

2024 Illinois Energy Conservation Code 10/30/25

AMENDMENTS TO THE 2024 IECC 1st Printing

New text added by Illinois amendment to the 2024 IECC

~~Deleted text removed by Illinois amendment to the 2024 IECC.~~

PART 1—SCOPE AND APPLICATION

SECTION C101—SCOPE AND GENERAL REQUIREMENTS



C101.1 Title. This code shall be known as the *2024 Illinois Energy Conservation Code* or code and shall mean: ~~of [NAME OF JURISDICTION] and shall be cited as such. It is referred to herein as "this code."~~

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 2024 International Energy Conservation Code, including all published errata and excluding published supplements that encompass ASHRAE 90.1-2022), and any statutorily authorized adaptations to the incorporated standards adopted by CDB, are effective upon adoption.

C101.1.1 Adoption. The Board shall adopt amendments to this Code within 12 months after publication of the 2024 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.

C101.1.2 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.

C101.4 Compliance. ~~Residential buildings shall meet the provisions of IECC—Residential Provisions. Commercial buildings shall meet the provisions of IECC—Commercial Provisions.~~ 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]; or
5. Other compliance materials required by C407 Simulated Building Performance or C410 Passive Building Compliance Option shall be provided when those respective compliance paths are utilized.

C104.1.1 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 the 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 code official or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program as exceeding the energy efficiency required by this code. Buildings approved in writing by such an energy efficiency program shall be considered to be in compliance with this code.~~ The requirements identified in Table C407.2(1) shall be met.

C105.2.2 Electrification system. The construction documents shall provide details for additional electric infrastructure, including branch circuits, raceway capacity, pre-wiring, panel capacity, and electrical service capacity, as well as interior and exterior spaces designated for future electric equipment, in compliance with the provisions of this code.

SECTION C109—MEANS 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 shall be~~ **and is hereby** created a board of appeals. The board of appeals shall be appointed by the governing authority 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.

C109.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall not have authority to waive requirements of this code.

C109.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training on matters pertaining to the provisions of this code ~~and are not employees of the jurisdiction.~~

C109.4 Administration. The *code official* shall take action in accordance with the decisions of the board.

SECTION C202—GENERAL DEFINITIONS

AUTHORITY HAVING JURISDICTION (AHJ). The organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

BOARD. The Illinois Capital Development Board.

COMMERCIAL COOKING APPLIANCES. Commercial cooking appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers, upright broilers, griddles, broilers, steam-jacketed kettles, hot-top ranges, under-fired broilers (charbroilers), ovens, barbecues, rotisseries and similar appliances.

COMMERCIAL CLOTHES DRYING APPLIANCES. Clothes drying appliances meeting the International Fuel Gas Code definition of a Type 2 appliance, or tested in accordance with UL 2158 or UL 1240 and installed in a commercial laundry establishment.

COUNCIL. The Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the *Illinois Energy Conservation Code*.

EEB ACT. The Energy Efficient Building Act [20ILCS 3125].

RESIDENTIAL BUILDING. A detached one-family or two-family dwelling or any building that is three 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 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 four stories above grade, where occupants are primarily permanent. ~~For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (town-houses) and Group R-2, R-3 and R-4 buildings three stories or less in height above-grade plane.~~

SECTION C401—GENERAL

C401.1 Scope. The provisions in this chapter are applicable to *commercial buildings* and their *building sites*.

C401.2 Application. *Commercial buildings* shall comply with Section C401.2.1, ~~or~~ C401.2.2, or C401.2.3.

C401.2.1 International Energy Conservation Code. *Commercial buildings* shall comply with one of the following:

1. **Prescriptive Compliance.** The Prescriptive Compliance option requires compliance with Sections C402 through C406 and Section C408. *Dwelling units* and *sleeping units* in Group R-2 buildings shall be deemed to be in compliance with this chapter, provided that they comply with Section R406.
2. **Simulated Building Performance.** The *Simulated Building Performance* option requires compliance with Section C407.

Exception: *Additions, alterations, repairs* and changes of occupancy to existing buildings complying with Chapter 5.

C401.2.2 ASHRAE 90.1. *Commercial buildings* shall comply with the requirements of ANSI/ASHRAE/IES 90.1.

