Wisconsin Department of Safety and Professional Services
Division of Policy Development
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Tony Evers, Governor
Dan Hereth, Secretary

VIRTUAL/TELECONFERENCE
WISCONSIN ADVISORY COUNCIL ON BUILDING SUSTAINABILITY
Virtual, 4822 Madison Yards Way, Madison
Contact: Brad Wojciechowski (608) 266-2112
March 7, 2025

The following agenda describes the issues that the Council plans to consider at the meeting. At the time of the meeting, items may be removed from the agenda. Please consult the meeting minutes for a record of the actions of the Council.

AGENDA

9:00 A.M.

OPEN SESSION – CALL TO ORDER – ROLL CALL

A. Adoption of Agenda (1-2)

B. Approval of Minutes of December 6, 2024 (3)

C. Reminders: Conflicts of Interest, Scheduling Concerns

D. Introductions, Announcements and Recognition

E. Administrative Matters – Discussion and Consideration
- **1. Department, Staff and Council Updates**
- **2. 2025 Meeting Dates (4)**
- **3. Annual Policy Review (5-6)**
- **4. Election of Officers (7)**
- 5. Council Members
  - a. Austin, Benjamin V.
  - b. Eber, Alan H.
  - c. Hackel, Scott P.
  - d. Herrmann, Monika S.
  - e. Nergard, Missy A.
  - f. Nino Torres, Victor G.
  - g. O'Brien, Timothy M.
  - h. Sayu, Francisco J.
  - i. Swartz, Keith A.
  - j. Weber, Christina Louise

F. Presentation: Darren Port, Slipstream – Discussion and Consideration (8-56)
1. Cost-effectiveness Analysis of the 2021 and 2024 IECC for the State of Wisconsin

G. Update on Code Council Meetings – Discussion and Consideration

H. Administrative Rule Matters – Discussion and Consideration

I. Legislation and Policy Matters – Discussion and Consideration

J. Discussion and Consideration of Items Added After Preparation of Agenda:
   1. Introductions, Announcements and Recognition
   2. Administrative Matters
   3. Election of Officers
   4. Education and Examination Matters
   5. Credentialing Matters
   6. Legislative and Policy Matters
   7. Administrative Rule Matters
   8. Council Liaison Training and Appointment of Mentors
   9. Informational Items

K. Public Comments

L. ADJOURNMENT

NEXT MEETING: JUNE 6, 2025

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MEETINGS AND HEARINGS ARE OPEN TO THE PUBLIC, AND MAY BE CANCELLED WITHOUT NOTICE.

Times listed for meeting items are approximate and depend on the length of discussion and voting. All meetings are held virtually unless otherwise indicated. In-person meetings are typically conducted at 4822 Madison Yards Way, Madison, Wisconsin, unless an alternative location is listed on the meeting notice. In order to confirm a meeting or to request a complete copy of the board's agenda, please visit the Department website at https:\\dsps.wi.gov. The board may also consider materials or items filed after the transmission of this notice. Times listed for the commencement of any agenda item may be changed by the board for the convenience of the parties. The person credentialed by the board has the right to demand that the meeting at which final action may be taken against the credential be held in open session. Requests for interpreters for the hard of hearing, or other accommodations, are considered upon request by contacting the Affirmative Action Officer or reach the Meeting Staff by calling 608-267-7213.

VIRTUAL/TELECONFERENCE
WISCONSIN ADVISORY COUNCIL ON
BUILDING SUSTAINABILITY
MEETING MINUTES
DECEMBER 6, 2024

PRESENT: Alan Eber, Scott Hackel, Monika Herrmann, Missy Nergard, Victor Nino Torres, Keith Swartz, Christina Weber

ABSENT: Benjamin Austin, Timothy O'Brien, Francisco Sayu

STAFF: Brad Wojciechowski, Executive Director; Joseph Ricker, Legal Counsel; Jacob Pelegrin, Rules Administrative Coordinator; Ashley Sarnosky, Board Administration Specialist; and other DSPS Staff

CALL TO ORDER

Missy Nergard, Chairperson, called the meeting to order at 9:01 a.m. A quorum of seven (7) members was confirmed.

ADOPTION OF AGENDA

MOTION: Monika Herrman moved, seconded by Alan Eber, to adopt the Agenda as published. Motion carried unanimously.

APPROVAL OF MINUTES OF OCTOBER 25, 2024

MOTION: Christi Weber moved, seconded by Scott Hackel, to adopt the Minutes of October 25, 2024, as published. Motion carried unanimously.

PRESENTATION: DARREN PORT, SLIPSTREAM AND BILL DETERS, PERFORMANCE SYSTEMS DEVELOPMENT

MOTION: Victor Nino Torres moved, seconded by Keith Swartz, to acknowledge and thank Darren Port, Sarah Wells and Bill Deters for their appearance and presentation to the Council. Motion carried unanimously.

ADJOURNMENT

MOTION: Christi Weber moved, seconded by Victor Nino Torres, to adjourn the meeting. Motion carried unanimously.

The meeting adjourned at 9:45 a.m.

WISCONSIN COUNCIL ON BUILDING SUSTANABILITY
2025 MEETING DATES

Meeting Date	Start time	Location	Agenda Item Deadline
Friday, March 7, 2025	9:00 AM	Virtual	**2/25/25**
Friday, June 6, 2025	9:00 AM	Virtual	**5/27/25**
Friday, September 5, 2025	9:00 AM	Virtual	**8/26/25**
Friday, December 5, 2025	9:00 AM	Virtual	**11/24/25**

State of Wisconsin
Department of Safety & Professional Services

AGENDA REQUEST FORM

1) Name and title of person submitting the request: Brenda Taylor, Board Services Supervisor		**2) Date when request submitted: 12/1/2024**	
3) Name of Board, Committee, Council, Sections: All Boards			
4) Meeting Date: First Meeting of 2025	**5) Attachments:** ☒ Yes	**6) How should the item be titled on the agenda page?** Administrative Matters: Annual Policy Review	
7) Place Item in: ☒ Open Session	**8) Is an appearance before the Board being scheduled?** ☒ No	**9) Name of Case Advisor(s), if applicable:** N/A	

10) Describe the issue and action that should be addressed:

Please be advised of the following Policy Items:

1. **In-Person and Virtual Meetings:** Depending on the frequency of scheduled meetings, discussion topics, and member availability, DSPS may host one or more in-person meetings. Virtual connection options are available for all board meetings.
2. **Attendance/Quorum:** Thank you for your service and commitment to meeting attendance. If you cannot attend a meeting or have scheduling conflicts impacting your attendance, please let us know as soon as possible. A quorum is required for Boards, Sections, and Councils to meet pursuant to Open Meetings Law. Connect to / arrive at meetings 10 minutes before posted start time to allow for audio/connection testing, and timely Call to Order and Roll Call. Virtual meetings include viewable onscreen materials and A/V (speaker/microphone/video) connections.
3. **Walking Quorum:** Board/Section/Council members must not collectively discuss the body's business outside a properly noticed meeting. If several members of a body do so, they could be violating the open meetings law.
4. **Mandatory Training:** All Board Members must complete Public Records and Ethics Training, annually. Register to set up an account in the Cornerstone LearnCenter online portal or Log in to an existing account.
5. **Agenda Deadlines:** Please communicate agenda topics to your Executive Director before the agenda submission deadline at 12:00 p.m., eight business days before a meeting. (Attachment: Timeline of a Meeting)
6. **Travel Voucher Submissions:** Please submit all Mileage Reimbursement claims for in-person meetings to DSPS within 30 days of the close of each month in which expenses are incurred.
7. **Lodging Accommodations/Hotel Cancellation Policy:** Lodging accommodations are available to eligible members for in-person meetings. Standard eligibility: the member must leave home before 6:00 a.m. to attend an in-person meeting by the scheduled start time.
    a. If a member cannot attend a meeting, they must cancel their reservation with the hotel within the applicable cancellation timeframe.
    b. If a meeting is changed to occur remotely, is canceled, or rescheduled, DSPS staff will cancel or modify reservations as appropriate.
8. **Inclement Weather Policy:** In inclement weather, the DSPS may change a meeting from an in-person venue to a virtual/teleconference only.

