



Staff Report

August 2, 2022

To: Mayor Billick and Town Council

From: Mel Yemma, Long-Range Planner and Astrid Matison, Chief Building Official

Thru: Troy Russ, Community Development Director

Subject: Ordinance No 13, Series 2022: An Ordinance of the Crested Butte Town Council Amending Chapter 18 of the Town Code to adopt by reference the 2021 International Building Code with amendments (18-1-10), the 2021 International Green Construction Code with amendments (18-1.5-10), the 2021 International Residential Code with amendments (18-2-10), the 2021 Existing Building Code with amendments (18-2.5-10), the 2021 International Mechanical Code with amendments (18-3-10), the 2021 International Fire Code with amendments (18-6-10), the 2021 International Energy Conservation Code with amendments (18-9-10), and various elements of Chapter 18 related to construction activities – Public Hearing

Summary:

This agenda item is the public hearing of Ordinance No. 13, Series 2022, an ordinance to adopt the 2021 building code. This memo (1) outlines minor edits and cleaned up language in the ordinance since the first reading on July 18, 2022, and (2) summarizes and answers questions identified by the Town Council. For reference, the staff report from the first reading is attached, which provides a comprehensive summary of the ordinance.

Ordinance Changes:

The following changes are included in the attached ordinance. The ordinance does not include any substantive changes from the first reading, but cleans up language and inconsistencies, as well as adds in missing provisions that were in the original intention of the building code adoption.

- Revised the definition of “All Electric Building” to exclude “Commercial Food Heat-processing Equipment,” and added a definition for “Commercial Food Heat-processing Equipment.”
 - o Sec. 18-1-30(2)
 - o Sec. 18-2-30(2)
 - o Sec. 18-9-20
- For commercial buildings more than 5,000 square feet, added a limitation to the solar panel requirement that reads:
 - “Solar requirements must not exceed any Gunnison County Electric Association net metering limitation in place at the time of building permit application.”
 - o Sec. 18-1-30(3)
 - o Sec. 18-2.5-30 (2)

- Sec. 18-9-40(b)(6)
- Sec. 18-9-50
- Added new building permit requirement to 18-13-40 as new subsection (e) to read:
 - “No permit shall be issued after February 1st, 2023 unless a current building contractor license is submitted. The building contractor license must meet Gunnison County building contractor licensing program requirements.”
- Added new definitions for:
 - **Combustion Equipment.** Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.
 - **Commercial Food Heat-processing Equipment.** Equipment used in a food establishment for heat-processing food or utensils and that produces grease vapors, steam, fumes, smoke, or odors that are required to be removed through a local exhaust ventilation system.
 - **Electric Heating Appliance.** A device that produces heat energy to create a warm environment by the application of electric power to resistance elements, refrigerant compressors, or dissimilar material junctions.
 - **Fuel Gas.** A gas that is natural, manufactured, liquefied petroleum, or a mixture of these.
- Sec. 18-1-30(2)
- Sec. 18-2-30(2)
- Sec. 18-9-20
- Updated the crowd manager requirement for large outdoor events to remove an exemption for 1,000 person outdoor events. Crowd managers are required for indoor or outdoor events of more than 500 people.
 - Sec. 18-6-20(5)
- Various citations to reference codes in amendments were updated; substance of the code amendments did not change.

Town Council Questions:

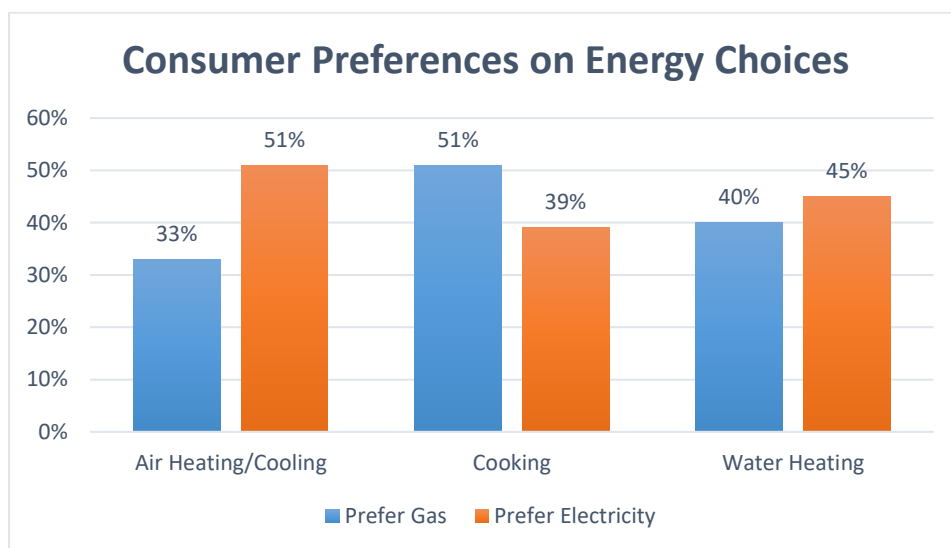
The following questions and requests for supplemental information were identified by the Town Council during the first reading on July 18th.

1. **Can you further explain the reasoning and cost implications for the electrification recommendation for new construction?**
 - a. **What is the overall landscape of electricity vs. gas use in buildings nationally compared to Colorado?**

At the Town Council meeting, Atmos Energy raised the point that over 75% of Colorado homes choose to consume natural gas. It was asked by the Council how this figure compares to national home energy usage and consumer preferences.

[A report by Climate Central](#) referenced U.S. census data showing that about 48% of homes nationally use natural gas for heating, while electricity is used in 37% of homes (14% use other fuels).

[A 2021 Survey about “What Homebuyers really want” by the National Association of Homebuilders](#) found the following preferences relating to electricity vs. gas for the following:



b. Is natural gas use in homes less carbon intensive than electric use today?

The primary reason for electrifying new construction is to reduce direct fossil fuel use in buildings and equip homes to use power from an increasingly renewable electricity grid. Atmos Energy additionally raised a claim that “today, a natural gas home in Colorado produces significantly lower emissions at less than half the cost when compared to an all-electric home”.

Emissions Reductions Commitments vs. Goals from Tri-State and Atmos Energy:

Electrification of new buildings is being recommended this year because the Town now has commitment that Tri-State Electricity and Generation, whom the Town receives electricity from as Gunnison County Electric Association’s wholesale provider, to significantly increase their renewable energy portfolio and reduce their greenhouse gas emissions 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

There was an assertion made in the Crested Butte news that the Town is betting on having an increasingly renewable energy grid, however, staff would like to clarify that this commitment from Tri-State is through a [Colorado Public Utilities Commission \(PUC\)-approved electric resource plan](#), which will have oversight from the PUC on ensuring Tri-State meets these goals.

Staff has asked Atmos Energy to provide their commitment to reducing their greenhouse gas emissions to take into consideration with their feedback on the 2021 building code recommendations. Atmos staff has not directly provided this information to staff, but research has found that [Atmos Energy has a voluntary company goal of reducing methane emissions in their natural gas distribution system by 50% by 2035](#).

Carbon Emissions Comparisons of Natural Gas vs. Electricity Today: While GCEA/Tri-State's grid today is only about 34% renewable electricity, natural gas has been asserted to produce less GHG emissions. However, when accounting for methane leakage from natural gas production and distribution, this claim is false.

Staff is working with REG to compare GHG emissions from a 3,000 sq ft house in Town modeled using the Department of Energy Zero Energy Home (ZERH) certification for building measures to improve energy efficiency.

The following chart shows a comparison of GHG emission from energy use (comparing a natural gas system to an electric system with heat pumps) 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 (explained further below). 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 two scenarios showing if the homeowner chooses to install a 10 kW (maximized net-metered allowed size per GCEA) (with today's grid and 2030's projected grid) on the home.

GHG Emissions Calculations	Natural gas heating, hot Water heating, appliances for 3,000 sq ft home example	Electric heating, hot water heating, Appliances for 3,000 sq ft home example
Annual GHG Emissions from Energy Usage (today's grid)	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)

If natural gas leakage is a large contributor of emissions and is happening no matter what, should we focus on reducing leakage rather than electrifying new buildings?

This question was posed by a Council member at the first reading. Natural gas leakage is an important consideration when it comes to impacts on carbon emissions.

The following chart shows multiple studies of methane leakage from natural gas infrastructure as a percent of national production, which shows the 4.2% average percent leakage, which staff is using to calculate the associated GHG emissions from natural gas compared to electricity. This chart is from a presentation by Naomi Wentworth from Local Government Sustainability Analytics and the studies¹ she references in the chart are provided in the footnote below.

¹ Studies References in Natural Gas Leakage Chart

80 “Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 -2014.” U.S. *Environmental Protection Agency*, 15 Apr 2016. <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf>

Burnham, Andrew, et al. “Lifecycle Greenhouse Gas Emissions of Shale Gas, Natural Gas, Coal, and Petroleum.” *Environmental Science and Technology*. 22 Nov 2011. <http://pubs.acs.org/doi/abs/10.1021/es201942m>

Burnham, Andrew, et al. “Lifecycle Greenhouse Gas Emissions of Shale Gas, Natural Gas, Coal, and Petroleum.” *Environmental Science and Technology*. 22 Nov 2011. <http://pubs.acs.org/doi/abs/10.1021/es201942m>

Brandt, A.R., et al. “Methane Leaks from North American Natural Gas Systems.” *Science Magazine*. Vol 343. Issue 6172 14 Feb 2014 <http://science.sciencemag.org/content/343/6172/733>

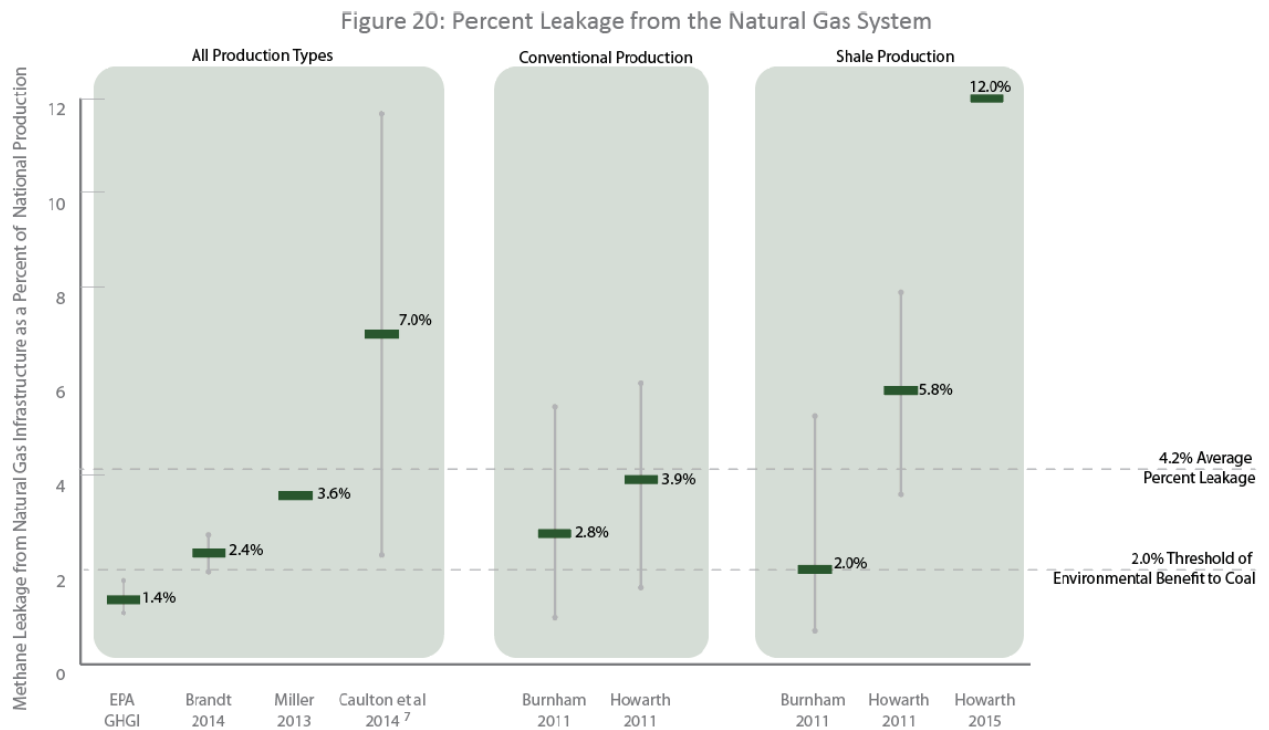
Howarth, Robert, et al. “Methane Emissions from Natural Gas Systems: Background Paper Prepared for the National Climate Assessment.” Cornell University, 25 Feb 2012. http://www.eeb.cornell.edu/howarth/publications/Howarth_et_al_2012_National_Climate_Assessment.pdf

Miller, Scot M., et al. “Anthropogenic emissions from methane in the United States.” *Proceedings of the National Academy of Sciences of the United States of America*. PNAS 2013 110 (50) 20018-20022, <http://www.pnas.org/content/110/50/20018.abstract>

Howarth, Robert, et al. “Methane Emissions from Natural Gas Systems: Background Paper Prepared for the National Climate Assessment.” Cornell University, 25 Feb 2012. http://www.eeb.cornell.edu/howarth/publications/Howarth_et_al_2012_National_Climate_Assessment.pdf

Caulton, Dana et al. “Toward a better understanding and quantification of methane emissions from shale gas development.” *Environmental Sciences Proceedings of the National Academy of Sciences*, Vol 111 No. 17.

Howarth, Robert W. “Methane emissions and climatic warming risk from hydraulic fracturing and shale gas development: implications for policy.”



However, as stated earlier, the Town's goal with the electrification policy is to focus on not bringing direct fossil fuel infrastructure to new buildings and equipping buildings to utilizing an increasingly renewable electricity grid. By not bringing natural gas infrastructure to new buildings, the Town is not adding additional infrastructure within the Town that will continue to have leakage issues.

Leakage is overall a large challenge with natural gas and should be addressed, however, staff finds that this issue is separate from the electrification policy. However, staff is currently investigating if it would be possible through the Town's franchise agreement with Atmos Energy to require a leakage report of Crested Butte's local distribution system, as well as potentially setting metrics to reduce leakage.

c. Can you provide a more specific breakdown of natural gas vs. electric costs when it comes to infrastructure and associated energy usage?

Town Council has asked for further information to better understand the return on investment for an all-electric compared to a natural-gas fueled building.

A report from the (Southwest Energy Efficiency Project) called "[All Electric New Homes and Buildings of Colorado: A 2020-2021 Builder Survey of Costs, Technologies, and Trends](#)", shows case studies of different electric developments from across the state ranging from residential affordable housing developments to commercial developments. Additionally, staff is seeking a case study example from Crested Butte Nordic regarding their decision-making on pursuing an all-electric air source heat pump system for their Outpost Project, which staff is hoping to share at the Council Meeting.

SWEEP's analysis found the following comparison for a new construction home in Colorado when it comes to equipment costs and annual utility costs.

ELECTRIFICATION COST COMPARISONS FOR NEW HOMES IN COLORADO

HVAC System Costs [1]	95% Efficient Gas Furnace & AC	95% Efficient Propane Furnace & AC	Cold-climate Heat Pump
Initial cost excluding ducts	\$15,000	\$15,500	\$16,000
Rebate from Colorado utilities [2]	\$350	\$0	\$1,800
Total cost after rebates	\$14,650	\$15,500	\$14,200
Annual heating costs [3]	\$437	\$1,567	\$588
Fixed natural gas charges	\$156	\$0	\$0
Total annual heating costs	\$593	\$1,567	\$588
ENERGY STAR Water Heater Costs	Gas Water Heater	Propane Water Heater	Heat Pump Water Heater
Installed cost	\$1,500	\$1,600	\$2,500
Rebate from Colorado utilities [2]	\$50	\$0	\$350
Total cost after rebates	\$1,450	\$1,600	\$2,150
Annual heating costs	\$122	\$523	\$119
Stove/Range	Gas Stove	Propane Stove	Electric (Std. Induction)
Initial cost [4]	\$1,200	\$1,200	\$1,200-\$2,400
Infrastructure Costs	Gas Equipment	Propane Equipment	Electric Equipment
Electrical modification	\$0	\$0	\$500
Gas connection & piping or propane tank	\$4,000	\$2,500	\$0
Totals	Gas Equipment	Propane Equipment	Electric Equipment
Total equipment and infrastructure costs	\$21,300	\$20,800	\$17,370-\$18,450
Total annual heating costs	\$715	\$2,090	\$707

Town Staff worked with REG to develop a breakdown of this table using the same 3,000 sq ft home example in Town, which was showed above when it comes to associated annual GHG emission from energy usage.

The following table demonstrates anticipate equipment cost differences, available rebates from GCEA or Atmos, as well as annual energy costs going off today's current costs through Atmos Energy and GCEA. A cost scenario of the home installing 10 kW of solar is also provided.

The caveats and sources for the table include:

1. The equipment costs are on top of an estimated \$75,000 - \$100,000 baseline HVAC system cost for the house (whether or not the house uses natural gas or electricity).
2. Rebates were verified with Atmos Energy's website and GCEA's energy use advisor.
3. Equipment costs for HVAC and Water Heaters were estimated and verified by REG based on experience with local projects and estimates from vendors.