C401.2.3 Passive building compliance option. The Passive building compliance option requires compliance with Section C410.

C402.6.1.2 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 compromise the *building thermal envelope* and across the joints and assemblies.
2. *Air barrier* joints and seams shall be sealed, including sealing transitions ~~at joints between dissimilar in-places and changes in~~ 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 differentials such as those 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. Sealing shall allow for expansion, contraction and mechanical vibration. ~~Paths for air leakage from the building to the space between the roof deck and roof covering used as an air barrier, shall be caulked, gasketed or otherwise covered with a moisture vapor-permeable material.~~ Sealing materials 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. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the fire sprinkler 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 C402.6.1.2.1. Where similar objects are installed that penetrate the *air barrier*, provisions shall be made to maintain the integrity of the *air barrier*.
5. Electrical and communication boxes shall comply with Section C402.6.1.2.2.

C405.4 Horticultural lighting. Permanently installed luminaires shall have a *photosynthetic photon efficacy* of not less than 1.7 micromoles per joule ($\mu\text{mol/J}$) for *horticultural lighting* in greenhouses and not less than 1.9 $\mu\text{mol/J}$ for all other *horticultural lighting*. Luminaires for *horticultural lighting* in greenhouses shall be controlled by a device that automatically turns off the luminaire when



sufficient daylight is available. Luminaires for *horticultural lighting* shall be controlled by a device that automatically turns off the luminaire at specific programmed times.

Exception: The following buildings are exempt:

1. *Indoor grow buildings* with less than 40 kW of connected load for *horticultural lighting* shall have a PPE of at least 1.7 μmol/J for integrated, non-serviceable luminaires, or a PPE of at least 1.7 μmol/J for lamps in luminaires with removable or serviceable lamps.
2. Cannabis facilities subject to 410 ILCS 705/10-45, the Cannabis Regulation and Tax Act.

SECTION C410-PASSIVE BUILDING COMPLIANCE OPTION

C410.1 Phius standard compliance. Compliance based on the Phius CORE 2024 of Phius ZERO 2024 (or later) Standard will include performance calculations by Phius-approved software or the use of the Phius Prescriptive Path.

C410.1.1 Phius documentation. Prior to the issuance of a building permit, a Phius Design Certification letter must be provided to the code official.

C410.1.2 Project certificate. Prior to the issuance of a certificate of occupancy, a Phius 2024 (or later) Final certificate must be provided to the code official.

C410.2 PHI standard compliance. Compliance based on the most recent PHI standards using PHPP v.10 or later, shall be shown via Low Energy Building, Classic, Plus, or Premium certification by PHI.

C410.2.1 PHI documentation. Prior to the issuance of a building permit, a signed Design Stage Conditional Assurance Letter from a PHI-accredited Passive House Certifier confirming intent to certify the building must be provided to the code official.

C410.2.2 Project certificate. Prior to the issuance of a certificate of occupancy, a copy of either a Certifiers Assurance Letter by an approved PHI-accredited Certifier or a final PHI Certificate to document compliance with Passive House Standards must be provided to the code official.

SECTION R101—SCOPE AND GENERAL REQUIREMENTS



R101.1 Title. This code shall be known as the *2024 Illinois Energy Conservation Code* or code and shall mean: ~~of [NAME OF JURISDICTION] and shall be cited as such. It is referred to herein as “this code.”~~

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 2024 International Energy Conservation Code, including all published errata but excluding published supplements) and any statutorily authorized adaptations to the incorporated standards adopted by CDB is effective upon adoption.

R101.1.1 Adoption. The Board shall adopt amendments to this Code within 12 months after publication of the 2024 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.

R101.1.2 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.

