

Wisconsin's Commercial Energy Code Update: A Step Toward Resilient, More Efficient Buildings

Introduction

Building energy codes are one of Wisconsin's most significant opportunities for reducing energy costs and emissions. Building energy codes establish minimum standards for energy-efficient design and construction, ensuring that new and renovated buildings are both cost-effective and resilient. They address insulation, windows, HVAC systems, lighting, and renewable readiness. Wisconsin's commercial buildings are required to follow either the International Energy Conservation Code (IECC) or ASHRAE Standard 90.1. The state adopts and updates codes to reflect technological advancements and state goals. Recently, Wisconsin adopted and began enforcement of the IECC 2021 commercial codes, which means lower energy bills, improved housing affordability, and strengthened energy security.

Why Energy Codes Are Important

Economic Benefits: Lower energy bills for homeowners, schools, and businesses; reduced strain on Wisconsin's power grid; and job creation in construction and advanced manufacturing.

Resilience and Reliability: Modern codes improve building durability and passive survivability during power outages or extreme weather events. Increased efficiency also reduces strain on the electrical grid, helping prevent outages and reducing the need for costly peak-load generation.

Environmental and Energy Security: Reduced emissions, lower fuel consumption, and alignment with Wisconsin's clean energy objectives.

Public Health and Community Benefits: Enhanced indoor air quality and thermal comfort for all residents, particularly vulnerable populations. Reduced spending on energy enables households, particularly low-income families, to allocate their income toward other essential needs. Additionally, the improved indoor air quality and lowered emissions associated with energy codes lower health stressors, such as asthma and mold.



Wisconsin and Neighboring States

By adopting the 2021 IECC update, Wisconsin joins Minnesota and Illinois, which are currently on the 2021 IECC for commercial buildings. Having consistent codes with our neighbors ensures our building stock doesn't fall behind, encourages efficient supply chains, and can streamline code compliance.

Energy Code Impact

Buildings designed to meet the 2021 IECC use less energy for heating, cooling, and lighting, resulting in significant cost savings over time.

The 2021 IECC is estimated to improve site energy efficiency by 17.2%, the national average, for commercial buildings compared to the 2015 IECC, depending on building type.¹

A 50,000 square foot office building in northern Wisconsin (Climate Zone 6A), built to the 2021 IECC code, would save an estimated 14.1% in energy costs or \$10,480 per year compared to one built to the 2015 code.²

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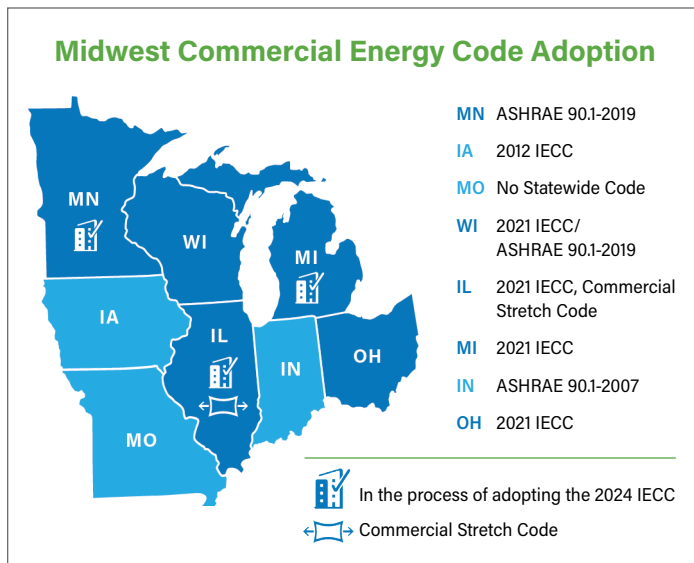
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Wisconsin Code Adoption Process

Wisconsin law requires updates to energy codes every three years. The process takes 24–30 months and includes review and recommendations from state code committees, departmental offices, and legislative review.

On September 1, 2025, the Wisconsin Department of Safety and Professional Services (DSPS) issued final rules to adopt the 2021 International Energy Conservation Code (IECC) commercial provisions as the state code, effective November 1, 2025. The DSPS rules also reference ASHRAE 90.1-2019 for commercial code compliance and specific design considerations. The current updates replace the state's previous 2015 IECC and ASHRAE 90.1-2013 standards.



Significant Changes 2015 IECC to 2021 IECC

The 2021 IECC changes incorporate the latest advances in building science while keeping flexibility for architects, engineers and builders.

Flexible prescriptive compliance options: allow building owners and designers to choose from energy-efficient compliance paths and Additional Energy Options (AEOs) that best apply to the project.

Optional performance-based paths: Allow designers to achieve efficiency goals through innovative methods that balance design intent and cost.

Tighter building envelopes: Improved air-sealing and insulation reduce heat loss and drafts. This helps the building maintain a cool or warm temperature for extended periods.

Updated mechanical system requirements: Stricter efficiency standards for HVAC equipment and controls, ensuring better building comfort and reduced energy costs.

More efficient lighting systems: Expanded use of LEDs, daylighting controls, and occupancy sensors. This is a cost-effective code element that can lead to significant energy savings.

Stricter commissioning standards: Ensure systems work as intended, lowering operational deficiencies.

Find Out More

If you are interested in learning more about energy codes, see the resources page at [Wienerycodes.org](https://www.energycodes.org) or the Department of Energy's [Wisconsin energy codes state profile](#).

¹ J Maddox, Energy and Energy Cost Savings Analysis of the 2021 IECC for Commercial Buildings, September 2022 https://www.energycodes.org/sites/default/files/2022-09/2021_IECC_Commercial_Analysis_Final_2022_09_02.pdf

J Zhang, Energy and Energy Cost Savings Analysis of the 2018 IECC for Commercial Buildings, December 2018 https://energycodes.gov/sites/default/files/2020-07/2018_IECC_Commercial_Analysis_Final.pdf

J Zhang, Energy Savings Analysis: ANSI/ASHRAE/IES Standard 90.1-2019, July 2021 https://www.energycodes.gov/sites/default/files/2021-07/Standard_90.1-2019_Final_Determination_TSD.pdf

² The above numbers are aggregated /estimates for Wisconsin, (weighted across common commercial prototype models). Actual savings for a specific building depend on building type, operations, loads, and building design.