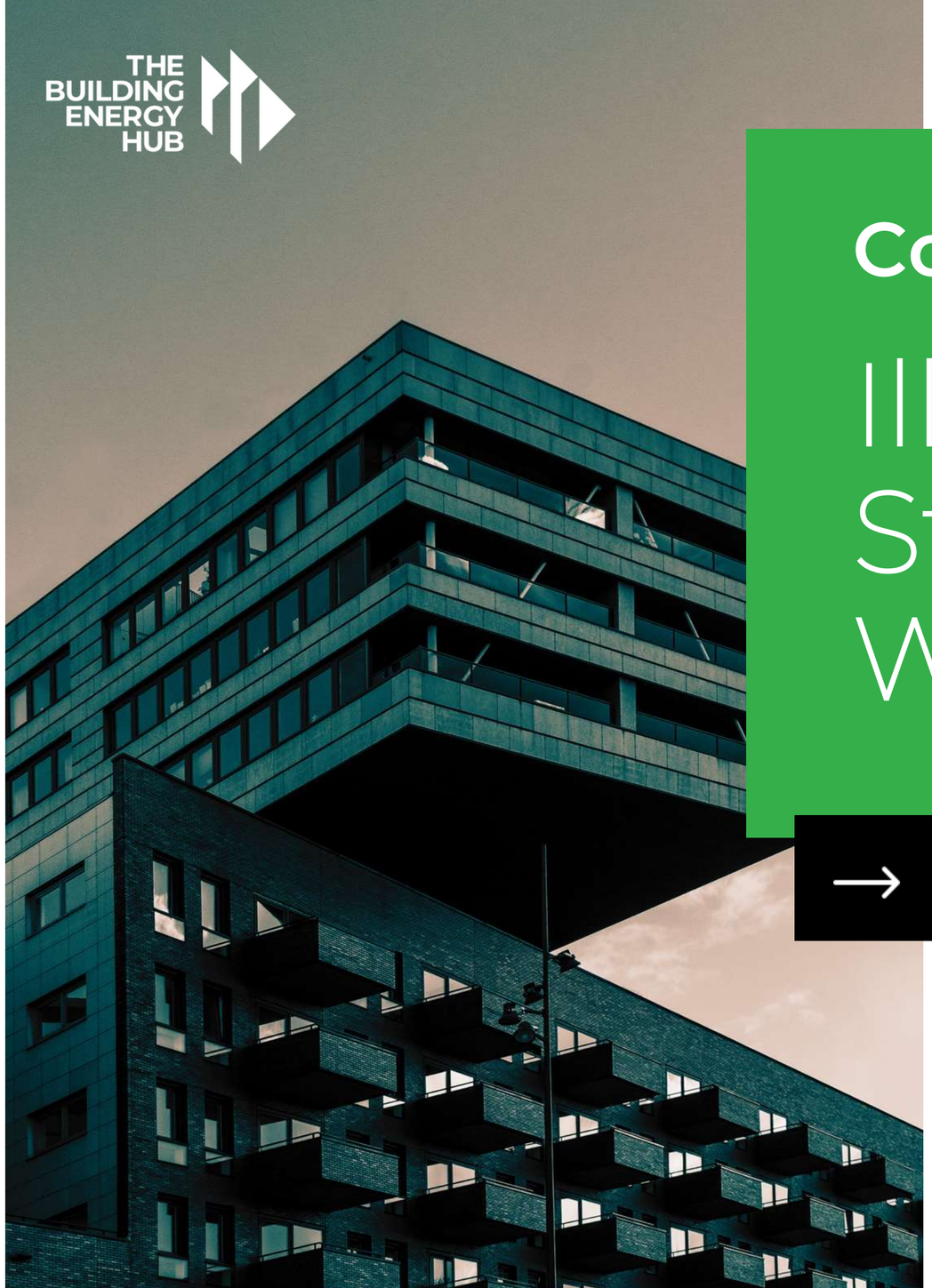


THE BUILDING ENERGY HUB

Code Workshops

Illinois Commercial Stretch Code Workshop

June 19, 2025

ILLINOIS GREEN ALLIANCE

The Building Energy Hub is a project of Illinois Green Alliance

DOE-ELEVATE-0010930-31

Who is the Hub?

Hub Partners

Program Partners

ELEVATE

IFA ILLINOIS FINANCE AUTHORITY Illinois Climate Bank

ICC INTERNATIONAL CODE COUNCIL

CHICAGO

Education, Technical, and Resource Development Partners

AIA Chicago

Argonne NATIONAL LABORATORY

BOMA CHICAGO

MEEA MIDWEST ENERGY EFFICIENCY ALLIANCE

SEDAC SMART ENERGY DESIGN ASSISTANCE CENTER

slipstream

Funding Partners

comed AN EXELON COMPANY

U.S. DEPARTMENT OF ENERGY

BUILDERS INITIATIVE

The Goals of the Hub are to:

- Educate & train building professionals
- Support diverse contractors
- Connect contractors to a project pipeline
- Build capacity for advanced codes and policies
- Streamline access to financial resources

The Hub is growing capacity for commercial & multi-family building retrofits.

Today's Presenters

Jerica Stacey
Director, Technical Training
International Code Council

Illinois Commercial Stretch Code Workshop

An Introduction to 2023 Illinois Commercial Stretch Code

The Building Energy Hub

This material is based upon work supported by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under the Building Technologies Office Award Number DOE-ELEVATE-0010930-27.

THE BUILDING ENERGY HUB

What is a Stretch Code?

Home | Start Here | Resources | Education | About | Get Help

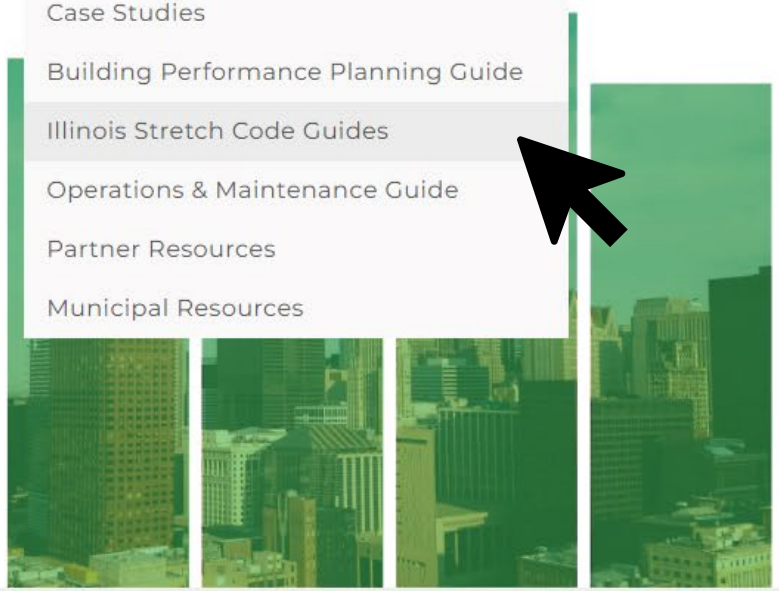
- Funding and Financing Resources
- Playbooks
- Technology Primers
- Case Studies
- Building Performance Planning Guide
- Illinois Stretch Code Guides
- Operations & Maintenance Guide
- Partner Resources
- Municipal Resources

Clear solutions. Trusted guidance.

Powering Illinois with clear building performance solutions.

How do I ask a specific question about my building?

Ask here



Get Started with the Hub

The Hub delivers practical, actionable building energy efficiency resources that help professionals achieve measurable improvements and navigate complex requirements with confidence.

GOAL & OBJECTIVES

This webinar focuses on amendments to the 2024 *International Energy Conservation Code*® (IECC) that comprise the 2023 Illinois Commercial Stretch Energy Code.