11) Authorization 12/02/2024

Directions for including supporting documents:
1. **This form should be saved with any other documents submitted to the Agenda Items folders.**
2. **Post Agenda Deadline items must be authorized by a Supervisor and the Policy Development Executive Director**

Timeline of a Meeting

8 business days prior to the meeting: All agenda materials are due to the Department by 12:00 pm, 8 business days prior to the meeting date.

7 business days prior to the meeting: The draft agenda page is due to the Executive Director. The Executive Director transmits to the Chair for review and approval.

5 business days prior to the meeting: The approved agenda is returned to the Board Administration Specialist for agenda packet production and compilation.

4 business days prior to the meeting: Agenda packets are posted on the DSPS Board SharePoint site and on the Department website.

Agenda Item Examples:

- Approval of the Agenda and previous meeting Minutes
- Open Session Items
  - Public Hearings (relating to Administrative Rules)
  - Administrative Matters
  - Legislation and Policy Matters
  - Administrative Rules Matters
  - Credentialing Matters
  - Education and Exam Issues
  - Public Agenda Requests
  - Current Issues Affecting the Profession
  - Public Comments
- Closed Session items
  - Deliberations on Proposed Disciplinary Actions
    - Stipulations
    - Administrative Warnings
    - Case Closings
    - Monitoring Matters
    - Professional Assistance Procedure (PAP) Issues
  - Proposed Final Decisions and Orders
  - Orders Fixing Costs/Matters Relating to Costs
  - Credentialing Matters
  - Education and Exam Issues

Thursday of the Week Prior to the Meeting: Agendas are published for public notice on the Public Notices and Meeting Minutes website: **publicmeetings.wi.gov**.

1 business day after the Meeting: "Action" lists are distributed by staff detailing board actions on closed session business.

5 business days after the Meeting: "To Do" lists are distributed to staff to ensure that board decisions are acted on and/or implemented within the appropriate divisions in the Department. Minutes approved by the board are published on the the Public Notices and Meeting Minutes website: **publicmeetings.wi.gov**.

WISCONSIN ADVISORY COUNCIL
ON BUILDING SUSTAINABILITY

2024 OFFICERS	
Chairperson	Missy Nergard
Vice Chairperson	Francisco Sayu
Secretary	Christina Louise Weber

State of Wisconsin
Department of Safety & Professional Services

AGENDA REQUEST FORM

1) Name and title of person submitting the request: Brad Wojciechowski, Executive Director		**2) Date when request submitted:** 2/24/2025 **Items will be considered late if submitted after 12:00 p.m. on the deadline date which is 8 business days before the meeting**
3) Name of Board, Committee, Council, Sections: Choose an item. **Wisconsin Advisory Council on Building Sustainability**		
4) Meeting Date: 3/7/2025	**5) Attachments:** ☒ Yes ☐ No	**6) How should the item be titled on the agenda page?** Presentation: Darren Port, Slipstream – Discussion and Consideration (1) Cost-effectiveness Analysis of the 2021 and 2024 IECC for the State of Wisconsin
7) Place Item in: ☒ Open Session ☐ Closed Session	**8) Is an appearance before the Board being scheduled?** *(If yes, please complete Appearance Request for Non-DSPS Staff)* ☐ Yes <Appearance Name(s)> ☐ No	**9) Name of Case Advisor(s), if applicable:** <Click Here to Add Case Advisor Name or N/A>

10) Describe the issue and action that should be addressed:

Darren Port will provide the slide presentation.

11) Authorization

Signature of person making this request	**Date** 2/24/2025
Supervisor (Only required for post agenda deadline items)	**Date**
Executive Director signature (Indicates approval for post agenda deadline items)	**Date**

Directions for including supporting documents:

1. This form should be saved with any other documents submitted to the Agenda Items folders.
2. Post Agenda Deadline items must be authorized by a Supervisor and the Policy Development Executive Director.
3. If necessary, provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.

PROJECT PARTNERS

Cost-Effectiveness Analysis of the 2021 and 2024 IECC for the State of Wisconsin

Presentation to the Wisconsin Advisory Council on Building Sustainability

February 28, 2025

THIS PROJECT is supported by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under the Building Technologies Office—DE-FOA-0002813—Bipartisan Infrastructure Law Resilient and Efficient Codes Implementation.

Agenda

Wisconsin Resilient and Efficient Codes Implementation (RECI) Project Updates

Wisconsin 2021 and 2024 IECC Cost Analysis

New Resources

Wisconsin RECI Project Updates

Baseline Studies Update

New Construction Baseline Study (Residential)

Residential Data Collection Updates

- 22 total homes visited
- Primarily in Dane and Waukesha counties
- Approaching 20% completion of total homes necessary
- Ongoing recruitment efforts

New Construction Baseline Study (Commercial)

Commercial Data Collection Updates

- Ongoing recruitment efforts- please reach with any leads or recruitment ideas
- Going through plan review process and scheduling site visits at 12 buildings (10% of our goal, 126 buildings)

Wisconsin Energy Codes Collaborative Update

Energy Codes Collaborative Purpose and Goals

- **Focus on the interests of stakeholders,** such as builders, buyers, state and local governments, building occupants, and the public.
- **Emphasize stakeholder collaboration** as a platform for sharing knowledge, experiences, and ideas to drive improvement of local building stock through energy codes and efficiency measures
- **Identify challenges to energy code compliance and address barriers** by proposing policies, actions, and other support (e.g., education, training, and outreach)
- **Serve as a reliable, trusted source of information** on energy codes that relevant market actors can collaborate with to learn more about best practices and facilitate widespread compliance.

