

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

- 1) Heading of the Part: Illinois Energy Conservation Code
- 2) Code Citation: 71 Ill. Adm. Code 600
- 3) 

<u>Section Numbers:</u>	<u>Adopted Actions:</u>
600.100	Amendment
600.110	Amendment
600.120	Amendment
600.200	Amendment
600.300	Amendment
600.320	Amendment
600.340	Amendment
600.400	Amendment
600.420	Amendment
600.440	Amendment
600.APPENDIX A	Amendment
- 4) Statutory Authority: Implementing and authorized by the Capital Development Board Act [20 ILCS 3105] and the Energy Efficient Commercial Building Act [20 ILCS 3125]
- 5) Effective Date of Rules: January 20, 2016
- 6) Does this rulemaking contain an automatic repeal date? No
- 7) Does this rulemaking contain incorporations by reference? No
- 8) A copy of the adopted rules, including any material incorporated by reference, is on file in the Agency's principal office and is available for public inspection.
- 9) Notice of Proposal published in the *Illinois Register*: 39 Ill. Reg. 12425; September 11, 2015.
- 10) Has JCAR issued a Statement of Objection to this rulemaking? No
- 11) Differences between Proposal and Final Version: The final version incorporates several Second Notice changes of a technical nature, agreed to by the Illinois Capital Development Board and the Joint Committee of Administrative Rules.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

- 12) Have all the changes agreed upon by the Agency and JCAR been made as indicated in the agreements issued by JCAR? Yes
- 13) Will this rulemaking replace any emergency rulemaking currently in effect? No
- 14) Are there any rulemakings pending on this Part? No
- 15) Summary and Purpose of Rulemaking: The Energy Efficient Building Act requires the adoption of latest published edition of the International Code Council's International Energy Conservation Code (IECC) as the Energy Code for Illinois. This rulemaking updates the version of the Code from the 2012 IECC to the 2015 IECC.

The Act allows the CDB to appropriately adapt the IECC for economic, geographical, climate, etc. considerations. The Board, through the addition of Appendix A in this Part is recommending adaptations to various sections of the 2015 IECC. This Appendix supplants and adds sections on administration, definitions, and various technical sections related to building envelope; additions, alterations and repairs of existing buildings; alternative compliance methods; and ventilation requirements for residential buildings.

The rules were also altered to allow for travel reimbursement for Illinois Energy Conservation Advisory Council members; remove two exceptions for State Funded Facilities that have been addressed in a newer version of the referenced standard; and to rearrange or reword a few sections to provide consistency.

- 16) Information and questions regarding this adopted rules shall be directed to

Lisa Mattingly  
Administrator, Professional Services  
Capital Development Board  
401 South Spring Street  
3<sup>rd</sup> Floor Stratton Building  
Springfield IL 62706

217/524-6408  
fax: 217/524-4208

The full text of Adopted Amendments begins on the next page:

CAPITAL DEVELOPMENT BOARD

NOTICE OF ADOPTED AMENDMENTS

TITLE 71: PUBLIC BUILDINGS, FACILITIES, AND REAL PROPERTY  
CHAPTER I: CAPITAL DEVELOPMENT BOARD  
SUBCHAPTER d: ENERGY CODES

PART 600  
ILLINOIS ENERGY CONSERVATION CODE

SUBPART A: GENERAL

Section	
600.100	Definitions
600.110	Adoption and Modification of the Code
600.120	Illinois Energy Conservation Advisory Council
600.130	Revisions to the Code

SUBPART B: STATE FUNDED FACILITIES

Section	
600.200	Standards for State Funded Facilities
600.210	Request for Variance
600.220	Compliance

SUBPART C: PRIVATELY FUNDED COMMERCIAL FACILITIES

Section	
600.300	Standards for Privately Funded Commercial Facilities
600.310	Exemptions
600.320	Local Jurisdiction
600.330	Compliance
600.340	Application to Home Rule Units

SUBPART D: RESIDENTIAL BUILDINGS

Section	
600.400	Standards for Residential Buildings
600.410	Exemptions
600.420	Local Jurisdiction
600.430	Compliance
600.440	Application to Home Rule Units

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

## 600.APPENDIX A Supplanted and Additional 2015 International Energy Conservation Code Sections

**AUTHORITY:** Implementing and authorized by the Capital Development Board Act [20 ILCS 3105] and the Energy Efficient Building Act [20 ILCS 3125].

**SOURCE:** Adopted by emergency rulemaking at 28 Ill. Reg. 11355, effective July 26, 2004, for a maximum of 150 days; emergency rules expired December 22, 2004; adopted at 29 Ill. Reg. 777, effective January 1, 2005; new Part adopted by emergency rulemaking at 29 Ill. Reg. 5736, effective April 8, 2005, for a maximum of 150 days; emergency expired September 4, 2005; emergency rulemaking repealed at 29 Ill. Reg. 6093, effective April 18, 2005, for a maximum of 150 days; emergency expired September 14, 2005; old Part repealed at 29 Ill. Reg. 16414 and new Part adopted at 29 Ill. Reg. 14790, effective April 8, 2006; amended at 31 Ill. Reg. 14422, effective October 9, 2007; emergency amendment at 33 Ill. Reg. 12407, effective August 18, 2009, for a maximum of 150 days; amended at 33 Ill. Reg. 16702, effective November 23, 2009; emergency rulemaking at 34 Ill. Reg. 2582, effective January 29, 2010, for a maximum of 150 days; emergency expired June 27, 2010; amended at 34 Ill. Reg. 11398, effective July 26, 2010; amended at 37 Ill. Reg. 789, effective January 11, 2013; amended at 37 Ill. Reg. 12822, effective July 23, 2013; amended at 40 Ill. Reg. 2754, effective January 20, 2016.

