assembly Action: **None**

PART II – IRC-M

Committee Action: **Disapproved**

Committee Reason: This issue is adequately covered in NFPA 31 which is already referenced in Section M1701.1.

Assembly Action: **None**

EC77-07/08

Committee Action: **Disapproved**

Committee Reason: This proposal is not needed given committee action on EC64-07/08. The proposal also references the IRC as the reference technical base for the requirement, which is inappropriate for the IECC.

Assembly Action: **None**

EC78-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: The proposed requirements would be too complicated to enforce. In addition, this could have the effect of preempting federal requirements.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: This proposal would make it cost prohibitive to retrofit flue placement and condensate drain placement. There are undefined terms non-authorized and authorized. Also, this would add a requirement that can only apply once a Federal Law authorizes it.

Assembly Action: **None**

EC79-07/08

PART I – IECC

Committee Action: **Approved as Submitted**

Committee Reason: Pilotless ignition systems represent a significant opportunity for saving energy.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: No evidence has been presented to show that this is a significant energy benefit. The pilot light will operate when there is a power outage. This may preempt Federal Law.

Assembly Action: **None**

EC80-07/08

PART I – IECC

Committee Action: **Approved as Submitted**

Committee Reason: While snow melt systems are not widely utilized, there should be limits on their operation. This is a reasonable and practical requirement.

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Submitted**

Committee Reason: This change provides a much needed automatic control on snow melt systems. Snow melt systems have a high energy use and automatic control will significantly reduce the energy use.

Assembly Action: **None**

EC81-07/08

PART I – IECC

Withdrawn by Proponent

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: This change would create enforcement problems since the owner can put the cover on anytime. This should not apply to indoor pools. Also, there is limited availability of R-12 covers.

Assembly Action: **None**

EC82-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The proposal simply adds requirements for residential heated pools that are already included in this code for commercial heated pools. Given the increasing use of heated pools in residences, this is a significant opportunity for energy savings.

Assembly Action: **None**

EC83-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: In accordance with the proponent's request.

Assembly Action: **None**

PART II – IRC

Committee Action: **Disapproved**

Committee Reason: Based on the proponent's request for disapproval. Based on the committee's previous action on EC69-07/08, Part II. This proposal seems to create a monopoly for energy star labeling. Replacement will be done by the owner and there would be no enforcement.

Assembly Action: **None**

EC84-07/08

PART I – IECC

Committee Action:

Approved as Modified

Modify the proposal as follows:

~~404.1 Scope. This section applies to lighting equipment, related controls and electric circuits serving the interior spaces and exterior building facades of all residential buildings, including accessory structures and garages.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal represents an opportunity for significant energy savings with technology that is presently in wide use. The modification was made to limit the scope to only lighting equipment.

Assembly Action:

None

PART II – IRC

Committee Action:

Approved as Modified

Modify proposal as follows:

SECTION N1104 ELECTRICAL POWER AND LIGHTING SYSTEMS

~~N1104.1 Scope. This section applies to lighting equipment, related controls and electric circuits serving the interior spaces and exterior building facades of all residential buildings, including accessory structures and garages.~~

N1104.21 Lighting equipment. A minimum of fifty percent of the lamps in permanently installed lighting fixtures shall be high efficacy lamps.

(Portions of proposal not shown remain unchanged)

Committee Reason: The energy bill mandates deletion of incandescent light bulbs by the year 2012. This change will begin that process ahead of time and will result in a significant energy saving. The modification was made to limit the scope to only lighting equipment.

Assembly Action:

None

EC85-07/08

Committee Action:

Disapproved

Committee Reason: There is no technical support for changing assumptions about human behavior relative to use of windows in different seasons. These numbers are higher than ASHRAE 92 and, while that is not necessarily a reason not to change them, there needs to be more study to justify the assumptions.

Assembly Action:

None

EC86-07/08

Committee Action:

Approved as Modified

Modify the proposal as follows:

TABLE 404.5.2(1) (Supp)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Thermostat	Type: Manual, cooling temperature setpoint = 75°F; Heating temperature set point = 70 72 °F	Same as standard reference

(Portions of table and footnotes not shown remain unchanged)

Committee Reason: The numbers proposed are more realistic. The modification was requested by the proponent as a compromise number.