Adapted from Energy Codes Collaborative Mission Statements from *Michigan*, *Minnesota*

Where We Are and Next Steps

- Held our first meeting in December 2024
  - 14 participants representing various stakeholder groups
  - Introduced the purpose of a Codes Collaborative and discussed attendee interests surrounding energy codes as well as barriers to code advancement and implementation
  - Discussed logistics (meeting cadence, subcommittees)
- Second meeting scheduled for mid-March
  - Finalize subcommittees (residential, commercial, business, advocacy, etc.)
  - Revisit barriers to code compliance and brainstorm actions/tools/resources that can address these issues

Next meeting: Monday, March 17 from 9:30-11:00 am

Want to be involved with the Codes Collaborative?
Email Sarah Wells (swells@slipstreaminc.org)

Wisconsin Energy Code Technical Advisor Program Update

Virtual and In-Person Trainings

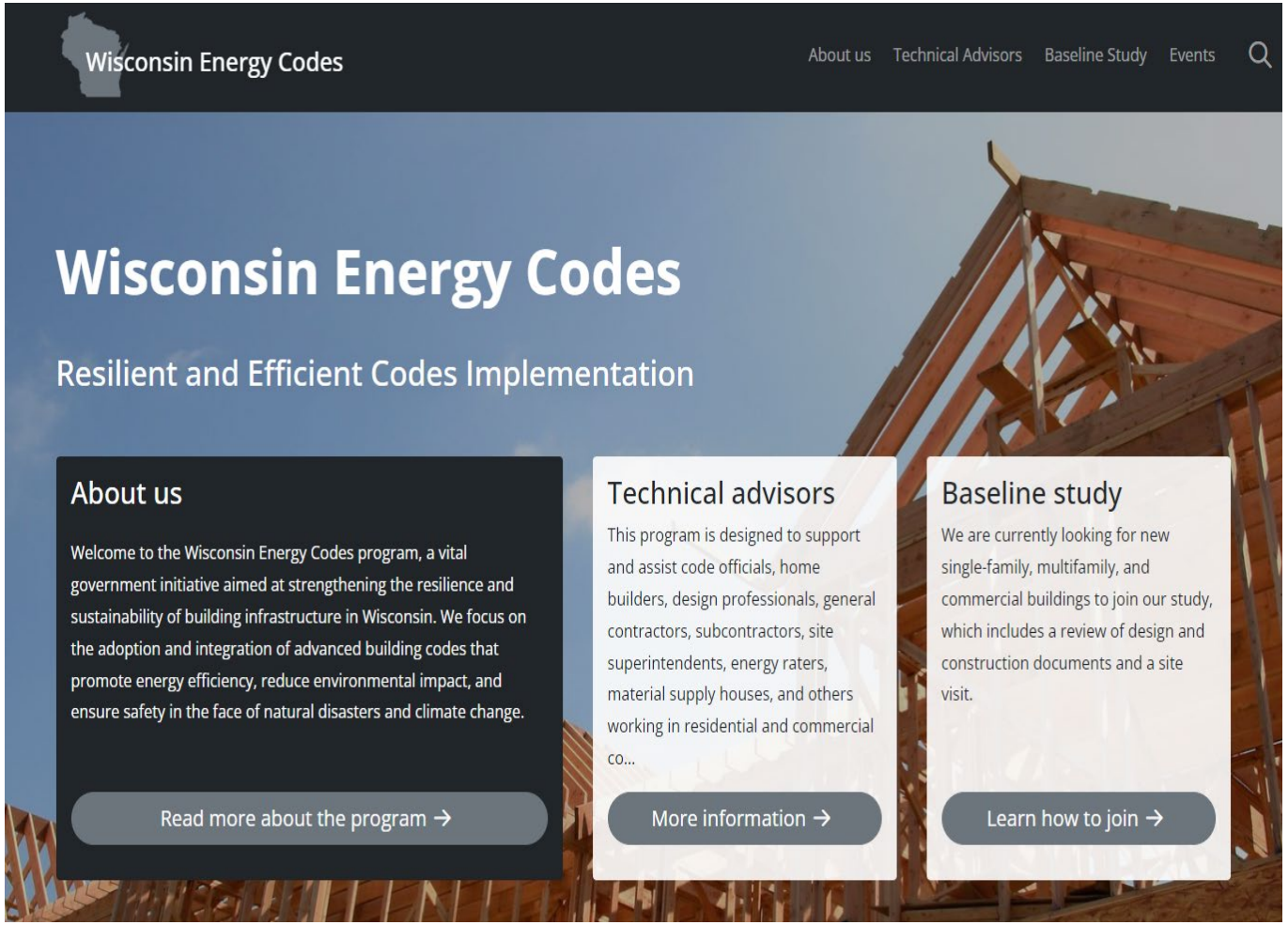
Upcoming Virtual/In-person combination Trainings!

- March 6 – 7:45am-10:45 am – Virtual (Bill) / In-person (Robby), 150 Gasser Road Lake Denton – Residential Infiltration and Air Sealing / Residential HVAC Equipment Sizing, Man J, S & D
- March 13 – 7:45am-10:45am – Virtual (Bill) / In-person (Robby), 8580 S Howel Ave, Oak Creek Community Center, Oak Creek – Residential Infiltration and Air Sealing / Residential HVAC Equipment Sizing, Man J, S & D
- March 19 – 7:45am-10:45am – Virtual (Bill) / In-person (Robby), 150 Gasser Road Lake Denton – Residential Infiltration and Air Sealing / Residential HVAC Equipment Sizing, Man J, S & D
- April 17 – 7:45am-10:45am – In-person (Robby and Bill), Eau Claire – IECC 2015 Large Commercial Buildings – Mechanical systems & IECC 2015 Lighting Systems for Large Commercial Buildings
- Additional courses will be scheduled through June 2025

For Information on Technical Advisor and Trainings

Robert Oakley
Wisconsin in-state contact
Senior Technical Specialist
roakley@psdconsulting.com

Bill Deters
Senior Technical Specialist
wdeters@psdconsulting.com



www.wienergycodes.org

Residential Cost-Effectiveness Analysis of the 2021 and 2024 International Energy Construction Code (IECC) Compared to the Wisconsin UDC (2009 IECC Amended)

PROJECT PARTNERS Clean Wisconsin • Wisconsin Local Government Climate Coalition • Midwest Energy Efficiency Alliance • New Buildings Institute •

Introduction and Overview

Wisconsin Energy Code Analysis

In July 2021, PNNL published a cost-effectiveness analysis of the 2021 IECC for residential buildings in Wisconsin.

In September 2024, Slipstream requested an updated cost-effectiveness analysis that considers:

- Comparison to current UDC,
- Current parameters,
- First-time and Average homebuyer data,
- Additional comparison to the 2024 IECC

MEMORANDUM

Pacific Northwest NATIONAL LABORATORY

Date:	**December 3, 2024**		
To:	**Darren Port, Slipstream, Inc.**		
From:	**Turns, Michael A, Rob Salcido, Claire McKenna, PNNL**	Information Release #:	PNNL-37079
Subject:	**Cost-Effectiveness Analysis of the 2021 and 2024 IECC-Residential for the State of Wisconsin**		

The State of Wisconsin is in the process of updating its current state residential energy code, which is an amended version of the 2009 International Energy Conservation Code (IECC), to either the 2021 or 2024 IECC. In July 2021, PNNL published a cost-effectiveness analysis of the 2021 IECC for residential buildings in Wisconsin.[1] In September 2024, the Wisconsin Council on Building Sustainably (CBS) requested an updated cost-effectiveness analysis that considers more recent mortgage interest rates, different downpayment amounts for first-time and average homebuyers, and an additional comparison to the 2024 IECC.

Summary of Cost-Effectiveness of Adopting the 2021 IECC
The resulting analysis shows that a home designed to comply with the residential provisions of the 2021 IECC would yield short-term and long-term consumer benefits compared to a home built to the Wisconsin-amended 2009 IECC. When building to the 2021 IECC, Wisconsin first-time homebuyers (8% down payment) and average homebuyers (15% down payment) can expect to save 21% in energy costs, equating to $817 of annual utility bill savings. When amortizing over a typical 30-year mortgage, first-time homebuyers will see a positive cumulative cash flow in the first four years and average homebuyers will see a positive cumulative cash flow in the first six years. Over the course of 30 years, both a first-time homebuyer and an average-income homebuyer will net approximately $10,600 in life-cycle cost savings. During the first year alone, collectively, Wisconsin residents could expect to save over $12,210,000 in energy costs and 56,100 metric tons in avoided CO2 emissions.