## SUBPART A: GENERAL

**Section 600.100 Definitions**

Definitions of terms in the International Energy Conservation Code, incorporated by reference in Subpart C of this Part, apply, as do the following definitions:

"Act" means the Capital Development Board Act [20 ILCS 3105].

"Authority Having Jurisdiction" or "AHJ" means the organization, office or individual responsible for approving equipment, materials, an installation or procedure.

"CDB" or "Board" means the Illinois Capital Development Board.

*"Commercial Facility" means any building except a building that is classified as a residential building. [20 ILCS 3125/10]*

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

"Council" means the Illinois Energy Conservation Advisory Council appointed under Subpart B of this Part and whose purpose it is to recommend modifications to the *Illinois Energy Conservation Code*.

"EEB Act" means the Energy Efficient Building Act [20 ILCS 3125].

"IECC" means the International Energy Conservation Code.

"Illinois Energy Conservation Code" or "Code" means:

With respect to the State facilities covered by Subpart B:

This Part, all additional requirements incorporated within Subpart B (including ASHRAE 90.1 Standards), and any statutorily authorized adaptations to the incorporated standards adopted by CDB;

With respect to the privately funded commercial facilities covered by Subpart C:

This Part, all additional requirements incorporated within Subpart C (including the 2015 International Energy Conservation Code that encompasses ASHRAE 90.1, including all published errata but excluding published supplements, and any statutorily authorized adaptations to the incorporated standards adopted by CDB; and

With respect to the residential buildings covered by Subpart D:

This Part, all additional requirements incorporated within Subpart D (including the 2015 International Energy Conservation Code, including all published errata but excluding published supplements) and any statutorily authorized adaptations to the incorporated standards adopted by CDB.

*"Municipality" means any city, village or incorporated town.* [20 ILCS 3125/10]

*"Residential Building" means a detached one-family or 2-family dwelling or any building that is 3 stories or less in height above grade that contains multiple*

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

*dwelling units, in which the occupants reside on a primarily permanent basis, such as a townhouse, a row house, an apartment house, a convent, a monastery, a rectory, a fraternity or sorority house, a dormitory, and a rooming house; provided, however, that when applied to a building located within the boundaries of a municipality having a population of 1,000,000 or more, the term "residential building" means a building containing one or more dwelling units, not exceeding 4 stories above grade, where occupants are primarily permanent. [20 ILCS 3125/10]*

"State Funded Building" means and includes buildings under the jurisdiction of each officer, department, board, commission, institution and body politic and corporate of the State, including the Illinois Building Authority, and any other person expending or encumbering State or federal funds by virtue of an appropriation or other authorization by the General Assembly or federal authorization or grant. This includes State funded *housing, hospitals, penitentiaries, laboratories, educational facilities, administrative facilities, recreational facilities, environmental equipment and parking facilities* [20 ILCS 3105/4.01].

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

**Section 600.110 Adoption and Modification of the Code**

- a) The purpose of the Illinois Energy Conservation Code is to implement Section 10.09-5 of the Capital Development Board Act [20 ILCS 3105/10.09-5], which requires CDB to adopt rules implementing a statewide Energy Code. Additionally, Section 15 of the Energy Efficient Building Act [20 ILCS 3125/15] requires CDB to officially adopt, as a minimum requirement, the 2015 International Energy Conservation Code, including all published errata but excluding any published supplements, to apply that Code to all commercial structures in Illinois, and to assist local code officials with enforcing the requirements of the Code. The 2015 Illinois Energy Conservation Code will become effective on January 1, 2016.
- b) This Code as described in Subpart B (State facilities) is effective July 26, 2004. This Code as described in Subpart C (privately-funded commercial facilities) is effective April 8, 2007. The Code as described in Subpart D (residential buildings) is effective January 29, 2010.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

- c) Application of the Code
- 1) State Facilities. The Code as described in Subpart B of this Part applies to all State facilities for which money has been appropriated or authorized by the General Assembly.
  - 2) Privately Funded Commercial Facilities and Residential Buildings. The Code as described in Subparts C and D of this Part applies *to any new building or structure in this State for which a building permit application is received by a municipality or county.* [20 ILCS 3125/20]
    - A) *Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of the Code as they relate to new construction without requiring the unaltered portion of the existing building or building system to comply with the Code.* [20 ILCS 3125/20(c)]
    - B) All exceptions listed in the Code related to additions, alterations, renovations or repairs to an existing building are acceptable provided the energy use of the building is not increased.
- d) This Code, together with the standards incorporated by reference in this Part, has the force of a building code and is administrative law applicable in the State of Illinois.

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

**Section 600.120 Illinois Energy Conservation Advisory Council**

- a) The Executive Director of the Capital Development Board shall appoint an Advisory Council. The Council shall be composed of the Executive Director or his or her authorized representative, who shall serve as Chairman ex-officio, and 11 additional members appointed by the Executive Director. The appointed members shall consist of 1 person representing the Department of Commerce and Economic Opportunity; 2 persons representing the residential construction contracting industry; 2 licensed architects; 1 licensed mechanical engineer; 1 licensed electrical engineer; 2 persons representing local code officials; and 2 persons representing the construction contracting industry. Members of the Council shall be appointed for 4 year terms. The members appointed by the

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

Executive Director shall serve for the term of their appointments and may be reappointed upon expiration of the term. Any member appointed to fill a vacancy occurring prior to the expiration of the term for which his or her predecessor was appointed shall be appointed for the remainder of the term.