Assembly Action: **None**

EC87-07/08

Committee Action: **Approved as Modified**

Modify the proposal as follows:

TABLE 404.5.2(1) (Supp)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Above-grade walls	Type: mass wall if proposed wall is mass; otherwise wood frame Gross Area: same as proposed U-Factor: from Table 402.1.3 Solar absorptions = 0.75 Remittance = 0.90	As proposed As proposed As proposed, assuming gaps/missing insulation equal to 5%, unless otherwise verified As proposed As proposed
Basement and crawlspace walls	Type: same as proposed Gross Area: same as proposed U-Factor: from Table 402.1.3, with insulation layer on interior side of walls	As proposed As proposed As proposed, assuming gaps/missing insulation equal to 5% of the insulated surface area, unless otherwise verified
Above-grade floors	Type: wood frame Gross Area: same as proposed U-Factor: from Table 402.1.3	As proposed As proposed As proposed, assuming gaps/missing insulation equal to 5% of the insulated surface area, unless otherwise verified
Ceilings	Type: wood frame Gross Area: same as proposed U-Factor: from Table 402.1.3	As proposed As proposed As proposed, assuming gaps/missing insulation equal to 5% of the insulated surface area, unless otherwise verified

(Portions of table not shown remain unchanged)

- a. Insulation installation, including percent of insulation missing and insulation substantially filling cavity and, shall be determined and documented by the code official or an independent party approved by the code official.

Committee Reason: It is realistic to assume in common practice that gaps or missing insulation will exist. If tighter inspection is made, then the user can take advantage of that, and get credit for more insulation. The modifications are for clarity, and to make clear that the code official can make the determination of installation.

Assembly Action: **None**

EC88-07/08

Committee Action: **Disapproved**

Committee Reason: This proposal would add costs to construction without a strong justification.

Assembly Action: **None**

EC89-07/08

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved in accordance with the proponent's request.

Assembly Action: **None**

EC90-07/08

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved in accordance with the proponent's request.

Assembly Action: **None**

EC91-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The proposal will reduce trade-offs available for measures with shorter life spans. As pointed out in the proponent's reason statement, there is no guarantee that a furnace will not be replaced with a less efficient one when it needs to be replaced.

Assembly Action: **None**

EC92-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The proposal more accurately represents current practice, and is an opportunity for energy savings.

Assembly Action: **None**

EC93-07/08

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved in accordance with the proponent's request.

Assembly Action: **None**

EC94-07/08

Committee Action: **Disapproved**

Committee Reason: In light of the fact that approval of EC92-07/08 reduces the total glazing area to 15%, it would seem inappropriate to require doors to be counted in that area.

Assembly Action: **None**

EC95-07/08

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved in accordance with the proponent's request.

Assembly Action: **None**

EC96-07/08

PART I – IECC **Withdrawn by Proponent**

PART II – IRC **Withdrawn by Proponent**

EC97-07/08

PART I – IECC

Committee Action:

Disapproved

Committee Reason: Based upon approval of EC84-07/08.

Assembly Action:

None

PART II – IRC

Committee Action:

Disapproved

Committee Reason: Based on the committee's previous action on EC84-07/08, Part II.

Assembly Action:

None

EC98-07/08

Withdrawn by the Proponent

EC99-07/08

Committee Action:

Approved as Submitted

Committee Reason: The committee agrees with the proponent that the problem with calculation of site energy costs are that they can change so quickly with time. Source energy use provides a more definitive assessment of the proposed design.

Assembly Action:

None

EC100-07/08

Committee Action:

Disapproved

Committee Reason: Based upon action on EC99-07/08.

Assembly Action:

None

EC101-07/08

Committee Action:

Approved as Submitted

Committee Reason: It is reasonable to give the code official the authority to ask for documentation of engineering calculations performed.

Assembly Action:

None

EC102-07/08

Withdrawn by the Proponent

EC103-07/08

Committee Action:

Disapproved

Committee Reason: The standard ASHRAE 90.1 has long been an accepted standard for energy conservation. The IECC Committee feels that, given that the values and the practices established in the IECC are fundamentally similar to those of ASHRAE 90.1, that we should continue to offer the option of using ASHRAE 90.1.

Assembly Action:

None

EC104-07/08

Committee Action: Disapproved

Committee Reason: See committee reason for disapproval of EC103-07/08.

Assembly Action: None

EC105-07/08

Committee Action: Approved as Submitted

Committee Reason: It is inadvisable to continue the current practice allowed in our code of mixing and matching provisions of ASHRAE with IECC. This could ultimately result in a building that does not meet the basic goals of either code.