1) Describe the importance of energy codes in reducing building energy use and meeting the site energy indexes in the Climate and Equitable Jobs Act
2) Summarize the administrative amendments to the 2024 IECC in the 2023 Illinois Commercial Stretch Code and those that improve useability of the code
3) Identify amendments made to the energy efficiency provisions of the 2024 IECC in the 2023 Illinois Commercial Stretch Code and potential impact on the design, plan review and inspection communities
4) Locate resources, technical assistance, and support for Illinois stretch code adoption

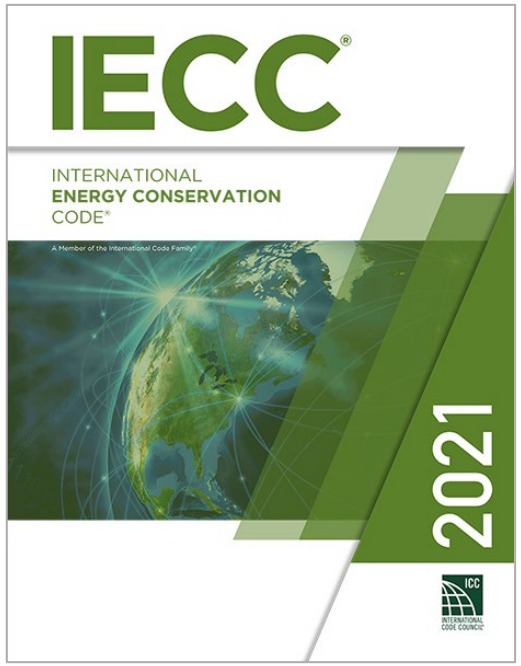
INSTRUCTOR

Jerica Stacey

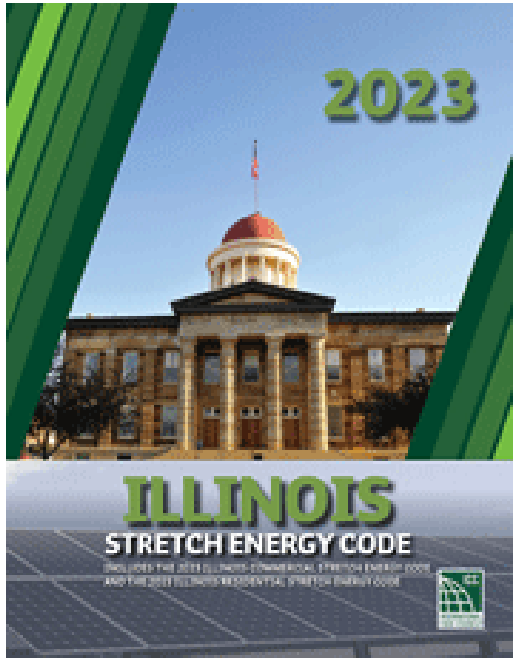
Director of Technical Training
International Code Council
Ammon, Idaho
Tel: 208.859.6578
jstacey@iccsafe.org

Overview of the 2024 IECC and 2023 Illinois Stretch Energy Code

2023 Illinois Stretch Energy Code

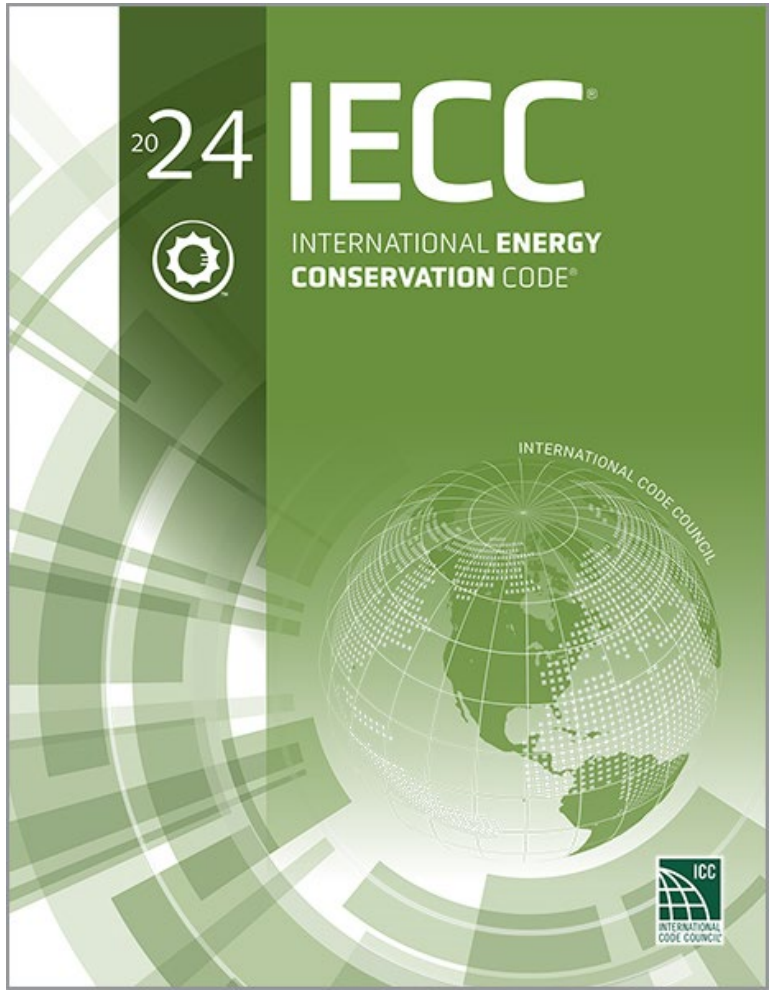


- Current statewide energy code
- Effective January 1, 2024
- Includes state-specific amendments



- Effective January 1, 2025
- Based on the 2024 IECC with amendments
- Where adopted, supersedes the Illinois Energy Conservation Code
- Evanstown first to adopt

2024 IECC Scope and Intent



Not Subject To Public Input

- Rewording of scope (minor)
  - **2021:** This code applies to commercial buildings and the buildings' sites and associated systems and equipment.
  - **2024:** This code applies to the design and construction of buildings not covered by the scope of the IECC—Residential Provisions.
  - C/R101.2.1 clarifies appendices do not apply unless specifically adopted

C101.3 Intent

2021 Intent Section

R101.3 Intent. This code shall regulate the design and construction of *buildings* for the effective use and conservation of energy over the useful life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

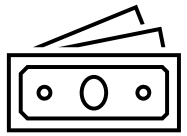
2024 Intent Section

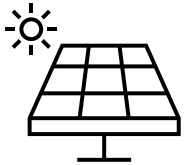
C101.3 Intent.

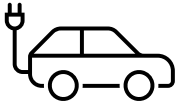
The IECC—Commercial Provisions provide market-driven, enforceable requirements for the design and construction of *commercial buildings*, providing minimum efficiency requirements for buildings that result in the maximum level of energy efficiency that is safe, technologically feasible, and life cycle cost effective, considering economic feasibility, including potential costs and savings for consumers and building owners, and return on investment. Additionally, the code provides jurisdictions with supplemental requirements, including ASHRAE 90.1, and optional requirements that lead to achievement of zero energy buildings, presently, and through glidepaths that achieve zero energy buildings by 2030 and on additional timelines sought by governments, and achievement of additional policy goals as identified by the Energy and Carbon Advisory Council and approved by the Board of Directors. Requirements contained in the code will include, but not be limited to, prescriptive- and performance-based pathways. The code may include nonmandatory appendices incorporating additional energy efficiency and greenhouse gas reduction resources developed by the International Code Council and others. The code will aim to simplify code requirements to facilitate the code's use and compliance rate. The code is updated on a 3-year cycle with each subsequent edition providing increased energy savings over the prior edition. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this intent. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

C101.3 Intent

- Provide minimum efficiency requirements for buildings that result in the maximum level of energy efficiency that is safe, technologically feasible, and life cycle **cost effective**
- Include optional requirements that lead to achievement of **zero energy buildings**
- Include non-mandatory appendices incorporating additional energy efficiency and **greenhouse gas reduction resources**
- Each subsequent edition provides **increased energy savings** over the prior edition