- b) The Council shall meet as frequently as the Chairman deems necessary, but at least once each year. Additional meetings may be called by the Chairman or by 3 members of the Council upon delivery of 10 days' written notice to the mailing address of each member of the Council. Seven members of the Council shall constitute a quorum. The Chairman shall only vote to break a tie or when necessary to establish a quorum.
- c) The purpose of the Council shall be to recommend modifications to the Illinois Energy Conservation Code.
- d) Members of the Council shall serve without compensation but shall be reimbursed for reasonable travel expenses necessarily incurred in the performance of their duties.

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

## SUBPART B: STATE FUNDED FACILITIES

**Section 600.200 Standards for State Funded Facilities**

- a) ANSI/ASHRAE/IESNA Standard 90.1, Energy Standard for Buildings Except Low-Rise Residential Buildings (2013), available from ASHRAE at 1791 Tullie Circle, N.E., Atlanta GA 30329, is hereby incorporated into the Illinois Energy Conservation Code, as described in this Subpart as applicable to State funded facilities, with the modifications outlined in subsection (c).
- b) All incorporations by reference in this Section are of the cited standards as they existed on the date specified. These incorporations include no later editions or amendments.
- c) Modifications to ASHRAE 90.1  
ASHRAE 90.1 is incorporated by this Section, but with the following modifications:



## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

## ASHRAE 90.1 Section 3.2

The terms "adopting authority" and "authority having jurisdiction" shall both be read to mean the Capital Development Board.

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

## SUBPART C: PRIVATELY FUNDED COMMERCIAL FACILITIES

**Section 600.300 Standards for Privately Funded Commercial Facilities**

- a) The 2015 IECC, including published errata but excluding published supplements, available from the International Code Council at 500 New Jersey Avenue NW, 6<sup>th</sup> Floor, Washington DC 20001, phone: 1-888-ICC-SAFE (422-7233), is hereby incorporated into the Illinois Energy Conservation Code, as described in this Subpart as applicable to privately funded commercial facilities, with the modifications outlined in subsection (c).
- b) All incorporations by reference in this Section are of the cited standards as they existed on the date specified. These incorporations include no later editions or amendments.
- c) **Modifications to IECC**  
Under Section 15 of the EEB Act, when applying the Code to privately funded commercial facilities, CDB may modify the incorporated standards to respond to the unique economy, population distribution, geography and climate of Illinois, as long as the objectives of the Act are maintained pursuant to that statutory authority. Modifications, additions or omissions to IECC are specified in Appendix A and are rules of the CDB and are not requirements of the IECC.

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

**Section 600.320 Local Jurisdiction**

- a) Construction projects involving privately funded commercial facilities and for which a municipality or county requires a building permit must comply with the Illinois Energy Conservation Code if the project involves new construction, addition, alteration, renovation or repair. *In the case of any addition, alteration, renovation or repair to an existing commercial structure, the Code as described*

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

by this Subpart C *applies only to the portions of that structure that are being added, altered, renovated or repaired.* [20 ILCS 3125/20(a)]

- b) The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Illinois Energy Conservation Code. The AHJ is authorized to enforce a building code that differs with the Code as described in this Subpart C, but any standards applied by an AHJ must be at least as stringent as the Code as described in this Subpart C.
- c) *A unit of local government that does not regulate energy efficient building standards is not required to adopt, enforce or administer the Code; however, any energy efficient building standards adopted by a unit of local government must comply with the Act. If a unit of local government does not regulate energy efficient building standards, any construction, renovation or addition to buildings or structures is still subject to the provisions contained in the Act.* [20 ILCS 3125/20(d)]

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

**Section 600.340 Application to Home Rule Units**

*No unit of local government, including any home rule unit, may apply energy efficient building standards to privately funded commercial facilities in a manner that is less stringent than the Code as described in this Subpart C. However, nothing in the EEB Act or this Subpart prevents a unit of local government from adopting an energy efficiency code or standards that are more stringent than this Code.* [20 ILCS 3125/45(a)]

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

## SUBPART D: RESIDENTIAL BUILDINGS

**Section 600.400 Standards for Residential Buildings**

- a) The 2015 IECC, including published errata but excluding published supplements, available from the International Code Council at 500 New Jersey Avenue NW, 6<sup>th</sup> Floor, Washington DC 20001, phone: 1-888-ICC-SAFE (422-7233), is hereby incorporated into the Illinois Energy Conservation Code, as described in this Subpart as applicable to residential buildings, with the modifications outlined in subsection (c).

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

- b) All incorporations by reference in this Section are of the cited standards as they existed on the date specified. These incorporations include no later editions or amendments.
- c) **Modifications to IECC**  
Under Section 15 of the EEB Act, when applying the Code to residential buildings, CDB may modify the incorporated standards to respond to the unique economy, population distribution, geography and climate of Illinois, as long as the objectives of the Act are maintained pursuant to that statutory authority. Modifications, additions or omissions to IECC are specified in Appendix A and are rules of the CDB and are not requirements of the IECC.

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

**Section 600.420 Local Jurisdiction**

- a) Construction projects involving residential buildings and for which a municipality or county requires a building permit must comply with the Illinois Energy Conservation Code if the project involves new construction, addition, alteration, renovation or repair. *In the case of any addition, alteration, renovation or repair to an existing commercial structure, the Code as described by this Subpart D applies only to the portions of that structure that are being added, altered, renovated or repaired.* [20 ILCS 3125/20(a)]
- b) The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Code.
- c) *A unit of local government that does not regulate energy efficient building standards is not required to adopt, enforce or administer the Code; however, any energy efficient building standards adopted by a unit of local government must comply with the Act. If a unit of local government does not regulate energy efficient building standards, any construction, renovation or addition to buildings or structures is still subject to the provisions contained in the Act.* [20 ILCS 3125/20(d)].