4. The appliance cost comparison is for a mid-range price stove/range from Lowes.
5. Gas connection and piping costs were sourced from two plumbers working with a local general contractor regarding current building permit application for a similar sized home.
6. Energy usage is based off the home meeting the Department of Energy's ZERH certification.
7. Energy usage is all converted to kBTU (using a conversion factor of _____)

	Natural Gas	Electric
HVAC Costs	95% Efficient Gas Boiler	Cold-Climate Heat Pump with Hydronic Heat
Equipment Cost	\$3,500	\$16,000 (2 heat pumps based on size and energy usage)
Available Rebates	\$300	\$4,800
Total Cost After Rebate	\$3,200	\$11,200
Energy Star Water Heater Costs	Gas Water Heater	Heat Pump Water Heater
Installed Cost	\$1,500	\$2,500
Available Rebates		\$740
Total Cost After Rebate	\$1,500	\$1,760
Stove/Range	Gas Stove	Electric Induction Stove
Cost*	\$3,200	\$3,200
Available Rebates		\$500 (\$350 + 25% additional off purchase price up to \$150)
Total Cost After Rebate	\$3,200	\$2,700
Infrastructure Costs	Gas Equipment	Electric Equipment
Electrical modification		\$500
Gas connection & piping	\$12,600 (\$2,100 gas line to house, \$10,500 internal piping and ventilation)	
Total Installation/Equipment Costs	\$20,500	\$16,160
Annual Energy Costs		
Calculated Annual Energy Costs	\$2,008	\$2,722
Scenario: Annual Energy Costs (with 10 kW of solar)	\$1,099 (off-setting lighting and other appliances)	\$813 (off-setting heating, hot water heating, lighting, and appliances)

d. **How much more do induction ranges and electric appliances cost?**

Appliance prices can vary depending on the features a homeowner is looking for in an appliance. Ranges can range in price from \$500 to \$30,000 and as shown above, you can find a comparable priced mid-range appliance that is gas or induction.

One primary difference with induction stoves is there aren't as many low-priced options available. Based on appliance searches from Lowe's and Home Depot, you can find many gas ranges for as low as \$500, while the lowest cost induction range is around \$1,200. It is worth noting, that electric resistance ranges still work well and can be found at the lower price point of \$500. However, induction ranges are more popular as they are reviewed to have the most comparable cooking experience to gas when it comes to heat responsiveness.

When it comes to laundry dryers, [U.S. News](#) found that gas dryers typically cost \$100 more than electric dryers, as well as incur additional installation costs by needing a natural gas line installed, which will also require professional installation by a licensed plumber to ensure there are no gas leaks.

Are there notorious warranty issues with induction cookstoves? Research by staff has not found any significant maintenance, care, or warranty issues with induction cookstoves. However, warranties for appliances will vary by brand.

Will Sixth & Butte and Paradise Park use induction cookstoves? This housing development is not at the level of design or detail to answer this question yet, however, this could be directed by the Town Council to ensure this project installs induction cookstoves instead of conventional electric ranges that are typically less energy efficient.

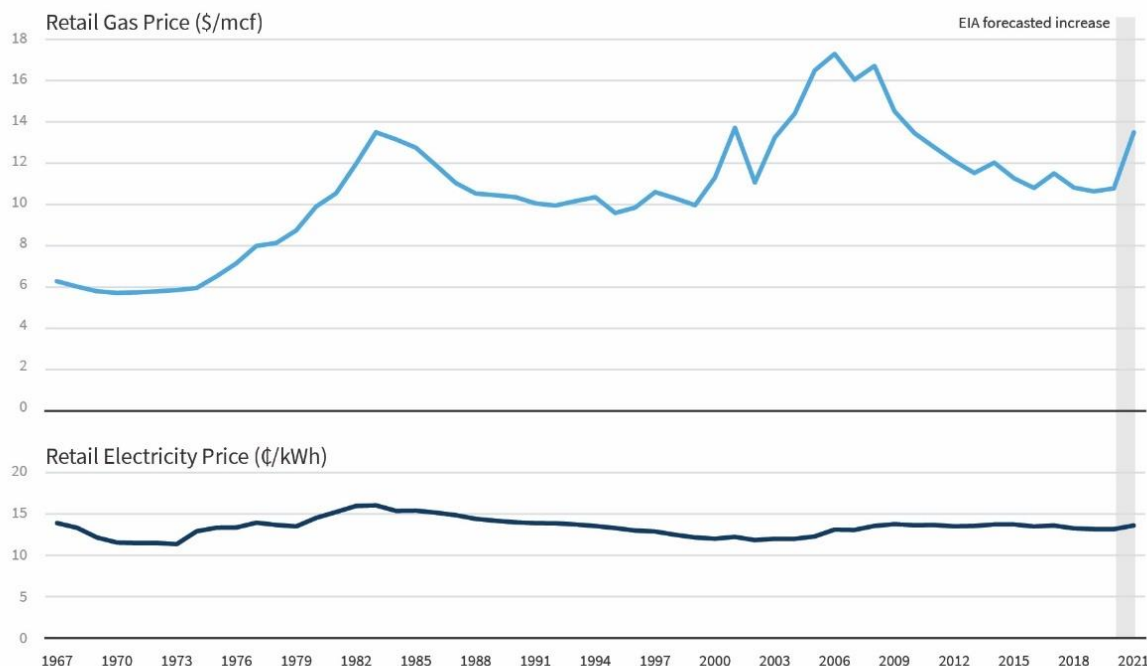
e. **Projections of natural gas vs. electricity costs.**

Many have asserted that natural gas is cheaper than electricity today. While this might be true today, as mentioned at the Town Council meeting, it is very challenging to predict future prices of electricity and natural gas, which can burden consumers based on their pricing.

A report by the Rocky Mountain Institute called [“Reality Check: The Myth of Stable and Affordable Natural Gas Prices”](#), referenced the US Energy Information Administration (EIA) forecast of residential gas prices increasing by 27% last winter, while electricity only increased by 4%. The chart below from the right shows a historical comparison of gas and electricity retail residential prices, accounting for inflation from 1967 to 2021, which shows that historically electricity pricing has been consistently more reliable than natural gas.

Gas prices are historically more volatile than electricity prices

HISTORICAL GAS AND ELECTRICITY RETAIL RESIDENTIAL PRICES, INFLATION-ADJUSTED



Source: RMI analysis of EIA retail gas and electricity prices and forecasts and Federal Reserve Economic Data inflation adjustment factors

f. What incentives could the Town provide to reduce construction costs?

As identified at the first reading, up front installation costs will be incrementally higher for electric heating systems, however, when analyzed with the 3,000 sq ft house example, not paying for natural gas piping system costs levels the playing field.

Sixth & Butte Contribution: Town Council asked for ideas from staff on how the Town could help incentivize and cover the costs for electric technology. The Town is already committing \$800,000 to the Sixth & Butte workforce housing project for green building, which the Town received through a State of Colorado Affordable Housing Incentives Grant. The Town could consider contributing more funding to further subsidize the project once the Town has a better understanding of design and construction costs. A Council member additionally raised a question regarding if the Town had to trade off building more units because of the green building funding contribution. This was not a direct trade off in this project, as the development size was limited by the Town's zoning regulations, as well as parking and snow storage needs.

Rebate Partnership Potential: The Town could consider partnering with GCEA on their [rebate programs](#) to contribute adding an additional incentive on top of the rebate's GCEA already provides for heat pumps, LED lighting, electric appliances, and electric vehicle chargers. However, staff believes that GCEA's existing rebate program provides a good incentive for electric technology and

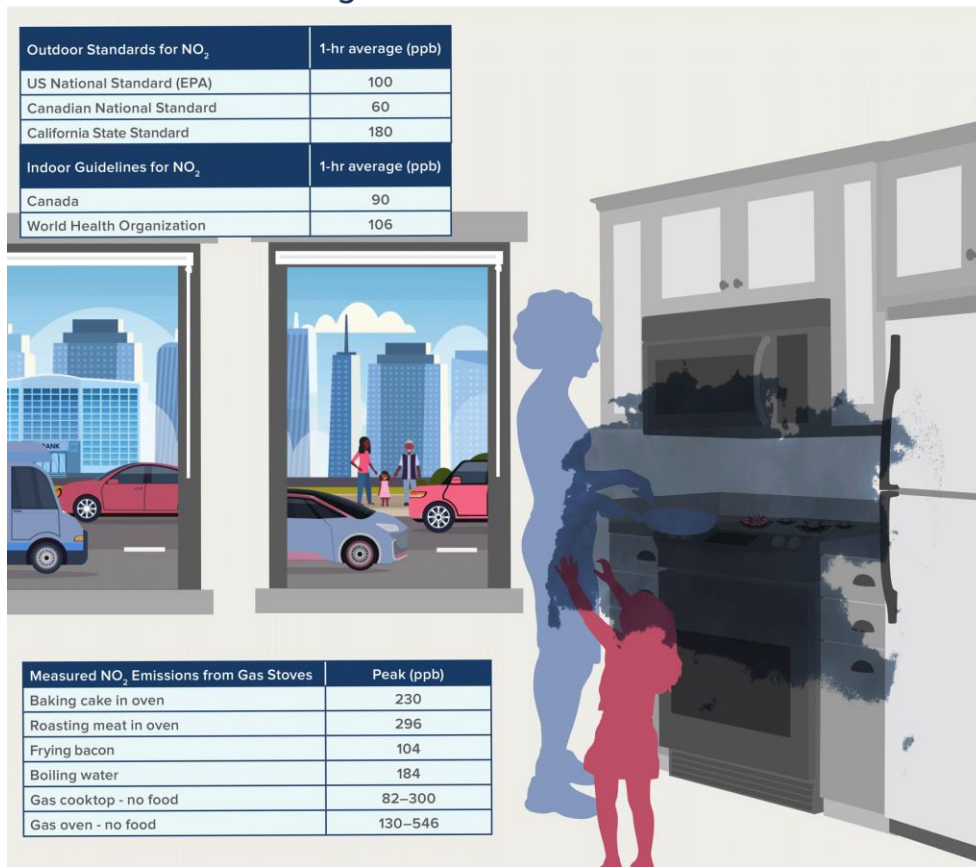
that subsidizing an incremental increase for electric heating systems on new construction lots being sold for over \$1,000,000 is not necessary.

Growing the GreenDeed Program: Staff would recommend considering increasing the 2023 budget allocation to the GreenDeed program, which the Town Council launched in 2021 with an annual commitment of \$30,000. GreenDeed retrofits existing deed restricted homes in the Town to increase energy efficiency and reduce utility costs. With additional funding, GreenDeed could grow to reach more homes annually, as well as add new program components such as convert existing homes to electric and/or help pay for the cost of installing on-site solar.

g. **What are other benefits of electrification?**

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.

Gas Stoves Can Emit Elevated Indoor Nitrogen Dioxide (NO₂) Levels Often Exceeding Indoor Guidelines and Outdoor Standards



Source: <https://rmi.org/insight/gas-stoves-pollution-health>

Ability to Achieve a Net-Zero Home: Another benefit with electrification is that the homeowner could have the option to install on-site solar, which can help offset their electricity usage, lower their bills, and reduce their carbon emissions. A homeowner wouldn't need to wait for Tri-State to lower their emissions over the next 8 years, as they could directly take action to install on-site renewable energy. A home powered with natural gas could install solar power, but the solar power will only be credited through GCEA's net metering to their electricity bill. An example of a home installing 10 kW of solar when it comes to annual costs, as well as GHG emissions, were demonstrated above to show this scenario.

2. Can you provide a better breakdown of ZERH added costs and anticipated energy savings?

The ZERH program requirements included in the ordinance for new residential construction is anticipated to come with added construction costs. First, to certify for ZERH, including obtaining a HERS rating, it is estimated that simple, smaller residential units (such as a duplex or triplex unit), would cost \$1,100, while a larger single-family unit could cost in the range of \$2,500 - \$5,000. Staff is recommending subsidizing the cost of ZERH certification for homes that build an accessory dwelling unit, consistent with how the Town subsidizes 2/3 of the cost of tap fees.

It is challenging to identify specific cost differences for a new construction home meeting 2021 code vs. ZERH because cost differences can vary drastically depending on design and building practices. For example, for insulation, zip sheathing with insulation panels with wall cavity insulation, and 2 by framed roof framing with closed cell foam is the typical method of construction in Town. However, a building could build a double framed wall with a gap between them with blown in cellulose and roof trusses with blown in cellulose insulation would be a savings of \$5,000 to \$10,000.

When it comes to window price differences, staff was unable to get a true apple to apples comparison of a window meeting the 2021 code required U-Factor (.30) compared to ZERH (.27) due to available windows in Eagle Windows and Sales currently inventory. As an estimate based on the U-Factor incremental window price differences from the 2015 code to 2021 code (U-Factor change from .32 to .30), staff estimates an incremental increase of \$150-\$200 per window.

The Town worked with Deeper Green to model the same 3,000 sq ft home in the Town, as well as a duplex in the Town to understand what additional costs each unit would incur to move the unit from the 2015 building code to ZERH, as well as the associated HERS rating and annual savings compared to an average national home.

Deeper Green Overall estimated that the Duplex would incur about \$5,000 in added costs for minimal changes to the thermal envelope. The single-family home was previously estimated to be \$20,000 in increased costs to account for window upgrades, thermal envelope improvements, and an energy recovery system (ERV). However, this estimate was an error because this home already has an ERV and the Town already requires this system in new construction. Staff is working on refining this cost estimates and will share an update at the Town Council meeting.

The following table shows the associated HERS rating for the single-family home and duplex compared to meeting the 2021 IRC vs. ZERH. The single-family home shows an incremental annual

savings of \$526 compared to the national average home in the U.S., while the duplex would experience an incremental annual savings of \$101.

Unit Type	2021 IRC		2021 IRC + ZERH Certified	
	HERS Score	Annual Savings	HERS Score	Annual Savings
Single Family Home	67	\$1,590	50	\$2,116
Duplex	56	\$899	50	\$1000

3. Is requiring duplexes to install sprinkler systems worth it?

Staff is still recommending requiring new duplexes to install new sprinklers to bring consistency to our regional jurisdictions' building codes, as well as improve safety in all shared-wall buildings where one household's unintended actions could impact another household. The sprinkler recommendation would only add a requirement of sprinklers for duplexes in the Town, where there are 5 vacant duplex lots in the Town currently (and 3 of which are part of the Sixth & Butte and Paradise Park project).

Based on the \$6 per square foot pricing that the Town paid for the Block 76 housing project, staff estimated the following cost implications for two scenarios in Town:

1. 806 Gothic Avenue- one-bedroom accessible unit 795.95 sq. ft. * \$6 = \$4,775.70
2. 808 Gothic Avenue- Two story three-bedroom unit 1,292.43 sq. ft. * \$6 = \$7,754.58

It is important to note the cost of installing fire sprinklers do not tell the complete story of the cost/benefits of installing fire sprinklers. Sprinkler costs are mitigated by reduced construction requirements associated with the International Fire Code. The Crested Butte Fire Protection District provided a useful handout titled, "the Benefits of Fire Sprinklers in 1- and 2-Family Dwellings and Townhomes" by the National Fire Sprinkler Association. Examples from the document demonstrate building cost reductions when sprinklers are installed, these include:

- 1) "When fire sprinklers are provided, ½-inch gypsum or 5/8-inch wood panel may be eliminated on the underside of floors".
- 2) "The common wall between townhouses can be reduced from 2-hr to 1-hr fire-resistance rating where dwellings on both sides of the common wall are sprinklered".
- 3) "Sprinklered townhouses built according to the IRC are NOT required to be structurally independent from each other".

Lastly, staff wanted to share the following data on sprinklers from the National Fire Protection Association's paper called ["US Experience with Sprinklers"](#) from October 2021:

- One sprinkler is usually enough to control a fire from its source. In 77% of the structure fires where sprinklers operate, only one operated. In 97%, five or fewer operated. In 99%, 10 or fewer operated.
- In reported home fires in which sprinklers were present, the fire was confined to the object or room of origin 97% of the time compared to 74% in homes with no sprinkler system.

- Sprinklers save lives and reduce injuries and property loss. From 2015 to 2019, the civilian death and injury death rates per reported home fire were 88 % (death) and 28 % (injury) lower, respectively, and average property loss per home fire was 62 % lower in reported home fires in which sprinklers were present compared to fires in homes without sprinkler systems.
- The rate of firefighter injuries per home fire in which sprinklers were present was 78 percent lower in homes with no sprinkler system.

Recommendation:

For a council member to make a motion, followed by a second, to approve Ordinance No. 13, Series 2022, with any associated conditions or changes identified at the meeting.