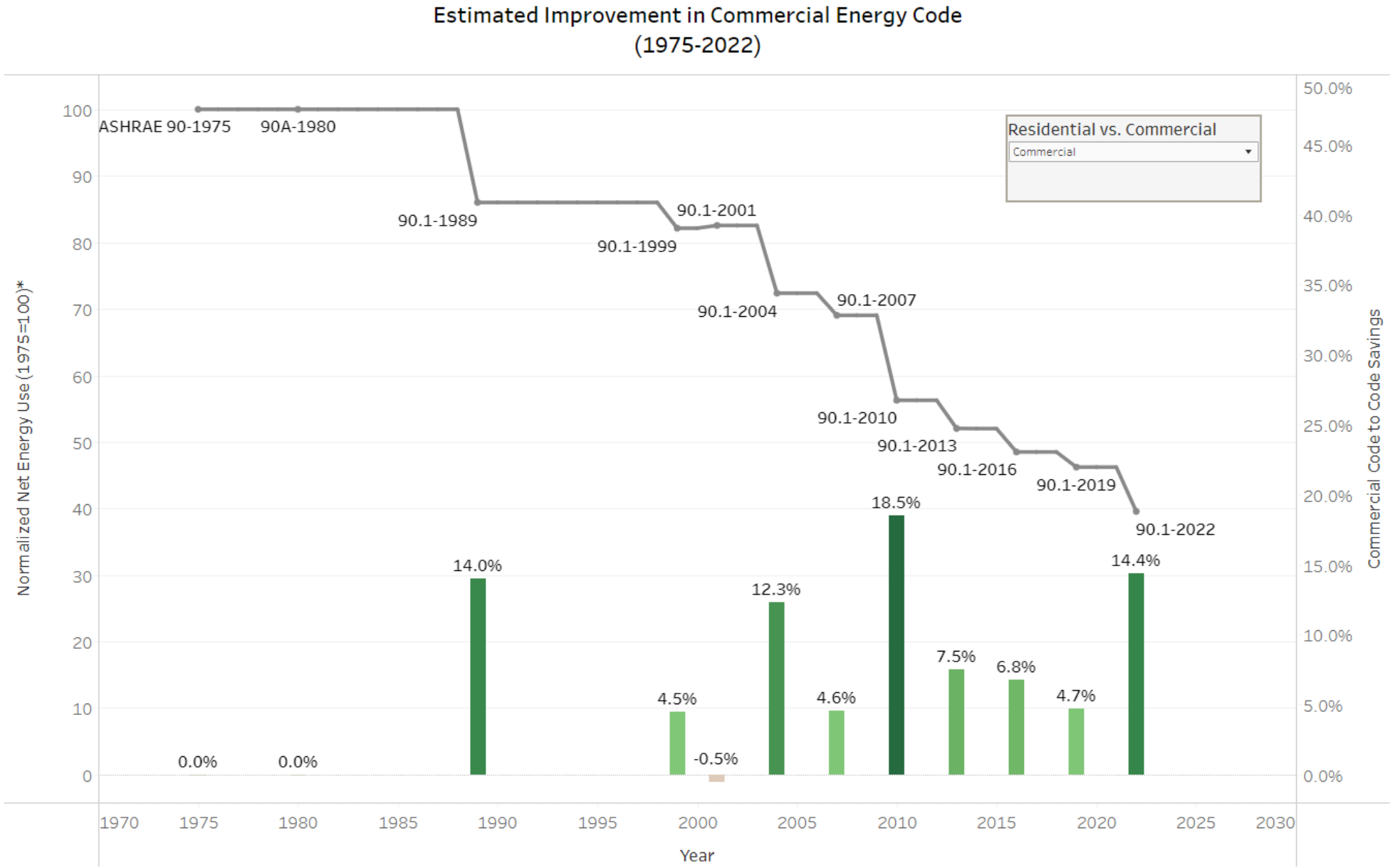






Energy Savings and Emissions Reductions – Commercial

- Determination for ASHRAE Standard 90.1 – 2022
  - 9.8% site energy savings
  - 9.4% source energy savings
  - 9.3% carbon emissions reduction
  - 8.9% energy cost savings



Source: Building Energy Codes Program, energycodes.gov

2024 IECC Commercial Preliminary Analysis

Pacific Northwest NATIONAL LABORATORY

Summary of Results

National Weighted Average		Site Energy [kBtu/ft²-yr] Energy Cost [$/ft²-yr] Emissions [tons/kft²-yr]		% Savings
		IECC 2021	IECC 2024 [Gross] / [Net]	[Gross] / [Net]
Whole Building	Site Energy	45.6	40.8 / 38.1	10.6% / 16.4%
	Energy Cost	$1.22	$1.09 / $1.01	10.2% / 17.2%
	Emissions	7.5	6.7 / 6.2	10.0% / 17.5%

Gross = total before accounting for renewable energy
Net = site energy after accounting for onsite renewable generation

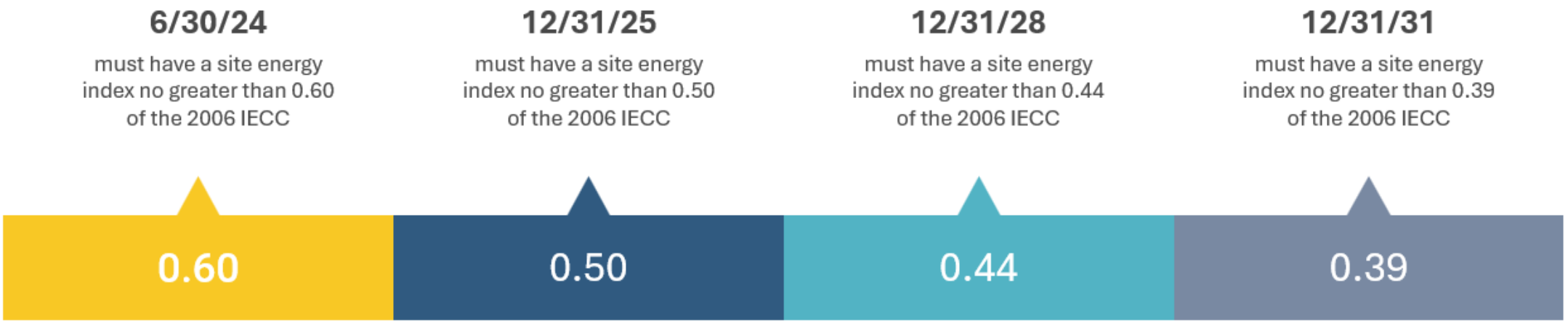
PRELIMINARY Analysis, PCD 1

Climate and Equitable Jobs Act (CEJA)

- Incentivizes renewable energy development
- Accelerates electric vehicle adoption and expands charging station infrastructure
- Creates statewide clean energy workforce training programs to ensure our workforce is prepared for the jobs of the future
- Equitably supports communities facing energy transitions and much more

CEJA and Site Energy Indexes

Goal: achieve a site energy index of 0.39 of the 2006 IECC or less by end of 2031



Codified in C101.1.1 Adoption

Administration, Definitions, and General Requirements

Significant Amendments to the 2024 IECC, Chapters 1-3

Chapter 1: Scope and Administration

- Establishes the limits of applicability of the code and describes how the code is to be applied and enforced
- Establishes authority and duties of the code official appointed by the authority having jurisdiction
- Establishes the rights and privileges of the design professional, contractor and property owner

AMENDMENT

Compliance, C101.5

- AHJ to establish its own enforcement procedures

- Compliance submission options expanded
  - Compliance materials
  - Professional architect or engineer seal
  - COMcheck compliance report

AMENDMENT

Above Code Programs, C103.1.1

- Passive House Institute
- Passive House Institute US
- Appendix CC, Zero Energy Commercial Building Provisions

