

The Colorado Model Low Energy and Carbon Code is a new initiative driven by House Bill 22-1362, aiming to establish state-minimum energy standards for new and renovated homes and commercial buildings. This model code, which must be published by September 1, 2025, and adopted by municipalities and counties that update their adopted building codes after July 1, 2026, prioritizes minimizing carbon dioxide emissions, maintaining housing affordability, and providing compliance pathways for both all-electric and mixed-fuel buildings.

Key aspects of the commercial provisions, based on the 2024 International Energy Conservation Code (IECC) with specific Colorado amendments, include:

- **Waivers (C111):** Provisions are included for waivers from certain requirements in cases of natural disasters or substantial cost differentials for large commercial buildings (over 10,000 sq ft) where compliance would exceed 1% of total mechanical, electrical, and plumbing construction costs. **CCOB has amended out the waiver for substantial cost differentials with the Electric Ready and Solar Ready code adoption and will maintain this with the new adoption - this is considered a strengthening amendment.**
- **Definitions (C202):** New definitions are introduced for terms crucial to energy efficiency, such as various types of Electric Vehicle (EV) readiness (e.g., EV Ready Space, EVSE Installed Space), different levels of Electric Vehicle Supply Equipment (EVSE), Combustion Equipment, Fuel Gas, Fuel Oil, Future Electric Equipment, Lighting Zones (LZ0-LZ4), Luminaire, and Solar-Ready Zone.
- **ASRAE 90.1 (section C401.2.2)** - This section, which allowed designers to follow the ASRAE 90.1 as an alternate has been deleted in its entirety - designers can only use requirements from the IECC
- **Strengthened Building Envelope and Systems (Section C402.6.1):** Amendments include enhanced requirements for air barrier design, construction, and inspection, and controls for heat pump supplementary heat to limit its operation.
- **Demand Response (Section C403.4.6, C404.10):** New sections mandate demand-responsive controls for electric heating and cooling systems, and for electric storage water heaters, enabling them to adjust operation in response to demand signals.
- **Lighting Controls (C405.2.8):** Expanded daylight-responsive controls and new demand-responsive lighting controls are required for general lighting in Group B (business), E (Educational), M (mercantile), and S (storage) occupancies (with exceptions for smaller areas and specific building types).
- **Energy Monitoring (C405.13):** New buildings 25,000 sq ft or more are required to measure, monitor, record, and report energy consumption across various load and end-use categories. Exceptions are for dwelling units in R-2 occupancies and individual tenant spaces less than 25,000 s.f. with their own utility services and meters.
- **Renewable Energy Systems (C405.13):** Deleted the entire section that requires either on-site or off-site renewable energy systems from the body of code - added new appendix with requirements for on-site or off-site renewable energy systems
- **Additional Energy Credits (C406):** This section has been significantly revised, replacing previous compliance methods. Buildings with a conditioned floor area greater than 2,000 sq ft (or build-outs greater than 1,000 sq ft) must achieve a specified number of energy credits.
 - **Tiered Credit Requirements:** The number of required energy credits varies based on building occupancy group, climate zone, and whether the building uses combustion equipment for space or water heating.

- **Renewable Energy Limits:** There are specific limits on the number of energy credits that can be achieved through renewable energy (R01).
 - **Core and Shell / First Tenant Finish:** Specific credit requirements and adjustments are outlined for projects with separate permits for core and shell and first tenant finish construction.
 - **Load Management Incentives:** Energy credit measures in the renewable energy and load management category (G01-G07) specifically require controls capable of and configured for automated load management operations in response to demand response signals.
 - **New Credit Measures:** Several new energy credit measures have been introduced, including evaporative cooling (H06), high efficiency heating credit alignment (H07), and building thermal mass (G07), indicating a broader approach to energy efficiency
 - **Mixed fuel buildings:** Requires approximately 50% more credits for buildings with combustion equipment (using gas) than all-electric buildings. There are also restrictions on how many energy credits can be used from renewable energy.
- **Commercial Electric Ready, Solar Ready, and EV Ready (Section C410):** This new section integrates the Electric Ready and Solar Ready code that is already adopted by Broomfield. It includes comprehensive requirements for preparing commercial and multifamily buildings 4 stories or higher in height for future electrification, solar energy, and electric vehicle charging.
 - **Electric Ready:** Mandates dedicated branch circuits, appropriately sized electrical panel space, and proper labeling for future electric equipment for space heating, water heating, cooking, and clothes drying, where combustion equipment is currently installed. It also requires provision for condensate drainage.
 - **Solar Ready:** Outlines requirements for a designated solar-ready zone on roofs of single-family homes and townhouses, including construction document specifications.
 - **EV Ready:** Specifies requirements for EV-ready spaces, including conduit, raceway, electrical panel capacity, wiring, receptacles, and circuit overprotection devices for future EV charging installations.
 - **EV Parking Table** - amended the number of parking spaces for commercial buildings with small lots from 10 to 15 spaces, and added requirement to provide at least 20% or a minimum of 2 spaces to be EV Ready.
 - **EV capable light spaces** - added exception to allow a conduit with pull string to a location of a future transformer or future electrical panel with service size determined at time of future permit.

This comprehensive code aims to significantly advance energy efficiency and carbon reduction in Colorado's built environment by establishing clear standards, incentivizing advanced technologies, and promoting demand-side management. Based on the numerous amendments to encourage the use of non-combustion equipment this code can be considered as an electric preferred code