Attachments:

1. Attachment 1: Ordinance No. 13, Series 2022
2. Attachment 2: 1st Reading – July 18th – Building Code Staff Report with Attachments

ORDINANCE NO. 13

SERIES 2022

AN ORDINANCE OF THE CRESTED BUTTE TOWN COUNCIL AMENDING CHAPTER 18 OF THE TOWN CODE TO ADOPT BY REFERENCE THE 2021 INTERNATIONAL BUILDING CODE WITH AMENDMENTS (18-1-10), THE 2021 INTERNATIONAL GREEN CONSTRUCTION CODE WITH AMENDMENTS (18-1.5-10), THE 2021 INTERNATIONAL RESIDENTIAL CODE WITH AMENDMENTS (18-2-10) , THE 2021 EXISTING BUILDING CODE WITH AMENDMENTS (18-2.5-10), THE 2021 INTERNATIONAL MECHANICAL CODE WITH AMENDMENTS (18-3-10), 2021 INTERNATIONAL FIRE CODE WITH AMENDMENTS (18-6-10), THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE WITH AMENDMENTS (18-9-10), AND VARIOUS ELEMENTS OF CHAPTER 18 RELATED TO CONSTRUCTION ACTIVITIES — 1ST READING

WHEREAS, the Town of Crested Butte, Colorado (the “Town”) is a home rule municipality duly and regularly organized and validly existing as a body corporate and politic under and by virtue of the Constitution and laws of the State of Colorado;

WHEREAS, the adoption of uniform codes of construction is necessary to ensure safe and sound construction of buildings;

WHEREAS, C.R.S. 31-16-202 allows municipalities to adopt published compilations of building and related construction codes by reference;

WEREAS, the Town of Crested Butte adopted its Climate Action Plan in 2019 with specific goals to reduce greenhouse gas emissions of Town operations by 50% and the community at-large by 25%, by 2023 and work towards becoming a net-zero community by 2030;

WHEREAS, the Town Council has determined that the below adoption of and amendments to the Uniform Codes promote the desired goals of the Town Council to achieve standardized, safe construction, and accordingly, are in the best interest of the environment, health, safety and general welfare of the residents and visitors of the Town.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF CRESTED BUTTE, COLORADO THAT,

Section 1. Chapter 18 of the Crested Butte Municipal Code is hereby repealed and replaced in its entirety as set forth in Exhibit A, incorporated herein by reference.

Section 2. Severability. If any section, sentence, clause, phrase, word or other provision of this ordinance is for any reason held to be unconstitutional or otherwise invalid, such holding shall not affect the validity of the remaining sections, sentences, clauses, phrases, words or other provisions of this ordinance, or the validity of this ordinance as an entirety, it being the legislative intent that this ordinance shall stand notwithstanding the invalidity of any section, sentence, clause, phrase, word or other provision.

Section 3. Savings Clause. Except as amended hereby, the Crested Butte Municipal Code, as amended, shall remain valid and in full force and effect. Any provision of any ordinance previously adopted by the Town which is in conflict with this ordinance is hereby repealed as the effective date hereof

INTRODUCED, READ AND SET FOR PUBLIC HEARING THIS _____DAY OF _____,
2022.

ADOPTED BY THE TOWN COUNCIL UPON SECOND READING AND PUBLIC HEARING THIS ____ DAY OF _____, 2022.

TOWN OF CRESTED BUTTE

By:_____

Ian Billick, Town Mayor

ATTEST:

BY:_____

Lynelle Stanford, Town Clerk

EXHIBIT A

CHAPTER 18

Building Regulations

ARTICLE 1 Building Code

Sec. 18-1-10. Adoption.

The *International Building Code* ("IBC"), 2021 edition, Chapters 1 through 35 without appendices, published by the International Code Council Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois 60478, is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes comprehensive provisions and standards regulating the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of buildings and structures for the purpose of protecting the public health, and safety and general welfare.

Sec. 18-1-20. Copy on file.

At least one (1) copy of the International Building Code, certified to be a true copy, is on file in the Building Department office and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-1-30. Amendments.

The code adoption herein is modified by the following amendments:

(1) IBC Section 105.2 is amended to read as follows:

R105.2 - Work exempt from permit. Building.

1. Fences less than 6 feet (1828.8 mm) high.
2. Oil derricks.
3. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIIA liquids.
4. Sidewalks and driveways not more than 18 inches (457 mm) above adjacent grade, and not over any *basement* or *story* below and are not part of an *accessible route*.
5. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
6. Temporary motion picture, television and theater stage sets and scenery.
7. Swings and other playground equipment accessory to detached one- and two-family *dwelling*s.

8. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.
- (2) IBC Section 202 is amended by inserting or amending the following definitions within the alphabetical order of the existing definitions as follows:

Crawlspace. Any space below the first floor of a building with a height of 60 inches or less, measured from the ground level at any point within the perimeter to the bottom of the floor joist directly above.

All Electric Building. A building that contains no combustion equipment or plumbing for combustion equipment serving space heating (with the exception of solid fuel-burning devices that meet requirements in Article 8 of this Chapter), water heating (including pools and spas), cooking appliances (including barbeques but excluding Commercial Food Heat-processing Equipment), and clothes drying, within the building or building property lines, and instead uses electric heating appliances for service.

Combustion Equipment. Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

Commercial Food Heat-processing Equipment. Equipment used in a food establishment for heat-processing food or utensils and that produces grease vapors, steam, fumes, smoke, or odors that are required to be removed through a local exhaust ventilation system.

Electric Heating Appliance. A device that produces heat energy to create a warm environment by the application of electric power to resistance elements, refrigerant compressors, or dissimilar material junctions.

Fuel Gas. A gas that is natural, manufactured, liquefied petroleum, or a mixture of these.

Townhouse. A single-family dwelling unit constructed in a group of two or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides.

- (3) IBC Section 1301.1 is amended by adding three new subsections to read as follows:

1301.1.2 - All Electric Buildings. All new commercial buildings shall be All Electric Buildings.

1301.1.3. - EV Parking. Commercial buildings and accessory structures with two or more parking spaces shall provide one Level II EVSE. Additionally, ten percent (10%) of total required parking spaces (rounded up) shall be Electric Vehicle Ready Spaces, and one DC Fast Charger (25 kW) shall be provided for 5 or more required parking spaces.

1301.1.4. - Solar Requirements.

C401.2.3.3.1 - Buildings that are less than 5,000 square feet. A commercial building that is less than 5,000 square feet shall install Solar Ready Components.

C401.2.3.3.2 - Buildings that are 5,000 square feet or larger. A commercial building that is 5,000 square feet or larger shall install solar PV panels to roof(s) per Sec 18-1.5-30 (5). Solar requirements shall not exceed any Gunnison County Electric Association net metering limitation in place when submitting a building permit application.

- (4) IBC Section 1805.3 is amended to read as follows:

1805.3- Waterproofing. All basement construction shall adhere to Section 18-16-10 of the Crested Butte Municipal Code for basement waterproofing.

Sec. 18-1-40. Fees.

Fees for any permit or inspection required by the codes adopted in this Chapter or required by Article 13 of this Chapter are set by resolution of the Town Council.

Sec. 18-1-50. Rules and regulations.

The Town may, from time to time, promulgate such rules and regulations as it deems necessary to implement and carry out the intent of this Article; provided, however, that such rules and regulations shall not be inconsistent herewith.

Sec. 18-1-60. Conflicting provisions.

In the event of a conflict between the code adopted herein and any provision set forth in Chapter 16 of this Code, such conflict shall be resolved in favor of said Chapter 16.

Sec. 18-1-70. Violation, liability and penalty.

- (a) Any person who violates any provision of this Article or this Chapter shall be punished by a fine not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that a violation of this Article or this Chapter continues to exist shall constitute a separate and additional offense.
- (b) Any person violating any provisions of this Article or this Chapter shall be liable to the Town for any expense, loss or damage, including reasonable attorneys' fees, occasioned by reason of such violation.
- (c) The Town may institute injunction, abatement or any other appropriate action to prevent, enjoin or abate any violation of this Article or this Chapter.
- (d) The remedies provided by this Section are cumulative and not exclusive, and are in addition to any other remedies provided by law.

ARTICLE 1.5 International Green Construction Code

Sec. 18-1.5-10. Adoption.

The *International Green Construction Code* ("IgCC"), 2021 edition, selected sections from Chapters 1, 3, 5, and 6 through 9 pursuant to Section 18-1.5-30, published by the International Code Council Inc. 4051, West Flossmoor Road, Country Club Hills, Illinois 60478, is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2. C.R.S.

The subject matter of the adopted code includes minimum requirements to be used in conjunction with the other codes and standards adopted by this jurisdiction. The requirements in this code shall not be used to circumvent any applicable safety, health, or environmental requirements. The provisions of this code shall apply to the design, construction, addition, alteration, equipment, change of occupancy, relocation, replacement, demolition and removal of every building or structure or any appurtenances connected or attached to such buildings or structures and to the building site on which the building is located. Occupancy classifications shall be determined in accordance with the International Building Code.

Sec. 18-1.5-20. Copy on File.

At least one (1) copy of the International Green Construction Code certified to be a true copy, is on file in the Building Department office and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-1.5-30. Selected Sections to be Adopted by Reference and Amendments Thereto.

The following selected sections of the Green Construction Code are hereby adopted in their entirety and amended as follows:

- (1) IgCC Chapter 1 "Scope and Administration" is adopted in its entirety.
- (2) IgCC Chapter 3 "Definitions, Abbreviations and Acronyms" is adopted in its entirety.
- (3) IgCC Chapter 5 "Site Sustainability" Section 501.3.4 (Stormwater management) is adopted in its entirety.
- (4) The following sections of IgCC Chapter 6: "Water Efficiency" shall be adopted in their entirety: Section 601.3.2 (Building water use reduction); Section 601.3.2.2 (Appliances); Section 601.3.2.3 (HVAC systems and equipment); Section 601.3.2.5 (Commercial food service operations); and Section 601.3.3 (Hot water distribution).
- (5) The following sections of IgCC Chapter 7 "Energy Efficiency" shall be adopted in their entirety: Section 701.3.2 (On-site renewable energy systems) and Section 701.4.3.8 (Kitchen exhaust systems).
- (6) The following sections of IgCC Chapter 8 "Indoor Environmental Quality" shall be adopted in their entirety: Section 801.3.1 (Indoor air quality); Section 801.4.3.4 (Soil-gas control); and Section 801.4.2 (Materials).
- (7) IgCC Chapter 9 "Materials and Resources" Section 901.3.2 (Extracting, harvesting and/or manufacturing) shall be adopted in its entirety.
- (8) IgCC Chapter 9 "Materials and Resources" Section 901.3.4 (Areas for storage and collection of recyclables and discarded goods) shall be adopted and amended to delete Sections 901.3.4.2 through 901.3.4.4.

ARTICLE 2 Residential Code

Sec. 18-2-10. Adoption.

The *International Residential Code* ("IRC"), 2021 edition, Chapters 1 through 44, with Appendix AF (Radon Control Methods), Appendix AK (Sound Transmission), Appendix AR (Light Straw-Clay Construction), and Appendix AS (Straw-Bale Construction), and Appendix AU (Cob Construction Monolithic adobe), published by the International Code Council Inc. 4051, West Flossmoor Road, Country Club Hills, Illinois 60478, is hereby adopted by

reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2. C.R.S.

The subject matter of the adopted code includes comprehensive provisions and standards regulating the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of buildings and structures for the purpose of protecting the public health, and safety and general welfare.

Sec. 18-2-20. Copy on file.

At least one (1) copy of the International Residential Code, certified to be a true copy, is on file in the Building Department office and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-2-30. Amendments.

The code adoption herein is modified by the following amendments:

- (1) IRC Section R105.2. Building exemptions are amended to read as follows:

R105.2 - Work exempt from permit. Building.

1. Fences less than 6 feet (1828.8 mm) high.
2. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.
3. Sidewalks and driveways.
4. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
5. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
6. Swings and other playground equipment.

- (2) IRC Section R202 is amended by inserting or amending the following definitions within the alphabetical order of the existing definitions as follows.

All Electric Building. A building that contains no combustion equipment or plumbing for combustion equipment serving space heating (with the exception of solid fuel-burning devices that meet requirements in Article 8 of this Chapter), water heating (including pools and spas), cooking appliances (including barbeques but excluding Commercial Food Heat-processing Equipment), and clothes drying, within the building or building property lines, and instead uses electric heating appliances for service.

Combustion Equipment. Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

Commercial Food Heat-processing Equipment. Equipment used in a food establishment for heat-processing food or utensils and that produces grease vapors, steam, fumes, smoke, or odors that are required to be removed through a local exhaust ventilation system.

Crawl Space. Any space below the first floor of a building with a height of 60 inches or less, measured from the ground level at any point within the perimeter to the bottom of the floor joist directly above.

Electric Heating Appliance. A device that produces heat energy to create a warm environment by the application of electric power to resistance elements, refrigerant compressors, or dissimilar material junctions.

Fuel Gas. A gas that is natural, manufactured, liquefied petroleum, or a mixture of these.

Townhouse. A single-family dwelling unit constructed in a group of two or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides.

- (3) IRC Section R301.2 is amended by adding following table to R301.2 (1) as follows:

Flat Roof Snow Load:	100 lbs. per square foot
Ground Snow Load:	Not Determined
Wind Design Speed:	115 Miles per Hour
Topographic effects	No
Special wind region	No
Wind-borne debris zone	No
Seismic Design Category	C
Subject to Damage From	
1. Weathering	Severe
2. Frost Line depth	36 inches
3. Termite	Slight
Winter Design Temp.	-16 degrees Fahrenheit
Roof Ice Barrier Underlayment Required	Yes
Floor Hazard	Flood Insurance Rate Maps (FIRM) 08051C0726D, 08051C0727D
Air Freezing Index	3500
Manual J Design Criteria	
1. Elevation	8921
Altitude Correction Factor by Appliance Manufacturer	
1. Coincident Wet Bulb Coldest Month	0.4 Percent
2. Indoor Winter Design Dry-Bulb Temp	-68 Degrees Fahrenheit
3. Outdoor Winter Design Dry-Bulb Temp	-25.0 Degree Fahrenheit
4. Heating Temperature Difference	93 Degrees (68 to -25)
Latitude	38.8697146
Mean Annual Temperature	35 degrees Fahrenheit

- (4) IRC Section R303.3 is amended to read as follows:

R303.3 – Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with mechanical ventilation with minimum ventilation rates of 50 cfm for intermittent ventilation and 20 cfm for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.

- (5) IRC Section R310.4 is amended to read as follows:

R310.4 - Area Wells. An emergency escape and rescue opening where the bottom of the clear opening is below the adjacent grade shall be provided with an area well in accordance with Sections R310.4.1 through R310.4.4. All area wells required for emergency escape shall be provided with a roof or projection above and curbing sufficient to prevent the accumulation of snow and ice inside the window well. Roofs or projections over window wells that are larger than the minimum code size of 9 square feet will count toward FAR as covered decks.

- (6) IRC Section R313.2 is amended to read as follows:

R313.2 – One- and two-family dwellings automatic sprinkler systems. Single-family dwellings are exempt from automatic residential fire sprinkler requirement.

- (7) IRC Section R315.1 is amended to read as follows:

R315.1 - Carbon monoxide alarms. Carbon monoxide alarms shall comply with Section R315 and Chapter 18, Article 14 of the Crested Butte Municipal Code. In the case of conflicts between the codes the more restrictive will apply.

- (8) IRC Section R406.2 is amended to read as follows:

R406.2 - Concrete and masonry foundation waterproofing. In areas where a high-water table or other severe soil-water conditions are known to exist, exterior foundation walls that retain earth and enclose interior spaces and floors below grade shall be waterproofed from the finished grade to the higher of the top of the footing or 6 inches (152 mm) below the top of the basement floor. Walls shall be waterproofed in accordance with one of the following:

1. Two-ply hot-mopped felts.
2. Fifty-five-pound (25 kg) roll roofing.
3. Forty-mil (1 mm) polymer-modified asphalt.
4. Sixty-mil (1.5 mm) flexible polymer cement.
5. One-eighth-inch (3 mm) cement-based, fiber-reinforced, waterproof coating.
6. Sixty-mil (1.5 mm) solvent-free liquid-applied synthetic rubber.

All joints in membrane waterproofing shall be lapped and sealed with an adhesive compatible with the membrane. All basement construction shall be in compliance with the requirements of Section 18-16-10 of the Crested Butte Municipal Code. In the case of conflicts between the codes, the more restrictive will apply

- (9) IRC Section R1002.2 is amended to read as follows:

R1002.2 - Installation. Masonry heaters shall be installed in accordance with this section and comply with one of the following:

1. Masonry heaters shall comply with the requirements of ASTM E1602.
2. Masonry heaters shall be listed and labeled in accordance with UL 1482 or CEN 15250 and installed in accordance with the manufacturer's instructions.

All solid fuel burning devices shall conform to Chapter 18, Article 8 of the Crested Butte Municipal Code.

- (10) IRC Section R1004.1 is amended to read as follows:

R1004.1 - General. Factory-built fireplaces shall be listed and labeled and shall be installed in accordance with the conditions of the listing. Factory-built fireplaces shall be tested in accordance with UL 127. All solid fuel burning devices shall conform to Chapter 18, Article 8 of the Crested Butte Municipal Code.

- (11) IRC Section R324.6.1 (Pathways) is deleted in its entirety and replaced with a new section to read as follows:

R324.6.1 – Pathways. A minimum of one pathway not less than 24 inches on each roof with installed photovoltaic (PV) arrays from eave to ridge shall be provided. 24 inches minimum pathway for roofs with roof valleys, as measured from the center of the valley to the PV array, shall be provided.

Pathways shall be located in areas capable of supporting fire fighters accessing the roof. Pathways shall be located in areas with minimal obstructions such as vent pipes, conduit, or mechanical equipment. For opposing roofs with PV arrays on both sides, one pathway shall be 24 inches wide and the other pathway shall be 36 inches wide on either side of the PV array. All pathways shall include 6 feet of clearance between solar panels and all sides of any solid fuel device chimney or stove pipe.

- (12) IRC Section R324.6.2 is amended to read as follows:

R324.6.2 - Setback at ridge. For photovoltaic arrays, not less than an 18-inch (457 mm) clear setback is required on both sides of a horizontal ridge. A minimum of 18" (457 mm) clear setback from bottom of photovoltaic arrays to bottom of roof eave is required.

- (1) IRC Section N1101.13 is amended to read as follows:

N1101.13– Application. Residential buildings shall comply with Section N1101.13.5, Section N1101.13.6, and Section N1101.13.1, N1101.13.2, N1101.13.3 or N1101.13.4.