ZERO ENERGY COMMERCIAL BUILDING PROVISIONS

AMENDMENT

Above Code Programs, C103.1.1

APPENDIX CC

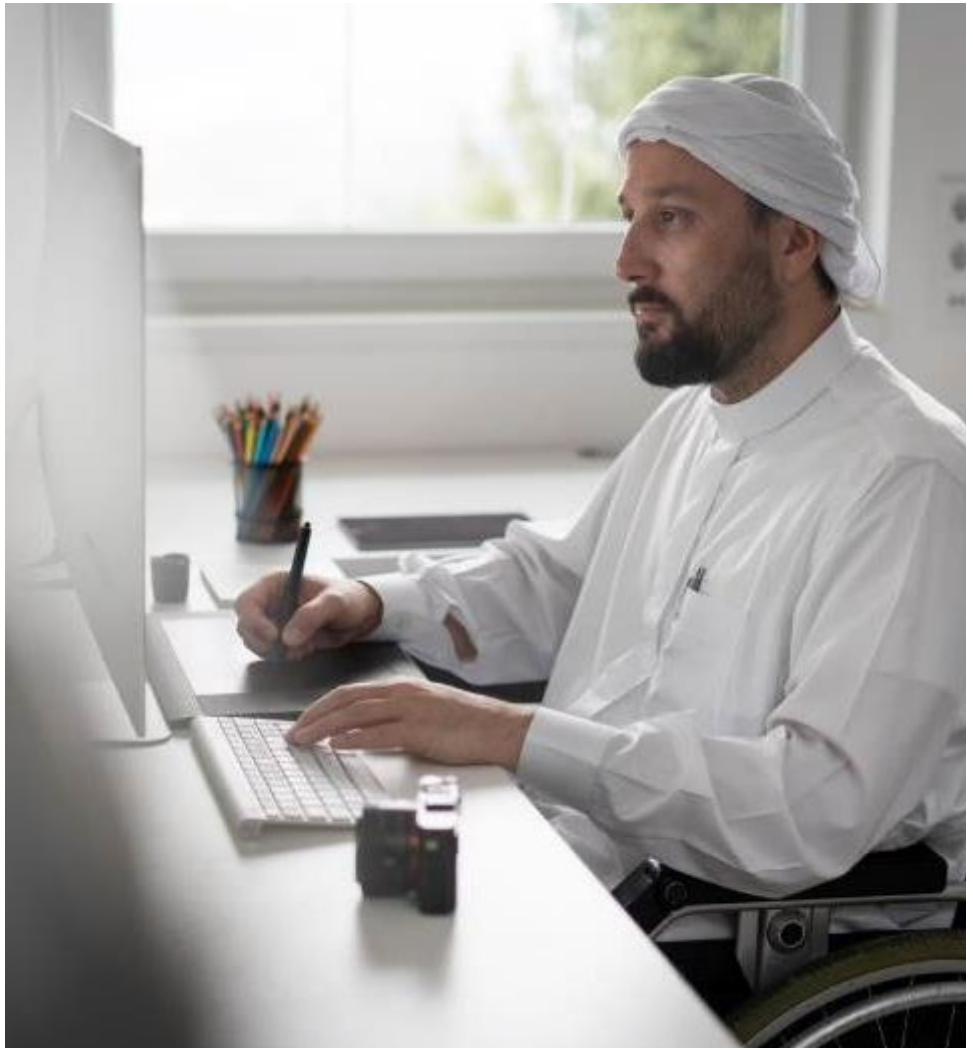
ZERO ENERGY COMMERCIAL BUILDING PROVISIONS

- "Mandatory" requirements in Table C407.2(1)

AMENDMENT

Electrification System, Construction Documents, C105.2.2

- **Electric infrastructure** shown in construction documents
  - Branch circuits
  - Conduit
  - Prewiring
  - Panel capacity
  - Electrical service capacity
  - Interior and exterior spaces designated for future electric equipment



Chapter 2: Definitions

- IECC includes definitions for specific terms
- Most defined terms are *italicized* in code text
  - When definition is key to understanding a particular code provision
- Undefined terms
  - Other I-Code definitions apply
  - Common-use definitions apply

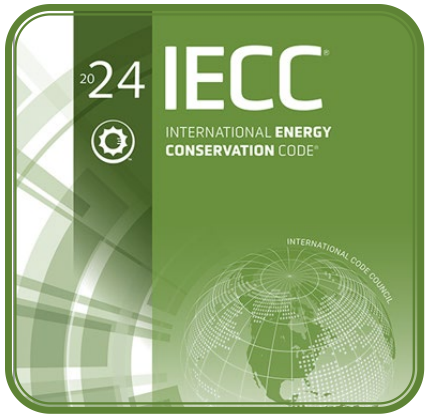
Commercial Definitions – 2024 Overview

- Renewable energy procurement types
- Thermal bridging related terms
- Mechanical equipment definitions
- Total system performance ratio (TSPR) related definitions
- Fan system terms
- Mechanical and lighting system control definitions
- Electric vehicle charging infrastructure terms

Commercial Energy Efficiency Requirements

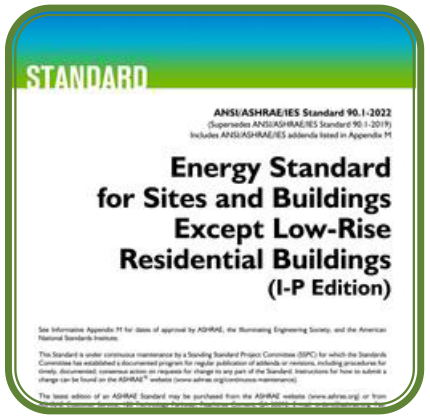
Significant Amendments to the 2024 IECC, Chapter 4

Commercial Compliance Options



International Energy Conservation Code

- Prescriptive Compliance
- Simulated Building Performance



ASHRAE Standard 90.1-2022

- With amendments

Chapter 4 – Commercial Energy Efficiency

- C401 General
- C402 Building Thermal Envelope Requirements
- C403 Building Mechanical Systems
- C404 Service Water Heating
- C405 Electrical Power and Lighting Systems
- C406 Additional Efficiency, Renewable and Load Management Requirements
- C407 Simulated Building Performance
- C408 Maintenance Information and System Commissioning
- C409 Calculation of the HVAC Total System Performance Ratio

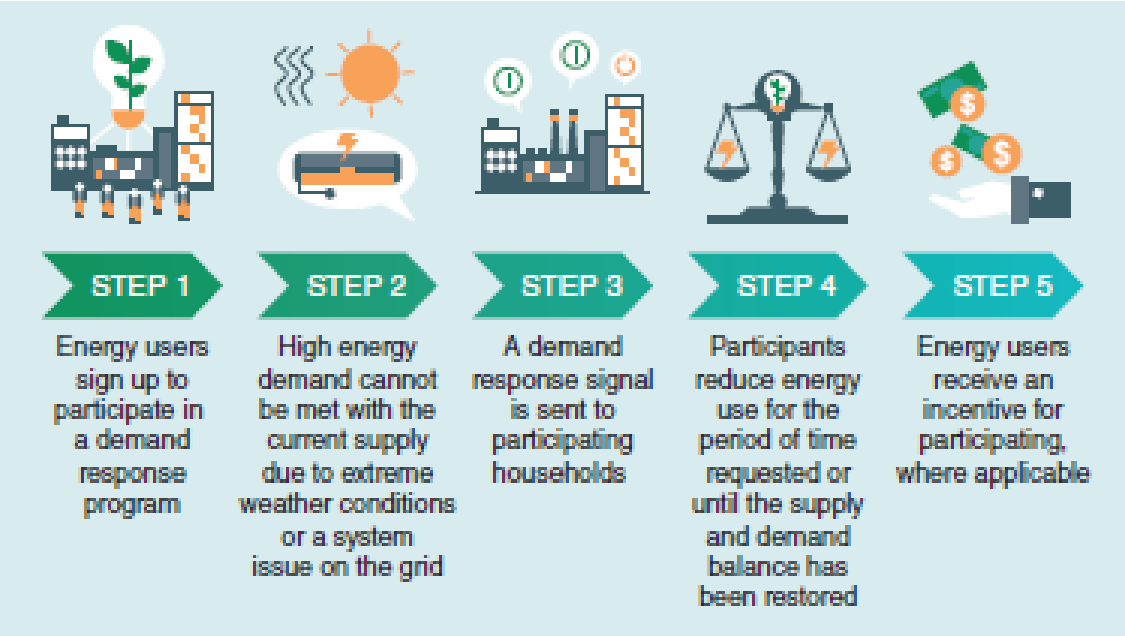
AMENDMENT

Fenestration Orientation, C402.5.1.3

- Two options for compliance
  1. Ensures the area of west-oriented and east-oriented fenestration do not exceed 25% of the total area
  2. Ensures the area of west-oriented and east-oriented fenestration multiplied by their respective SHGCs do not exceed 20% of the total area times prescriptive SHGCs

