

**MINUTES**  
**2015 International Energy Conservation Code Task Force**  
**Fifth Meeting**  
**April 18, 2017, 10:00 A.M.**

**Call to order**-Chairman, Joel Rodriguez called the meeting to order at 10:00 A.M. by welcoming and introducing Task Force members, Department of Community Affairs (DCA) staff, and guests. (See the last page of the minutes for a list of attendees).

**Task Force Member Appointment**- Ted Miltiades, Director, introduced Andrea Papageorge as the new representative for Utility Companies on the Task Force.

**Approval of Minutes**- The minutes from the March 7, 2017, meeting were reviewed. A motion was made by *Ryan Taylor* and seconded by *Mike Barcik* to accept the minutes as written. ***Motion Carried Unanimously***

**Duct and Envelope Tightness- Energy Rating Index (DET-ERI) Subcommittee Update**- Ryan Taylor, Chairman of the subcommittee, explained the scope of the work of the subcommittee. He updated the Task Force on the discussion of the amendments pertaining to the DET and ERI subjects. He announced the next scheduled subcommittee meeting is April 25, 2017.

**Review of the Current 2011 and 2012 GA Amendments to Carry Forward-**

- Georgia State Supplements and Amendments to the International Energy Conservation Code (2009 Edition) Revised January 1, 2011.

**COMMERCIAL CHAPTERS**

**CHAPTER 1 [CE] SCOPE AND ADMINISTRATION**

- Delete Section C101.1 'Title', without substitution.
- Keep Section C103, 'CONSTRUCTION DOCUMENTS'.
- Delete SECTION C104, 'INSPECTIONS', without substitution.
- Delete SECTION C107, 'FEES', without substitution.
- Delete SECTION C108, 'STOP WORK ORDER', without substitution.
- Delete SECTION C109, 'BOARD OF APPEALS', without substitution.
- Add new Section C101.6 'Requirements for high-efficiency cooling towers' as follows:  
**C101.6 Requirements for high-efficiency cooling towers.** Cooling towers installed in new construction shall be in compliance with ASHRAE, Standard 90.1.

**CHAPTER 2 [CE] DEFINITIONS – C202**

- Add new definition for 'Cooling Tower' to read as follows:  
**COOLING TOWER.** A building heat removal device used to transfer process waste heat to the atmosphere.
- Delete definition of 'CONDITIONED SPACE' and substitute the following:  
**SPACE.** An enclosed space within a building.  
The classifications of spaces are as follows for the purpose of determining building envelope requirements:

**(a) Conditioned space:** a cooled space, heated space, or indirectly conditioned space is defined as follows:

**(1) Cooled space:** an enclosed space within a building that is cooled by a cooling system whose sensible output capacity exceeds 5 Btu/h-ft<sup>2</sup> of floor area.

**(2) Heated space:** an enclosed space within a building that is heated by a heating system whose output capacity relative to the floor area is greater than or equal to 5 Btu/h-ft<sup>2</sup>.

**(3) Indirectly conditioned space:** an enclosed space within a building that is not a heated space or a cooled space, containing uninsulated ducts, or containing the heating equipment or which is heated or cooled indirectly by being connected to adjacent space(s), provided that air from heated or cooled spaces is transferred (naturally or mechanically) into the space. Unvented Attic Assemblies meeting the requirements of the IRC are an approved indirectly conditioned space.

**(b) Semi-heated space:** an enclosed space within a building that is heated by a heating system whose output capacity is greater than or equal to 3.4 Btu/h-ft<sup>2</sup> of floor area but is not a conditioned space.

**(c) Unconditioned space:** an enclosed space within a building that is not a conditioned space or a semi-heated space. Crawl spaces, attics, and parking garages with natural or mechanical ventilation are not considered enclosed spaces.

- Revise the definition for ‘COEFFICIENT OF PERFORMANCE (COP) – COOLING’ to read as follows: **COEFFICIENT OF PERFORMANCE (COP) – COOLING.** The ratio of heat removal to energy input, in consistent units, for a complete refrigerating system or some specific portion of that system under designated operating conditions.