Summary of Cost-Effectiveness of Adopting the 2024 IECC
A home designed to comply with the residential provisions of the 2024 IECC would also yield short-term and long-term consumer benefits compared to a home built to the Wisconsin-amended 2009 IECC. When building to the 2024 IECC, Wisconsin first-time homebuyers and average homebuyers can expect to save 24% in energy costs, equating to $993 of annual utility bill savings. When amortizing costs over a typical 30-year mortgage, first-time homebuyers will see a positive cumulative cash flow in the first three years, and average homebuyers will see a positive cumulative cash flow in the first five years. Over the course of 30 years, both a first-time homebuyer and an average-income homebuyer will net approximately $11,800 in life-cycle cost

First Time and Average Home Buyer

First-time Home Buyer

- Less equity or the ability to put down a substantial downpayment.
- Not owned a home in three years.
- 97% of first-time buyers financed their home purchase, with a typical downpayment of six percent.
- This analysis assumed an 8% down payment and a recent average interest rate of 5%

Average Home Buyer

- Annual household income is two-thirds to double the national median income possess the means or have the equity to pay a higher down payment.
- This analysis uses a 15% down payment
- Five percent interest rate
- 30 year mortgage (90 percent of mortgages per Freddie Mac)

Wisconsin Realtors Association
2022 National Association of Realtors (NAR)
Pew Research Center

2021 IECC Residential Savings for Homeowners Compared to Wisconsin UDC (2009 IECC Amended)

2021 IECC Savings

Average annual savings of 21% compared to the Wisconsin UDC.

$183 net annual consumer cash flow in year 1

Cash Flow Year One

Amortized costs and benefits over a typical 30-year mortgage

First-time homebuyers positive cumulative cash flow in the *first four* years.

Average homebuyers positive cumulative cash flow in the *first six* years.

Cash Flow 30 Year

Over the course of 30 years, both a first-time homebuyer and an average-income homebuyer will net approximately $10,630 in life-cycle cost savings.

2021 IECC Residential Wisconsin Statewide Impact

Wisconsin Year One

Wisconsin residents could expect to save:

Over $12,210,000 in energy costs

56,100 metric tons in avoided CO2 emissions.

Wisconsin Over 30 Years

Wisconsin would save 3.26 billion dollars in energy savings

reduce CO2 emissions by 25.8 MMT.

2024 IECC Residential Savings for Homeowners Compared to Wisconsin UDC (2009 IECC Amended)

2024 IECC Savings

Average annual savings of 24% compared to the Wisconsin UDC.

$269 net annual consumer cash flow year one.

Cash Flow Year One

Amortized costs and benefits over a typical 30-year mortgage

First-time homebuyers positive cash flow in the *first three* years.

Average homebuyers positive cumulative cash flow in the *first five* years.

Cash Flow 30 Year

Over the course of 30 years, both a first-time homebuyer and an average-income homebuyer will net approximately $11,800 in life-cycle cost savings.

2024 IECC Residential Wisconsin Statewide Impact

Wisconsin Year One

Wisconsin residents could expect to save:

$13,650,000 in energy costs

62,700 metric tons in avoided CO2 emissions.

Wisconsin Over 30 Years

Wisconsin would save $3.62 billion in energy savings

Reduce CO2 emissions by 28.8 MMT.

2024 IECC NATIONAL SAVINGS

The Department of Energy issued a 2024 IECC Residential code analysis, the results of which indicate that residential buildings meeting the 2024 IECC incur the following savings compared to the 2021 IECC on a weighted national average basis:

- 7.80 percent annual reduction in site energy use intensity (EUI);
- 6.80 percent annual reduction source EUI;
- 6.60 percent annual savings in energy cost; and
- 6.51 percent carbon emissions reduction.

From DOE Determination published December 30, 2024
https://www.energycodes.gov/determinations

Wisconsin Cost-Effectiveness Analysis:

The Data

Parameters

PARAMETER	First-Time Homebuyer	Average Home Buyer
Mortgage Interest Rate	5.0%	5.0%
Loan fees	0.9%	0.9%
Loan Terms	30 years	30 years
Down Payment	8.0%	15%
Nominal Discount Rate (equal to mortgage rate)	5.0%	5.0%
Inflation Rate	2.2%	2.2%
Marginal Federal income Tax	22%	22%
Marginal State Income Tax	5.3%	5.3%
Property Tax	1.61%	1.61%

Parameter Data Sources

The financial and economic parameters used in calculating **Life Cycle Cost (LCC)** and annual consumer cash flow are based on the latest **DOE-established methodology** with Wisconsin-specific economic scenarios.

Construction Cost Data

Climate-zone-specific cost data sources consulted by PNNL include:

- NREL National Residential Efficiency Measures Database
- 2024 RSMeans Residential Cost Data
- 2018 ENERGY STAR Cost & Savings Estimates
- Price data from nationally recognized home supply stores

The costs have been adjusted using a construction cost multiplier of 0.989 to reflect local Wisconsin construction costs based on location factors provided by 2024 RS Means and converted to 2024 dollars.

Methodology

Table 3. Residential Prototypes for 2021 IECC and 2024 IECC Simulated Models

HVAC SYSTEM		Natural Gas with forced air furnace	Liquefied petroleum gas/propane with a forced air furnace	Electric resistance with a forced air furnace	Electric heat pump with forced air distribution
		FOUNDATION TYPE			
RESIDENTIAL PROTOTYPE	Single Family	Crawl Space	Crawl Space	Crawl Space	Crawl Space
		Slab on Grade	Slab on Grade	Slab on Grade	Slab on Grade
		Heated Basement	Heated Basement	Heated Basement	Heated Basement
		Unheated Basement	Unheated Basement	Unheated Basement	Unheated Basement
	Multifamily	Crawl Space	Crawl Space	Crawl Space	Crawl Space
		Slab on Grade	Slab on Grade	Slab on Grade	Slab on Grade
		Heated Basement	Heated Basement	Heated Basement	Heated Basement
		Unheated Basement	Unheated Basement	Unheated Basement	Unheated Basement

Single Family Prototype Assumptions

Parameter	Assumption
Conditioned floor area	**2,376 ft^2 (plus 1,188 ft^2 of conditioned basement, where applicable)** **3,564ft^2 for heated basement**
Footprint and height	39.8-ft-by-29.8 ft, two-story, 8.5-ft-high ceilings
Area above unconditioned space	1,188 ft^2
Area below roof/ceilings	1,188 ft^2
Perimeter length	139.2 ft
Gross exterior wall area	2,366.4 ft^2
Window area (relative to conditioned floor area)	Fifteen percent equally distributed to the four cardinal directions (or as required to evaluate glazing-specific code changes)
Door area	42 ft^2
Internal gains	86,761 Btu/day 115,035 Btu/day (heated basement)