AMENDMENT

Demand Responsive Controls, C403.4.6



- Electric heating and cooling systems must be provided with a demand responsive control that allows participation in a demand response program
- Incrementally adjusts the heating and cooling setpoints in response to a demand response signal
- Several exceptions

AMENDMENT

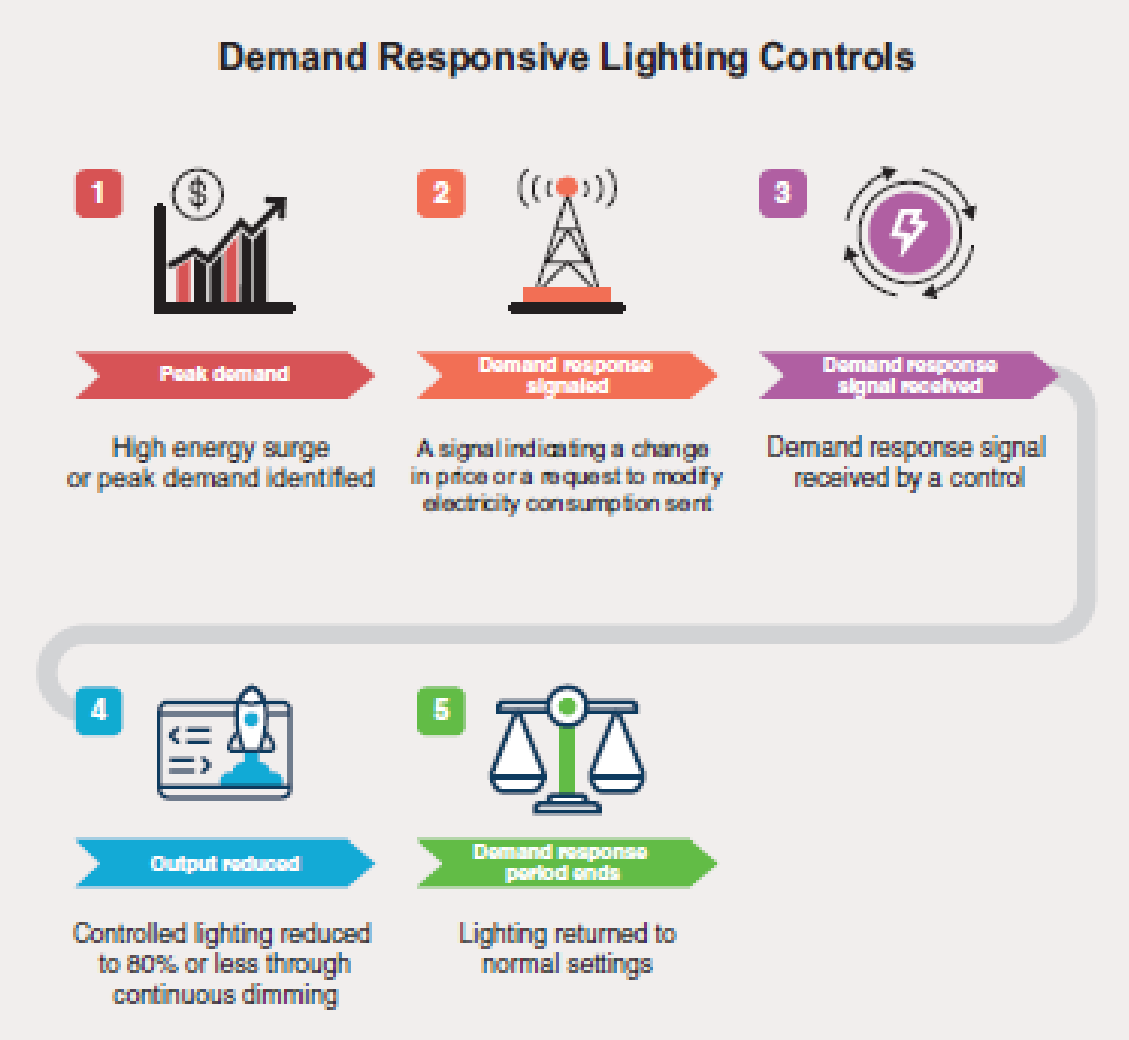
Demand Responsive Water Heating, C404.10

- Electric storage water heaters (40 – 120 gallons, 12kW or less) must be provided with demand responsive controls

Photo courtesy of Rheem

AMENDMENT

Demand Responsive Lighting Controls, C405.2.8



- Applies to Group B, E, M, S occupancies
- Interior general lighting in at least 75% of the interior floor area

AMENDMENT

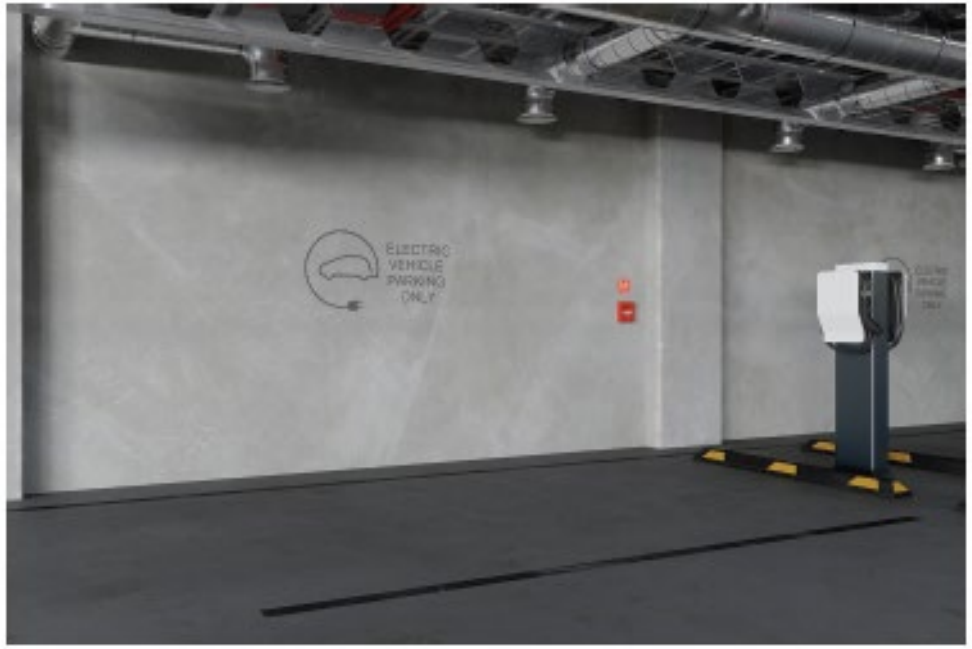
C405.4 Horticultural Lighting

- Photosynthetic photon efficacy
  - Greenhouses
    - 1.7 µmol/J or better
  - All other horticultural lighting
    - 2.2 µmol/J
- Control requirements
- Cannabis facilities subject to the Cannabis Regulation and Tax Act exempt

AMENDMENT

EV Infrastructure, C405.14

- Parking facilities must have electric vehicle power transfer infrastructure
- Table C405.14.1 details the number of spaces by occupancy and space type
- Based on the number of automobile parking spaces
  - R-2 buildings based on number of dwelling units or parking spaces, whichever is less



Electric Vehicle Definitions

- **EV CAPABLE SPACE.** An automobile parking space provided with electrical infrastructure…necessary for connection to an EVSE.
  - Raceways, cables, enclosures, electrical capacity, and electrical distribution equipment space

- **EV READY SPACE.** An automobile parking space provided with a branch circuit and either an outlet or enclosure for connection to EVSE.

- **EVSE SPACE**. An automobile parking space where operational EVSE has been installed.