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

**Section 600.440 Application to Home Rule Units**

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

- a) *No unit of local government, including any home rule unit, may regulate energy efficient building standards for residential buildings in a manner that is either less or more stringent than the standards established in this Subpart D.*
- b) *The following entities may regulate energy efficient building standards for residential buildings in a manner that is more stringent than the provisions contained in this Subpart D:*
  - 1) *a unit of local government, including a home rule unit, that has, on or before May 15, 2009, adopted or incorporated by reference energy efficient building standards for residential buildings that are equivalent to or more stringent than the 2006 IECC;*
  - 2) *a unit of local government, including a home rule unit, that has, on or before May 15, 2009, provided to the Capital Development Board, as required by Section 55 of the Illinois Building Commission Act [20 ILCS 3918], an identification of an energy efficient building code or amendment that is equivalent to or more stringent than the 2006 IECC; and*
  - 3) *a municipality with a population of 1,000,000 or more. [20 ILCS 3125/45(b)]*
- c) *No unit of local government, including any home rule unit or unit of local government that is subject to State regulation under the Code as provided in Section 15 of the EEB may enact any annexation ordinance or resolution, or require or enter into any annexation agreement, that imposes energy efficient building standards for residential buildings that are either less or more stringent than the energy efficiency standards in effect, at the time of construction, throughout the unit of local government. [20 ILCS 3125/45(c)]*

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

**Section 600.APPENDIX A Supplanted and Additional 2015 International Energy Conservation Code Sections**

The following Code sections shall be referenced in place of the corresponding 2015 IECC sections.

**CHAPTER 1 [CE]  
SCOPE AND ADMINISTRATION****SECTION C101  
SCOPE AND GENERAL REQUIREMENTS**

**C101.1 Title.** This Code shall be known as the Illinois Energy Conservation Code or Code and shall mean:

With respect to the State facilities covered by 71 Ill. Adm. Code 600.Subpart B:

This Part, all additional requirements incorporated within Subpart B (including ASHRAE 90.1 Standards, including all published errata but excluding published supplements that encompass ASHRAE 90.1-2013), and any statutorily authorized adaptations to the incorporated standards adopted by CDB, are effective January 1, 2016.

With respect to the privately funded commercial facilities covered by 71 Ill. Adm. Code 600.Subpart C:

This Part, all additional requirements incorporated within Subpart C (including the 2015 International Energy Conservation Code, including all published errata and excluding published supplements that encompass ASHRAE 90.1-2013), and any statutorily authorized adaptations to the incorporated standards adopted by CDB, are effective January 1, 2016.

**C101.1.2 Adoption.** The Board shall adopt amendments to this Code within 12 months after publication of changes to the International Energy Conservation Code. Any such update in this Code shall take effect within 6 months after it is adopted by the Board and shall apply to any new building or structure in this State for which a building permit application is received by a municipality or county, except as otherwise provided by the EEB Act.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

**C101.1.3 Adaptation.** The Board may appropriately adapt the International Energy Conservation Code to apply to the particular economy, population distribution, geography and climate of the State and construction within the State, consistent with the public policy objectives of the EEB Act.

**C101.5 Compliance.** Commercial buildings shall meet the provisions of the Illinois Energy Conservation Code covered by 71 Ill. Adm. Code 600.Subpart C. The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Illinois Energy Conservation Code. Minimum compliance shall be demonstrated by submission of:

1. Compliance forms published in the ASHRAE 90.1 User's Manual; or
2. Compliance Certificates generated by the U.S. Department of Energy's COMcheck™ Code compliance tool; or
3. Other comparable compliance materials that meet or exceed, as determined by the AHJ, the compliance forms published in the ASHRAE 90.1 User's Manual or the U.S. Department of Energy's COMcheck™ code compliance tool; or
4. The seal of the architect/engineer as required by Section 14 of the Illinois Architectural Practice Act [225 ILCS 305], Section 12 of the Structural Engineering Licensing Act [225 ILCS 340] and Section 14 of the Illinois Professional Engineering Practice Act [225 ILCS 325].

**C102.1.1 Above Code Programs.** No unit of local government, including any home rule unit, may apply energy efficient building standards to privately funded commercial facilities in a manner that is less stringent than this Code as described in 71 Ill. Adm. Code 600.Subpart C. However, nothing in the EEB Act or Subpart C prevents a unit of local government from adopting an energy efficiency code or standards that are more stringent than this Code. The requirements identified as "mandatory" in Chapter 4 shall be met.

**SECTION C109  
BOARD OF APPEALS**

**C109.1 General.** In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this Code, there may be created a board of appeals. The code official shall be an ex officio member of the board of appeals but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.

**C109.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training.

**CHAPTER 2 [CE]  
DEFINITIONS****SECTION C202  
GENERAL DEFINITIONS**

**Authority Having Jurisdiction or AHJ** – means the organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

**Board** – means the Illinois Capital Development Board.

**Council** – means the Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the Illinois Energy Conservation Code.

**EEB Act** – means the Energy Efficient Building Act [20 ILCS 3125].

**CHAPTER 4 [CE]  
COMMERCIAL ENERGY EFFICIENCY****SECTION C402  
BUILDING ENVELOPE REQUIREMENTS**

**C402.2.2 Roof Assembly.** The minimum thermal resistance (*R*-value) of the insulating material installed either between the roof framing or continuously on the roof assembly shall be as specified in Table C402.1.3, based on construction materials used in the roof assembly. Skylight curbs shall be insulated to the level of roofs with insulation entirely above deck or *R*-5, whichever is less.