- (2) IRC Section N1101.13 is amended by adding a new subsection to read as follows:

N1101.13.6. Residential Electric Requirements.

N1101.13.6.1 - All Electric. Residential buildings shall be All Electric Buildings.

N1101.13.6.2 - EV Parking. All residential buildings or garages shall provide one Electric Vehicle Ready Space per dwelling unit.

N1101.13.6.3 – Zero Energy Ready Home. All new heated buildings shall become qualified as a [Department of Energy Zero Energy Ready Home \(Rev. 07\)](#) by meeting the national program requirements specified in the program, becoming verified and field-tested in accordance with HERS standards by an approved verifier, and meeting all applicable codes. Residential construction may meet the requirements of either the performance path or the prescriptive path to qualify.

- (3) IRC Section N1105.1 is amended to read as follows:

N1105.1 – Scope. This section establishes criteria for compliance using total building performance analysis. Such analysis shall include heating, cooling, mechanical ventilation and service water-heating energy only. The utilization of this section shall be specifically approved by the Building Official prior to submittal of design documents.

- (4) IRC Section N1109 is deleted in its entirety and replaced with a new section to read as follows:

N1109 - Existing Buildings - General. The alteration, repair, addition and change of occupancy of existing buildings and structures shall comply with the requirements of the 2021 International Existing Building Code (IEBC).

ARTICLE 2.5 Existing Building Code

Sec. 18-2.5-10. Adoption.

The *International Existing Building Code* ("IEBC"), 2021 edition, Chapters 1 through 16 without appendices, published by the International Code Council Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois 60478, is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

CHAPTER 18 - Building Regulations
ARTICLE 3 Mechanical Code

The subject matter of the adopted code includes comprehensive provisions and standards regulating the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of buildings and structures for the purpose of protecting the public health, and safety and general welfare.

Sec. 18-2.5-20. - Copy on file.

At least one (1) copy of the International Existing Building Code certified to be a true copy, has been and is now on file in the Building Department office and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-2.5-30. Amendments.

The code adoption herein is modified by the following amendments:

- (1) IEBC Section 202 is amended by inserting or amending the following definitions within the alphabetical order of the existing definitions as follows:

Building Area. The area included within surrounding *exterior walls*, or *exterior walls* and *fire walls*, exclusive of vent *shafts* and *courts*. Areas of the building not provided with surrounding walls shall be included in the *building area* if such areas are included within the horizontal projection of the roof or floor above.”

DC Fast Charger (“DCFC”). EVSE that provides at least 50 kilowatts of direct current electrical power for charging a plug-in electric vehicle through a connector based on fast charging equipment standards and which is approved for installation for that purpose under the National Electric Code through an Underwriters Laboratories Certification or an equivalent certifying organization.

Electric Ready. A building that meets the following construction requirements:

- i. Where a gas heating system is installed provide a dedicated electric circuit, panel space and location for condensate drainage.
- ii. Where a gas water heating system is installed provide a dedicated electric circuit, panel space, location for condensate drainage.
- iii. Where a gas cooking stove is installed, a dedicated circuit and panel space for electric appliance replacement is provided.
- iv. Where a gas dryer is installed, a dedicated circuit and panel space for electric appliance replacement is provided.

Electric Vehicle Supply Equipment (EVSE). The conductors—including the ungrounded, grounded, and equipment grounding conductors—and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

Electric Vehicle (EV) Ready Space. Parking spaces that have full circuit installations of 208/240-volt (or greater), 40-ampere (or greater) panel capacity, raceway wiring, receptacle and circuit overprotection devices. This strategy provides all required electrical hardware for the future installation of EV Supply Equipment (EVSE). Anticipating the use of dual head EVSE, the same circuit may be used to support charging in adjacent EV-Ready spaces.

CHAPTER 18 - Building Regulations
ARTICLE 3 Mechanical Code

Home Energy Assessment. An assessment includes a home visit by a building performance institute (BPI) certified energy analyst that results in a report that analyzes the current condition and energy usage of a home and provides a list of recommended improvements.

Level II EVSE. An EVSE capable of charging at 30 amperes or higher at 208 or 240 VAC.

Solar Ready Components. Building construction components that facilitate and optimize the installation of a rooftop solar photovoltaic (PV) system at some point after the building has been constructed, including installation of electrical conduit from electrical panel space to the solar panel roof area.

Work Area. That portion or portions of the building consisting of reconfigured and altered spaces as indicated on the construction documents as measured from the inside face of the building envelope.

- (2) IEBC Section 907 is deleted in its entirety and replaced with a new section to read as follows:

907 ENERGY CONSERVATION

907.1 - Minimum requirements. Except as specified in this section, Level 3 *alterations* to *existing buildings* or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the [*International Energy Conservation Code*](#) or [*International Residential Code*](#). The *alterations* shall conform to the energy requirements of the [*International Energy Conservation Code*](#) or [*International Residential Code*](#) as they relate to new construction only.

907.2 – Electric Ready. Existing buildings undergoing Level 3 alterations shall be Electric Ready.

907.3 – Commercial Level 3 Alterations.

907.3.1 - Level 3 alterations that are less than 5,000 square feet. A Level 3 alteration of commercial buildings that is less than 5,000 square feet shall install Solar Ready Components.

907.3.2 - Level 3 Alterations that are 5,000 square feet or larger. A Level 3 alteration of a commercial building that is 5,000 square feet or larger shall install solar PV panels to roof(s) per Sec 18-1.5-30 (5) of the Town Code. Solar requirements shall not exceed any Gunnison County Electric Association net metering limitation in place when submitting a building permit application.

907.3.3 – EV Parking. All commercial Level 3 alterations of buildings with two or more parking spaces shall provide one Level II EVSE. Additionally, ten percent (10%) of total required parking spaces (rounded up) shall be Electric Vehicle Ready Space(s).

907.4 – Residential Level 3 Alterations.

907.4.1 – Home Energy Assessment. Existing buildings undergoing Level 3 alterations shall obtain a Home Energy Assessment prior to issuance of a building permit.

907.4.2 - Residential EV Ready Parking. Existing buildings or garages undergoing Level 3 alterations shall provide one Electric Vehicle Ready Space per dwelling unit.

907.5 Historic buildings with Level 3 Alterations. Level 3 alterations of Historic Buildings, as defined in Section 16-1-20 of Town Code, shall meet 2021 IECC without damaging the existing historic structure, except that closed cell foam insulation can be used in the ceiling framing cavities only. No closed cell foam shall be used in the wall framing cavities. BOZAR shall review the areas to be disturbed on-site before any work commences and during the construction process as needed. A blower door test conducted after drywall is optional.

ARTICLE 3 Mechanical Code

Sec. 18-3-10. Adoption.

The *International Mechanical Code* ("IMC"), 2021 edition, including Appendix A, as published by the International Code Council, Inc. 4051 West Flossmoor Road, Country Club Hills, Illinois 60478, is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes regulating and governing the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems as herein provided; providing for the issuance of permits and the collection of fees therefor.

Sec. 18-3-20. Copy on file.

At least one (1) copy of the International Mechanical Code, certified to be a true copy, is on file in the office of the Town Clerk and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-3-30. Amendments.

The code adopted herein is modified by the following amendments:

- (1) IMC Section 905.1 is amended to read as follows:

Section 905.1 - General. Fireplace stoves and solid-fuel type room heaters shall be listed and labeled and shall be installed in accordance with the conditions of the listing. Fireplace stoves shall be tested in accordance with UL 1482. Fireplace inserts intended for installation in fireplaces shall be listed and labeled in accordance with the requirements of UL 1482 and shall be installed in accordance with the manufacturer's instructions. New wood burning residential hydronic heaters shall be EPA certified. All solid fuel-burning devices shall comply with the requirements of Chapter 18, Article 8 of the Crested Butte Municipal Code.

Sec. 18-3-40. Rules and regulations.

The Town may, from time to time, promulgate such rules and regulations as it deems necessary to implement and carry out the intent of this Article; provided, however, that such rules and regulations shall not be inconsistent herewith.

Sec. 18-3-50. Conflicting provisions.

In the event of a conflict between the IMC and any provisions set forth in Chapter 16 of this Code, such conflict shall be resolved in favor of said Chapter 16.

Sec. 18-3-60. Fees.

Fees for any permit or inspection required by the IMC are set forth in Appendix A to this Code.

Sec. 18-3-70. Violation, liability and penalty.

- (a) Any person who violates any provision of the IMC shall be punished by a fine not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that a violation continues to exist shall constitute a separate and additional offense.
- (b) Any person who violates any provision of the IMC shall be liable to the Town for any expense, loss or damage, including reasonable attorneys' fees, occasioned by reason of such violation.
- (c) The Town may institute injunction, abatement or any other action to prevent, enjoin or abate any violation of the IMC.
- (d) The remedies provided by this Section are cumulative and not exclusive and are in addition to any other remedies provided by law.

ARTICLE 4 Plumbing Code

Sec. 18-4-10. Adoption.

The *International Plumbing Code* ("IPC"), 2018 edition, including Appendices C and E, published by the International Code Council, Inc. 4051 West Flossmoor Road, Country Club Hills, Illinois 60478, is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes regulating and governing the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems as herein provided; providing for the issuance of permits and the collection of fees therefor.

Sec. 18-4-20. Copy on file.

At least one (1) copy of the International Plumbing Code, certified to be a true copy, has been and is now on file in the Building Department office and may be inspected by an interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-4-30. Amendments.

The code adopted herein is modified by the following amendments: none.

Sec. 18-4-40. Rules and regulations.

The Town may, from time to time, promulgate such rules and regulations as it deems necessary to implement and carry out the intent of this Article; provided, however, that such rules and regulations shall not be inconsistent herewith.

Sec. 18-4-50. Conflicting provisions.

In the event of a conflict between the IPC and any provisions set forth in Chapter 16 of this Code, such conflict shall be resolved in favor of said Chapter 16.

Sec. 18-4-60. Violation, liability and penalty.

- (a) Any person who violates any provision of the IPC shall be punished by a fine not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that a violation continues to exist shall constitute a separate and additional offense.
- (b) Any person who violates any provision of the IPC shall be liable to the Town for any expense, loss or damage, including reasonable attorneys' fees, occasioned by reason of such violation.
- (c) The Town may institute injunction, abatement or any other action to prevent, enjoin or abate any violation of the IPC.
- (d) The remedies provided by this Section are cumulative and not exclusive, and are in addition to any other remedies provided by law.

ARTICLE 5 Electrical Code**Sec. 18-5-10. Adoption.**

The National Electrical Code ("NEC"), 2020 edition, including Appendices C and E, published by National Fire Protection Association, One Battery March Park, Quincy, Massachusetts 02169-7471, is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes regulating and governing the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems as herein provided; providing for the issuance of permits and the collection of fees therefor.

Sec. 18-5-20. Copy on file.

At least one (1) copy of the National Electrical Code, certified to be a true copy, has been and is now on file in on file in the Building Department office and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-5-30. Amendments.

The code adopted herein is modified by the following amendments: none.

Sec. 18-5-40. Rules and regulations.

The Town may, from time to time, promulgate such rules and regulations as it deems necessary to implement and carry out the intent of this Article; provided, however, that such rules and regulations shall not be inconsistent herewith.

Sec. 18-5-50. Conflicting provisions.

In the event of a conflict between the NEC and any provisions set forth in Chapter 16 of this Code, such conflict shall be resolved in favor of said Chapter 16.

Sec. 18-5-60. Violation, liability and penalty.

- (a) Any person who violates any provision of the NEC shall be punished by a fine not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that a violation continues to exist shall constitute a separate and additional offense.
- (b) Any person who violates any provision of the NEC shall be liable to the Town for any expense, loss or damage, including reasonable attorneys' fees, occasioned by reason of such violation.
- (c) The Town may institute injunction, abatement or any other action to prevent, enjoin or abate any violation of the NEC.
- (d) The remedies provided by this Section are cumulative and not exclusive, and are in addition to any other remedies provided by law.

ARTICLE 6 Fire Code

Sec. 18-6-10. Adoption.

The *International Fire Code* ("IFC"), 2021 Edition, including Appendices B-M, as published by the International Code Council, is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code as the Town Fire Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes regulating and governing the safeguarding of life and property from fire and explosion hazards arising from storage, handling and use of hazardous substances, materials and devices and from conditions hazardous to life or property in the occupancy of buildings and premises as herein provided; providing for issuance of permits and collection fees therefor. State and EPA regulations shall take precedence if there is any International Fire Code regulations pertaining to the use, storage, handling, manufacture or dispensing of flammable and compressed gases, corrosive materials, explosives and fireworks, flammable gases and solids, highly toxic and toxic materials, liquefied petroleum gases, organic peroxides, oxidizers, pyrophoric materials, pyroxylin (Cellulose nitrate) plastic, unstable (reactive) materials, water-reactive solids and liquids or any other material which may be characterized or become known as a hazardous material.

Sec. 18-6-20. Amendments.

The code adoption herein is modified by the following amendments:

- (1) IFC Section 101.1. is amended to read as follows:
101.1. - Title. These regulations shall be known as the Fire Code of the Town of Crested Butte, hereinafter referred to as "this Code."
- (2) IFC Section 102.7 is amended to read as follows:
102.7 - Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 80, and such codes and standards shall be considered to be part of the requirements of this code to the prescribed extent of each such reference and as further regulated

by Sections 102.7.1 and 102.7.2. The most current NFPA edition may be utilized upon approval of the CBFPD Fire Marshal.

- (3) IFC Section 102.8 is amended to read as follows:

102.7 - Subjects not related to this code. Where applicable standards or requirements are not set forth in this code, or are contained within other laws, codes, regulations, ordinances or bylaws adopted by the jurisdiction, compliance with applicable standards of the National Fire Protection Association or other nationally recognized fire safety standards, as *approved*, shall be deemed as prima facie evidence of compliance with the intent of this code. Nothing herein shall derogate from the authority of the *fire code official* to determine compliance with codes or standards for those activities or installations within the *fire code official's* jurisdiction or responsibility. The most current NFPA edition may be utilized upon approval of the CBFPD Fire Marshal.

- (4) IFC Section 108.2.1 is amended to read as follows:

108.2.1 - Inspection requests. Requests for inspections shall be submitted at least five (5) working days prior to the date of requested inspections.

- (5) IFC Section 403.11.3.1 is amended to read as follows:

403.11.3.1- Number of crowd managers. Not fewer than two trained crowd managers, and not fewer than one trained crowd manager for each 250 persons or portion thereof, shall be provided for the gathering.

Exceptions:

1. Assembly occupancies used exclusively for religious worship with an occupant load not exceeding 1,000 shall not require crowd managers.
2. The number of crowd managers shall be reduced where, in the opinion of the fire code official, the fire protection provided by the facility and the nature of the event warrant a reduction.

- (6) IFC Section 507.1 is amended to read as follows:

507.1 - Required water supply. An *approved* water supply capable of supplying the required fire flow for fire protection shall be provided to premises on which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction. Where required fire flows cannot be provided, an approved monitored fire suppression system complying with Section 9 of this Code and the Guidelines and Standards of the Crested Butte Fire Protection District and Fire Code shall be installed throughout every occupancy and structure except Occupancy R-3 within the boundaries of the Town of Crested Butte.

- (7) IFC Section 507.5.5 is amended to read as follows:

507.5.5- Clear space around hydrants. A 3-foot clear space shall be maintained around the circumference of fire hydrants and "Fire Department Connections," except as otherwise required or approved.

- (8) ICF Section 507.5.6 is amended to read as follows:

507.5.6 - Physical protection. Where fire hydrants and "Fire Department Connections" are subject to impact by motor vehicle, guard posts or other approved means shall comply with Section 312.

- (9) IFC Section 605.9 is amended to read as follows:

605.9 - Gas Meters. Above-ground gas meters regulators and piping subject to damage shall be protected by a barrier complying with Section 312 or otherwise protected in an approved manner.

Locations of gas meters, regulators and piping shall also comply with the Crested Butte Fire Protection District and Fire Code.

- (10) IFC Section 5806 is amended to read as follows:

5806 - Flammable Cryogenic Fluids. The storage and use of flammable cryogenic fluids is not allowed in the Town of Crested Butte.

- (11) IFC Section 6103.3 is amended to read as follows:

6103.3 - Location of equipment and piping. Locations of gas meters, regulators and piping shall comply with this section and the Crested Butte Fire Protection District and Fire Code.

- (12) IFC Appendix B 105.1 is amended to read as follows:

B105.1 - Fire-flow requirements for buildings. The minimum *fire-flow* and flow duration requirements for one- and two-family *dwellings* (Group R-3), Group R-3 and R-4 buildings and *townhouses* shall be as specified in [Tables B105.1\(1\)](#) and [B105.1\(2\)](#). Minimum fire flow requirements shall be 1,500 gpm.

Sec. 18-6-30. Copy on file.

At least one (1) copy of the International Fire Code, certified to be a true copy, is on file in the Building Department office and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-6-40. Rules and regulations.

The Town may, from time to time, promulgate such rules and regulations as it deems necessary to implement and carry out the intent of this Article; provided, however, that such rules and regulations shall not be inconsistent herewith.

Sec. 18-6-50. Conflicting provisions.

In the event of a conflict between the code adopted herein and any provisions set forth in Chapter 16 of this Code, such conflict shall be resolved in favor of said Chapter 16.

Sec. 18-6-60. Violation, liability and penalty.

