



Town of Crested Butte 2021 Building Code Information

Starting January 1, 2023, the Town of Crested Butte will be enforcing the following building codes to ensure the health and safety of our citizens, as well as contribute to meeting the Town's Climate Action Goals of promoting energy efficiency and facilitating renewable energy. The following provisions apply to building permits within the Town of Crested Butte. All permit applications and permit sets submitted after December 31, 2022, will need to be designed under the newly adopted codes.

COMMERCIAL CONSTRUCTION

New Construction

In addition to meeting the 2021 International Building Code (IBC), International Mechanical Code (IMC), International Fire Code (IFC), 2023 National Electrical Code (NEC), International Property Maintenance Code (IPMC), International Energy Conservation Code (IECC), 2023 National Electrical Code (NEC), 2021 International Fuel Gas Code (IFGC), and 2021 International Plumbing Code (IPC), new commercial construction shall also meet:

- **International Green Construction Code (IgCC)**
Provisions: IgCC provisions relating to water use reduction, interior environment materials and ventilation, insulation requirements, and solar heat gain coefficient requirements.
- **Solar Ready and Solar Requirements:** Commercial buildings less than 5,000 sq. ft. are required to be "solar ready" per IgCC Section 701.3.2. Commercial buildings 5,000 sq. ft. and larger are required to install solar PV panels per the on-site energy systems size provision IgCC Section 701.3.2, up to a maximum of Gunnison County Electric Association's net metering limits.
- **Electric Vehicle Charging and Readiness Requirements:** All commercial buildings that trigger two or more parking spaces per the Town's zoning code shall install one level II electric vehicle charger per building. In addition, 10% of all parking spaces (rounded up) shall be Electric Vehicle Ready, meaning the circuit breaker is installed in the electrical panel, and conduit and wire are run to a parking space.
- **Electric Required:** All new buildings are required to use electricity for heating, hot water heating, and appliances. Commercial kitchen appliances are exempt from the building electrification requirement.

Remodels

All commercial remodels are required to adhere to the 2021 International Existing Building Code (IEBC), as well as the provisions in the IgCC. The remodel will require additional provisions if the project classifies as a Level 3 alteration, based on the work area definition of "the portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents". If you are renovating more than 50% of the work area, level 3 commercial remodels shall also meet:

- **Solar Ready and Solar Requirements:** Alteration level 3 classified commercial buildings less than 5,000 sq. ft. are required to be "solar ready" per IgCC Section 701.3.2. Commercial buildings 5,000 sq. ft. or larger are required to install solar PV panels per on-site energy systems size provision IgCC Section 701.3.2, up to a maximum of Gunnison County Electric Association's net metering limits.
- **Electric Vehicle Charging and Readiness Requirements:** Alteration level 3 classified commercial buildings that have two or more parking spaces per the Town's zoning code shall install one level II electric vehicle charger per building. In addition, 10% of all parking spaces (rounded up) shall be Electric Vehicle Ready, meaning the circuit breaker is installed in the electrical panel, and conduit and wire are run to a parking space.
- **Electric Ready:** Alteration level 3 classified commercial buildings shall meet the electric ready definition of installing a dedicated electric circuit, panel space, and location for condensate drainage for the gas heating systems and gas hot water heating systems, as well as a dedicated circuit and panel space for gas appliances such as cooking stoves and gas dryers.

RESIDENTIAL CONSTRUCTION

New Construction

In addition to meeting the 2021 International Residential Code (IRC), International Energy Conservation Code and International Fire Code (IFC), 2023 National Electrical Code (NEC), 2021 International Fuel Gas Code (IFGC), and 2021 International Plumbing Code (IPC,) new residential construction shall also meet:

- **Sprinkler Requirements:** All shared wall units including duplexes, triplexes, quadplexes, and multifamily units shall meet the IFC Chapter 9 provisions.
- **Department of Energy Zero Energy Ready Home (ZERH) Certification:** New residential construction will need to achieve [ZERH \(latest version\)](#) certification which recognizes builders for increasing energy efficiency, improving indoor air quality, and making homes zero energy ready. Certification can be achieved through the prescriptive or performance pathway, which includes a solar ready check list.
- **Electric Vehicle Readiness Requirements:** All new residential buildings shall provide one Electric Vehicle Ready parking space per dwelling unit, meaning the circuit breaker is installed in the electrical panel, and conduit and wire are run to a parking space.
- **Electric Required:** All new residential buildings are required to use electricity for heating, hot water heating, and appliances.
- **Solid Fuel Burning Devices:** All new residential buildings seeking to install a solid fuel burning device shall conduct a HERS assessment and achieve a score of 30 or lower.