#### CHAPTER 4 [CE] COMMERCIAL ENERGY EFFICIENCY

- Revise Section C403.3, Economizers to read as follows: Supply air economizers shall... (Beginning of section left unchanged)

Exceptions:

10. Computer Room Applications

#### CHAPTER 6 [CE] REFERENCED STANDARDS

- Revise referenced UL standards as follows (standards not listed to remain unchanged):

Standard reference number	Title	Referenced in code section number
UL	Underwriters Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062	
181—96	Factory-made Air Ducts and Air Connectors—with Revisions through May 2003 . . . . .	403.2.4
181A—98	Closure Systems for Use with Rigid Air Ducts and Air Connectors—with Revisions through December 1998 . . . . .	403.2.4
181B—95	Closure Systems for Use with Flexible Air Ducts and Air Connectors—with Revisions through August 2003. . . . .	403.2.4

## RESIDENTIAL CHAPTERS

### CHAPTER 1 [RE] SCOPE AND ADMINISTRATION

- Delete Section R101.1, 'Title', without substitution.
- Delete Section R103, 'CONSTRUCTION DOCUMENTS', without substitution.
- Delete SECTION R104, 'INSPECTIONS', without substitution.
- Delete SECTION R107, 'FEES', without substitution.
- Delete SECTION R108, 'STOP WORK ORDER', without substitution.
- Delete SECTION R109, 'BOARD OF APPEALS', without substitution.

### CHAPTER 2 [RE] DEFINITIONS

- Add definition of 'ATTIC KNEEWALL' as follows:

**ATTIC KNEEWALL.** Any vertical or near-vertical wall in the building envelope that has conditioned space on one side and unconditioned attic space on the other side. If the envelope features the insulation installed along the sloped ceiling, the vertical wall is considered an interior wall and thus does not require insulation.

- Add definition of 'CERTIFIED DUCT AND ENVELOPE TIGHTNESS (DET) VERIFIER' as follows:

**CERTIFIED DUCT AND ENVELOPE TIGHTNESS (DET) VERIFIER.** A certified DET verifier shall be a certified Home Energy Rating Systems (HERS) rater, or be a Building Performance Institute (BPI) Analyst, or be an Infiltration Duct Leakage (IDL) Certified, or successfully complete a certified DET verifier course that is approved by the Georgia Department of Community Affairs.

- Delete definition of 'CONDITIONED SPACE' and substitute the following:

**SPACE.** An enclosed space within a building.

The classifications of spaces are as follows for the purpose of determining building envelope requirements:

**(a) Conditioned space:** a cooled space, heated space, or indirectly conditioned space is defined as follows:

**(1) Cooled space:** an enclosed space within a building that is cooled by a cooling system whose sensible output capacity exceeds 5 Btu/h·ft<sup>2</sup> of floor area.

**(2) Heated space:** an enclosed space within a building that is heated by a heating system whose output capacity relative to the floor area is greater than or equal to 5 Btu/h·ft<sup>2</sup>.

**(3) Indirectly conditioned space:** an enclosed space within a building that is not a heated space or a cooled space, containing un-insulated ducts, or containing the heating equipment or which is heated or cooled indirectly by being connected to adjacent space(s), provided that air from heated or cooled spaces is transferred (naturally or mechanically) into the space. Unvented Attic Assemblies meeting the requirements of the IRC are an approved indirectly conditioned space.

**(b) Semi-heated space:** an enclosed space within a building that is heated by a heating system whose output capacity is greater than or equal to 3.4 Btu/h·ft<sup>2</sup> of floor area but is not a conditioned space.

**(c) Unconditioned space:** an enclosed space within a building that is not a conditioned space or a semi-heated space. Crawl spaces, attics, and parking garages with natural or mechanical ventilation are not considered enclosed spaces.