- (a) Any person who violates any provision of this Article shall be punished by a fine not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that a violation of this Article continues to exist shall constitute a separate and additional offense.
- (b) Any person violating any provisions of this Article shall be liable to the Town for any expense, loss or damage, including reasonable attorneys' fees, occasioned by reason of such violation.
- (c) The Town may institute injunction, abatement or any other appropriate action to prevent, enjoin or abate any violation of this Article.
- (d) The remedies provided by this Section are cumulative and not exclusive, and are in addition to any other remedies provided by law.

ARTICLE 7 Fuel Gas Code

Sec. 18-7-10. Adoption.

The International Fuel Gas Code, 2018 edition, including Appendices, published by the International Code Council Inc. 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ("IFGC"), is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code as the Town Fuel Gas Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes regulating and governing the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of fuel gas system and fuel gas appliances as herein provided; providing for the issuance of permits and the collection of fees therefor.

Sec. 18-7-20. Copy on file.

At least one (1) copy of the International Fuel Gas Code, certified to be a true copy, has been and is now on file in on file in the Building Department office and may be inspected by any interested person between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.

Sec. 18-7-30. Amendments.

The code adoption herein is modified by the following amendments:

- (1) IFGC Section 101.1. is amended to read as follows:

101.1. - Title. These regulations shall be known as the Fuel Gas Code of the Town of Crested Butte, hereinafter referred to as "this Code."

- (2) IFGC Section 106.6.3. is deleted in its entirety.

- (3) IFGC Section 304.1 is amended to read as follows:

304.1 - Combustion, Ventilation and Dilution Air. Air for combustion, ventilation and dilution of flue gases for appliances installed in buildings shall be provided by application of one of the methods prescribed in [Sections 304.6, 304.8, and 304.9](#). *Direct-vent appliances*, gas appliances of other than natural draft design, vented gas appliances not designated as Category I and appliances equipped with power burners shall be provided with combustion, ventilation and dilution air in accordance with the *appliance* manufacturer's instructions. All installed fuel gas-burning appliances shall be high efficiency direct-vent appliances with sealed combustion, installed in accordance with their listing, and in compliance with the manufacturer's installation instructions. All such appliances shall be installed in compliance with Chapter 18, Article 9 of the Crested Butte Municipal Code.

- (4) IFGC Section **304.2. Appliance Location** is deleted in its entirety.
- (5) IFGC Section **304.3. Draft hood/regulator location** is deleted in its entirety.
- (6) IFGC Section **304.5. Indoor combustion air** is deleted in its entirety.
- (7) IFGC Section **304.6. Outdoor combustion air** is deleted in its entirety.
- (8) IFGC Section **304.7. Combination indoor and outdoor combustion air** is deleted in its entirety.
- (9) IFGC Section **304.8. Engineered installations** is deleted in its entirety.

Sec. 18-7-40. Rules and regulations.

The Town may, from time to time, promulgate such rules and regulations as it deems necessary to implement and carry out the intent of this Article; provided, however, that such rules and regulations shall not be inconsistent herewith.

Sec. 18-7-50. Conflicting provisions.

In the event of a conflict between the IFGC and any provisions set forth in Chapter 16 of this Code, such conflict shall be resolved in favor of Chapter 16.

Sec. 18-7-60. Fees.

Fees for any permit or inspection required by the IFGC are set forth in Appendix A to this Code.

Sec. 18-7-70. Violation, liability and penalty.

- (a) Any person who violates any provision of the IFGC shall be punished by a fine not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that a violation continues to exist shall constitute a separate and additional offense.
- (b) Any person who violates any provision of the IFGC shall be liable to the Town for any expense, loss or damage, including reasonable attorneys' fees, occasioned by reason of such violation.
- (c) The Town may institute injunction, abatement or any other action to prevent, enjoin or abate any violation of the IFGC.
- (d) The remedies provided by this Section are cumulative and not exclusive, and are in addition to any other remedies provided by law.

ARTICLE 8 Solid Fuel-Burning Devices

Sec. 18-8-10. Definitions.

For the purposes of this Article, the following terms shall have the meanings given in this Section:

Approved solid fuel-burning device means a solid fuel-burning device that meets the EPA Phase 2 qualified fireplace.

Approved solid fuel-burning fireplace means a solid fuel-burning device that meets the EPA Phase 2 qualified fireplace.

Approved solid fuel burning stove means a free-standing solid fuel-burning device that has an emission limit of 2.5 grams per hour and is listed on the EPA Certified Wood Stoves Data Base

Solid fuel-burning device means any stove, firebox or other mechanical device designed and/or used for the purpose of generating heat by the burning of wood, coal, pulp, paper or other nonliquid or nongaseous fuel.

Sec. 18-8-20. Required installation.

No solid fuel-burning device shall be installed within any structure, building or mobile home in the Town unless such device is an approved solid fuel-burning device. No building can contain more than one (1) solid fuel-burning device; however, a building housing a retail sales space for authorized stove dealers who are selling stoves approved for use by the Town shall be allowed to have one (1) or two (2) solid fuel-burning devices so long as the device(s) in such space are being used for demonstration purposes only.

Sec. 18-8-30. Permit required.

- (a) An application shall be filled out and a solid fuel-burning device installation permit issued prior to the installation of any solid fuel-burning device. This provision includes installation of any replacement devices, as well as first installations.
- (b) All applications requesting a first installation of a solid fuel-burning device shall comply with Section 18-9-60, Solid Fuel Burning Device Permit.

Sec. 18-8-40. Notice of removal of solid fuel-burning device.

The Building Department shall be notified when a solid fuel-burning device is removed from a structure. Once removed, a new compliant device may not be installed after sixty (60) days unless said structure is in compliance with Section 18-9-60 of this Chapter.

Sec. 18-8-50. Fees.

In order to compensate the Town for the costs of enforcing this Article and for the costs of implementing programs and improvements to reduce air pollution caused by solid fuel-burning devices, a permit fee as established by resolution of the Town Council will be charged for applications requesting first installations, and a permit fee as established by resolution of the Town Council will be charged for replacement installations.

Sec. 18-8-60. Exemption from regulations.

The following devices are exempt from these regulations; provided, however, that new nonconforming devices may not be installed under these exemptions. Applications for exemptions hereunder shall be made in writing to the Town Manager, who shall have the right to inspect the applicable premises to confirm the qualification for exemption. The decision of the Town Manager shall be final unless appealed to the Town Council within thirty (30) days of the decision. Upon appeal to the Town Council, the matter shall be considered and a decision rendered within sixty (60) days. The exemptions are:

- (1) A solid fuel-burning device using coal as an exclusive fuel source located in structures or buildings constructed prior to September 1, 1935, so long as such device was installed and in use prior to July 21, 1986, and is owned by the same owner since said date.
- (2) Any solid fuel-burning device upon real property which is owned and occupied on a full-time basis by a person who qualifies for a sewer and water service charge rebate pursuant to Section 13-1-330 of this Code.
- (3) Solid fuel-burning devices located in buildings with significant historical value that are not used as a primary heat source and are only fired on an occasional basis.
- (4) Solid fuel-burning devices utilized by authorized wood stove dealers as regulated by Section 18-8-20 of this Article.

Sec. 18-8-70. Installation requirements and standards.

All solid fuel-burning devices shall be installed as per the manufacturer's recommendations, in accordance with appropriate building and fire codes and standards as adopted in this Chapter, and as directed by the Building Official and Fire Marshal.

Sec. 18-8-80. Maintenance of solid fuel-burning devices.

It shall be the responsibility of each solid fuel-burning device owner to adequately repair and maintain the device in order to assure that it burns in accordance with its original specifications and does not exceed those particulate emission standards allowed. If complaints are filed or questionable emissions are observed on three (3) separate occasions, the Building Department may initiate an investigation of a device and require that the device be tested, repaired or replaced to assure compliance with this Article.

Sec. 18-8-90. Penalty and delinquencies.

Any person violating any provision or section of this Article, including a failure to obtain the required permit, shall be guilty of a misdemeanor and, upon conviction thereof, may be punished in accordance with the provisions of Section 1-4-20 of this Code. Any person or entity who does not pay the license fee when required shall also be deemed in violation of this Article. Any unpaid permit fee shall accrue a delinquency charge of three percent (3%) per month, compounded monthly. Any such delinquency shall become a lien upon the real property on which the permitted solid fuel-burning device exists, which lien may be collected in the same manner as a tax lien. The Town shall be entitled to recover all of its collection costs, including attorneys' fees, as part of any action or proceeding to collect delinquent permit fees due pursuant to this Article.

Sec. 18-8-100. Abatement.

The Town shall have the power to abate, enjoin or otherwise correct the violation of any provision of this Article through any court of competent jurisdiction. The Town, in such action, shall be entitled to its costs and attorney's fees in the event that it prevails.

ARTICLE 9 Energy Standards

Sec. 18-9-10. Purpose.

The intent of this Article is to ensure energy conservation and sustainable building practice within the Town. All new, heated structures shall comply with the terms of this Article.

Sec. 18-9-20. Definitions.

For purposes of this Article, the use of a plural form shall not necessarily imply that more than the singular is suggested, condoned or allowed, and the following terms shall have the meanings herein given:

All Electric Building. A building that contains no combustion equipment or plumbing for combustion equipment serving space heating (with the exception of solid fuel-burning devices that meet requirements in Article 8 of this Chapter), water heating (including pools and spas), cooking appliances (including barbeques but excluding Commercial Food Heat-processing Equipment), and clothes drying, within the building or building property lines, and instead uses electric heating appliances for service.

Combustion Equipment. Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

Commercial Food Heat-processing Equipment. Equipment used in a food establishment for heat-processing food or utensils and that produces grease vapors, steam, fumes, smoke, or odors that are required to be removed through a local exhaust ventilation system.

DC Fast Charger ("DCFC"). EVSE that provides at least 50 kilowatts of direct current electrical power for charging a plug-in electric vehicle through a connector based on fast charging equipment standards and which is approved for installation for that purpose under the National Electric Code through an Underwriters Laboratories Certification or an equivalent certifying organization.

Decorative Appliance. A device utilizing natural gas as a fuel designed to appear as a real fireplace and shall be a direct vent appliance with no opening to the interior of the structure.

Electric Heating Appliance. A device that produces heat energy to create a warm environment by the application of electric power to resistance elements, refrigerant compressors, or dissimilar material junctions.

Electric Vehicle Supply Equipment (EVSE). The conductors—including the ungrounded, grounded, and equipment grounding conductors—and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

Electric Vehicle (EV) Ready Space. Parking spaces that have full circuit installations of 208/240-volt (or greater), 40-ampere (or greater) panel capacity, raceway wiring, receptacle and circuit overprotection devices. This strategy provides all required electrical hardware for the future installation of EV Supply Equipment (EVSE). Anticipating the use of dual head EVSE, the same circuit may be used to support charging in adjacent EV-Ready spaces.

Fuel Gas. A gas that is natural, manufactured, liquefied petroleum, or a mixture of these.

Home Energy Assessment. An assessment includes a home visit by a building performance institute (BPI) certified energy analyst that results in a report that analyzes the current condition and energy usage of a home and provides a list of recommended improvements.

Home Energy Rating System (HERS) certificate. A certificate generated by an accredited home energy rating system program provider.

Level II EVSE. An EVSE capable of charging at 30 amperes or higher at 208 or 240 VAC.

R Value. A term used to describe the thermal transmission of heat through a combination of insulating components in a wall, roof or foundation assembly.

Renovation. To improve or repair a structure and may include preservation and rehabilitation.

Solar Ready Components. Building construction components that facilitate and optimize the installation of a rooftop solar photovoltaic (PV) system at some point after the building has been constructed, including installation of electrical conduit from electrical panel space to the solar panel roof area.

Sustainable building practices. Building practices that accommodate increased population by means that reduce overall per-capita energy usage.

U Value. The reciprocal of R value. The rate of nonsolar heat flow through a building.

Sec. 18-9-30. Utilization of Home Energy Rating System (HERS).

All new, heated residential structures shall become qualified as a [Department of Energy Zero Energy Ready Home \(Rev. 07\)](#) by meeting the national program requirements, becoming verified and field-tested in accordance with HERS standards by an approved verifier, and meeting all applicable codes. Residential construction may meet the requirements of either the performance path or the prescriptive path as defined in the Zero Energy Ready Home Requirements to qualify.

Sec. 18-9-40. International Energy Conservation Code.

- (a) Adoption. The *International Energy Conservation Code* ("IECC"), 2021 edition, without appendices, as published by the International Code Council Inc. 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 is hereby adopted by reference thereto and incorporated into and made part of the Crested Butte Municipal Code to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes regulating and governing the minimum energy conservation requirements as herein provided; providing for the issuance of permits and collection of fees (as appropriate) therefor; and each and all of the regulations, provisions, penalties, conditions and terms of said code on file in the office of the Town are hereby referred to, adopted and made as part hereof, as if fully set out herein.

- (b) **Amendments.**

The code adoption herein is modified by the following amendments:

- (8) Section C102.1.1 is amended to read as follows:

Section C102.1.1 - Above Code Programs. The *code official* or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program as exceeding the energy efficiency required by this code. Buildings *approved* in writing by such an energy efficiency program shall be considered to be in compliance with this code. The requirements identified in Table C407.2 shall be met. New commercial buildings are also governed by Article 1.5 of Chapter 18 of the Crested Butte Town Code (International Green Construction Code).

- (5) IECC Section C401.2 is amended to read as follows:

C401.2 – Application. Commercial buildings shall comply with Section C401.2.1 or C401.2.2, and shall comply with C401.2.3. A compliance method other than the Prescriptive Compliance Option in 401.2.1. shall be pre-approved by the building official.

- (6) IECC Section C401.2 is amended by adding a new subsection to read as follows:

C401.2.3. Commercial Electric Requirements.

C401.2.3.1. All Electric. Commercial buildings shall be All Electric Buildings.

C401.2.3.2. EV Parking. Commercial buildings and accessory structures with two or more parking spaces shall provide one Level II EVSE. Additionally, ten percent (10%) of total required parking spaces (rounded up) shall be Electric Vehicle Ready Spaces, and one DC Fast Charger (25 kW) shall be provided for 5 or more required parking spaces.

C401.2.3.3. Solar Requirements.

C401.2.3.3.1 - Buildings that are less than 5,000 square feet. A commercial building that is less than 5,000 square feet shall install Solar Ready Components.

C401.2.3.3.2 - Buildings that are 5,000 square feet or larger. A commercial building that is 5,000 square feet or larger shall install solar PV panels to roof(s) per Sec 18-1.5-30 (5). Solar requirements shall not exceed any Gunnison County Electric Association net metering limitation in place when submitting a building permit application.

- (7) IECC Chapter 5 [CE] is deleted in its entirety and replaced with a new section to read as follows:

Chapter 5 [CE]. Commercial Existing Buildings. The alteration, repair, addition and change of occupancy of existing buildings and structures shall comply with the requirements of the 2021 International Existing Building Code (IEBC) as amended in Section 18-2.5-30 of the Town Code.

- (8) IECC Section R401.2 is amended to read as follows:

R401.2 – Application. Residential buildings shall comply with Section R401.2.5 and R401.2.6 and either Sections R401.2.1, R401.2.2, R401.2.3 or R401.2.4.

- (9) IECC Section R401.2 is amended to add a new subsection R401.2.6 to read as follows:

R401.2.6. Residential Electric Requirements.

R401.2.6.1. All Electric. Residential buildings shall be All Electric Buildings.

R401.2.6.2. EV Parking. All residential buildings or garages shall provide one Electric Vehicle Ready Space per dwelling unit.

R401.2.6.2. – Zero Energy Ready Home. All new heated buildings shall become qualified as a [Department of Energy Zero Energy Ready Home \(Rev. 07\)](#) by meeting the national program requirements specified in the program, becoming verified and field-tested in accordance with HERS standards by an approved verifier, and meeting all applicable codes. Residential construction may meet the requirements of either the performance path or the prescriptive path to qualify.

- (10) IECC Section R405.1 is amended to read as follows:

R405.1 – Scope. This section establishes criteria for compliance using total building performance analysis. Such analysis shall include heating, cooling, mechanical ventilation and service water-heating energy only. The utilization of this section shall be specifically approved by the Building Official prior to submittal of design documents.

- (11) IECC Chapter 5 [RE] is deleted in its entirety and replaced with a new section to read as follows:

Chapter 5 [RE]. Residential Existing Buildings. The alteration, repair, addition and change of occupancy of existing buildings and structures shall comply with the requirements of the 2021 International Existing Building Code (IEBC)."

Sec. 18-9-50. Minimum efficiency standards for new construction; commercial structures

Commercial buildings with less than 5,000 square feet shall install Solar Ready Components. Commercial buildings 5,000 square feet or larger shall install solar PV panels to roof(s) per Sec 18-1.5-30 (5). Solar installation requirements shall not exceed any Gunnison County Electric Association net metering limitation in place when submitting a building permit application.

Sec. 18-9-60. Solid fuel-burning device permit.

- (a) Only one (1) solid fuel-burning device shall be permitted within any structure. Permits for solid fuel-burning devices shall be obtained from the Building Official. Prior to issuance of a permit allowing for the placement of a solid fuel-burning device within any structure, the applicant for such permit must conduct an Energy

Rating System (HERS) Audit. The results of such energy efficiency test shall be provided to the Building Official along with the permit application for any solid fuel-burning device. The cost and expense of such Energy Star energy efficiency test shall be borne by the permit applicant.