**Exceptions:**

1. Continuously insulated roof assemblies in which the thickness of insulation varies 1 inch (25 mm) or less and in which the area-weighted *U*-factor is equivalent to the same assembly with the *R*-value specified in Table C402.1.3.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

2. When tapered insulation is used with insulation entirely above deck, the *R*-value when the insulation thickness varies 1 inch (25 mm) or less from the minimum thickness of tapered insulation shall comply with the *R*-value specified in Table C402.1.3.
3. Unit skylight curbs included as a component of a skylight listed and labeled in accordance with NFRC 100 shall not be required to be insulated.
4. For roofs on existing buildings with slope less than 2.5" in 12", refer to Section C503.1, exceptions.
5. For roofs on existing buildings, refer to Section C503.1 or C504.2.

Insulation installed on a suspended ceiling with removable ceiling tiles shall not be considered part of the minimum thermal resistance of the roof insulation.

**C402.5.1 Air Barriers.** A continuous air barrier shall be provided throughout the building thermal envelope. The air barriers shall be permitted to be located on the inside or outside of the building envelope, located within the assemblies composing the envelope, or any combination thereof. The air barrier shall comply with Sections C402.5.1.1 and C402.5.1.2. For roof air barriers on existing buildings, refer to Section C503.1 or C504.2.

**Exception:** Air barriers are not required in buildings located in Climate Zone 2B.

**C402.5.1.1 Air Barrier Construction.** The continuous air barrier shall be constructed to comply with the following:

1. The air barrier shall be continuous for all assemblies that are the thermal envelope of the building and across the joints and assemblies.
2. Air barrier joints and seams shall be sealed, including sealing transitions at joints between dissimilar materials. The joints and seals shall be securely installed in or on the joint for its entire length so as not to dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation.
3. Penetrations of the air barrier shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Paths for air leakage from the building to the space between the roof deck and roof covering used air barrier shall be caulked, gasketed or otherwise covered with a moisture vapor-permeable material. Joints



## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

and seals associated with penetrations shall be sealed in the same manner or taped or covered with moisture vapor-permeable wrapping material. Sealing materials shall be appropriate to the construction materials being sealed and shall be securely installed around the penetration so as not to dislodge, loosen or otherwise impair the penetrations' ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.

4. Recessed lighting fixtures shall comply with Section C402.5.7. When similar objects are installed that penetrate the air barrier, provisions shall be made to maintain the integrity of the air barrier.

**CHAPTER 5 [CE]  
EXISTING BUILDINGS**

**SECTION C503  
ALTERATIONS**

**C503.1 General.** Alterations to any building or structure shall comply with the requirements of this Code for new construction. Alterations shall be such that the existing building or structure is no less conforming to the provisions of this Code than the existing building or structure was prior to the alteration. Alterations to an existing building, building system or portion thereof shall conform to the provisions of this Code as those provisions relate to new construction without requiring the unaltered portions of the existing building or building system to comply with this Code. Alterations shall not create an unsafe or hazardous condition or overload existing building systems.

Alterations complying with ANSI/ASHRAE/IESNA 90.1 need not comply with Sections C402, C403, C404 and C405.

**Exceptions:** The following alterations need not comply with the requirements for new construction, provided the energy use of the building is not increased:

1. Storm windows installed over existing fenestration.
2. Surface-applied window film installed on existing single-pane fenestration assemblies reducing solar heat gain, provided the Code does not require the glazing or fenestration to be replaced.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

3. Existing ceiling, wall or floor cavities exposed during construction, provided that these cavities are filled with insulation.
4. Construction in which the existing roof, wall or floor cavity is not exposed.
5. Roof recover.
6. Air barriers shall not be required for roof recover and roof replacement when the alterations or renovations to the building do not include alterations, renovations or repairs to the remainder of the building envelope.

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

**SECTION R101  
SCOPE AND GENERAL REQUIREMENTS**

**R101.1 Title.** This Code shall be known as the Illinois Energy Conservation Code or Code, and shall mean:

With respect to the residential buildings covered by 71 Ill. Adm. Code 600.Subpart D:

This Part, all additional requirements incorporated within Subpart D (including the 2015 International Energy Conservation Code, including all published errata but excluding published supplements) and any statutorily authorized adaptations to the incorporated standards adopted by CDB are effective January 1, 2016.

**R101.1.2 Adoption.** The Board shall adopt amendments to this Code within 12 months after publication of changes to the International Energy Conservation Code. Any such update in this Code shall take effect within 6 months after it is adopted by the Board and shall apply to any new building or structure in this State for which a building permit application is received by a municipality or county, except as otherwise provided by the EEB Act.

**R101.1.3 Adaptation.** The Board may appropriately adapt the International Energy Conservation Code to apply to the particular economy, population distribution, geography and climate of the State and construction within the State, consistent with the public policy objectives of the EEB Act.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

**R101.5 Compliance.** Residential buildings shall meet the provisions of the Illinois Energy Conservation Code covered by 71 Ill. Adm. Code 600.Subpart D. The local authority having jurisdiction (AHJ) shall establish its own procedures for enforcement of the Illinois Energy Conservation Code. Minimum compliance shall be demonstrated by submission of:

1. Compliance Certificates generated by the U.S. Department of Energy's REScheck™ Code compliance tool; or
2. Other comparable compliance materials that meet or exceed, as determined by the AHJ, U.S. Department of Energy's REScheck™ code compliance tool; or
3. The seal of the architect/engineer as required by Section 14 of the Illinois Architectural Practice Act [225 ILCS 305], Section 12 of the Structural Engineering Licensing Act [225 ILCS 340] and Section 14 of the Illinois Professional Engineering Practice Act [225 ILCS 325].