- **ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).** Equipment for plug-in power transfer…installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

AMENDMENT

Required EV Power Transfer Infrastructure

TABLE C405.14.1
REQUIRED EV POWER TRANSFER INFRASTRUCTURE

Occupancy	EVSE Spaces	EV Ready Spaces	EV Capable Spaces
Group A	10%	0%	10%
Group B	15%	0%	30%
Group E	15%	0%	30%
Group F	2%	0%	5%
Group H	1%	0%	0%
Group I	15%	0%	30%
Group M	15%	0%	30%
Group R-1	20%	5%	75%
Group R-2	20%	5%	75%
Group R-3 and R-4	2%	0%	5%
Group S exclusive of parking garages	1%	0%	0%
Group S-2 parking garages	15%	0%	30%

AMENDMENT

Electrical Energy Storage Systems, C405.16

- Buildings must have
  - At least one ESS that meets the total rated energy and power capacities

    OR

  - At least one reserved ESS-ready area to accommodate future electrical storage

AMENDMENT

Electric Infrastructure, C405.18

- Group R-2 occupancies
- Requires electric infrastructure where fossil fuel equipment is installed
  - Space heating equipment
  - Service water heating equipment
  - Cooking equipment
  - Clothes drying appliances

Additional Efficiency, Renewable and Load Management Requirements

- Complete overhaul of Section C406 in 2024 IECC
- 2021 IECC moved to credits vs. selecting one package option
- 2024 IECC
  - Increases additional energy efficiency credit options
  - **Stretch code includes an adjustment factor for buildings without heat pumps**
  - Adds renewable and load management credits
- Energy credits must be over and above what is required with the mandatory compliance with the 2024 IECC. No double dipping.

Additional Efficiency, Renewable, and Load Management Requirements Overview

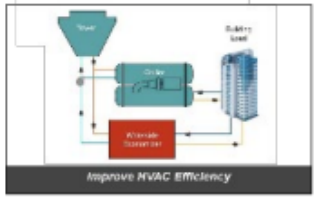
Energy Credit Measures

Efficiency Measures
- Envelope performance
- UA reduction (15%)*
- Envelope leak reduction*
- Add roof insulation*
- Add wall insulation*
- Improve fenestration*

HVAC Measures
- HVAC performance
- Heating efficiency
- Cooling efficiency
- Residential HVAC control
- Ground source heat pump*
- DOAS/fan control

Water Heating Measures
- SHW preheat recovery
- Heat pump water heater
- Efficient gas water heater
- SHW pipe insulation
- Point of use water heaters
- Thermostatic bal. valves
- SHW heat trace system*
- SHW submeters
- SHW flow reduction
- Shower heat recovery

*Only in IECC;
**Only in Standard 90.1



Lighting Measures
- Lighting dimming & tuning
- More occupancy sensors
- Increase daylight area
- Residential light control
- Light power reduction

Power & Equipment Measures
- Energy monitoring
- Efficient elevator
- Efficient commercial kitchen equipment
- Residential kitchen equipment
- Fault detection
- Guideline 36 controls**

Renewable & Load Management Measures
- Renewable energy
- Lighting load management
- HVAC load management
- Automated shading
- Electric energy storage
- Cooling energy storage
- SHW energy storage
- Building mass/night flush

- 32 Energy Credit Measures
- Based on Building Occupancy Type and Climate Zone
- Each credit represents 0.1% whole building site energy
- Requirements achieve ~ 7% building energy cost savings
- Load management and renewable credits introduced, carryover credits allowed

Image credit: PNNL

C406.1 Compliance

Greater than 2,000ft^2

- Additional energy efficiency credit requirements apply
  - Multiplier for buildings without a heat pump

Greater than 5,000ft^2

- Additional energy efficiency credit requirements apply, with multiplier
- Additional renewable and load management credit requirements apply

Build-out greater than 1,000ft^2

- Specific reqs for core/shell and build-out construction

C406.1.1 Additional Energy Efficiency Credits

TABLE C406.1.1(1)
ENERGY CREDIT REQUIREMENTS BY BUILDING OCCUPANCY GROUP

Building Occupancy Group	Climate Zone																	
	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
R-2, R-4, and I-1	65	66	67	77	80	86	80	81	90	86	90	90	86	90	90	70	89	80	78
I-2	43	42	38	37	36	38	32	32	30	36	36	35	43	43	44	46	47	50	53
R-1	63	62	66	65	70	71	77	80	84	81	83	88	85	86	90	83	87	87	85
B	62	62	64	66	66	65	64	64	68	70	72	74	71	73	77	71	74	74	71
A-2	70	70	72	72	75	75	70	73	82	69	74	78	67	72	78	60	67	57	51
M	80	79	83	79	81	84	67	74	87	80	66	65	79	62	50	75	67	75	58
E	56	57	55	58	58	57	59	62	59	61	66	62	64	67	67	65	67	63	58
S-1 and S-2	61	60	61	60	58	57	44	54	62	85	68	75	90	82	72	90	89	90	90
All Other	31	31	31	32	32	33	30	32	36	35	35	35	37	36	36	36	37	36	34

AMENDMENT

C406.1.1 Additional Energy Efficiency Credits

TABLE C406.1.1(1)
ENERGY CREDIT REQUIREMENTS BY BUILDING OCCUPANCY GROUP

Building Occupancy Group	Climate Zone																	
	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
R-2, R-4, and I-1								81	90	86	90	90	86	90	90	70	89	80	78
I-2								32	30	36	36	35	43	43	44	46	47	50	53
R-1								80	84	81	83	88	85	86	90	83	87	87	85
B								64	68	70	72	74	71	73	77	71	74	74	71
A-2								73	82	69	74	78	67	72	78	60	67	57	51
M								74	87	80	66	65	79	62	50	75	67	75	58
E								62	59	61	66	62	64	67	67	65	67	63	58
S-1 and S-2								54	62	85	68	75	90	82	72	90	89	90	90
All Other	31	31	31	32	32	33	30	32	36	35	35	35	37	36	36	36	37	36	34

Buildings without heat pumps:

Multiply the number of credits by 1.25

Energy Credit Table Example: Group B

TABLE C406.2(4)
BASE ENERGY CREDITS FOR GROUP B OCCUPANCIES[a]

ID	Energy Credit Measure	Section	Climate Zone																	
			0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
E01	Envelope Performance	C406.2.1.1	Determined in accordance with Section C406.2.1.1																		
E02	UA reduction (15%)	C406.2.1.2	7	8	3	6	5	3	7	3	1	13	4	8	21	15	11	13	24	37	43
E03	Reduced air leakage	C406.2.1.3	5	3	4	2	2	2	5	1	x	8	x	2	13	4	x	18	9	18	7
E04	Add Roof Insulation	C406.2.1.4	2	2	2	2	2	2	3	2	1	3	1	2	3	2	2	3	3	2	3
E05	Add Wall Insulation	C406.2.1.5	13	14	8	11	4	4	7	4	1	5	2	4	6	4	3	9	7	10	8
E06	Improve Fenestration	C406.2.1.6	5	5	4	5	7	7	8	2	1	8	2	4	10	5	1	21	17	10	9
H01	HVAC Performance	C406.2.2.1	22	22	19	20	17	17	15	15	11	15	15	11	16	15	11	19	17	18	20
H02	Heating efficiency	C406.2.2.2	X	x	x	x	x	x	1	1	1	3	2	2	5	4	3	9	7	8	12
H03	Cooling efficiency	C406.2.2.3	7	6	4	5	3	3	1	2	1	1	2	1	1	1	1	x	x	x	x

partial table

C406.1.2 Additional Renewable and Load Management Credit Requirements

TABLE C406.1.2
RENEWABLE AND LOAD MANAGEMENT CREDIT REQUIREMENTS BY BUILDING OCCUPANCY GROUP

Building Occupancy Group	Climate Zone																	
	0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
R-2, R-4, and I-1	34	37	31	46	48	56	49	56	38	31	42	32	26	33	34	23	27	25	25
I-2	23	24	25	25	25	28	26	30	22	25	32	24	25	28	29	26	28	22	20
R-1	30	28	35	30	34	36	34	37	41	32	37	27	28	33	32	25	29	22	18
B	38	39	45	42	45	49	47	56	57	44	55	42	38	47	46	38	45	38	31
A-2	8	8	9	9	8	9	9	11	13	8	11	9	8	10	9	8	9	8	3
M	32	32	42	37	39	47	44	58	57	42	54	46	38	48	5	42	45	38	34
E	27	34	38	37	39	47	44	58	57	42	54	46	38	48	50	42	45	38	34
S-1 and S-2	89	90	90	90	90	90	90	90	90	90	90	90	70	90	90	84	86	71	54
All Other	35	39	46	42	46	52	49	56	56	40	52	42	37	44	44	36	39	32	28