- (b) All solid fuel-burning device permit applications must include a HERS rating for the structure of not more than:
 - (1) Thirty (30) for any new structure; and
 - (2) Fifty (50) for any existing structure.
- (c) Permissible solid fuel-burning devices shall meet the EPA List of Phase 2 Qualified Fireplaces:
- (d) Solid fuel—burning device permit. All solid fuel-burning devices must incorporate exterior combustion air ventilation that complies with Section 701.1 and 701.2 of the International Mechanical Code (IMC), as defined in Article 3 of this Chapter. Ducting for solid fuel-burning devices must be fitted with backdraft dampers.
- (e) All applications for solid fuel-burning devices shall reflect the applicant's compliance with the foregoing requirements.

Sec. 18-9-70. Minimum efficiency standards for renovation of existing historic buildings.

Any heated buildings or portions thereof undergoing renovations must comply with Section 18-9-40 above. The Building Official may waive any or all of the requirements of Section 18-9-40 at his or her discretion per IECC C101.3 and with IECC Section C501.5 Historic buildings- Commercial Provision and per IECC Section R101.3 and R501.6 Historic buildings- Residential Provision.

Buildings shall meet IECC without damaging the existing historic structure with the exception that closed cell foam insulation can be used in the ceiling framing cavities. No closed cell foam shall be used in the wall framing cavities. BOZAR reviews this work on site before any work commences and during the construction process as needed. A blower door infiltration test conducted after drywall is optional.

Sec. 18-9-80. Building science requirements.

- (a) All new, heated residential structures shall become qualified as a [Department of Energy Zero Energy Ready Home \(Rev. 07\)](#) and Section 18-9-30 by meeting the national program requirements specified in the program, becoming verified and field-tested in accordance with HERS standards by an approved verifier, and meeting all applicable codes. Residential construction may meet the requirements of either the performance path or the prescriptive path to qualify.
- (b) Installation of energy-efficient lighting fixtures. All permanently installed light sources in a new structure shall be compact fluorescent (CF) or LED high-efficiency lamps. This requirement complies with IECC Section R404.1 Lighting equipment.
- (c) Use of energy-efficient appliances. All appliances, including microwave ovens, boilers, water heaters, refrigeration devices, clothing washers and dryers and dishwashers, in new construction and remodels of existing structures must be Energy Star certified. The permit must confirm compliance with this requirement during the Town's final inspection of the structure.
- (d) Mechanical fresh air ventilation system. All new construction shall incorporate an outdoor air ventilation system complying with Chapter 4, Section 403 of the IMC, as defined in Article 3 of this Chapter, or the equivalent with heat exchange.

- (e) Requirements for sealed combustion, direct-vent heating equipment. All gas-fired boilers, furnaces, water heaters and fireplaces must be sealed combustion, direct-vent type appliances or an appliance otherwise approved by the Building Official.

Sec. 18-9-90. Snowmelt system requirements.

All snowmelt systems must be approved by the Building Official and shall meet the following requirements:

- (1) R-10 insulation below the heated surface must be incorporated;
- (2) Minimum slab thickness for sidewalks must be five (5) inches; and
- (3) Snowmelt equipment must include automatic temperature and surface moisture controls (no idling snowmelt equipment is permitted).

Sec. 18-9-100. Renewable Energy Mitigation Program.

Installing a zone and tubing to a future outdoor heated area is prohibited without first obtaining an outdoor energy usage permit. All outdoor snowmelt systems must meet IECC Section R403.9 Snow Melt and Ice System controls and comply with the following Energy Mitigation Program (REMP) requirements. All outdoor pools, hot tubs and spas must comply with the REMP requirements. Electric heat trace systems must comply with IECC Sections C404.6.2 and R403.5.1.2.

- (1) REMP; Applicability. For purposes hereof, an "outdoor snowmelt system" shall include any heating system installed in any walkway, driveway, roof or any other exterior surface. All energy utilized in operating outdoor snowmelt systems, and outdoor pools, hot tubs and spas with a top surface area in excess of sixty-four (64) square feet (as determined by the unit's manufacturer), shall be produced by a renewable energy system; or, in lieu thereof, the owner of the property with said outdoor snowmelt system and/or subject pool, hot tub or spa shall make payment to the Town in lieu of providing energy produced by a renewable energy system. The owner of the subject property shall have the right to choose between providing energy from a Town-approved renewable energy system or making payment in lieu thereof, or a combination of both, in order to offset energy used by outdoor snowmelt systems and subject pools, hot tubs and spas. For any subject hot tub or spa, only that surface area over said sixty-four (64) square feet shall be subject to the requirements of this Section. Any outdoor snowmelt system or subject pool, hot tub or spa that has been installed prior to June 25, 2007, shall be exempt from the requirements of this Section. Said exemption shall not apply, however, to any modification to any existing outdoor snowmelt system or outdoor pool increasing the square footage thereof, said modification requiring an outdoor energy usage permit as defined hereunder.
- (2) Outdoor energy usage permit. Prior to the installation of any (i) outdoor snowmelt system and/or (ii) outdoor pool, hot tub or spa, the owner of the property affected by such installation shall obtain an outdoor energy usage permit. No outdoor snowmelt system or subject pool, hot tub or spa shall be installed without first obtaining an outdoor energy usage permit, as well as a plumbing and mechanical permit as applicable, from the Building Official. No outdoor energy usage permit shall be required for any outdoor snowmelt system or subject pool, hot tub or spa located on public property or any portable outdoor heat lamp.
 - a. An outdoor energy usage permit shall not be issued until the owner of the subject property has complied with the requirements of this Section. All outdoor snowmelt systems shall be in compliance with Section 18-9-90 above.
 - b. An outdoor energy usage permit shall be obtained by said owner for each outdoor snowmelt system and subject pool, hot tub and spa, or any modification to any outdoor snowmelt system and outdoor pool increasing the square footage thereof. An outdoor energy usage permit shall

include a processing fee that shall cover the cost and expense of the Building Official of reviewing and processing said outdoor energy usage permit application.

- c. The Building Official shall review and approve any complete and properly submitted application for an outdoor energy usage permit within thirty (30) days of its submission; except that, if the installation of any outdoor snowmelt system or subject pool, hot tub or spa is part of any new construction, addition, renovation or remodel that otherwise requires a building permit under this Code, the application for said outdoor energy usage permit shall be approved, if at all, along with the approval and issuance of said building permit, and the installation shall be considered part of the structure for purposes of Article 13 of this Chapter. In such circumstances, the issuance of an outdoor energy usage permit shall be subject to Board approval as provided in this Code. No outdoor energy usage permit shall be granted, however, until a Town-approved renewable energy system or other Town-approved system, as described in Subparagraph (3)(b) of this Section, has been selected by the owner of the affected property and/or payment in lieu has been made, as applicable, as further described in Paragraph (3) of this Section. The owner shall provide the following supporting documentation along with the application for an outdoor energy usage permit:
 - 1. The legal description of the affected property;
 - 2. The signature of the owner of the property or other person with the written legal authority (e.g., power of attorney) of the owner;
 - 3. A site development plan drawn to scale for the building and/or sidewalk, driveway or patio, as applicable, that is the subject of the outdoor snowmelt system or subject pool, hot tub or spa installation;
 - 4. A complete set of drawings, plans and specifications, to scale, depicting any outdoor snowmelt system or subject pool, hot tub or spa installation, along with the type and efficiency of the same;
 - 5. If the owner of the affected property elects to incorporate a renewable energy system or other Town-approved system, a complete set of drawings, plans and specifications, to scale, of the renewable energy system or other Town-approved system and its proposed installation location, along with the type and efficiency of the same;
 - 6. The owner's election to either utilize a renewable energy system or other Town-approved system or make payment in lieu, or a combination of both, as set forth in Paragraph (3) of this Section; and
 - 7. Any other information requested by the Building Official in order to review the application for compliance with this Section and Section 18-9-90 above.

Only subsections (1), (2), (5), (6) and (7) hereof shall apply to subject pools, hot tubs and spas. The items listed above are hereby incorporated into the application for the outdoor energy usage permit.

- d. Outdoor energy usage permit applications, unless otherwise included as part of a building permit for any new construction, addition, renovation or remodel as discussed above, shall be submitted only to the Building Official and not the Board for approval.
- e. All installations of outdoor snowmelt systems shall be in strict compliance with the application requirements for an outdoor energy usage permit. Any deviation from the application requirements shall require a new outdoor energy usage permit. All installations of outdoor snowmelt systems shall be completed within six (6) months of issuance of an outdoor energy usage permit; except that, where the installation of an outdoor snowmelt system is otherwise associated with a building permit for any new construction, addition, renovation or remodel as

discussed above, such longer permitted time under this Code as it relates to said building permit shall apply.

- f. Should the Building Official discover the installation of any outdoor snowmelt system or subject pool, hot tub or spa in violation of this Section, the same shall attach a "stop work order" to said installation in a conspicuous place. Where the Building Official discovers any use of property in violation of this Section, the same shall attach a "desist order" to the property and attempt to deliver a copy of the same to the occupier of the property. Any stop work order or desist order shall be signed by the Building Official and indicate the subject area in which the violations exists. The removal of a stop work order or desist order by any person before the violation is corrected shall constitute a violation of this Section. The continuation of construction or use in violation of a stop work or desist order shall also constitute a violation of this Section.
 - g. An outdoor energy usage permit shall not be issued in connection with any property until all due and owing fees for sewer, water, sanitation, street or other improvement assessments, real property taxes, real estate transfer taxes and/or other fees or taxes due to the Town in connection with said property have been paid in full and are current in all respects.
- (3) Calculations; Renewable energy systems; Payment in lieu.
- a. Calculations. The amount of energy used by an outdoor snowmelt system or subject pool, hot tub or spa shall be calculated by the Town using a system adopted by the Town. Said system shall also calculate the payment in lieu of providing energy produced by a renewable energy system or other Town-approved system. The Town shall utilize the Town of Crested Butte Outdoor Energy Worksheet attached as Exhibit "A" to the ordinance codified herein, a copy of which is on file in the Town Clerk's office, to calculate the mitigation required for outdoor energy usage. Said Town of Crested Butte Outdoor Energy Worksheet shall also be utilized to calculate the renewable energy mitigation credit proposed to offset the proposed outdoor energy usage. The assumptions and calculations incorporated into the Town of Crested Butte Outdoor Energy Worksheet are incorporated in the Calculation Assumptions attached as Exhibit "B" to the ordinance codified herein, a copy of which is on file in the Town Clerk's office. Once said energy usage and payment in lieu are calculated by the Town, the owner of the property affected by the outdoor snowmelt system or subject pool, hot tub or spa shall select whether it will utilize either a Town-approved renewable energy system or other Town-approved system to offset energy usage by any outdoor snowmelt system or subject pool, hot tub or spa, or make payment in lieu thereof. The owner of the affected property may select use of a combination of both a Town-approved renewable energy system or other Town-approved system to offset energy usage by any outdoor snowmelt system or subject pool, hot tub or spa and payment in lieu thereof. Such combination shall, however, be approved in advance by the Building Official. No outdoor energy usage permit may be issued until the owner of the affected property has selected either a Town-approved renewable energy system or other Town-approved system to offset energy usage by any outdoor snowmelt system or subject pool, hot tub or spa or payment in lieu thereof, or a combination of both as approved by the Town.
 - b. Renewable energy systems. All renewable energy systems and other systems must be approved in advance by the Building Official. Said renewable energy systems may be solar or geothermal in nature. Other energy usage mitigation systems may be proposed but must be approved in advance by the Building Official. Any renewable energy system utilized as mitigation for outdoor energy usage must conform to the requirements set forth in the Project Checklist attached as Exhibit "C" to the ordinance codified herein, a copy of which is on file in the Town Clerk's office, as applicable. Other systems must provide an engineering analysis that calculates the renewable energy mitigation credit for the proposed system and provides all necessary information as determined by the Building Official. Review of the system will be at the expense of the owner. No

renewable energy system or other system shall be approved which does not cause the mitigation of energy usage to be made within the Town. All proposed renewable energy mitigation systems and any other systems shall be included as part of the application for an outdoor energy usage permit. If the proposed renewable energy system is solar in nature, the panels and/or collectors must be approved through the standard building permit process and must be approved by the Board. The type of renewable energy system or other system, the specifications and efficiency thereof, the location of the installation of said renewable energy system or other system and any other additional information requested by the Building Official must be submitted with the application for an outdoor energy usage permit.

- c. Payments in lieu. The Town may accept payment from the owner of an affected property as described in this Section in lieu of providing energy produced by a Town-approved renewable energy system, or partial payment in lieu from said owner of an affected property providing only partial energy produced by a Town-approved renewable energy system, as delineated in this Section. Acceptable payments shall be made by cash or check only. The owner of the affected property shall make payment in lieu at the time of, and as a condition precedent to, issuance of an outdoor energy usage permit. Such payment requirements shall apply to any addition or modification to any outdoor snowmelt system or outdoor pool where the owner has selected payments in lieu as described in this Section. In the event that an owner of an outdoor snowmelt system, subject pool, hot tub or spa with an outdoor energy usage permit for such energy usage seeks to make modifications to such usage such that any payment in lieu previously made could otherwise be reduced, no refund shall be given by the Town.
 - d. Appropriation of funds. All payments in lieu received pursuant to this Section shall be deposited into a separate account with the Town. Funds derived from payments in lieu made pursuant to this Section shall be utilized by the Town to, in no order of preference: (i) defray any costs and expenses associated with the operation, administration and enforcement of the REMP program described in this Section; (ii) reduce and offset energy consumption in public buildings; (iii) reduce energy consumption in residential affordable housing units; (iv) defray the cost and expense of engineering and education to promote energy consciousness, renewable energy installation and reducing energy use; and/or (iv) cover such other costs and expenses consistent with the goals of the REMP and the Energy Code, as determined by the Town Council.
 - e. Updating and monitoring. The Building Official may monitor and, to the extent necessary, update and amend, as determined by the Building Official, the Town of Crested Butte Outdoor Energy Worksheet, the Calculation Assumptions and the Project Checklist in order to promote and advance the goals of the REMP.
- (4) Violations. Any person who violates any of the provisions of this Section may be fined an amount not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that such violation continues to exist shall be deemed to be a separate offense.

Sec. 18-9-110. Penalties.

- (a) Offense. Any person who violates any of the provisions of this Chapter shall be fined an amount not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that such violation continues to exist shall be deemed a separate offense.
- (b) Actions. The erection, construction, alteration, enlargement, conversion, moving or maintenance of any building, and the use of any land, building or structure, which activity or use is continued, operated or maintained contrary to any provision of this Chapter shall be unlawful. The Town may institute injunction, abatement or any other appropriate action to prevent, enjoin, abate or remove such violation. Such action may also be maintained and instituted by any property owner who is damaged by a violation of this Article.

ARTICLE 10 Sanitary Standards and Regulations

Sec. 18-10-10. Purpose.

The purpose of this Article is to provide minimum requirements for the protection of the health, welfare and safety of the residents and inhabitants of the Town and the occupants of all public accommodations, and to set forth applicable standards of maintenance, sanitation, ventilation, occupancy and use of public accommodations and buildings.

Sec. 18-10-20. Definitions.

For the purpose of this Article, certain words and phrases shall be defined as follows:

Boarding and rooming house means a building other than a hotel or lodge where, for compensation, meals or lodging are provided for five (5), but not more than fifteen (15) persons.

Building means any structure having a roof supported by columns or walls.

Dormitory means a building containing sleeping rooms designed to be rented for short-term occupancy, with adequate sanitary facilities, and which may or may not have cooking facilities as an accessory use.

Dwelling means any building or part thereof designed or used for private residential purposes.

Dwelling unit means any room or group of rooms located within a dwelling and forming a single habitable unit with facilities which are used or intended to be used for living and sleeping, and a part of which is exclusively or occasionally appropriated for cooking or eating.

Exit means a continuous and unobstructed means of egress to a public way, and shall include intervening doorways, corridors, ramps, stairways, smoke-proof enclosures, horizontal exits, exit courts and yards.

Floor area means the sum of the areas of the several floors of main and accessory buildings on a lot, as measured by the exterior faces of the walls, and of enclosed porches as measured by the exterior limits thereof, but excluding the areas of unroofed porches or terraces, basements or attics used only for accessory storage or service, and accessory buildings used for garage purposes.

Garbage means all putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food.

Grounds means exterior yard areas or premises.

Guest means any person hiring or occupying a room for living or sleeping purposes.

Guest room means any room used, or intended to be used, by a guest for sleeping purposes.

Habitable room means a room or enclosed floor space used or intended to be used for sleeping, living, cooking or eating purposes, excluding bath or toilet rooms, service rooms, foyers, connecting corridors, closets, storage spaces or utility rooms.

Health Department means the Health Department and the officers and employees of the Town.

Hot water means water at a temperature of not less than one hundred twenty (120) degrees Fahrenheit.

Hotel or lodge means a building containing sleeping rooms designed to be rented for short-term occupancy and which may or may not have eating or drinking facilities as an accessory use.

Kitchen means a room used, or designed to be used, for the preparation of food.

Motel means a building or group of buildings containing individual sleeping or living units designed and used for temporary rental occupancy and with automobile parking space adjacent to or near each rental unit.

Multiple dwelling means any dwelling containing more than one (1) dwelling unit.

Nuisance. The following shall be defined as *nuisances*:

- a. Any public nuisance known at common law or in equity jurisprudence.
- b. An attractive nuisance known at common law or in equity jurisprudence.
- c. Whatever is dangerous to human life or detrimental to health.
- d. Overcrowding a room with occupants.
- e. Insufficient ventilation, illumination or heating.
- f. Inadequate or unsanitary sewerage or plumbing facilities.
- g. Unsanitary conditions.
- h. Whatever renders air, food or drink unwholesome or detrimental to the health of human beings.