**SECTION R102  
ALTERNATIVE MATERIALS DESIGN AND METHODS  
OF CONSTRUCTION AND EQUIPMENT**

**R102.1.1 Above Code Programs.** No unit of local government, including any home rule unit, may regulate energy efficient building standards for residential building in a manner that is either less or more stringent than the standards established pursuant to this Code. The requirements identified as "mandatory" in Chapter 4 shall be met.

However, the following entities may regulate energy efficient building standards for residential buildings in a manner that is more stringent than the provisions contained in this Code:

- i) A unit of local government, including a home rule unit, that has, on or before May 15, 2009, adopted or incorporated by reference energy efficient building standards for residential buildings that are equivalent to or more stringent than the 2006 International Energy Conservation Code;
- ii) A unit of local government, including a home rule unit, that has, on or before May 15, 2009, provided to the Capital Development Board, as required by Section 55 of the Illinois Building Commission Act, an identification of an energy efficient building code or amendment that is equivalent to or more stringent than the 2006 International Energy Conservation Code; and

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

- iii) A municipality with a population of 1,000,000 or more.

**SECTION R109  
BOARD OF APPEALS**

**R109.1 General.** In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this Code, there may be created a board of appeals. The code official shall be an ex officio member of the board of appeals but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.

**R109.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training.

**CHAPTER 2 [RE]  
DEFINITIONS**

**SECTION R202  
GENERAL DEFINITIONS**

**Authority Having Jurisdiction or AHJ** – means the organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

**Board** – means the Illinois Capital Development Board.

**Council** – means the Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the Illinois Energy Conservation Code.

**EEB Act** – means the Energy Efficient Building Act [20 ILCS 3125].

**Local Exhaust** – means an exhaust system that uses one or more fans to exhaust air from a specific room or rooms within a dwelling.

**Residential Building** – means a detached one-family or 2-family dwelling or any building that is 3 stories or less in height above grade that contains multiple dwelling units, in which the occupants reside on a primarily permanent basis, such as a townhouse, a row house, an apartment

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

house, a convent, a monastery, a rectory, a fraternity or sorority house, a dormitory and a rooming house; provided, however, that when applied to a building located within the boundaries of a municipality having a population of 1,000,000 or more, the term "residential building" means a building containing one or more dwelling units, not exceeding 4 stories above grade, where occupants are primarily permanent.

**Whole House Mechanical Ventilation System** – means an exhaust system, supply system or combination thereof that is designed in accordance with Section R403.6 to mechanically exchange indoor air with outdoor air when operating continuously or through a programmed intermittent schedule to satisfy the whole house ventilation rates. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

**CHAPTER 4 [RE]  
RESIDENTIAL ENERGY EFFICIENCY**

**SECTION R401  
GENERAL**

**R401.2 Compliance.** Projects shall comply with one of the following:

1. Sections R401 through R404.
2. Section R405 and the provisions of Sections R401 through R404 labeled "Mandatory".
3. With the concurrence of the code official, an alternative method, an energy rating index (ERI) approach in Section R406, and the provisions of Sections R401 through R404 labeled "Mandatory".

**SECTION R402  
BUILDING THERMAL ENVELOPE**

**TABLE R402.1.2  
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT<sup>a</sup>**

CLIMATE ZONE	FENES-TRATION U-FACTOR <sup>b</sup>	SKYLIGHT <sup>b</sup> U-FACTOR	GLAZED FENES-TRATION SHGC <sup>b,e</sup>	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE <sup>f</sup>	FLOOR R-VALUE	BASEMENT <sup>c</sup> WALL R-VALUE	SLAB <sup>d</sup> R-VALUE & DEPTH	CRAWL SPACE <sup>c</sup> WALL R-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13+5 <sup>h</sup>	8/13	19	5/13 <sup>f</sup>	0	5/13
4 except Marine	0.35	0.55	NR	49	20 or 13+5 <sup>h</sup>	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5 <sup>h</sup>	13/17	30 <sup>g</sup>	10/13	10, 2 ft	15/19
6	0.32	0.55	NR	49	20+5 or 13+10 <sup>h</sup>	15/20	30 <sup>g</sup>	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20+5 or 13+10 <sup>h</sup>	19/21	38 <sup>g</sup>	15/19	10, 4 ft	15/19

For SI: 1 foot = 304.8 mm

- <sup>a</sup> *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.
- <sup>b</sup> The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for skylights does not exceed 0.30.
- <sup>c</sup> "15/19" means *R*-15 continuous insulation on the interior or exterior of the home or *R*-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with *R*-13 cavity insulation on the interior of the basement wall plus *R*-5 continuous insulation on the interior or exterior of the home. "10/13" means *R*-10 continuous insulation on the interior or exterior of the home or *R*-13 cavity insulation at the interior of the basement wall.
- <sup>d</sup> *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 feet, whichever is less in Climate Zones 1 through 3 for heated slabs.
- <sup>e</sup> There are no SHGC requirements in the Marine Zone.
- <sup>f</sup> Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1 (of the IECC).

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

- <sup>g</sup> Or insulation sufficient to fill the framing cavity, *R*-19 minimum.
- <sup>h</sup> The first value is cavity insulation, the second value is continuous insulation, so "13+5" means *R*-13 cavity insulation plus *R*-5 continuous insulation.
- <sup>i</sup> The second *R*-value applies when more than half the insulation is on the interior of the mass wall.