Renewable & Load Mgmt Table Example: Group B

TABLE C406.3(4)
Renewable and Load Management Credits for Group B Occupancies

ID	Energy Credit Abbreviated Title	Section	Climate Zone																	
			0A	0B	1A	1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
R01	Renewable energy	C406.3.1	14	14	17	15	17	19	18	22	24	17	22	16	14	18	18	14	17	14	11
G01	Lighting load management	C406.3.2	10	11	11	12	11	11	11	12	9	10	11	10	10	11	10	10	11	10	9
G02	HVAC load management	C406.3.3	x	10	10	9	9	3	8	12	7	12	8	11	9	10	12	8	9	10	2
G03	Automated shading	C406.3.4	4	7	7	8	7	8	5	6	6	4	6	5	4	5	5	5	5	4	7
G04	Electric energy storage	C406.3.5	14	15	14	14	16	16	17	16	18	17	16	18	17	17	18	16	15	17	18
G05	Cooling energy storage	C406.3.6	28	7	36	16	27	24	28	45	27	17	27	15	15	20	9	12	25	2	4
G06	SHW energy storage	C406.3.7	5	5	6	6	6	6	7	7	8	7	7	7	7	7	8	6	7	6	6
G07	Building thermal mass	C406.3.8	3	1	5	2	6	9	6	7	14	4	11	8	9	15	5	8	12	15	7

x = Credits excluded from this building use type and *climate zone*.

Section C407

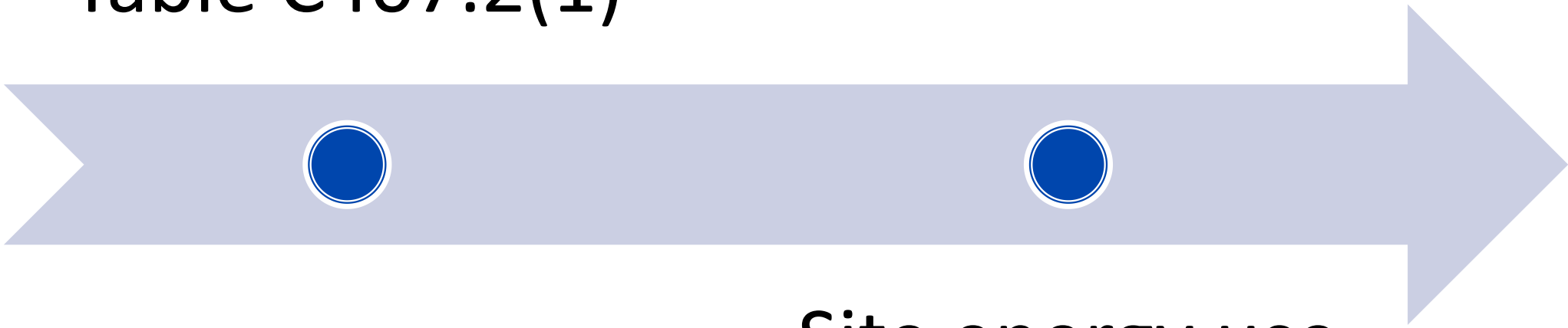
Commercial Simulated Building Performance

Simulated Building Performance

- Systems and loads included in determining Simulated Building Performance
  - Heating systems
  - Cooling systems
  - Service water heating
  - Fan systems
  - Lighting power
  - Receptacle loads
  - Process loads

C407.2 Mandatory Requirements

Requirements in
Table C407.2(1)



Site energy use

Mandatory Requirements, Table C407.2(1)

TABLE C407.2(1)REQUIREMENTS FOR SIMULATED BUILDING PERFORMANCE

SECTION[a]	TITLE
Envelope	
C401.3	Building thermal envelope certificate
C402.2.1.1	Joints staggered
C402.2.1.2	Skylight curbs
C402.2.6	Insulation of radiant heating system panels
C402.5.1.3	Fenestration orientation
C402.6	Air leakage—building thermal envelope
Mechanical	
C403.1.1	Calculation of heating and cooling loads
C403.1.2	Data centers
C403.2	System design
C403.3	Heating and cooling equipment efficiencies
C403.4.1	Thermostatic controls
C403.4.2	Off-hour controls
C403.4.7	Heating and cooling system controls for operable openings to the outdoors
C403.5.5	Economizer fault detection and diagnostics
C403.7, except C403.7.4.1	Ventilation and exhaust systems
C403.8, except C403.8.6	Fan and fan controls
C403.9	Large-diameter ceiling fans
C403.12, except C403.12.3	Refrigeration equipment performance
C403.13	Construction of HVAC system elements
C403.14	Mechanical systems located outside of the building thermal envelope
C404	Service water heating
C405, except C405.3	Electrical power and lighting systems
C406.1.2	Additional renewable and load management credit requirements
C408	Maintenance information and system commissioning

C407.2 Mandatory Requirements, Site Energy Use

- New calculation method for compliance
  - Site energy use must be less than or equal to the percentage of the site energy use (SEUC) of standard reference design

C407.2 Mandatory Requirements, Site Energy Use

- New calculation method for compliance
  - Site energy use must be less than or equal to the percentage of the site energy use (SEUC) of standard reference design

PSEUC = 100 x (0.80 + 0.025 – Ecr/1000)

PSEUC = Percentage of site energy use of the standard reference design

ECr= Energy efficiency credits required for the building in accordance with Section C406.1 (do not include load management and renewable credits)

ASHRAE Standard 90.1 Compliance

Amendments for compliance with Section C401.2.2

AMENDMENT

C401.2.2 ASHRAE 90.1

Commercial buildings shall comply with the requirements of ANSI/ASHRAE/IES 90.1, Appendix CI and the requirements of the sections indicated within Table C401.2.2.

- New Appendix CI, Total Building Performance Pathway
- Additional requirements from Table C401.2.2

Requirements for ASHRAE 90.1 Compliance

TABLE C401.2.2REQUIREMENTS FOR ASHRAE 90.1 COMPLIANCE

SECTION[a]	TITLE
	New Construction
C405.4	Horticultural lighting
C405.14	Electric vehicle power transfer infrastructure
C405.16	Electrical energy storage system
C405.18	Electric infrastructure
	Additions and Alterations
C502.3.7	Additional energy efficiency credit requirements
C503.3.2	Mechanical system acceptance testing
C503.3.3	Duct testing
C503.3.4	Controls
C503.3.5	System sizing
C503.6	Additional energy efficiency credit requirements foralterations
C505.1.3	Additional energy efficiency for changes of occupancy