Remodels

All residential remodels are required to adhere to the International Existing Building Code (IEBC), as well as:

- **Optional Home Energy Assessment:** The Town will subsidize home energy assessments for all remodels not classified as a level 3 project.
- **Solid Fuel Burning Devices:** Installing a solid fuel burning device to an existing home, a HERS assessment is required with a score of 50 or lower.

If you are renovating more than 50% of the work area, level 3 residential remodels shall also meet:

- **Historic Buildings:** Historic buildings classified as an alteration level 3 remodel shall meet the 2021 IECC without damaging the existing historic structure with BOZAR and Building Official oversight.
- **Home Energy Assessment:** Alteration level 3 classified residential remodels shall conduct and provide a copy of a home energy assessment report prior to building permit issuance.
- **Electric Vehicle Readiness Requirements:** Alteration level 3 classified residential buildings shall provide one Electric Vehicle Ready parking space per dwelling unit, meaning the circuit breaker is installed in the electrical panel, and conduit and wire are run to a parking space.
- **Electric Ready:** Alteration level 3 classified residential buildings shall meet the electric ready definition of installing a dedicated electric circuit, panel space, and location for condensate drainage for the gas heating systems and gas hot water heating systems, as well as a dedicated circuit and panel space for gas appliances such as cooking stoves and gas dryers.

How do I learn more about these new provisions?

Please view the resource library for educational links and educational webinars to support the transition to this new code.

Click on the link below to view a FAQ about the new codes.

TOWN OF CRESTED BUTTE - 2021 BUILDING CODE FREQUENTLY ASKED QUESTIONS

How do I learn more about these new provisions?

The Town is organizing a builder education series regarding the new building code. Please stay tuned for an educational webinar series in the Fall 2022 to learn more about the new code provisions.

Why is the Town requiring above code provisions in addition to the 2021 ICC family of building codes?

The 2021 building code adoption includes above code requirements that help implement the Town's 2019 Climate Action Plan. The new code seeks to reduce greenhouse gas emissions from new construction and significant remodels through increased building efficiency, onsite renewable energy opportunities, electrification, and electric vehicle charging stations by:

- Improving energy efficiency of the building envelope in all new construction
- Preparing new buildings to accommodate renewable energy and require large new buildings to supply renewable energy
- Preparing new buildings to accommodate electric vehicle chargers and require commercial buildings to install chargers
- Electrifying new buildings and preparing significant remodels for electrification

What was the process for adopting the 2021 building codes?

When the Town adopts the new building codes every six years, there has typically been little community engagement outside of the public hearing to approve the ordinance. However, because the Town was considering going above code, Town Staff planned a community engagement process to ensure that the construction community and community at-large had an opportunity to be aware of the potential changes to the code and to participate and share their feedback.

Town Staff first worked with Resource Engineering Group (REG) as technical advisors to review and research the 2021 codes and above code considerations from January – April 2022.

Community engagement commenced in Spring 2022, with a hybrid public meeting on May 25th which presented the draft above code considerations. The meeting was advertised virtually through the Town website, newspaper, radio, as well as two direct emails to the Town's list of building industry professionals. The public meeting additionally kicked off a public feedback period where members of the public could send comments to Town Staff regarding the considerations until June 10th.

The second round of community engagement included convening an advisory committee on June 14th comprised of two Town Council members, REG, architects, contractors, and building officials/inspectors from Mt. CB, Gunnison County, and City of Gunnison, to review and discuss feedback on the considerations and further refine the adoption considerations. During this time, staff also individually discussed the code considerations with other key stakeholders including Gunnison County Electric Association (GCEA) and Atmos Energy.

A third round of community engagement included work sessions with the Town Council and with BOZAR to review and discuss the considerations, which both were open to public participation.