Assembly Action: None

EC106-07/08

Committee Action: Approved as Submitted

Committee Reason: This change picks up values for residential that agree with ASHRAE 90.1, and also represents savings in energy in both residential and commercial. The committee notes that the residential portion of the table would apply to all residential outside of the definition of residential in the IECC (i.e. residential greater than 3 stories.), which are covered by Chapter 5.

Assembly Action: None

EC107-07/08

Committee Action: Disapproved

Committee Reason: The proposal was disapproved in accordance with the proponent's request.

Assembly Action: None

EC108-07/08

Committee Action: Disapproved

Committee Reason: The committee was not convinced that averaging SHGC values gives realistic solutions, even on small buildings.

Assembly Action: None

EC109-07/08

Errata: The following corrections are noted in the monograph: In the row entitled "Metal building" replace "No change" with "Not available".

Committee Action: Disapproved

Committee Reason: There were concerns from the committee that, given that the errata in the document was just now being called to their attention, that the proponent needed to review the proposal and bring it back to the process when it is ready.

Assembly Action: None

EC110-07/08

Committee Action: Disapproved

Committee Reason: Disapproval was based upon action taken on EC106-07/08.

Assembly Action: None

EC111-07/08

Committee Action: Disapproved

Committee Reason: The committee preferred the level of increase in stringency provided in EC106-07/08.

Assembly Action: None

EC112-07/08

Committee Action: Disapproved

Committee Reason: The proposed changes would conflict with the changes proposed in EC106-07/08.

Assembly Action: None

EC113-07/08

Committee Action: Disapproved

Committee Reason: The proposed U-factor of .35 for curtain walls and storefronts cannot readily be achieved with available technology.

Assembly Action: None

EC114-07/08

Committee Action: Disapproved

Committee Reason: Provisions of the code should be the same for all materials. This sets a different standard for different types of skylights. This does not make sense to make performance requirements different for different materials.

Assembly Action: None

EC115-07/08

Committee Action: Disapproved

Committee Reason: There was no compelling technical justification for eliminating shading values in setting SHGC requirements.

Assembly Action: None

EC116-07/08

Errata: Remove ASTM E903 from 1st paragraph of Section 502.3 and also from added standards to read as follows:

502.3 Roof reflectance. Low and medium sloped roofs in Climate Zones 1, 2, and 3 shall comply with the following requirements for reflectance when tested in accordance with ASTM C1549, E1918 or by testing with a portable reflectometer at near ambient conditions. The roof surface of low sloped roofs (2:12 or less) shall have

an initial solar reflectance greater than or equal to 0.65 and shall maintain a reflectance equal or grater than 0.50 for three years after installation. Medium sloped roofs (greater than 2:12 and less than or equal to 5:12) shall have a solar reflectance equal to or greater than 0.15 initially and for three years after installation.

ASTM

C1549-(04) Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer

E1918-(1997) Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field

Committee Action: **Approved as Submitted**

Committee Reason: This is an opportunity for energy efficiency with the use of readily available roofing materials.

Assembly Action: **None**

EC117-07/08

Committee Action: **Disapproved**

Committee Reason: This provision would be difficult to enforce, given the complexity of the analysis necessary.

Assembly Action: **None**

EC118-07/08

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved in accordance with the proponent's request.

Assembly Action: **None**

EC119-07/08

Committee Action: **Disapproved**

Committee Reason: Use of a weighted average for SHGC's does not assure that the energy loss is equivalent for the building envelope.

Assembly Action: **None**

EC120-07/08

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard ASTM D 1003-00 indicated that, in the opinion of ICC Staff, the standard did not comply with ICC standards criteria, Section 3.6.3.1.

Committee Action: **Disapproved**

Committee Reason: The code should not specify how a building envelope should be built, whether with skylights or without. In addition, this focuses on energy savings for use of daylight, but does not assure that the losses in the building envelope do not exceed the savings from lighting. The proposal would also require daylighting controls, which are expensive and complex.

Assembly Action: **None**

EC121-07/08

Withdrawn by the Proponent

EC122-07/08

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard ASTM D 1003-00 indicated that, in the opinion of ICC Staff, the standard did not comply with ICC standards criteria, Section 3.6.3.1.