## CHAPTER 4 [RE] RESIDENTIAL ENERGY EFFICIENCY

- The existing sample compliance certificate needs to be updated.
- Revise Section 401.3, 'Certificate', by revising first sentence and adding at the end as follows:  
**401.3 Certificate.** A permanent certificate shall be posted on or near the electrical distribution panel or air handler. The certificate shall be...  
(Middle of section left unchanged.)  
...water heating equipment. The certificate shall also list the calculated heating load, sensible cooling load, latent cooling load and cfm for space conditioning. The certificate shall also list the duct tightness and envelope tightness test results. Buildings classified as R-2 occupancy shall indicate that the visual inspection option was used or provide envelope tightness test results. (Remainder of section left unchanged)
- Add a new Section R401.4, 'Certified duct and envelope tightness (DET) verifier', to read as follows:  
**R401.4 Certified duct and envelope tightness (DET) verifier.** Testing for building duct and envelope tightness (DET) shall be conducted by a certified DET verifier.
- SECTION 402 BUILDING THERMAL ENVELOPE: Deferred to DET-ERI Subcommittee for review
- Revise Section 402.2.1, 'Ceilings with attic spaces', by adding at the end as follows:  
**402.2.1 Ceilings with attic spaces.** Where Section R402.1.2 would require R-38 insulation in the ceiling, installing R-30 over 100 percent of the ceiling area requiring insulation shall be deemed to satisfy the requirement for R-38 wherever the full height of uncompressed R-30 insulation extends completely over the wall top plate at the eaves and gable end walls. This reduction shall not apply to the U-Factor alternative approach in Section R402.1.4 and the total UA alternative in Section R402.1.5.  
For HVAC attic platforms used for locating and servicing equipment, R-19 (maximum U-0.047) shall be deemed to meet the requirements of R-38 (maximum U-0.027) in the ceiling. R-19 is deemed acceptable for up to 32 square feet of attic decking per HVAC system. R-19 shall be deemed acceptable for a maximum 32-inch wide passage to the HVAC system as referenced under M1305.1.3 of the International Residential Code.
- Revise Section R402.2.3, 'Eave baffle' to read as follows:  
**R402.2.3 Wind wash baffle and air-permeable insulation dam.** For air-permeable insulation in vented attics, baffles shall be installed adjacent to soffit and eave vents. A minimum of a 1-inch of space shall be provided between the insulation and the roof sheathing and at the location of the vent. The baffle shall extend over the top of the insulation inward until it is at least 4 inches vertically above the top of the insulation. Any solid material such as cardboard or thin insulating sheathing shall be permissible as the baffle. (See Appendix A, 'Air Sealing Key Points' for further clarification.)
- Delete Section R402.2.4, 'Access hatches and doors', and substitute the following:  
**R402.2.4 Fenestration access hatches and doors.** Access doors from conditioned spaces to unconditioned spaces (e.g., attics, unconditioned basements and crawl spaces) shall be weather-stripped and insulated in accordance with the following insulation values:
  1. Hinged vertical doors shall have a maximum U-Factor of U-0.20 (R-5 minimum);
  2. Hatches/scuttle hole covers shall have a maximum U-Factor of U-0.05 (R-19 minimum); and

3. Pull down stairs shall have a maximum U-Factor of U-0.20 with a minimum of 75 percent of the panel area having (R-5 minimum) insulation.

Access shall be provided to all equipment which prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer is required to be provided when loose fill insulation is installed, the purpose of which is to prevent the loose fill insulation from spilling into the living space when the attic access is opened, and to provide a permanent means of maintaining the installed R-value of the loose fill insulation.

- **402.2.6 Floors.** Not recommended to be carried forward.

- Delete Section R402.2.11, 'Crawl space walls', and substitute to read as follows:

**R402.2.11 Crawl space walls.** As an alternative to insulating floors over crawl spaces, crawl space walls shall be permitted to be insulated when the crawl space is not vented to the outside. Crawl space wall insulation shall be permanently fastened to the wall and extend downward from the floor to within 9-inches (229 mm) of the finished interior grade adjacent to the foundation wall. A 3-inch (76 mm) inspection/view strip immediately below the floor joists shall be provided to permit inspections for termites. Exposed earth in unvented crawl space foundations shall be covered with a continuous Class 1 vapor retarder in accordance with the *International Building Code*. All joints of the vapor retarder shall overlap by 6-inches (152 mm) and be sealed or taped. The edges of the vapor retarder shall extend at least 6-inches (228 mm) up the stem wall and shall be attached and sealed to the stem wall.

- **402.3.4 Opaque door exemption.** Not recommended to be carried forward.

- **402.4.1 Building thermal envelope.** Deferred to DET-ERI Subcommittee for review.

- **R402.4.1.2 Testing.** Deferred to DET-ERI Subcommittee for review.

**LUNCH BREAK.** The Task Force broke for lunch (11:30 A.M. - 12:30 P.M.)

**R403.3.4 Duct testing (Prescriptive).** Deferred to DET-ERI Subcommittee for review.

- Delete R403.3.5 Building cavities and substitute the following:

**R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums. All supply and return ducts must be lined with metal, flex duct, duct board or other material approved in Section M1601 of the IRC.