Occupant means any person living, sleeping, cooking in or having possession of a dwelling unit or rooming unit.

Operator means any person who owns or has charge, care or control of a building or part thereof in which dwelling units or rooms are rented.

Public accommodations means any establishment or building, including a rooming house, boarding house, lodging house, hotel, motel or other facility by whatever name known, which maintains, advertises, offers or rents to a guest as a place where sleeping or rooming accommodations are provided, whether with or without meals.

Refuse means all combustible or noncombustible, putrescible or nonputrescible solid or liquid wastes, including garbage, rubbish, ashes and manure.

Rooming unit means any room or group of rooms forming a single habitable unit used or intended to be used for living and sleeping, but not for cooking or eating purposes.

Sanitary facilities means toilet, privies, lavatories, showers, baths, bathtubs, urinals, laundry tubs and the service rooms provided for installation and use of these units.

ARTICLE 11 Utility Undergrounding Requirements

Sec. 18-11-10. Underground installation required.

All electric and communication utility lines and services, and all street lighting circuits, except as hereinafter provided, shall be installed underground.

Sec. 18-11-20. Exceptions.

Excepted from the requirements of the foregoing shall be the following:

- (1) Transformers, switching boxes, terminal boxes, meter cabinets, pedestals, ducts and other facilities necessarily appurtenant to such underground and street light facilities when placed aboveground within the utility easement provided therefor or within the street or other public place as appropriate.
- (2) All facilities reasonably necessary to connect underground facilities to existing or permitted overhead or aboveground facilities.
- (3) Overhead electric transmission and distribution feeder lines and overhead communication long distance, trunk and feeder lines, existing or new.
- (4) Such utility facilities as are present on the effective date of this Article which are used or useful in serving a proposed development.
- (5) Development of a limited extent in previously developed areas where overhead service exists, provided that a permit for such overhead service is obtained from the Board of Zoning and Architectural Review. Said permit shall only be issued in those cases where the new service cannot reasonably be placed underground.

Sec. 18-11-30. Responsibility of developer.

The developer of any improvements to real property requiring the installation of utility service lines shall be responsible for complying with the requirements of this Article. He or she shall make the necessary arrangements, including payment for any construction or installation charges, with each of the serving utilities for the installation of such facilities. The developer shall present evidence, prior to the final approval of a certificate of occupancy for said improvements, that the necessary arrangements have been made with each of the serving utilities for the installation of facilities in compliance with this Article.

ARTICLE 12 Construction Site Regulations

Sec. 18-12-10. Definition.

For purposes of this Article, *construction site* shall mean any location where activities pursuant to a building permit are conducted.

Sec. 18-12-20. Construction activity hours.

No construction activity on any construction site shall take place before 7:00 a.m., nor extend past 7:00 p.m., Monday through Saturday. No construction activity on any construction site shall take place before 8:00 a.m. nor extend past 5:00 p.m. on any Sunday.

Sec. 18-12-30. Construction debris.

The owner of a property on which construction activity is taking place is required to:

- (1) provide recycling bins on the construction site to recycle glass bottles, plastic bottles, and cardboard, q and,

- (2) Ensure that all debris, garbage and refuse are removed from the construction site, and that such debris, garbage and refuse do not enter upon the public right-of-way or any private property.

Sec. 18-12-40. Construction site safety.

Every excavation on site shall have safety fencing erected as a public safeguard. Adjoining public or private property shall be protected from damage during construction, remodeling, and demolition work. Protection shall be provided for footings, foundations, party wall, chimney, skylight and roof work. Provisions shall also be made to control water runoff and erosion during construction and demolition activities.

Sec. 18-12-50. Violation, liability and penalty.

- (a) The failure to comply with this Article shall constitute a nuisance. The owner of the property upon which such violation occurs shall be jointly and severally liable for the violation.
- (b) Offense. Any person who violates any of the provisions of this Chapter shall be fined an amount not to exceed one thousand dollars (\$1,000.00) for each offense. Each day that such violation continues to exist shall be deemed a separate offense.
- (c) In addition, any person who violates any provision of this Article shall be liable to the Town for any expense, loss or damage, including reasonable attorneys' fees, occasioned by reason of such violation.
- (d) The Town may institute injunction, abatement or any other action to prevent, enjoin or abate any violation of this Article.
- (e) The remedies provided by this Article are cumulative and not exclusive, and are in addition to any other remedies provided by law.

ARTICLE 13 Building Inspector and Building Permits

Sec. 18-13-10. Powers of Building Inspector.

- (a) There is hereby established the position of Building Inspector. The Building Inspector shall be appointed by the Town Manager, who may remove the Building Inspector according to procedures established for Town employees. The Building Inspector shall have the power to seek inspection of any property or structure at reasonable hours to determine compliance with Town zoning and land use ordinances.
- (b) It shall be the duty of the Building Inspector to administer and enforce all provisions of this Article except for those powers granted to the Board of Zoning and Architectural Review, hereinafter referred to as the "Board." In addition, the Building Inspector may permit the construction of a foundation before the actual issuance of a building permit if all of the following conditions apply:
 - (1) An application for a building permit has been submitted to the Building Inspector and is complete with sufficient plans, and is awaiting only Board approval;
 - (2) The applicant has signed a written and acknowledged agreement with the Town on a form provided by the Town agreeing to remove all work performed within sixty (60) days of the Board's rejection of the application; and
 - (3) The Building Inspector and the Chair of the Board agree that there is just cause for allowing work to commence on the foundation, and the application is in keeping with all Town regulations and policies of the Board.

Sec. 18-13-20. Building permit applications.

- (a) All applications for building permits shall be made on the forms provided by the Town for that purpose, and shall be accompanied by the following:
- (1) The legal description of the lot involved.
 - (2) A deed for the property establishing title.
 - (3) A plot plan of the lot or parcel, drawn preferably to a one-eighth-inch-to-one-foot scale, showing the dimensions of the lot or parcel and the size and location of the building or structure to be erected thereon, together with all other structures on the lot or parcel.
 - (4) Plans showing the height and elevation of the building or structure, and the exterior walls and roof thereof, with a general schematic drawing of the exterior design of the building drawn to one-quarter-inch or one-eighth-inch to the foot scale.
 - (5) A statement concerning the use to be made of such building or structure.
 - (6) A statement setting forth necessary variances, conditional uses, conditional waivers or other special reviews.
 - (7) A cutout of the floor plan at a scale determined by the Building Inspector.
 - (8) A perspective, drawn to scale, showing the relationship of the proposed building or project to nearby buildings, if requested by the Chair of the Board or the Building Inspector.
 - (9) The signature of the owner of the property or some other person with the written legal authority of the owner, if that person has the written legal authority to make such application.
 - (10) Any other information specifically requested by the Board or Building Inspector in order to review the application for compliance with this Article or any other Town ordinance or code.
 - (11) A complete site development plan for the entire proposed building site, drawn to scale and indicating:
 - a. All paving, driveways, walkways, parking areas, trash or Dumpster locations and other service structures;
 - b. All walls and fences with their location and heights;
 - c. Grass or other planted ground cover;
 - d. Any trees and shrubbery with a notation as to species and size at the time of planting and a notation as to any mature landscaping proposed to be removed or relocated on the site;
 - e. Any exterior lighting; and
 - f. Proposed deviation of finish grade from natural grade in excess of one (1) vertical foot.
 - (12) A front elevation, drawn to scale, showing the width and height of the street elevation (alley elevation in the case of an alley structure) of the proposed building, any other buildings on the proposed building site and the buildings on the parcels abutting the proposed building site, all on one (1) drawing.
 - (13) A cross-section of each building section which varies in floor-to-ceiling height from any other section in the building.
 - (14) If the natural grade of a building site varies more than two (2) vertical feet between any two (2) points on the site or one (1) vertical foot within the building footprint, the natural contour of the site shall be graphically depicted on the site plan with no greater than one-foot contour lines and depicted on the submitted elevations of the proposed structure. If the finish grade of the site is proposed to be

different from the natural grade of the site by more than one (1) vertical foot, both finish and natural grade shall be clearly depicted and labeled as such on the site plan and on the submitted elevations of the structure.

- (15) The engineering plans for single and two family residences shall be prepared by a registered or licensed design professional and signed and stamped with a seal stamp.
- (16) All construction documents for commercial projects shall be prepared by registered or licensed design professionals and signed stamped with a seal stamp.
- (b) The Building Inspector shall refer all complete applications to the Board, except those applications designated "insubstantial" as provided in Paragraph 16-21-100(a)(9) of this Code, for sketch plan review, classification and approval as provided in Sections 16-21-130 and 16-21-140.

Sec. 18-13-30. Application fees.

- (a) The Building Official shall charge a fee for any building permit or sign permit application sufficient to cover related Town expenses as described in the building code adopted by the Town in this Chapter. Should any building or sign permit application or permit be withdrawn and returned to the Building Official within ninety (90) days after the date of application or issuance, the Building Official may refund up to eighty-five percent (85%) of any application or permit funds not used to pay publication costs. The Building Official shall be authorized to charge such additional fees as are necessary to offset expenses to the Town occasioned by requests or approvals not combined with building permit applications, special or extra publications or special Board meetings.
- (b) Building permit fees and application fees shall be waived for all resident-occupied affordable housing. Building permit fees are based on the entire building. Where a resident-occupied affordable housing unit is contained within the building, permit fees shall be reduced in proportion to the cost of construction of the resident occupied affordable housing unit.

Sec. 18-13-40. Building permit.

- (a) No building or structure shall be erected, constructed, structurally altered, moved, demolished or changed without first obtaining a building permit issued by the Building Inspector. Such building permit shall be issued when the applicant has complied with all requirements of this Chapter and any code adopted herein, including the requirement for the submission of construction documents and payment of such fees as are required to review such documents, and when the applicant has obtained all approvals required hereunder.
- (b) The determination of value or valuation of the building permit scope of work under any provision of this chapter shall be made by the Building Official based on the published International Code Council minimum valuation table multiplied by the regional multiplier of 2.70, or other evidence of value, whichever is greater, as determined by the Building Official. The value to be used in computing the building permit and building plan review fees shall be the total value of all construction work for which the permit is issued. The approval by the Board of a building permit application shall be valid for the period of time set forth in Section 24-68-104, C.R.S., as implemented by Section 16-19-30 of this Code, so long as said sections remain in effect.
- (c) No building permit shall be issued unless and until a performance deposit has been deposited with the Building Department.
 - (1) The amount of the performance deposit shall be the amount of the valuation of the structure for which a building permit is sought multiplied by fifty hundredths percent (.50%).

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- (2) The performance deposit will be released upon the issuance of a certificate of occupancy for the structure for which the building permit is sought, if the Building Department determines that all improvements have been completed in accordance with the approved plans, including landscaping and parking requirements. The performance deposit will be released upon request within a two-year period only after issuance of certificate of occupancy date.
 - (3) Two hundred fifty dollars (\$250.00) per violation may be retained by the Town where the applicant has failed to perform any building, construction, structural alteration, movement, demolition or change work to any building or other structure in strict compliance with the approved plans and specifications therefor. Such retained deposit amounts shall represent the estimated costs and expenses of the Building Inspector in processing and handling said failures. Following such failure to perform, the Building Inspector shall notice the applicant of such failure and thereafter may retain the same without further action on the part of the Town. Nothing contained herein shall prohibit the Town from exercising any other remedies provided at law or in equity, including, without limitation, an action for attorneys' fees, costs and expenses in connection with any such failure to comply.
 - (d) No building permit shall be issued until written approval of the application is given by the Building Inspector and the Board when the latter is required under the terms of this Article.
 - (e) No permit shall be issued after February 1st, 2023 unless a current building contractor license is submitted. The building contractor license shall meet Gunnison County building contractor licensing program requirements.
 - (f) No building permit shall be issued unless the proposed erection, construction, alteration or change of the building or use of the building or land is in full conformance with this Article.
 - (g) Upon issuance of the building permit, the applicant shall perform all work thereunder in strict accordance and compliance with the application, plans and specifications, representations to the Board and Building Inspector, and any memoranda of agreement. The Building Inspector, members of the Board and other Town officials shall monitor and inspect the work being performed and, upon the discovery of any deviation from the plans, application or representations, shall report the deviation to the Building Inspector who shall order all work on the structure to cease until the Board considers, at its next regular meeting, if the deviation is substantial, in which case a new building permit shall be required.
 - (h) After the issuance of a building permit, any substantial deviation from the plans, application or representations shall require a new building permit, which shall be applied for and considered in the same fashion as a new application.
 - (i) Any application or other request under this Article shall be made by an owner of the property or his or her legal representative as evidenced by a written power of attorney. Any permits, approvals, conditions or other decisions under this Article shall benefit and/or bind such applicant, the owner, other co-owners of the property and their heirs or assigns.
 - (j) Penalties; enforcement. No person shall build, construct, structurally alter, move, demolish or change any building or other structure for which a building permit is required without compliance with the requirements of the Section. Any person who violates this Section shall be guilty of a misdemeanor and subject to a maximum fine of one thousand dollars (\$1,000.00) per offense, or by imprisonment not to exceed ninety (90) days, or by both such fine and imprisonment. Each day any such building or structure is out of compliance with this Section shall be a separate offense hereunder. The Marshal's Department, the Building Inspector or the Town Manager may enforce the penalties provided hereunder, including, without limitation, by proper summons to appear in a court of competent jurisdiction. The Town may institute injunction, abatement or any other appropriate action to prevent, enjoin, abate or remove any violation of this Section. Remedies provided in this Section are cumulative and concurrent and not intended to be exclusive, and the same are in addition to all other rights provided at law and in equity.

Sec. 18-13-50. Boundaries.

No building or structure shall be constructed or erected on any lot prior to the property corners of the lot being properly established and marked by permanent monuments consisting of a metal pin not less than one-half (½) inch in diameter and not less than sixteen (16) inches in depth below ground level. Any such corner monument or other survey monumentation required by the Town after October 1, 1988, shall be surveyed from and based upon one (1) or both of two (2) official survey monuments. Such official survey monuments are located at the precise centerline intersections of Elk Avenue with Third Street and Seventh Street, respectively; stamped as follows: "CL ELK CL THIRD E.F. BENNER PLS 9476 1997" and "CL SEVENTH/ELK 1988 LS 11250." A cross mark "X" on each monument marks the precise centerline intersection.

Sec. 18-13-60. Construction time.

Unless additional time, which shall be no more than six (6) months, is granted for good cause by the Building Inspector, all exterior construction must be totally completed within one (1) year of the commencement of construction under a building permit. If not so completed, the building permit shall be expired, and the owner shall obtain a new permit based on the valuation of the work to be complete the project.

Sec. 18-13-70. Certificate of occupancy.

- (a) It is unlawful for the owner of a structure or any other person to rent, occupy or use any structure within the Town without obtaining, in advance, a certificate of occupancy; provided, however, that a certificate of occupancy shall not be required for that part of any structure which has been: (1) completed; and (2) occupied and in use, prior to July 24, 1973. Any modification or alteration of or addition to any structure after July 24, 1974, for which a building permit or other permit is required, shall not be occupied or used prior to the issuance of a certificate of occupancy. Any change in use within any structure shall require a new certificate of occupancy.
- (b) Procedure for obtaining a certificate of occupancy.
 - (1) A written request for a certificate of occupancy must be made to the Building Inspector at least forty-eight (48) hours prior to the certificate of occupancy inspection.
 - (2) As soon as reasonably practicable and not more than ten (10) days after receipt of the request for the certificate of occupancy, the Building Inspector shall inspect the structure for which the certificate of occupancy has been sought to ascertain if the structure conforms with all the applications, plans and specifications theretofore submitted to the Town and all state statutes and Town ordinances.
 - (3) If the Building Inspector determines that the structure conforms to all applications, plans and specifications theretofore submitted to the Town and all state statutes and Town ordinances, he or she shall issue a certificate of occupancy.
 - (4) If either the Building Inspector or the Chair of the Board determines that the structure fails, in any manner, to conform with all applications, plans and specifications theretofore submitted to the Town, or with all state statutes and Town ordinances, a certificate of occupancy shall not be issued. In that event, the applicant shall be informed of the reason why the certificate of occupancy has not been granted.
 - (5) After a denial of an application for a certificate of occupancy, the Building Inspector and/or the Chair of the Board shall ascertain, in their reasonable discretion, if the defects or shortcomings in the structure will require so substantial a reinspection as to warrant an additional application fee.

Sec. 18-13-80. Stop work or desist order.

Should the Building Inspector discover any construction within the Town in violation of this Article, he or she shall attach a stop work order to that construction in a conspicuous place. Should the Building Inspector discover any use of property in the Town in violation of this Article or in violation of any agreement pursuant to Section 16-9-70 of this Code, he or she shall attach a desist order to the property and attempt to deliver a copy of the same to the occupier of the property. Any stop work order or "desist" order shall be signed by the Building Inspector and indicate the subject area in which the violation exists. The removal of a stop work order or desist order before the violation is corrected shall constitute a violation of this Article. The continuation of construction or use in violation of a stop work order or desist order shall also constitute a violation of this Article.

Sec. 18-13-90. Payment of overdue fees.

No building permit or certificate of occupancy shall be issued by the Town for any lot, parcel or structure until all overdue fees for sewer, water, sanitation, street or other improvement district assessments, real property taxes, real estate transfer taxes and/or other fees or taxes due to the Town in connection with said lot, parcel or structure have been paid in full.