Committee Action: **Disapproved**

Committee Reason: The definition of "General lighting" includes the phrase "including, but not limited to.." which, used in this context makes the definition vague and difficult to understand.

Assembly Action: **None**

EC123-07/08

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard ASTM E 779-99 indicated that, in the opinion of ICC Staff, the standard did not comply with ICC standards criteria, Section 3.6.3.1.

Committee Action: **Disapproved**

Committee Reason: The methodology for testing still needs some development and standardization before it is ready for inclusion in the code.

Assembly Action: **None**

EC124-07/08

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard ASTM E2178-03 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

Committee Action: **Disapproved**

Committee Reason: It is not appropriate or necessary to require an air barrier on all building types. In some cases, the use of an air barrier is far too costly for the gains realized in energy efficiency.

Assembly Action: **None**

EC125-07/08

Committee Action: **Disapproved**

Committee Reason: Contrary to what the proponent suggests, removal of the phrase "such as doors to mechanical or electrical equipment rooms." will make the code less clear. The "such as" phrase is useful in that it helps to describe what is not considered a building entrance.

Assembly Action: **None**

EC126-07/08

Withdrawn by Proponent

EC127-07/08

Committee Action: **Disapproved**

Committee Reason: The proposal would seem to prohibit different needed ways in and out of buildings. The proposal would suggest that a vestibule can never be a conditioned space, when there are times when some type of conditioning is needed, such as heaters to prevent ice build up. Therefore, this proposal essentially muddles what exactly a vestibule is.

Assembly Action: **None**

EC128-07/08

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard ANSI/ASHRAE/ACCA Standard 183-2007 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

Committee Action: **Approved as Submitted**

Committee Reason: The committee believes that it is desirable to have a consensus document for this purpose rather than the handbook previously specified.

Assembly Action: **None**

EC129-07/08

Committee Action: **Disapproved**

Committee Reason: The committee favored the approach taken to the same issue in EC130-07/08.

Assembly Action: **None**

EC130-07/08

Committee Action: **Approved as Modified**

Modify the proposal as follows:

503.2.3 HVAC equipment performance requirements. Equipment shall meet the minimum efficiency requirements of Tables 503.2.3(1), 503.2.3(2), 503.2.3(3), 503.2.3(4), 503.2.3(5), 503.2.3(6), 503.2.3(7), and 503.2.3(8) when tested and rated in accordance with the applicable test procedure. The efficiency shall be verified through certification under an approved certification program or, if no certification program exists, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein.

Exception: Water-cooled centrifugal water-chilling packages listed in Table 503.2.3(7) not designed for operation at ARI Standard 550/590 test conditions of 44°F (7°C) leaving chilled water temperature and 85°F (29°C) entering condenser water temperature with 3 gpm/ton (0.054 l/s.kW) condenser water flow shall have maximum full load and NPLV ratings adjusted using the following equations:

$$\text{Adjusted maximum Full load kW/ton rating} = (\text{full load kW/ton from Table 503.2.3(7)})/K_{\text{adj}}$$
$$\text{Adjusted maximum NPLV rating} = (\text{IPLV from Table 503.2.3(7)})/K_{\text{adj}}$$

Where:

$$K_{\text{adj}} = 6.174722 - 0.303668(X) + 0.00629466(X)^2 - 0.000045780(X)^3$$
$$X = DT_{\text{std}} + \text{LIFT}$$
$$DT_{\text{std}} = (24 + (\text{full load kW/ton from Table 503.2.3(7)}) \times 6.83) / \text{Flow}$$
$$\text{Flow} = \text{Condenser water flow (GPM)} / \text{Cooling Full Load Capacity (Tons)}$$
$$\text{LIFT} = \text{CEWT} - \text{CLWT (F)}$$
$$\text{CEWT} = \text{Full Load Condenser Entering Water Temperature (F)}$$
$$\text{CLWT} = \text{Full Load Leaving Chilled Water Temperature (F)}$$

The adjusted full load and NPLV values are only applicable over the following full-load design ranges:

Minimum Leaving Chilled
Water Temperature: ~~40 to 48°F (4 to 9°C)~~ 38°F (3.3°C)

Maximum Condenser Entering Condenser
Water Temperature: ~~75 to 85°F (24 to 29°C)~~ 102°F (38.9°C)

Condensing Water
Flow: ~~2 to 6 gpm/ton (0.036 to 0.1076 l/s.kW)~~ 0.018 to 0.1076 l/s.kW and
X≥39 and ≤60

Chillers designed to operate outside of these ranges or applications utilizing fluids or solutions with secondary coolants (e.g., glycol solutions or brines) with a freeze point of 27°F (-2.8°C) or lower for freeze protection are not covered by this code.