Lastly, a fourth round of public feedback occurred during the adoption process, which included a first reading of the ordinance on July 18th and a public hearing on August 2nd.

Why is the Town requiring electrification for new construction?

Many local government climate action plans, including the Town’s CAP, include strategies of electrifying buildings to reduce direct fossil fuel usage in buildings and connect building energy use to an increasingly renewable energy grid. The Town is powered with electricity from GCEA, which purchases whole-sale power from Tri-State. As of April 2022, Tri-State has a Colorado Public Utilities Commission approved Electric Resource Plan which commits Tri-State to increasing their renewable energy portfolio and reducing their GHG by 80% by 2030 on the following trajectory:

Reduce GHG emissions by:

- 26% by 2025
- 36% by 2026
- 46% by 2027
- 80% by 2030

Increase renewable energy to:

- 50% by 2024
- 70% by 2030

Is our electricity less carbon intensive than natural gas?

While GCEA/Tri-State’s grid today is only about 34% renewable electricity, when accounting for methane leakage in extraction and distribution of natural gas, today’s grid is already less carbon intensive than natural gas.

The following chart shows a comparison of GHG emissions from energy use in a 3,000 sq ft single family home in Town. This analysis accounts for a 4.2% natural gas leakage rate, which is the current national average. The chart also shows three different scenarios, showing projected annual GHG emissions from the home in 2030 based on Tri-State’s commitment, as well as two scenarios showing if the homeowner chooses to install a 10 kW (maximized net-metered allowed size per GCEA) PV panels with today’s grid and 2030’s projected grid.

GHG Emissions Calculations for 3,000 sq ft home	Natural gas heating, hot water heating, and appliances	Electric heating, hot water heating, and appliances
Annual GHG Emissions from Energy Usage (<i>today’s grid</i>)	37,242 lbs. carbon (18.6 tons)	33,082 lbs. carbon (16.5 tons)
<i>Scenario: GHG Emissions (expected 2030 grid)</i>	28,863 lbs. carbon (14.4 tons)	7,982 lbs. carbon (4 tons)
<i>Scenario: GHG emissions with 10 kW solar (today’s grid)</i>	26,198 lbs. carbon (13.1 tons)	9,880 lbs. Carbon (4.9 tons)
<i>Scenario: GHG emissions with 10 kW solar (2030 grid)</i>	26,198 lbs. carbon (13.1 tons)	2,382 lbs. carbon (1.2 tons)

What does electrification have to do with indoor air quality?

Aside from improved energy efficiency and an increasingly renewable electricity grid, there are other intrinsic benefits to electrifying new construction. A report by the Rocky Mountain Institute [called “Gas Stoves: Health and Air Quality Impacts and Solutions”](#) identifies concerns of indoor air quality with using gas stoves in homes, which can contribute to elevated levels of nitrogen dioxide, which can influence increased risk of childhood asthma, aggravated respiratory symptoms, and irritated airways, among others.

Can GCEA handle increased electric load? Are there concerns about redundancy if the grid experiences an outage?

GCEA has sufficient capacity to handle increased electric load from new construction in the Town of Crested Butte. Concerns about grid outages, which are currently infrequent, are valid, but a grid outage would impact both homes with natural gas and electric heating systems as modern natural gas heating systems that meet the latest building code require electricity to operate. The Town does allow solid fuel burning devices which can help provide redundancy if a home meets a specified HERS rating. Backup generators are permitted and are enforced under the

International Mechanical Code (IMC) and International Fuel Gas Code (IFGC). Additionally, buildings meeting the new codes are expected to handle outages by retaining heat through a more efficient building envelope.

When will the building code be updated next?

While the Town was previously on a six-year building code adoption cycle, going forward the Town will update the building code every three years. The next building code adoption process will occur in 2025 and will also include a further integration with the Town’s zoning code and design standards and guidelines.

What rebates are available?

Gunnison County Electric Associate offers several rebates for electric heat pumps, hot water heaters, appliances, electric vehicles and chargers, LED lightbulbs, smart thermostats, outdoor power equipment, and more. More information about their rebate programs can be found at <https://www.gcea.coop/energy-efficiency/rebates/>.