Multifamily Prototype Assumptions

Parameter	Assumption
Conditioned floor area	**1,200 ft^2 per unit, or 21,600 ft^2 total (plus 1,200 ft^2 of conditioned basement on ground-floor units, where applicable)**
Footprint and height	Each unit is 40 ft wide by 30 ft deep, with 8.5-ft-high ceilings. The building footprint is 120 ft by 65 ft.
Area above unconditioned space	1,200 ft^2 on ground-floor units
Wall area adjacent to unconditioned space	None
Area below roof/ceilings	1,200 ft^2 on top-floor units
Perimeter length	370 ft (total for the building), 10 ft of which borders the open breezeway
Gross wall area	5,100 ft^2 per story, 2,040 ft^2 of which faces the open breezeway (15,300 ft^2 total)
Window area (relative to gross wall area)	Twenty-three percent of gross exterior wall area, excluding walls facing the interior breezeway (or as required to evaluate glazing-specific code changes)
Door area	21 ft^2 per unit (378 ft^2 total)
Internal gains	54,668 Btu/day per unit (984,024 Btu/day total)

Wisconsin Construction, Heating, Foundation Shares

Share of New Homes (Percent)		
Heating System	**Single-Family**	**Multifamily**
Natural Gas	88.6	88.6
Heat Pump	7.3	7.3
Electric Resistance	4.1	4.1
Oil	0.0	0.0

Foundation Type Shares				
Foundation Type	**Slab-on-grade**	**Heated Basement**	**Unheated Basement**	**Crawl Space**
Share of New Homes (%)	9.4	72.1	18.4	0

Construction Shares by Climate Zone		
Climate Zone	**Share of New Homes (Percent)**	
	Single-Family	Multifamily
5A	74.2	25.8
6A	88.7	11.3

Fuel Prices

Fuel Prices for Wisconsin		
Electricity ($/kWh)	**Gas (S/Therm)**	**Fuel Oil ($/gal)**
0.1688	1.047	3.882

Fuel cost data from U.S. Energy Information Administration (EIA)

2021 Construction Cost Increase

Total Single-Family Construction Cost Increase for the 2024 IECC Compared to the Wisconsin-amended 2009 IECC			
Single-family Prototype House			
Climate Zone	**Unheated Basement**	**Heated Basement**	**Slab**
5A	$11,827	$12,005	$11,827
6A	$9,893	$9,893	$9,893
Average	$10,993	$11,094	$10,933

Multifamily Construction Cost Increase for the 2021 IECC Compared to the Wisconsin-amended 2009 IECC			
Multifamily Prototype Apartment/Condo			
Climate Zone	**Unheated Basement**	**Heated Basement**	**Slab**
5A	$4,130	$4,156	$4,266
6A	$4,016	$4,016	$4,016
Average	$4,105	$4,126	$4,212

2024 Construction Cost Increase

Total Single-Family Construction Cost Increase for the 2024 IECC Compared to the Wisconsin-amended 2009 IECC			
Single-family Prototype House			
Climate Zone	**Unheated Basement**	**Heated Basement**	**Slab**
5A	$11,282	$11,549	$11,282
6A	$11,730	$11,601	$11,730
Average	$11,475	$11,521	$11,475

Multifamily Construction Cost Increase for the 2024 IECC Compared to the Wisconsin-amended 2009 IECC			
Multifamily Prototype Apartment/Condo			
Climate Zone	**Unheated Basement**	**Heated Basement**	**Slab**
5A	$4,583	$4,609	$4,719
6A	$5,702	$5,702	$5,702
Average	$4,825	$4,846	$4,932

Terminology

A **weighted average** is calculated across building configurations and climate zones.

The **annual cash flow** is the net difference between annual energy savings and annual cash outlays (mortgage payments, etc.), including all tax effects but excluding up-front costs (mortgage down payment, loan fees, etc.).

First-year net cash flow is reported; subsequent years' cash flow will differ due to inflation and fuel price escalation, changing income tax effects as the mortgage interest payments decline, etc.

Annual energy savings is reported at time zero, before any inflation or price escalations are considered.

Annual energy savings is reported as a percentage of whole building energy use.

Life-cycle Cost Savings 2021 IECC Compared to the Wisconsin-amended 2009 IECC

Metric	First-time Homebuyer	Average Homebuyer
LCC Savings of 2021 (Year 30)	$10,601	$10,630
LCC Savings of 2021 (Year 10)	$1,618	$1,351
LCC Savings of 2021 (Year 7)	$677	$341
LCC Savings of 2021 (Year 5)	$172	$292
Net Annual Consumer Cash Flow Year 1 of the 2021 IECC	$183	$222
Years to positive cumulative cash flow	4	6
Annual (year 0) energy cost savings of the 2021 IECC	$817	$817
Annual energy cost savings of the 2021 IECC	21%	21%
Simple payback period (years)	11.8	11.8

Life-cycle Cost Savings 2024 IECC Compared to the Wisconsin-amended 2009 IECC

Metric	First-time Homebuyer	Average Homebuyer
LCC Savings of 2021 (Year 30)	$11,812	$11,843
LCC Savings of 2021 (Year 10)	$2,396	$2,116
LCC Savings of 2021 (Year 7)	$1,206	$854
LCC Savings of 2021 (Year 5)	$538	$50???
Net Annual Consumer Cash Flow Year 1 of the 2024 IECC	$269	$310
Years to positive cumulative cash flow	3	5
Annual (year 0) energy cost savings of the 2024 IECC	$968	$933
Annual energy cost savings of the 2024 IECC	24%	24%
Simple payback period (years)	10.9	10.9

2024 IECC energy Credits Included in Analysis

Table 7. Energy Credits Included in 2024 IECC Analysis for Fossil Fuel Prototypes

Measure Number	Measure Description	Included in Analysis	
		CZ 5	CZ 6
R408.2.1.2(1)	U-factor and SHGC for windows per Table R408.2.1	Yes	No
R408.2.2(5)	High Performance Gas Furnace (Option 2) 95 AFUE	No	Yes
R408.2.3(2)(b)	Gas-Fired Instantaneous Water Heater (Option 2) UEF = 0.95	Yes	No
R408.2.3(8)	Compact Hot Water Distribution	Yes	Yes
R408.2.5(1)	ERV or HRV installed – 75% SRE	No	Yes
R408.2.6	Energy Efficient Appliances	Yes	No

Table 8. Energy Credits Included in 2024 IECC Analysis for Electric Prototypes

Measure Number	Measure Description	Included in Analysis	
		CZ 5	CZ 6
R408.2.1.2(1)	U-factor and SHGC for windows per Table R408.2.1	Yes	No
R408.2.3(3)	Electric Water Heaters (Option 1) - Integrated HPWH: UEF = 3.30	Yes	Yes
R408.2.3(8)	Compact Hot Water Distribution	Yes	No
R408.2.4(3)	>= 80% of ductwork inside conditioned space	No	Yes
R408.2.5(1)	ERV or HRV installed – 75% SRE	Yes	No

Table 16. First Time Home Buyer Consumer Cash Flow from Compliance with the 2021 IECC Compared to the Wisconsin-amended 2009 IECC

	Cost/Benefit	5A	6A	Average
A	Incremental down payment and other first costs	$878	$815	$853
B	Annual energy savings (year one)[31]	$817	$897	$848
C	Annual mortgage increase	$95	$88	$92
D	Net annual cost of mortgage interest deductions, mortgage insurance, and property taxes (year one)	$589	$547	$573
E = [B-(C+D)]	Net annual cash flow savings (year one)	$133	$262	$183
F = [A/E]	Years to positive savings, including up-front cost impacts	5	3	4

Table 17. Average Home Buyer Consumer Cash Flow from Compliance with the 2021 IECC Compared to the Wisconsin-amended 2009 IECC