TABLE 503.2.3(7)
WATER CHILLING PACKAGES - EFFICIENCY REQUIREMENTS^a
 (No changes to proposed table)

- a. The chiller equipment requirements do not apply for chillers used in low-temperature applications where the design leaving fluid temperature is <40 °F.
- b. Section 12 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.
- c. Compliance with this standard can be obtained by meeting the minimum requirements of Path A or Path B. However, both the full load and IPLV must be met to fulfill the requirements of Path A or Path B.
- ~~d. All Path B chillers must be equipped with demand limiting control capability.~~
- ed. NA means that this requirement is not applicable and can not be used for compliance.
- fe. NR means that there are no minimum requirements for this category.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee noted that this proposal had industry support and represented an opportunity for significant improvements in energy efficiency. The modification incorporates changes to Addendum M of ASHRAE 90.1-2007, which will result in application of the provisions to more chillers.

Assembly Action: **None**

EC131-07/08

Committee Action: **Disapproved**

Committee Reason: The committee did not believe that addition of motorized dampers on relief ducts would be a cost-effective method of energy savings.

Assembly Action: **None**

EC132-07/08

Committee Action: **Approved as Submitted**

Committee Reason: This same proposal was approved for Chapter 4. This represents a good opportunity for energy savings.

Assembly Action: **None**

EC133-07/08

Committee Action: **Approved as Modified**

Modify proposal as follows:

TABLE 503.2.8
MINIMUM PIPE INSULATION
 (thickness in inches)

FLUID	NOMINAL PIPE DIAMETER	
	≤1.5"	>1.5"
Steam	1 ½	3
Hot Water	1 1/2	2 ½
Chilled water, brine or refrigerant	2 ½ 1 1/2	3 1 1/2

a. (No change to current text)

b. For insulation with a thermal conductivity not equal to 0.27 Btu • inch/h • ft² • °F at a mean temperature of 75°F, the minimum required pipe thickness is adjusted using the following equation:

$$T = r[(1+tr)^{K/k} - 1]$$

Where: T = Adjusted insulation thickness (in)

r=actual pipe radius (in)

t=insulation thickness from applicable cell in table (in)

K=New thermal conductivity at 75°F (Btu•in/hr•ft²•°F)

k=0.27 Btu•in/hr•ft²•°F

Committee Reason: The proposal for increased insulation on hot water supply will provide an opportunity for significant energy efficiency gains at a relatively low cost. The modification proposed by the proponent called for smaller increases on chilled water pipe, as it was seen that the originally proposed thickness insulation values were not cost effective.

Assembly Action: **None**

EC134-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The proposal expands the requirements for HVAC equipment commissioning to greater detail and more succinct information than is presently in the code. This will make the process easier to understand and regulate, thus insuring that proper commissioning is performed.

Assembly Action: **None**

EC135-07/08

Committee Action: **Disapproved**

Committee Reason: The committee preferred EC134-07/08.

Assembly Action: **None**

EC136-07/08

Committee Action: **Approved as Submitted**

Committee Reason: This will add an opportunity for significant increases in energy efficiency in commercial buildings.

Assembly Action: **None**

EC137-07/08

Committee Action: **Approved as Modified**

Modify the proposal as follows:

503.2.10 Heating systems outside a building. Heating systems installed to provide heat outside a building shall be radiant systems. Such heating systems shall be controlled by an occupancy sensing device or a timer switch, so that the system is automatically de-energized when no occupants are present.

Committee Reason: This proposal will help prevent the use of wasteful, inappropriate systems on the outside. The modification was editorial to make the requirements more succinctly stated.

Assembly Action: **None**

EC138-07/08

Withdrawn by Proponent

EC139-07/08

Committee Action: **Approved as Submitted**

Committee Reason: Consistent with action taken previously on pilotless water heaters, the committee believes that the prohibition of continuously burning pilots is a good opportunity to save energy.

Assembly Action: **None**

EC140-07/08

Committee Action: **Approved as Submitted**

Committee Reason: Consistent with previous action on Chapter 4, the committee believes that high efficiency lamps are readily available and costs are such that the use of them are affordable and cost effective.