**TABLE R402.1.4  
EQUIVALENT U-FACTORS**

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
5 and Marine 4	0.32	0.55	0.026	0.060	0.082	0.033	0.059	0.055

**R402.2.2 Ceilings Without Attic Spaces.** When Section R402.1.2 would require insulation levels above *R*-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for those roof/ceiling assemblies shall be *R*-30. This reduction of insulation from the requirements of Section R402.1.2 shall be limited to 500 square feet (46 m<sup>2</sup>) or 20 percent of the total insulated ceiling area, whichever is less. 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.

**Exception:** For roofs on existing buildings with slope less than 2.5" in 12", refer to Section R503.1.1.

**R402.2.9 Basement Walls.** Walls associated with conditioned basements shall be insulated from the top of the basement wall down to 10 feet (3048 mm) below grade or to within 6 inches (152 mm) of the basement floor, whichever is less. Walls associated with unconditioned basements shall meet this requirement unless the floor overhead is insulated in accordance with Sections R402.1.2 and R402.2.2.8.

**Exception:** Walls associated with conditioned basements may be insulated from the top of the basement wall down to 4 feet (1219 mm) below grade when the basement wall *R*-value is at least 15/19, (basement wall *U*-Factor of 0.050).

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

**R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding 5 air changes per hour (ACH) in Climate Zones 4 and 5. The building or dwelling unit shall be provided with a whole-house mechanical ventilation system as designed in accordance with Section R403.6. Testing shall be conducted in accordance with ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inches w.g. (50 Pascals). When required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test, indicating the ACH, shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after all penetrations of the building thermal envelope have been sealed.

**Exceptions:**

1. For additions, alterations, renovations or repairs to existing buildings, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. When required by the code official, an approved third party independent from the installer shall inspect both air barrier and insulation installation criteria.
2. For heated attached private garages and heated detached private garages accessory to 1- and 2-family dwellings and townhouses not more than 3 stories above grade plane in height, building envelope tightness and insulation installation shall be considered acceptable when the items in Table R402.4.1.1, applicable to the method of construction, are field verified. When required by the code official, an approved third party independent from the installer shall inspect both air barrier and insulation installation criteria. Heated attached private garage space and heated detached private garage space shall be thermally isolated from all other habitable, conditioned spaces.

## During testing:

1. Exterior windows and doors and fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers, including exhaust, intake, makeup air, backdraft and flue dampers, shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.



## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

**R402.4.4 Rooms Containing Fuel-burning Appliances. This section has been deleted. It is not required in Illinois.**

**SECTION R403  
SYSTEMS**

**R403.6 Mechanical Ventilation (Mandatory).** When the air infiltration rate of a building or dwelling unit is 5 air changes per hour or less when tested in accordance with Section R402.4.1.2, the building or dwelling unit shall be provided with ventilation that meets the requirements of this section or the International Mechanical Code, as applicable, or with other approved means of ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

**R403.6.2 Recirculation of Air.** Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another dwelling unit and shall be exhausted directly to the outdoors. Exhaust air from bathrooms and toilet rooms shall not discharge into an attic, crawl space or other areas inside the building.

**R403.6.3 Whole-house Mechanical Ventilation System.** Whole-house mechanical ventilation systems shall be designed in accordance with Sections R403.6.4 through R403.6.6.

**R403.6.4 System Design.** The whole-house ventilation system shall consist of one or more supply or exhaust fans, or a combination of such, and associated ducts and controls. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered to provide supply ventilation.

**R403.6.5 System Controls.** The whole-house mechanical ventilation system shall be provided with controls that enable manual override.

**R403.6.6 Mechanical Ventilation Rate.** The whole house mechanical ventilation system shall provide outdoor air at a continuous rate of not less than that determined in accordance with Table R403.6.6(1).

**Exceptions:**

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

1. The whole-house mechanical ventilation system is permitted to operate intermittently when the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventilation rate prescribed in Table R403.6.6(1) is multiplied by the factor determined in accordance with Table R403.6.6(2).
2. The total required outdoor air ventilation rate ( $Q_{tot}$ ) shall be as specified in Table 403.6.6(1) or calculated in accordance with Equation 4-1.

Equation 4-1:

$$CFM_{total} = 0.01CFA + 7.5(Nbr + 1)$$

Where:

$CFM_{total}$  = total required ventilation rate, (cfm)

$CFA$  = conditioned floor area of residence, (ft<sup>2</sup>)

$Nbr$  = number of bedrooms (not to be less than 1)

**R403.6.6.1 Different Occupant Density.** Table R403.6.6(1) assumes two persons in a dwelling unit and an additional person for each additional bedroom. When higher occupant densities are known, the airflow rate shall be increased by 7.5 cfm (3.5 L/s) for each additional person. When approved by the authority having jurisdiction, lower occupant densities may be used.

**R403.6.6.2 Airflow Measurement.** The airflow rate required is the quantity of outdoor ventilation air supplied and/or indoor air exhausted by the whole-house mechanical ventilation system installed, and shall be measured using a flow hood, flow grid, or other airflow measuring device. Ventilation airflow of systems with multiple operating modes shall be tested in all modes designed to meet Section R403.6.6. Where required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test, indicating the verified airflow rate, shall be signed by the party conducting the test and provided to the *code official*.

**R403.6.7 Local Exhaust Rates.** Local exhaust systems shall be designed to have the capacity to exhaust the minimum air flow rate determined in accordance with Table R403.6.7.

**TABLE R403.6.6(1)**  
**CONTINUOUS WHOLE-HOUSE MECHANICAL**  
**VENTILATION SYSTEM AIRFLOW RATE**

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

For SI: 1 square foot = 0.0929 m<sup>2</sup>, 1 cubic foot per minute = 0.0004719 m<sup>3</sup>/s.