	Cost/Benefit	5A	6A	Average
A	Incremental down payment and other first costs	$1,567	$1,455	$1,524
B	Annual energy savings (year one)[32]	$817	$897	$848
C	Annual mortgage increase	$100	$93	$97
D	Net annual cost of mortgage interest deductions, mortgage	$544	$505	$529

able 19. First Time Home Buyer Consumer Cash Flow from Compliance with the 2024 IECC Compared to the Wisconsin-amended 2009 IECC

	Cost/Benefit	5A	6A	Average
A	Incremental down payment and other first costs	$852	$968	$897
B	Annual energy savings (year one)[23]	$966	$973	$933
C	Annual mortgage increase	$92	$105	$97
D	Net annual cost of mortgage interest deductions, mortgage insurance, and property taxes (year one)	$572	$650	$602
E = [B-(C+D)]	Net annual cash flow savings (year one)	$301	$218	$269
F = [A/E]	Years to positive savings, including up-front cost impacts	3	4	3

able 20. Average Home Buyer Consumer Cash Flow from Compliance with the 2024 IECC Compared to the Wisconsin-amended 2009 IECC

	Cost/Benefit	5A	6A	Average
A	Incremental down payment and other first costs	$1,522	$1,729	$1,602
B	Annual energy savings (year one)[23]	$966	$973	$933
C	Annual mortgage increase	$97	$110	$102
D	Net annual cost of mortgage			

Individual Consumer Impact of Moving from the Wisconsin Amended 2009 IECC to the 2021 IECC and 2024 IECC

	2021 IECC		2024 IECC	
Metric	First-time Homebuyer	Average Homebuyer	First-time Homebuyer	Average Homebuyer
LCC Savings of 2021 (Year 30)	$10,601	$10,630	$11,812	$11,843
LCC Savings of 2021 (Year 10)	$1,618	$1,351	$2,396	$2,116
LCC Savings of 2021 (Year 7)	$677	$341	$1,206	$854
LCC Savings of 2021 (Year 5)	$172	$292	$538	$50??
Net Annual Consumer Cash Flow Year 1 of the 2021 IECC	$183	$222	$269	$310
Years to positive cumulative cash flow	4	6	3	5
Annual (year 0) energy cost savings of the 2021 IECC	$817	$817	$968	$933
Annual energy cost savings of the 2021 IECC	21%	21%	24%	24%
Simple payback period (years)	11.8	11.8	10.9	10.9

Simple Pay Back

Simple Payback Period for the 2021 IECC Compared to Wisconsin-amended 2009 IECC	
Climate Zone	**Simple Payback (Years)**
5A	12.6
6A	10.7
Average	11.8

Simple Payback Period for the 2024 IECC Compared to Wisconsin-amended 2009 IECC	
Climate Zone	**Simple Payback (Years)**
5A	10.4
6A	11.7
Average	10.9

Simple payback may oversimplify financial evaluations.
LCC is the primary metric DOE uses to determine the cost-effectiveness.

2021 and 2024 IECC (At-a-Glance) Overview

2021
Single Family, Heated Basement, Natural Gas

Cost: *5A* $12,005 *6A* $9,893

Savings: First-time Homebuyer $10,601;
Positive cash flow in 4 years

Average Homebuyer $10,630;
Positive cashflow in 6 years

Overall Savings: 21%*

WI Societal Benefit (30 years):
$3.26 billion in energy savings
Reduction in CO2 emissions by 25.8 MMT.

2024
Single Family, Heated Basement, Natural Gas

Cost: *5A* $11,549 *6A* $11,601

Savings: First-time Homebuyer $11,812;
Positive cash flow in 3 years

Average Homebuyer $11,843;
Positive cashflow in 5 years

Overall Savings: 24%*

WI Societal Benefit (30 years):
$3.62 billion in energy savings
Reduction in CO2 emissions by 28.8 MMT.

*Compared to the Wisconsin UDC (2009 IECC)

Wisconsin Cost-Effectiveness Analysis:

Appendix A

30 Year Cash Flow

	Down Payment	Loan Fees	Electric Savings	Gas Savings	Oil Savings	Loan Payment	Tax Deductions	Mortgage Insurance Payment	Property Tax Payment	Replacement Costs	Residual Value	Total Energy Savings	Net Cashflow	Cumulative Cashflow
time.0	-$773	-$80	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	-$853	-$853
year.1	$0	$0	$343	$465	$0	-$546	$114	-$51	-$151	$0	$0	$808	$174	-$679
year.2	$0	$0	$339	$460	$0	-$520	$107	-$48	-$147	$0	$0	$799	$191	-$488
year.3	$0	$0	$335	$454	$0	-$495	$101	-$46	-$143	$0	$0	$790	$206	-$282
year.4	$0	$0	$332	$449	$0	-$471	$94	-$44	-$140	$0	$0	$781	$220	-$62
year.5	$0	$0	$328	$444	$0	-$449	$88	-$42	-$136	$0	$0	$772	$234	$172
year.6	$0	$0	$324	$439	$0	-$427	$82	-$40	-$132	$0	$0	$764	$246	$419
year.7	$0	$0	$321	$435	$0	-$407	$77	-$38	-$129	$0	$0	$755	$258	$677
year.8	$0	$0	$317	$430	$0	-$388	$71	$0	-$125	$0	$0	$747	$305	$982
year.9	$0	$0	$314	$425	$0	-$369	$66	$0	-$122	$0	$0	$739	$314	$1,296
year.10	$0	$0	$310	$420	$0	-$352	$62	$0	-$119	$0	$0	$731	$322	$1,618
year.11	$0	$0	$307	$416	$0	-$335	$57	$0	-$116	$0	$0	$722	$329	$1,946
year.12	$0	$0	$303	$411	$0	-$319	$53	$0	-$113	-$291	$0	$714	$45	$1,991
year.13	$0	$0	$300	$406	$0	-$304	$48	$0	-$110	$0	$0	$706	$342	$2,333
year.14	$0	$0	$297	$402	$0	-$289	$45	$0	-$107	$0	$0	$699	$347	$2,680
year.15	$0	$0	$293	$397	$0	-$276	$41	$0	-$104	$0	$0	$691	$352	$3,032
year.16	$0	$0	$290	$393	$0	-$262	$37	$0	-$101	$0	$0	$683	$357	$3,389
year.17	$0	$0	$287	$389	$0	-$250	$34	$0	-$98	$0	$0	$676	$361	$3,751
year.18	$0	$0	$284	$384	$0	-$238	$31	$0	-$96	$0	$0	$668	$365	$4,116
year.19	$0	$0	$281	$380	$0	-$227	$27	$0	-$93	$0	$0	$661	$368	$4,484
year.20	$0	$0	$277	$376	$0	-$216	$24	$0	-$91	$0	$0	$653	$371	$4,855
year.21	$0	$0	$274	$372	$0	-$206	$22	$0	-$88	$0	$0	$646	$374	$5,229
year.22	$0	$0	$271	$368	$0	-$196	$19	$0	-$86	$0	$0	$639	$376	$5,606
year.23	$0	$0	$268	$364	$0	-$186	$16	$0	-$84	$0	$0	$632	$378	$5,984
year.24	$0	$0	$265	$360	$0	-$178	$14	$0	-$81	-$210	$0	$625	$170	$6,154
year.25	$0	$0	$262	$356	$0	-$169	$12	$0	-$79	$0	$0	$618	$381	$6,535
year.26	$0	$0	$260	$352	$0	-$161	$10	$0	-$77	$0	$0	$611	$382	$6,917
year.27	$0	$0	$257	$348	$0	-$153	$7	$0	-$75	$0	$0	$604	$383	$7,301
year.28	$0	$0	$254	$344	$0	-$146	$5	$0	-$73	$0	$0	$598	$384	$7,685
year.29	$0	$0	$251	$340	$0	-$139	$4	$0	-$71	$0	$0	$591	$384	$8,069
year.30	$0	$0	$248	$336	$0	-$133	$2	$0	-$69	$0	$2,148	$584	$2,532	$10,601