AMENDMENT

Appendix CI

- Replaces energy cost with site energy in sections throughout ASHRAE 90.1

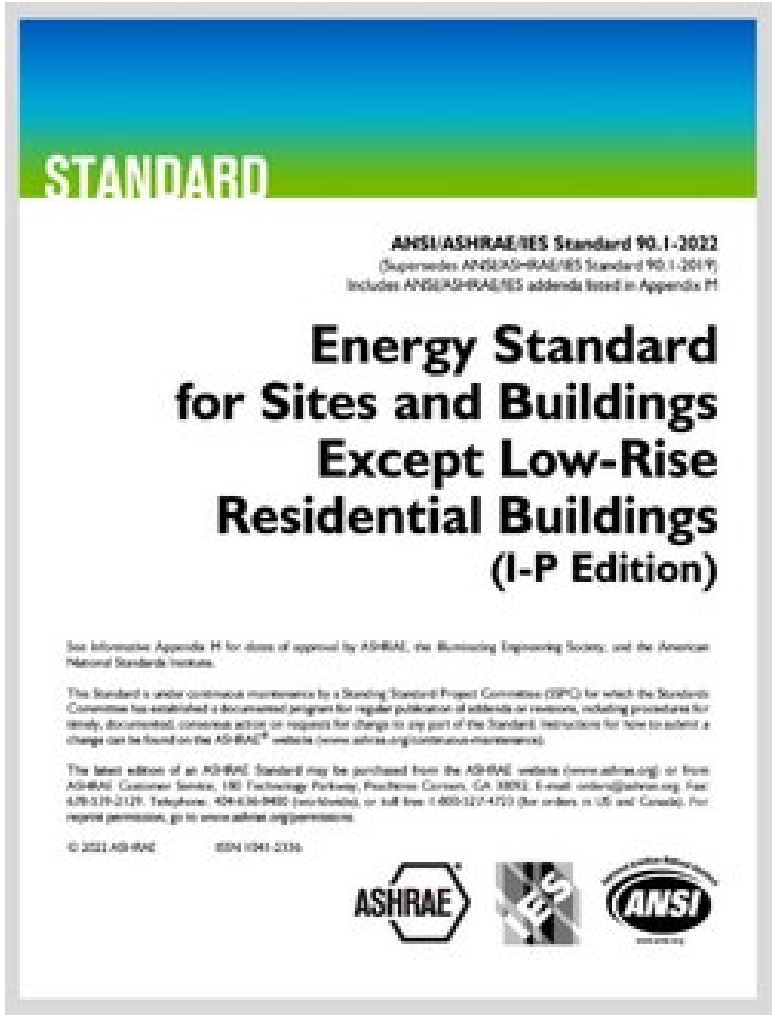


Image courtesy of ASHRAE

Resources

- Read-only version of the 2023 Illinois Stretch Energy Code: https://codes.iccsafe.org/content/ILSEC2023P1
- The Building Energy Hub: https://www.buildinghub.energy/
- Climate and Equitable Jobs Act: https://epa.illinois.gov/topics/ceja.html
- CEJA Updates & Program Status: https://dceo.illinois.gov/ceja/ceja-program-announcements.html
- ASHRAE 90.1-2022 Energy Savings Analysis: https://www.energycodes.gov/sites/default/files/2024-02/Standard_90.1-2022_Final_Determination_TSD.pdf

Resources

- Midwest Energy Efficiency Alliance: https://www.mwalliance.org/building-efficiency/building-energy-codes
- Building energy codes program: https://www.energycodes.gov/
- 2024 IECC Significant Changes: https://shop.iccsafe.org/significant-changes-to-the-international-energy-conservation-coder-2024-edition.html
- ASHRAE 90.1-2022 Changes: https://www.ashrae.org/technical-resources/bookstore/ansi-ashrae-ies-standard-90-1-2022-changes

International Code Council, Inc.
Training Department

888-ICC-SAFE, Ext 33821
Learn@ICCSAFE.org

Building Professional Careers!

Illinois Stretch Code Resources

Hub Stretch Code Guides

- 2023 Commercial Stretch Code Guide
- 2023 Residential Stretch Code Guide

Illinois Stretch Energy Code Compliance Checklists

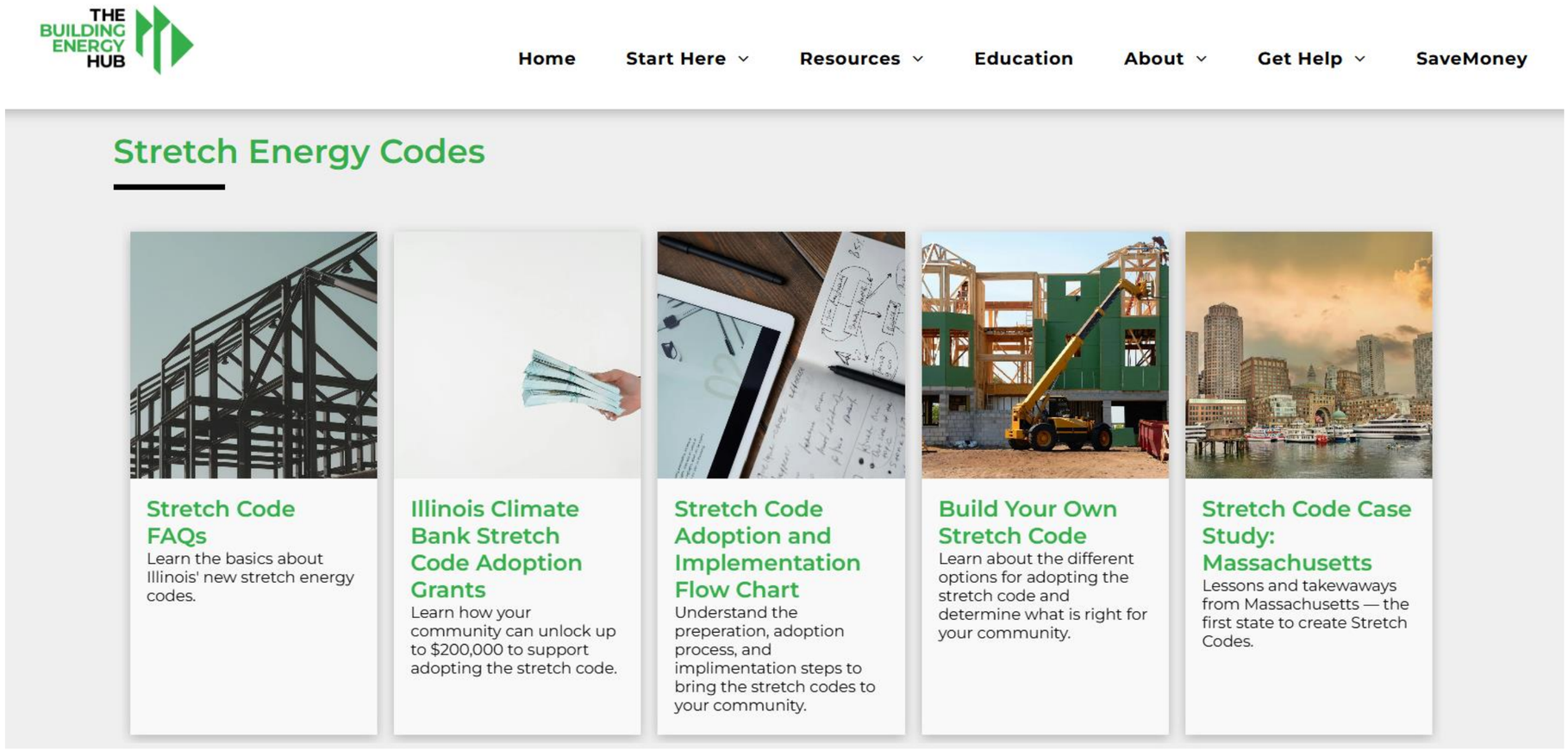
- 2023 Commercial Stretch Code Checklist
- 2023 Residential Stretch Code Checklist

SEDAC Energy Code Resources

- 2023 Commercial Stretch Code Primer
- 2023 Residential Stretch Code Primer

Hub: Municipal Resources

Benchmarking, Building Performance, Stretch Codes, Finance

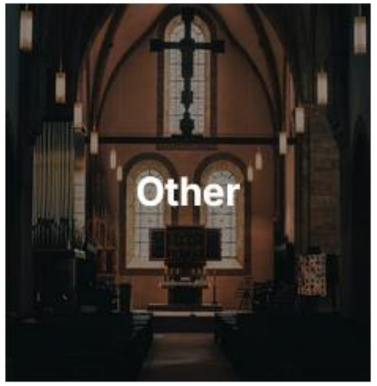


SCAN ME

Hub: Funding Resources

Financing Options by Building Sector

We've compiled useful resources to help you find suitable funding and financing options for your next project.



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