



What's in the Commercial Draft of the 2024 IECC?

Background

The International Code Council (ICC)'s 2024 International Energy Conservation Code (IECC) provisions are in the final stages of development.

- The second public comment period ended June 30, 2023.
- A [monograph of public comments](#) was posted to the ICC website July 2023.
- The [Committee Action Report](#) on these comments was released September 18, 2023.

According to the ICC, the Consensus Committee concluded the balloting process for approved changes to the Public Comment Draft #2 on November 2, 2023. The final result was approval of all balloted code changes by 2/3 vote. All approved items from the Committee Action Report will be incorporated into the Final Draft of the 2024 IECC. The submittal period for appeals is currently underway. The deadline for submitting appeals has been [extended](#) to January 2, 2024. For more information, please visit the [Commercial Consensus Committee webpage](#) and [NEEP's 2024 IECC webpage](#).

In 2022, NEEP published an initial [resource summarizing the provisions of the first draft](#) of the 2024 IECC. This resource has been updated and amended to reflect changes that appear in the second draft.

Pacific Northwest National Laboratories (PNNL) [estimates](#) the site energy savings of the 2024 Commercial IECC is 10.6 percent before factoring in renewable energy, or 16.4 percent after factoring in renewable energy compared to the 2021 IECC.

Key Takeaways

The provisions discussed in this document present a few of the changes and updates in this draft code. There are other proposals not included in this document. This document focuses on proposals that significantly impact energy use. A full list of updates may be found in the draft [here](#).

The outlined proposals refer to new or updated provisions within the 2024 IECC draft. Those delineated in red refer to entirely new sections that were not included in a previous code. Those delineated in orange refer to changes to the first draft of the IECC in response to public comments.

- **Building Envelope Requirements (C402)**
 - **C402.1.3 Increased Insulation Requirements:** Updates the insulation R-Value requirements for metal and wood framed exterior walls.
 - **NEW C402.7 Guidance on Thermal Bridging in Exterior Walls:** A thermal bridge is a component of the building thermal envelope that transfers heat through the assembly by way of construction materials (such as steel). This new language intends to reduce thermal bridges, which will mitigate heat loss through the building's envelope.
- **Building Mechanical Systems (C403)**
 - **NEW C403.4.6-C403.4.8 Demand Responsive Controls for Heating and Cooling Systems:** These controls respond to occupant needs and will adjust the temperature based on the number of occupants present at a given time.
 - **NEW C403.7.8 Occupant Sensors for Ventilation:** These sensors will respond to movement, which will reduce the system's energy consumption when the building is unoccupied.
- **Electrical Power and Lighting Systems (C405)**



- **C405.2.3 Lighting Dimmer Controls and Demand Responsive Controls:** These controls will adjust the lighting intensity based on occupant needs, which will reduce lighting loads when there is less demand.
- **NEW C405.14 Electric Vehicle Charging Infrastructure:** New buildings are required to have a certain number of spaces dedicated to electric vehicles, depending on the type of building and use. The number of required spaces has increased from the previous version of the 2021 IECC.
- **NEW C405.15 Mandatory Requirements for On-Site Renewable Energy Generation:** New buildings are required to generate renewable energy (such as solar) on site, with options for off-site generation if on-site is not possible.
- **NEW C405.16 Mandatory Requirements for On-Site Energy Storage Systems:** New buildings need to either store electricity on site or have the infrastructure in place for future capability.
- **Additional Efficiency, Renewable, and Load Management Requirements (C406)**
 - This section builds on a point system created for the 2021 IECC, requiring a certain number of energy efficiency “credits” to comply with the code. In addition to requiring more credits, this updated version provides a wider range of efficiency measures that are eligible to earn credits, giving builders more opportunity for tradeoffs and flexibility/choice in design. **Draft 2 includes language requiring more efficiency credits if the building is not using heat pumps for space or water heating and limits the number of credits that can be carried over from renewable energy systems.**
- **NEW Calculation of HVAC Total System Performance Ratio (C409)**
 - This section establishes a computer-based model on HVAC total system performance, which factors in all parts of the HVAC design plan instead of modeling the system as individual parts. This allows for better understanding of how effective an HVAC system may be; based on equipment efficiency, type, insulation, design loads, etc.

Appendices

- **Appendix CC: Zero Energy Commercial Buildings Provisions:** This Appendix was included in the 2021 IECC but has been updated to reflect higher prescriptive renewable energy requirements with an updated table with more building types and changing the units from one thousand British thermal units (kBtu) to kilowatt hours (kWh).
- **NEW Appendix CD: The 2030 Glide Path:** This new Appendix in the 2024 IECC is used to scale up efficiency measures for states to meet their emissions reduction goals by 2030. It specifically requires the number of efficiency credits to increase by **1.4 times the number as noted for Prescriptive Compliance**; the percentage of annual energy costs used in the standard reference design to decrease by two percent for Total Building Performance Compliance; or installing additional on-site or off-site renewable electricity systems in addition to what was previously required for compliance with energy efficiency credits.
- **NEW Appendix CE: Required HVAC TSPR:** This new Appendix is used for jurisdictions that want to adopt a stretch code or HVAC incentive system, so it amends the section relating to Building Mechanical Systems with stricter requirements that provide an additional five percent reduction in HVAC energy use.
- **NEW Appendix CF: Energy Credits:** This new Appendix pushes for an advanced energy credit package and increases the number of energy credit requirements for all building types.
- **NEW Appendix CG: All Electric Commercial Building Provisions:** Adds guidance for new and existing commercial buildings to become all electric
- **NEW Appendix CH: Electric-Ready Commercial Building Provisions:** Adds guidance for new and existing commercial buildings to become electric ready.

Disclaimer: The information presented in this document is subject to change based on public comments and further committee updates. A final draft of the 2024 IECC is expected to be published in mid to late 2023

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