Cashflow Analysis of homes built to the 2021 and 2024 IECC compared to the Wisconsin-amended 2009 IECC for:

First-time home buyers
Average home buyer

	Down Payment	Loan Fees	Electric Savings	Gas Savings	Oil Savings	Loan Payment	Tax Deductions	Mortgage Insurance Payment	Property Tax Payment	Replacement Costs	Residual Value	Total Energy Savings	Net Cashflow	Cumulative Cashflow
time.0	-$773	-$80	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	-$853	-$853
year.1	$0	$0	$343	$465	$0	-$546	$114	-$51	-$151	$0	$0	$808	$174	-$679
year.2	$0	$0	$339	$460	$0	-$520	$107	-$48	-$147	$0	$0	$799	$191	-$488
year.3	$0	$0	$335	$454	$0	-$495	$101	-$46	-$143	$0	$0	$790	$206	-$282
year.4	$0	$0	$332	$449	$0	-$471	$94	-$44	-$140	$0	$0	$781	$220	-$62
year.5	$0	$0	$328	$444	$0	-$449	$88	-$42	-$136	$0	$0	$772	$234	$172
year.6	$0	$0	$324	$439	$0	-$427	$82	-$40	-$132	$0	$0	$764	$246	$419
year.7	$0	$0	$321	$435	$0	-$407	$77	-$38	-$129	$0	$0	$755	$258	$677
year.8	$0	$0	$317	$430	$0	-$388	$71	$0	-$125	$0	$0	$747	$305	$982
year.9	$0	$0	$314	$425	$0	-$369	$66	$0	-$122	$0	$0	$739	$314	$1,296
year.10	$0	$0	$310	$420	$0	-$352	$62	$0	-$119	$0	$0	$731	$322	$1,618
year.11	$0	$0	$307	$416	$0	-$335	$57	$0	-$116	$0	$0	$722	$329	$1,946
year.12	$0	$0	$303	$411	$0	-$319	$53	$0	-$113	-$291	$0	$714	$45	$1,991
year.13	$0	$0	$300	$406	$0	-$304	$48	$0	-$110	$0	$0	$706	$342	$2,333
year.14	$0	$0	$297	$402	$0	-$289	$45	$0	-$107	$0	$0	$699	$347	$2,680
year.15	$0	$0	$293	$397	$0	-$276	$41	$0	-$104	$0	$0	$691	$352	$3,032
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year.18	$0	$0	$284	$384	$0	-$238	$31	$0	-$96	$0	$0	$668	$365	$4,116
year.19	$0	$0	$281	$380	$0	-$227	$27	$0	-$93	$0	$0	$661	$368	$4,484
year.20	$0	$0	$277	$376	$0	-$216	$24	$0	-$91	$0	$0	$653	$371	$4,855
year.21	$0	$0	$274	$372	$0	-$206	$22	$0	-$88	$0	$0	$646	$374	$5,229
year.22	$0	$0	$271	$368	$0	-$196	$19	$0	-$86	$0	$0	$639	$376	$5,606
year.23	$0	$0	$268	$364	$0	-$186	$16	$0	-$84	$0	$0	$632	$378	$5,984
year.24	$0	$0	$265	$360	$0	-$178	$14	$0	-$81	-$210	$0	$625	$170	$6,154
year.25	$0	$0	$262	$356	$0	-$169	$12	$0	-$79	$0	$0	$618	$381	$6,535
year.26	$0	$0	$260	$352	$0	-$161	$10	$0	-$77	$0	$0	$611	$382	$6,917
year.27	$0	$0	$257	$348	$0	-$153	$7	$0	-$75	$0	$0	$604	$383	$7,301
year.28	$0	$0	$254	$344	$0	-$146	$5	$0	-$73	$0	$0	$598	$384	$7,685
year.29	$0	$0	$251	$340	$0	-$139	$4	$0	-$71	$0	$0	$591	$384	$8,069
year.30	$0	$0	$248	$336	$0	-$133	$2	$0	-$69	$0	$2,148	$584	$2,532	$10,601

Wisconsin Resources

2024 Model Energy Code Key Changes and the Wisconsin Uniform Dwelling Code

This document provides an introductory overview of the key provisions of the **Residential 2024 International Energy Conservation Code (2024 IECC)**. For some components of the 2024 code, a comparison is made to the current WI UDC based on the 2009 IECC with amendments, the model residential 2009 IECC, and the model residential 2021 IECC.

The International Code Council (ICC) published the 2024 International Energy Conservation Code (IECC) on August 14, 2024. The IECC is a model code that sets minimum requirements for energy efficiency for residential and commercial buildings.

OVERVIEW MAJOR RESIDENTIAL CHANGES relevant to Wisconsin climate zones five and six

(See *Figure 1* on page 2):

- Ceiling insulation requirements revert to less insulative 2018 IECC levels,
- Enhanced design flexibility is permitted for wall insulation in Climate 5.
- The prescriptive compliance path requires additional efficiency practices from a table of measures with assigned credits (points) with a size of structure multiplier.
- The performance compliance path has been revised and expanded to allow equipment trade-offs and consider the location of ducts.
- The Energy Rating Index (ERI) compliance path has been updated for usability.
- Provisions for existing buildings are updated.
- The 2024 IECC includes several appendices that states and municipalities can elect to adopt. Example of new appendices address:
  - Electric Energy Storage Provisions
  - Electric Vehicle Charging Infrastructure
  - Appendix NG—2024 IECC Stretch Code
  - Operational Carbon Rating and Energy Reporting
  - On-site Renewable Energy
  - Electric-Ready and All-Electric Residential Building Provisions

2024 IECC NATIONAL SAVINGS

The Department of Energy issued a 2024 IECC Residential code analysis, the results of which indicate that residential buildings meeting the 2024 IECC incur the following savings compared to the 2021 IECC on a weighted national average basis:

- 7.80 percent annual site energy use intensity (EUI);
- 6.80 percent annual source EUI;
- 6.60 percent annual energy cost; and
- 6.51 percent carbon emissions.

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2024 IECC Energy Code Key Changes and the Wisconsin Uniform Dwelling Code

This is an overview document of the 2024 IECC residential changes. It also compares the major compliance options of the 2024, 2021, and 2009 IECC with Wisconsin UDC.

2021 IECC Residential comparison document www.slipstreaminc.org/codes

Building a Strong Foundation for Wisconsin Energy Codes

Wisconsin Stakeholder Priorities and Preferences for Building Energy Code Adoption

Clean Wisconsin and Slipstream staff conducted stakeholder engagement interviews in late 2024 to better understand concerns and barriers regarding code adoption and compliance. These interviews focused on identifying obstacles to the successful adoption and implementation of building energy codes. Stakeholders most directly impacted by energy codes were interviewed across Wisconsin. All stakeholders recognized the value and importance of codes, but there was a significantly diverse range of opinions regarding the content and requirements of those codes.