R101.4 Compliance. ~~Residential buildings shall meet the provisions of the Illinois Energy Conservation Code covered by 71 Ill. Adm. Code 600. Subpart D. IECC—Residential Provisions. Commercial buildings shall meet the provisions of IECC—Commercial Provisions.~~ 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, the 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],

R104.1.1 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 code official or other AHJ shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this code.~~ Buildings ~~approved in writing by such an energy efficiency program~~ shall be considered to be in compliance with this code where such buildings also meet the requirements identified in Table R405.2 and the proposed total building thermal envelope thermal conductance (TC) shall be less than or equal to the total building thermal envelope TC using the prescriptive U-factors and F-factors from Table R402.1.2 multiplied by 1.08 in Climate Zones 0, 1 and 2, and by 1.15 in Climate Zones 3 through 8, in accordance with Equation 1-1. The area-weighted maximum fenestration solar heat gain coefficients (SHGC) permitted in Climate Zones 0 through 3 shall be 0.30.

Equation 1-1 For Climate Zones 0-2: $TC_{\text{Proposed design}} \leq 1.08 \times TC_{\text{Prescriptive reference design}}$
For Climate Zones 3-8: $TC_{\text{Proposed design}} \leq 1.15 \times TC_{\text{Prescriptive reference design}}$

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:

- 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 International Energy Conservation Code.
- 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 10.18 of the Capital Development Board 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.
- 3) A municipality with a population of 1,000,000 or more.
- 4) A municipality that has adopted the Illinois Stretch Energy Code.

SECTION R109—MEANS 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 shall be and is hereby~~ 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 ~~applicable~~ governing body authority 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.

R109.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equivalent or better form of construction is proposed. The board shall not have authority to waive requirements of this code.

R109.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training on matters pertaining to the provisions of this code ~~and are not employees of the jurisdiction.~~

R109.4 Administration. The code official shall take action in accordance with the decision of the board.

SECTION R202—GENERAL DEFINITIONS

AUTHORITY HAVING JURISDICTION (AHJ). The organization, officer or individual responsible for approving equipment, materials, an installation or procedure.

BOARD. The Illinois Capital Development Board.

COUNCIL. The Illinois Energy Conservation Advisory Council whose purpose is to recommend modifications to the Illinois Energy Conservation Code.

EEB ACT. The Energy Efficient Building Act [20ILCS 3125].

LOCAL EXHAUST. An exhaust system that uses one or more fans to exhaust air from a specific room or rooms within a dwelling.

RESIDENTIAL BUILDING. A detached one-family or two-family dwelling or any building that is three 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 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 four stories above grade, where occupants are primarily permanent. ~~For this code, includes detached one- and two-family dwellings and townhouses as well as Group R-2, R-3 and R-4 buildings three stories or less in height above grade plane.~~

R401.2.4 Passive building compliance option. The Passive building compliance option requires compliance with Section R409.

R401.2.4 Tropical Climate Region Option. The Tropical Climate Region Option requires compliance with Section R407.

R402.2 Specific insulation requirements. In addition to the requirements of Section R402.1, insulation shall meet the specific requirements of Sections R402.2.1 through R402.2.13.

R402.2.1 Roof/Ceilings with attics. Where Section R402.1.3 requires R-38 insulation in the ceiling or attic, installing R-30 over 100 percent of the ceiling or attic area requiring insulation shall satisfy the requirement for R-38 insulation wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Where Section R402.1.3 requires R-49 insulation in the ceiling or attic, installing R-38 over 100 percent of the ceiling or attic area requiring insulation shall satisfy the requirement for R-49 insulation wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the insulation and *fenestration* criteria in Section R402.1.2 and the component performance alternative in Section R402.1.5.

R402.2.2 Roof/Ceilings without attics. Where Section R402.1.3 requires insulation *R-values* greater than R-30 in the interstitial space above a ceiling and below the structural roof deck, and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation *R-value* for such roof/ceiling assemblies shall be R-30. Insulation shall extend over the top of the wall plate to the outer edge of such plate and shall not be compressed. This reduction of insulation from the requirements of Section R402.1.3 shall be limited to 500 square feet (46 m²) or 20 percent of the total insulated ceiling area, whichever is less. This reduction shall not apply to the component performance alternative in Section R402.1.5.

R402.2.9.1 Basement wall insulation installation. Where *basement walls* are insulated, the insulation shall be installed 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, or in accordance with the *proposed design* or the *rated design*, as applicable.