Assembly Action: **None**

EC141-07/08

Committee Action: **Disapproved**

Committee Reason: This technology is in use in certain parts of the country and is working well. The committee feels that this practice should be continued.

Assembly Action: **None**

EC142-07/08

Committee Action: **Disapproved**

Committee Reason: The proposed language introduces terminology, "luminaire configurations" that is not defined, and potentially more confusing than the existing language.

Assembly Action: **None**

EC143-07/08

Committee Action: **Approved as Submitted**

Committee Reason: The exemptions are consistent with the provisions of ASHRAE 90.1. These exemptions are more in line with practical code application.

Assembly Action: **None**

EC144-07/08

Committee Action: **Approved as Submitted**

Committee Reason: This is a practical and reasonable method for calculation of wattage on track lighting that is consistent with ASHRAE and is more in line with practical code application.

Assembly Action: **None**

EC145-07/08

Committee Action: **Disapproved**

Committee Reason: The committee was concerned that the provision for automatic controls was not enforceable, and therefore leaves this proposal impractical for code application.

Assembly Action: **None**

EC146-07/08

Committee Action:

Approved as Modified

Modify the proposal as follows:

TABLE 505.5.2 INTERIOR LIGHTING POWER ALLOWANCES

(No change to table entries)

For SI: 1 foot = 304.8 mm, 1 watt per square foot = W/0.0929 m².

- a. In cases where both a general building area type and a more specific building area type are listed, the more specific building area type shall apply.
- b. Where lighting equipment is specified to be installed to highlight specific merchandise in addition to lighting equipment specified for general lighting and is switched or dimmed on circuits different from the circuits for general lighting, the smaller of the actual wattage of the lighting equipment installed specifically for merchandise, or additional lighting power as determined below shall be added to the interior lighting power determined in accordance with this line item.

Calculate the additional lighting power as follows:

Additional Interior Lighting Power Allowance = 1000 watts + (Retail Area 1 x ~~4.0~~ 0.6 W/ft²) + (Retail Area 2 x ~~4.7~~ 0.6 W/ft²) + (Retail Area 3 x ~~2.6~~ 1.4 W/ft²) + (Retail Area 4 x ~~4.2~~ 2.5 W/ft²).

(Portions of proposal not shown remain unchanged)

Committee Reason: This provides a clear, understandable method for dealing with retail lighting. The modification makes the allowance more restrictive as the committee agreed that the original values were too liberal.

Assembly Action:

None

EC147-07/08

Committee Action:

Approved as Submitted

Committee Reason: This provision will reduce energy use and have the additional benefit of reducing light pollution.

Assembly Action:

None

EC148-07/08

Committee Action:

Disapproved

Committee Reason: The committee believes that the existing terminology "athletic playing areas" describes the area better than the proposed terminology.

Assembly Action:

None

EC149-07/08

Withdrawn by Proponent

EC150-07/08

Committee Action:

Approved as Modified

Modify the proposal as follows:

FULLY SHIELDED. A light fixture constructed, installed, and maintained in such a manner that all light emitted from the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the fixture, is projected below the horizontal plane through the fixture's lowest light emitting part.

EC152-07/08

PART I – IECC

Committee Action: **Disapproved**

Committee Reason: This proposal appears to validate energy use without regulation outside of the building thermal envelope.

Assembly Action: **None**

PART II – IRC

Committee Action: **Approved as Submitted**

Committee Reason: This change will harmonize the definition with the IBC and the IECC.

Assembly Action: **None**

EC153-07/08

Errata: Add ASHRAE standard to the Administrative Update as follows:

ASHRAE

90.1-04 07 Energy Standard for Buildings Except for Low-Rise Residential Buildings

Committee Action: **Approved as Submitted**

Committee Reason: It is necessary to update standards so that the latest regulations are reflexive of current practices.

Assembly Action: **None**

EC154-07/08

Committee Action: **Disapproved**

Committee Reason: Introduction of an appendix that provides, in essence, an “above code” program will be chaotic, at best. The IECC should be reflexive of the baseline requirements the members of the IECC Code development process have determined should be the level of stringency. We should not be providing choices that could lead to confusion in the market place and in the regulatory areas. In addition, there are many technical flaws in the proposed text and tables that the IECC Committee has discussed and disapproved or modified in the last several days of this committee meeting.

Assembly Action: **None**