- Add new Section R403.3.6, 'Joints and seams', to read as follows:

**R403.3.6 Joints, seams and Connections.** All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in *SMACNA HVAC Duct Construction Standards- Metal and Flexible* and *NAIMA Fibrous Glass Duct Construction Standards*. All joints, longitudinal and transverse seams, and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes. Without exception all closure systems shall have mastic applied that is at least 0.08 inches (2mm) thick. Closure systems used to seal flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 B-M" for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fastener for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 inch (25.4 mm) and

shall be mechanically fastened by means of not less than three sheet metal screws or rivets equally spaced around the joints.

Closure systems used to seal metal ductwork shall be installed in accordance with manufacturer's instructions. Round metallic ducts shall be mechanically fastened by means of at least three sheet metal screws or rivets spaced equally around the joint. Unlisted duct tape shall not be permitted as a sealant on any duct.

Exceptions:

1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
3. Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.

- Add new section R403.1.2.3, 'Primary heat source' to read as follows:

**R403.1.2.3 Primary heat source.** For new dwelling unit central HVAC systems, or replacement HVAC systems installed in dwelling units that were originally permitted after January 1, 1996, electric-resistance heat shall not be used as the primary heat source. Primary heat source is defined as the heat source for the original dwelling unit system.

**Exception:** Alterations or additions of 50% or less than the original conditioned floor area.

- Add new section R403.13, 'Power attic ventilators' to read as follows:

**R403.13 Power attic ventilators.** In new construction, power attic ventilators shall not be connected to the electric grid. Power attic ventilators connected to a solar panel are allowed.

## CHAPTER 6 [RE] REFERENCED AND STANDARDS

- Add new standard:

ANSI/RESNET/ICC 301-2014 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index First Published March 7, 2014, republished January 2016.

### Appendices-

Appendix A: There was a discussion on deleting Appendix RA and RB in 2015 IECC and bringing forward the Appendix A, 'AIR SEALING KEY POINTS' to replace Appendix RA.

Appendix B: Do not carry forward.

Appendix C: There was a discussion whether to carry forward this appendix or not.

Appendix D: needs to be revised.

**OLD BUSINESS.** There was no further old business.

### Review of Proposed Amendments, Assigned for further Clarification

C403.2.8 Kitchen Exhaust Systems. Proponent provided testimony in support of the amendment

**NEW BUSINESS.** There was no new business.

## **CONCLUSION OF MEETING**

- These minutes summarize the Task Force recommendations to carry forward the 2011 and 2012 Georgia Amendments. These recommendations will be considered and voted on in the upcoming Task Force Meetings.
- Chairman Rodriguez announced the next scheduled meeting is May 9, 2017.
- During the May 9 meeting, Residential Chapters and all other amendments will be discussed.
- The second ERI/DET Subcommittee meeting is scheduled for April 25, 2017.
- No further business or discussion. The meeting adjourned at 3:00 P.M.

## **Attendees**

**Task Force Members Present:** Joel Rodriguez, Ryan Taylor, Stephen Adams, Ron Anderson, Mark Gallman, Mike Barcik, Kelly Cutts, Neal Davis, James Martin, Andrea Papageorge, Elaine Powers, John Pruitt, Max Rietschier, Scott Walters, and Lauren Westmoreland.

**Task Force Members Absent:** David Hirsch and Jim Moody.

**Staff Members Present:** Ted Miltiades, Seti Ordoobadi, Bill Towson, Matt McConnell, Kadedra Caldwell and Austin Dyer.

**Guests:** Russell Holly, Fulton County Schools; Brian Griffin, Pat Griffin, Quality Air Inc.; Jeffrey Sauls, Energy Vanguard; Terry Vaughn, City of Columbus; Don Willis, Smart Energy Solutions; David Dowis, SCCS; Kelly Lass, HBAG; William Taylor, City of Woodstock; Bettie Sleeth, HBAG; Eric Lacey, RECA; Duane Helton, City of Woodstock; Dee LeClair, Stevens Wilkinson; Mark Crosby, City of Canton- BOMA; Paul Laney, Cobb County; Mark Schroder, BOMA; Jim Matheson, Matheson-Ball; Brian Shanks, Beazer Homes.

**End of Minutes.**