Wisconsin currently utilizes the 2009 International Energy Conservation Codes (IECC) for residential construction and the 2015 IECC for commercial buildings. The two latest national energy codes are the 2021 and 2024 IECC. The interview team found that different stakeholder groups perceive the impact of updating energy codes differently. Commercial developers and residential builders primarily focus on the costs associated with energy codes, particularly the initial cost impact. Conversely, building design professionals, code officials, and commercial builders focused more on the potential benefits of updating the code and the challenges associated with workforce development and training on new codes.

Four core themes were identified:

1. **Differing priorities may complicate communication around code updates.** Interviewees who expressed viewpoints opposing building energy code updates emphasized the upfront cost impacts of updated codes and the payback periods. In contrast, those who voiced support for energy code updates tended to highlight potential energy savings and the public benefits of reducing energy consumption (lower utility bills, comfort, reduced emissions).
2. **Most stakeholders recognize a potential increase in the upfront cost of construction, but there is broad disagreement about the overall cost impact of updated codes.** Although information exists about the potential upfront costs and payback periods for advancing energy codes, the data may have a limited impact on stakeholders' viewpoints because different sources often produce dissimilar cost analyses. Sources like the National Association of Home Builders estimate up to an $8000 incremental cost increase. In contrast, other sources like the Pacific Northwest National Laboratory estimate the incremental residential home cost to be approximately $ 5,800.
3. **The construction industry faces broader workforce-related challenges that impede training and increase construction costs.** We heard from stakeholders that there is a shortage of skilled tradespeople, raters, and building code inspectors. Stakeholders mentioned learning a new code would be difficult, especially with an already time-constrained workforce.
4. **The code adoption update process is opaque and frustrating for many stakeholders.** Those formally involved in the code adoption process have a generally positive view. Still, they want it to be an administrative rulemaking process rather than involving the legislature. On the other hand, those who have not been a part of the formal process find it frustrating and challenging to participate in code updates.

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Wisconsin Stakeholder Interviews

1) **Differing priorities may complicate communication around code updates.**

2) **Most stakeholders recognize a potential increase in the upfront cost of construction, but there is broad disagreement about the overall cost impact of updated codes.**

3) **The construction industry faces broader workforce-related challenges that impede training and increase construction costs.**

4) **The code adoption update process is opaque and frustrating for many stakeholders.**

Wisconsin Baseline Study

New Construction Baseline Study: Single Family, Multifamily and Commercial

Help shape the future of construction practices!

The Building a Strong Foundation for Wisconsin Energy Codes program includes the first ever comprehensive field study examining new construction practices in single-family homes, multifamily buildings, and commercial buildings through the state of Wisconsin. The results of this study will validate impacts of energy codes and other energy efficiency initiatives, identify training opportunities, and benchmark technology trends in single-family, multifamily, and commercial new construction.

Are you interested in being part of the study?

By joining our study, you can help provide valuable information that will be used to understand how new construction practices align with building energy codes. We are currently looking for new single-family, multifamily, and commercial buildings to join our study. All information we collect in this study will be kept confidential and anonymous. Findings will be reported in aggregate and not on individual municipalities or buildings.

About Us

The Building a Strong Foundation for Wisconsin Energy Codes program is an initiative aimed at strengthening the resilience and sustainability of buildings throughout Wisconsin.

THIS PROJECT is supported by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under the Building Technologies Office—DE-FOA-0002813—Bipartisan Infrastructure Law Resilient and Efficient Codes Implementation.

Eligible buildings include

We are currently looking for buildings in one of two phases:

1. **Pre-drywall phase:** The building shell is constructed and insulation is install but interior drywall not installed.
2. **Final phase:** This is different depending on the type of building in the study:
   a. **Single-family:** The building is essentially complete with no occupancy.
   b. **Multifamily and commercial buildings:** The building is complete with early occupancy and typical operations.

How to participate

What's involved:

- **For commercial and multifamily buildings:** (1) a review of your design and construction documents and (2) a site visit to observe key building practices
- **For single family:** a site visit to observe key building practices

To participate, scan the QR below and fill out the form at the bottom of the webpage or send an email to **info@wienergycodes.org.**

Your input will help inform smarter, more efficient building methods and improve industry standards. We are offering a generous Home Depot gift card for those that participate.

SCAN ME

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Building a Strong Foundation for Wisconsin Energy Codes

Wisconsin Energy Code Technical Advisor

Program Details

The Wisconsin Energy Code Technical Advisor program provides expert, no-cost, individually tailored assistance, training, and education to stakeholders across Wisconsin on the energy provisions of the Uniform Dwelling Code and commercial energy code. The goal of this work is to help stakeholders obtain the full benefits of improved compliance through a greater understanding of code requirements, best practices and building science.
While the Energy Code Technical Advisor does not issue official code interpretations, the advisor will share best practices and tailored information to participants to help address challenging provisions in the UDC or commercial energy code.

Pre-Training Survey

Scan this QR code to get involved and answer a brief survey on your experience with building codes.

You can also access the survey here.

SCAN ME

Who Should Participate

This program is designed to support and assist code officials, home builders, design professionals, general contractors, subcontractors, site superintendents, energy raters, material supply houses, and others working in residential and commercial construction.

Program Services Include

- **Virtual, In-Office, or Job Site Visits**
- **One-on-one and Small Group Consultations**
- **In-Person Trainings**
- **Live Webinars**

And more, all at no cost to you!

Contact

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Upcoming Trainings (CEUs Provided)

Code officials, home builders, design professionals and other construction professionals in Wisconsin are encouraged to explore the many upcoming training opportunities administered by the Wisconsin Energy Code Technical Advisor. To register for in-person and virtual events, visit https://www.wienergycodes.org/.

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Thank You!

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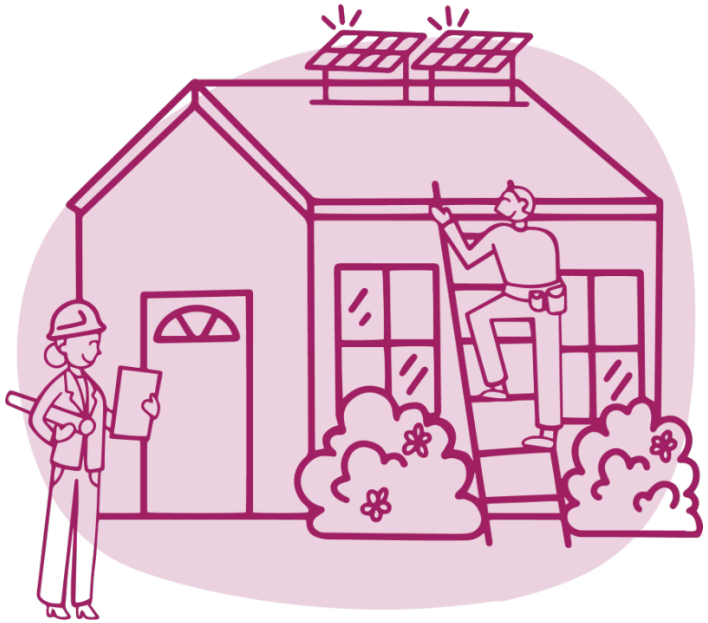

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