TABLE R402.5.1.1—AIR BARRIER, AIR SEALING AND INSULATION INSTALLATION^a

COMPONENT	AIR BARRIER, AIR SEALING CRITERIA	INSULATION INSTALLATION CRITERIA
General requirements	A continuous air barrier shall be installed in the building thermal envelope. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Roof/Ceiling/attic	An air barrier shall be installed in any dropped ceiling or soffit to separate it from unconditioned space. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed with gasketing materials that allow for repeated entrance over time.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier. Access hatches and doors shall be installed and insulated in accordance with Section R402.2.5. Eave baffles shall be installed in accordance with Section R402.2.4.

R403.3 Duct systems. *Duct systems* shall be **insulated, sealed, tested and** installed in accordance with Sections R403.3.1 through R403.3.9. Where required by the *code official*, duct testing shall be conducted by an *approved party*. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*.

TABLE R408.2—CREDITS FOR ADDITIONAL ENERGY EFFICIENCY

MEASURE NUMBER	MEASURE DESCRIPTION	CREDIT VALUE					
		Climate Zones 0 & 1	Climate Zone 2	Climate Zone 3	Climate Zone 4 Except Marine	Climate Zone 4 Marine	Climate Zone 5
R408.2.2 (15)	High-performance gas heat pump space heating system (Option 1)				9		11
R408.2.2 (16)	High-performance gas heat pump space heating system (Option 2)				11		14
R408.2.2(10) ^b	High Performance Electric Heat pump with electric resistance backup (Option 1)	13	12	11	12	NA	NA
R408.2.2(14) ^b	High Performance Electric Heat pump with electric resistance backup (Option 2)	NA	NA	NA	12	8	12

R408.2.2 More efficient HVAC equipment performance options. Heating and cooling *equipment* shall meet one of the following measures as applicable for the *climate zone* where heating and cooling efficiencies are represented by Annual Fuel Utilization Efficiency (AFUE), Coefficient of Performance (COP), Energy Efficiency Ratio (EER and EER2), Heating Season Performance Factor (HSPF2) and Seasonal Energy Efficiency Ratio (SEER2). Where multiple heating or cooling systems are installed serving different *zones*, credits shall be earned based on the weighted average of square footage of the *zone* served by the system.

15. Greater than or equal to 120 AFUE gas heat pump space heating system (Option1). The gas heat pump space heating system shall not be configured to provide cooling.
16. Greater than or equal to 140 AFUE gas heat pump space heating system (Option 2). The gas heat pump space heating system shall not be configured to provide cooling.

~~**R408.2.9 Opaque walls.** For *buildings* in Climate Zones 4 and 5, the maximum *U factor* of 0.060 shall be permitted to be used for wood-framed walls for compliance with Table R402.1.2 where complying with one or more of the following:~~

- ~~1. Primary space heating is provided by a heat pump that meets one of the efficiencies in Section R408.2.2.~~
- ~~2. All installed water heaters are heat pumps that meet one of the efficiencies in Section R408.2.3.~~
- ~~3. In addition to the number of credits required by Section R408.2, three additional credits are achieved.~~
- ~~4. Renewable energy resources are installed to meet the requirements of Section R408.2.7.~~

SECTION R409-PASSIVE BUILDING COMPLIANCE OPTION

R409.1 Phius standard compliance. Compliance based on the Phius CORE 2024 or Phius ZERO 2024 (or later) Standard will include performance calculations by Phius-approved software or the use of the Phius Prescriptive Path.

R409.1.1 Phius documentation. Prior to the issuance of a building permit, a Phius Design Certification letter must be provided to the code official:

R409.1.2 Project certificate. Prior to the issuance of a certificate of occupancy, a Phius 2024 (or later) Final certificate must be provided to the code official.

R409.2 PHI standard compliance. Compliance based on the most recent PHI standards using PHPP v.10 or later, shall be shown via Low Energy Building, Classic, Plus, or Premium certification by PHI.

R409.2.1 PHI documentation. Prior to the issuance of a building permit, a signed Design Stage Conditional Assurance Letter from a PHI-accredited Passive House Certifier confirming intent to certify the building must be provided to the code official.

R409.2.2 Project certificate. Prior to the issuance of a certificate of occupancy, a copy of either a Certifiers Assurance Letter by an approved PHI-accredited Certifier or a final PHI Certificate to document compliance with Passive House Standards must be provided to the code official.