**TABLE R403.6.6(2)**  
**INTERMITTENT WHOLE-HOUSE MECHANICAL**  
**VENTILATION RATE FACTORS<sup>a, b</sup>**

RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
Factor <sup>a</sup>	4	3	2	1.5	1.3	1.0

<sup>a</sup> For ventilation system run time values between those given, the factors are permitted to be determined by interpolation.

<sup>b</sup> Extrapolation beyond the table is prohibited.

**TABLE R403.6.7**  
**MINIMUM REQUIRED LOCAL EXHAUST RATES FOR**  
**ONE- AND TWO-FAMILY DWELLINGS**

AREA TO BE EXHAUSTED	EXHAUST RATES
Kitchens	100 cfm intermittent or 25 cfm continuous
Bathrooms-Toilet Rooms	Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous

For SI: 1 cubic foot per minute = 0.0004719 m<sup>3</sup>/s.

**SECTION R405**  
**SIMULATED PERFORMANCE ALTERNATIVE (PERFORMANCE)**

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

**TABLE R405.5.2(1)**  
**SPECIFICATIONS FOR THE STANDARD**  
**REFERENCE AND PROPOSED DESIGNS**

<b>BUILDING COMPONENT</b>	<b>STANDARD REFERENCE DESIGN</b>	<b>PROPOSED DESIGN</b>
Air Exchange Rate	<p>Air leakage rate of 5 air changes per hour in climate zones 4 and 5. Testing shall be conducted in accordance with ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inches w.g. (50 Pascal). The mechanical ventilation rate shall be in addition to the air leakage rate and the same as in the proposed design, but no greater than <math>0.01 \times CFA + 7.5 \times (N_{br} + 1)</math></p> <p>where:</p> <p><math>CFA</math> = conditioned floor area  <math>N_{br}</math> = number of bedrooms</p> <p>Energy recovery shall not be assumed for mechanical ventilation.</p>	<p>For residences that are not tested, the same air leakage rate as the standard reference design.</p> <p>For tested residences, the measured air exchange rate. The mechanical ventilation rate<sup>b</sup> shall be in addition to the air leakage rate and shall be as proposed.</p>

**SECTION 406**  
**ENERGY RATING INDEX COMPLIANCE ALTERNATIVE**

**R406.1 Scope.** This section establishes an alternative compliance criteria using an Energy Rating Index (ERI) analysis. For purposes of clarification, the Illinois Department of Commerce and Economic Opportunity declares that Section R406 of the 2015 International Energy Conservation Code affords an alternative form of compliance and is not a mandate on the Department to provide training to Section R406.

**CHAPTER 5 [RE]**  
**EXISTING BUILDINGS**

**SECTION R502**  
**ADDITIONS**

**R502.1.1.2 Heating and Cooling Systems.** New heating, cooling and duct systems that are part of the addition shall comply with Sections R403.1, R403.2, R403.3, R403.5 and R403.6.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

**Exception:** When ducts from an existing heating and cooling system are extended to an addition, the new and existing duct systems shall not be required to be tested in accordance with Section R403.3.3. New duct systems shall be sealed in accordance with Section R403.3.2.

**SECTION R503  
ALTERATIONS**

**R503.1.1 Building Envelope.** Building envelope assemblies that are part of the alteration shall comply with Section R402.1.2 or R402.1.4, Sections R402.2.1 through R402.2.12, R402.3.1, R402.3.2, R402.4.3 and R402.4.4.

**Exception:** The following alterations need not comply with the requirements for new construction provided the energy use of the building is not increased:

1. Storm windows installed over existing fenestration.
2. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation.
3. Construction in which the existing roof, wall or floor cavity is not exposed.
4. Roof recover.
5. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.
6. For roof replacement on existing buildings with a roof slope of less than 2" in 12", and when the roof covering is removed and insulation remains, and when the required *R*-value cannot be provided due to thickness limitations presented by existing rooftop conditions, (including heating, ventilating and air-conditioning equipment, low door or glazing heights, parapet heights, weep holes, and roof flashing heights not meeting the manufacturer's specifications), the maximum thickness of insulation compatible with the available space and existing uses shall be installed. Insulation used shall be minimum *R*-3.5 per inch. In areas where flashing may be terminated a minimum of 8" above the roof covering (including required insulation), insulation shall be a minimum of *R*-20.
7. *R*-value for roof assemblies with tapered insulation above deck with slope greater than 1/8" in 12" shall average *R*-20.

## CAPITAL DEVELOPMENT BOARD

## NOTICE OF ADOPTED AMENDMENTS

8. Surface-applied window film installed on existing single pane fenestration assemblies to reduce solar heat gain provided the Code does not require the glazing or fenestration assembly to be replaced.

**R503.1.2 Heating and Cooling Systems.** New heating, cooling and duct systems that are part of the alteration shall comply with Sections R403.1, R403.2, R403.3 and R403.6.

**Exception:** When ducts from an existing heating and cooling system are extended, the new and existing duct systems shall not be required to be tested in accordance with Section R403.3.3. Altered duct systems shall be sealed in accordance with Section R403.3.2.

**SECTION R504  
REPAIRS**

**R504.2 Application.** For the purposes of this Code, the following shall be considered repairs:

1. Glass-only replacements in an existing sash and frame.
2. Roof repairs.
3. Insulation with new roof covering for roof slopes less than 2" in 12" inches only in areas where the tapered insulation is used above an existing roof covering to create slope between drains or upslope from obstructions to water flow.
4. Repairs in which only the bulb and/or ballast within the existing luminaires in a space are replaced, provided that the replacement does not increase the installed interior lighting power.

(Source: Amended at 40 Ill. Reg. 2754, effective January 20, 2016)