Sec. 18-13-100. Appeals from Building Inspector.

Any person desiring to appeal any order, requirement, decision, action, omission or determination by the Building Inspector under this Chapter must file such appeal with the Board within thirty (30) days after such action by delivering the same to the Town Clerk. Such appeal shall be in writing and shall contain all data and information necessary for a clear understanding and intelligent action by the Board.

ARTICLE 14 Carbon Monoxide Detector/Alarm Regulations

Sec. 18-14-10. Carbon monoxide detection.

(a) Adoption. The *International Fire Code* ("IFC"), 2021 Edition, Chapter 9, Section 915, as published by the International Code Council, is hereby adopted by reference thereto and incorporated into this section to have the same force and effect as if set forth herein in every particular pursuant to Title 31, Article 16, Part 2, C.R.S.

The subject matter of the adopted code includes regulating and governing the safeguarding of life and property from carbon monoxide and the detection of conditions hazardous to life or property in the occupancy of buildings and premises as herein provided.

(b) Amendments.

The code adoption herein is modified by the following amendments:

- (1) IFC Section 915.1.4 is amended to read as follows:

Section 915.1.4 – Fuel-burning appliances outside of dwelling units, sleeping unit and classrooms.

Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms located in buildings that contain fuel-burning appliances or fuel-burning fireplaces within 15 feet of a bedroom.

Exception:

1. Carbon monoxide detection shall not be required in *dwelling units, sleeping units* and classrooms where a carbon monoxide detector is provided in one of the following locations:

- 1.1. In an *approved* location between the fuel-burning appliance or fuel-burning fireplace and the *dwelling unit, sleeping unit* or classroom.
- 1.2. On the ceiling of the room containing the fuel-burning appliance or fuel-burning fireplace.

(2) IFC Section 915.1.5 is amended to read as follows:

Section 915.1.5. – Private garages. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms in buildings with attached private garages.

Exceptions:

1. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms without communicating openings between the private garage and the dwelling unit, sleeping unit or classroom.
2. Where a carbon monoxide detector is provided in an approved location between openings to a private garage and dwelling units, sleeping units or classrooms.

(3) IFC Section 915.2.1 is amended to read as follows:

Section 915.1.5. – Dwelling. Carbon monoxide detection shall be installed in *dwelling units* outside of each separate sleeping area within 15 feet of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, carbon monoxide detection shall be installed within the bedroom.

(4) IFC Section 915.2.2 is amended to read as follows:

Section 915.2.2. – Sleeping units. Carbon monoxide detection shall be installed in sleeping units.

Exception:

Carbon monoxide detection shall be allowed to be installed outside of each separate sleeping area within 15 feet of the sleeping unit where the sleeping unit or its attached bathroom does not contain a fuel-burning appliance and is not served by a forced-air furnace.

Sec. 18-14-20. Definitions.

For purposes of this Article only, the following terms shall have the following meanings ascribed thereto:

Adjacent means directly above, below or next to.

Carbon monoxide detector/alarm means any single- or multiple-station carbon monoxide detector and alarm listed by a nationally recognized, independent product safety testing and certification laboratory to conform to the standards for carbon monoxide alarms issued by such laboratory or any successor standards.

Dwelling unit means one (1) or more rooms or other spaces, arranged for use by one (1) or more persons, on a permanent, temporary or transient basis, for sleeping or living, located in one (1) or more of the following use categories: R1, R2, R3 and R4.

Enclosed parking area means a structure or portion thereof utilized for the parking of motor vehicles and other carbon monoxide-emitting equipment which is less than fifty percent (50%) open at all times to outside air.

Fuel-burning device means any equipment that burns solid, liquid or gaseous fuel, or a combination thereof, including, without limitation, a gas-fueled stove, wood stove, coal stove, natural gas/heating oil heater, natural gas/ heating oil boiler, natural gas/heating oil furnace and any equipment that burns wood, coal, natural gas, kerosene, petroleum or hydrocarbon products indoors.

NFPA 720 means the NFPA 720 Standard for the Installation of Carbon Monoxide Detection and Warning Equipment.

Other applicable uses means one (1) or more rooms arranged for use by one (1) or more persons, on a permanent, temporary or transient basis, for sleeping or living, located in one (1) or more of the following use categories: E, I1, I2, I3 and I4. *Other applicable uses* shall include, but shall not be limited to, day care, hospital, medical and assisted living facilities.

Sec. 18-14-30. Installation guidelines.

- (a) All existing dwelling units and existing other applicable uses or those undergoing new construction, additions, remodels and renovations where: (1) a fuel-burning device is or will be installed therein or adjacent thereto; and/or (2) an enclosed parking area is adjacent thereto, shall contain a carbon monoxide detector/alarm.
- (b) A carbon monoxide detector/alarm shall be installed in any room or space that is not otherwise considered a dwelling unit or other applicable use under this Article but that is:
 - (1) Fifty (50) square feet or less and that contains a fuel-burning device; and/or
 - (2) Generally utilized as a central location of one (1) or more fuel-burning devices.
- (c) In dwelling units and other applicable uses, a carbon monoxide detector/alarm shall be installed within fifteen (15) feet of the entrance to each room lawfully used at any time for sleeping.
- (d) Dwelling units and other applicable uses shall have a carbon monoxide detector/alarm installed on each story of the structure and in such other locations as deemed necessary by the Building Official.
- (e) Carbon monoxide detectors/alarms for existing dwelling units and other applicable uses and those undergoing new construction, additions, remodels, renovations, and alterations shall carry the listing of a nationally recognized, independent product safety testing and certification laboratory to conform to the standards for carbon monoxide alarms issued by such laboratory or any successor standards.
- (f) All carbon monoxide detectors/alarms shall be installed in accordance with NFPA 720 standards and the manufacturer's recommended installation requirements, except as otherwise provided in this Section.
- (g) All dwelling units and other applicable uses undergoing new construction, additions, remodels, renovations, and alterations where a carbon monoxide detector/alarm is required shall have primary (i.e., hard-wired) and secondary (e.g., battery back-up) power sources for all carbon monoxide detectors/alarms. All multiple-station carbon monoxide detectors/alarms required by this Section shall be interconnected.
- (h) All existing dwelling units and other applicable uses where a carbon monoxide detector/alarm is required must comply with NFPA 720 standards or, in lieu of an NFPA 720 standard carbon monoxide detector/alarm, a plug-in (without a switch and with battery back-up) or battery-operated carbon monoxide detector/alarm shall be installed which shall carry the listing of a nationally recognized, independent product safety testing and certification laboratory to conform to the standards for carbon monoxide alarms issued by such laboratory or any successor standards.
- (i) In all structures with multiple dwelling units and other applicable uses where the structure contains a central fire alarm system, carbon monoxide detectors/alarms shall be connected to the structure's central fire alarm system and shall be audible in each dwelling unit within the structure. Such carbon monoxide detectors/alarms shall initiate a supervisory signal at the fire alarm panel and provide an audible alarm at the device upon the detection of carbon monoxide. Such carbon monoxide detectors/alarms shall be initiated to a monitoring agency or be an audible/visual alarm located in a conspicuous place on the exterior of the structure.

- (j) Compliance with the requirements of this Article shall be irrespective of the occupancy of a dwelling unit or other applicable use.

Sec. 18-14-40. Exception to installation requirements.

For any existing dwelling unit or other applicable use and those undergoing new construction, additions, remodels and renovations where a carbon monoxide detector/alarm is required by this Article, the Building Official may exempt such dwelling unit or other applicable uses from having to install a carbon monoxide detector/alarm where good cause is shown.

Sec. 18-14-50. Time for compliance.

All dwelling units and other applicable uses undergoing new construction, additions, remodels, renovations and alterations where carbon monoxide detectors/alarms are required under this Article shall be in compliance with these carbon monoxide detector/alarm regulations at the time of such construction, additions, remodels, renovations and alterations. All existing dwelling units and other applicable uses where carbon monoxide detectors/alarms are required under this Article shall have six (6) months from the effective date of these carbon monoxide detector/alarm regulations or a change in tenancy of the dwelling unit or other applicable use, whichever occurs first, to comply with the requirements hereof.

Sec. 18-14-60. Testing, inspection and maintenance of carbon monoxide detectors/alarms.

- (a) All carbon monoxide detectors/alarms shall be tested, inspected and maintained in accordance with NFPA 720 standards or shall carry the listing of a nationally recognized, independent product safety testing and certification laboratory to conform to the standards for carbon monoxide alarms issued by such laboratory or any successor standards.
- (b) Subject to the obligations of a tenant in any tenancy as described in Subsection (d) below, the owner of any dwelling unit or other applicable use where a carbon monoxide detector/alarm is required under this Article shall be responsible for the installation, testing, inspection, maintenance, repair and/or replacement of such carbon monoxide detector/alarm.
- (c) Prior to the commencement of any tenancy in any dwelling unit, the owner shall replace any carbon monoxide detector/alarm that has been stolen, removed, missing or is found to be not operational by the owner. At the time of the commencement of the tenancy for the dwelling unit, the owner shall ensure that any batteries necessary to make the carbon monoxide detector/alarm operational are provided to the tenant at the time the tenant takes residence in the dwelling unit. The owner shall replace any carbon monoxide detector/alarm if notified by a tenant as specified in Subsection (d) below that any carbon monoxide detector/alarm was stolen, removed, missing or is found to be not operational during the tenant's occupancy. The owner shall correct any deficiency in any carbon monoxide detector/ alarm if notified by a tenant in accordance with Subsection (d).
- (d) The tenant of any rental property shall:
 - (1) Keep, test and maintain all carbon monoxide detectors/alarms in good repair;
 - (2) Notify, in writing, the owner of the dwelling unit or the owner's authorized agent, as applicable, if the batteries of any carbon monoxide detector/alarm require replacement;
 - (3) Notify, in writing, the owner of the dwelling unit or the owner's authorized representative if any carbon monoxide detector/alarm is stolen, removed, missing or is found to be not operational during the tenant's occupancy; and

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- (4) Notify, in writing, the owner of the dwelling unit or the owner's authorized representative of any deficiency in any carbon monoxide detector/alarm that the tenant cannot correct.
 - (e) No person shall remove batteries from, or in any way render inoperable, a carbon monoxide detector/alarm, except as part of a process to inspect, maintain, test, repair or replace the carbon monoxide detector/alarm or replace the batteries in the carbon monoxide detector/alarm.

Sec. 18-14-70. Limitation of liability.

No person shall have a claim for relief against any property owner, an authorized agent of a property owner, a person in possession of real property and/or an installer of any carbon monoxide detector/alarm for any damages resulting from the installation, operation, maintenance or effectiveness of a carbon monoxide detector/alarm if the property owner, authorized agent, person in possession of real property and/or installer installs, operates, maintains and tests the carbon monoxide detector/alarm in accordance with the manufacturer's published instructions and the provisions of these carbon monoxide detector/alarm regulations.

ARTICLE 15 Deconstruction and Recycle Plan

Sec. 18-15-10. Required.

If a permit is requested for the demolition of an existing structure in accordance with Section 16-2-60 or 16-14-190 of this Code, a site specific deconstruction and recycle plan must be submitted and approved by the Building Official. Said plan should, as a goal, seek to recycle, reuse or resell fifty percent (50%) of the existing materials in the deconstructed structure or element. Materials from the following categories should be considered: doors, windows, cabinets, roofing, wood flooring, plumbing fixtures, mechanical and heating fixtures, framing and structural materials, landscaping elements, concrete and bricks. The plan should identify what materials are to be recovered. The plan should either specify a destination for the recycled materials or the materials should be made available to the public for acquisition for a minimum of two (2) weeks, as well as how the same is to be communicated and accomplished. Recycled materials may not be placed on Town rights-of-way or other Town property.

ARTICLE 16 Basement Construction Requirements

Sec. 18-16-10. Basement construction.

All new basements, as defined in Section 16-1-20, of this code must meet the following requirements.

- (1) Basement foundation design. Basements shall be designed and constructed to be completely waterproof and shall be no larger in footprint than the aboveground structure they support, with the exception of window wells and exiting features and underground parking facilities in Business, Tourist and Commercial districts. Basement foundations shall be designed by a licensed Colorado professional engineer experienced in these types of waterproof structural systems, who shall affix his or her seal on all relevant construction documents.
- (2) Floors. All floors in basements are required to be waterproofed. They shall be constructed of concrete, designed and constructed to withstand the hydrostatic pressures to which such floors will be subjected. Waterproofing shall be accomplished through means approved in the International Building Code, such as applied membranes and coatings installed under the slab in accordance with the manufacturer's requirements. Additionally, concrete admixtures may be utilized in conjunction with

- approved membranes and coatings. Alternative designs may be approved on a case-by-case basis by the Building Official if submitted by a licensed Colorado professional engineer.
- (3) Walls. Walls required to be waterproofed shall be of concrete and shall be designed and constructed to withstand the hydrostatic pressure and other lateral loads to which such walls will be subjected. Waterproofing shall be accomplished through means approved in the International Building Code, such as applied membranes and coatings installed on the positive hydrostatic pressure side of the wall according to the manufacturer's requirements. The waterproofing shall be lapped and sealed to the slab waterproofing according to the manufacturer's requirements and shall extend to a point not less than six (6) inches above finished grade. Concrete admixtures may be utilized in conjunction with approved membranes and coatings. Alternative designs may be approved on a case-by-case basis by the Building Official if submitted by a licensed Colorado professional engineer.
 - (4) Water table displacement. Basement foundations shall not extend more than one (1) story, as such term is defined in the International Residential Code (IRC), below existing grade. On sloping sites, maximum foundation depth will be determined by the Building Official.
 - (5) Construction dewatering. Construction dewatering may be allowed only during construction of the basement foundation upon approval by the Building Department. The proponent is responsible for obtaining any required dewatering discharge permits that may be required by the State or other licensing agency and shall provide copies of the same to the Town. A construction dewatering and discharge plan including the location and point of discharge shall be submitted to the Town for approval prior to commencement of dewatering.
 - (6) Dewatering systems. Permanent dewatering systems shall not be allowed. Accommodations for emergency dewatering systems and sumps may be allowed if they are designed by a Colorado professional engineer and shall be described as part of the foundation submittal and approved by the Building Department. Automatic pumping systems may not be incorporated into the design of such dewatering systems. Water may not be discharged into the Town's sewer system as part of an emergency dewatering proposal. Prior to activating any emergency dewatering system, the Town must be notified in writing, with such notice providing the address, location for discharge and volume of discharge. Said activation must be approved by the Town.

ARTICLE 17 Property Maintenance

Sec. 18-17-10. Adoption.

Pursuant to Title 31, Article 16, Part 2, C.R.S., there is adopted as the Property Maintenance Code of the Town, by reference thereto, the *International Property Maintenance Code*, 2021 edition, including Chapters 1—8, as published by the International Code Council Inc. 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ("IPMC"), regulating and governing the conditions and maintenance of all property, buildings and structures; by providing safe, sanitary and fit for occupation and use; and the condemnation of buildings and structures unfit for human occupancy within the Town of Crested Butte, is hereby adopted herein.

Sec. 18-18-20. Amendments.

The code adoption herein is modified by the following amendments:

- (a) Section 101.1. is amended to read as follows:

101.1. - Title. These regulations shall be known as the Property Maintenance Code of the Town of Crested Butte, hereinafter referred to as "this Code."

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- (b) Section **103.5. Fees** is deleted in its entirety.
 - (c) Section **113. Demolition** is deleted in its entirety.
 - (d) Section 110.4 is amended to read as follows:

110.4 - Stop Work Order Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to a maximum fine of one thousand dollars (\$1,000) per offense.
 - (e) Section 302.4 is amended to read as follows:

302.4 - Weeds. Premises and exterior property shall be maintained free from weeds as defined herein, and Article 3 of the Town Code. Noxious weeds shall be prohibited. Weeds shall be defined as all grasses, annual plants and vegetation, other than trees or shrubs provided; however, this term shall not include cultivated flowers and gardens.
 - (f) Section **304.14. Insect screens** is deleted in its entirety.
 - (g) Section 602.3 is amended to read as follows:

602.3 - Heat supply. Every owner and operator of any building who rents, leases or lets one or more dwelling units or sleeping units, on terms either expressed or implied, to furnish heat to the occupants thereof shall supply heat year-round to maintain a minimum temperature of 68 degrees in all habitable rooms, bathrooms and toilet rooms.
 - (h) Section 602.4 is amended to read as follows:

602.4 - Occupiable work spaces. Indoor occupiable work spaces shall be supplied with heat year-round to maintain a minimum temperature of 65 degrees during the period the spaces are occupied.



Staff Report

July 18, 2022

To: Mayor Billick and Town Council

From: Mel Yemma, Long-Range Planner and Astrid Matison, Chief Building Official

Thru: Troy Russ, Community Development Director

Subject: Ordinance No 13, Series 2022: An Ordinance of the Crested Butte Town Council Amending Chapter 18 of the Town Code to adopt by reference the 2021 International Building Code with amendments (18-1-10), the 2021 International Green Construction Code with amendments (18-1.5-10), the 2021 International Residential Code with amendments (18-2-10), the 2021 Existing Building Code with amendments (18-2.5-10), the 2021 International Mechanical Code with amendments (18-3-10), the 2021 International Fire Code with amendments (18-6-10), the 2021 International Energy Conservation Code with amendments (18-9-10), and various elements of Chapter 18 related to construction activities – 1st Reading

Summary

This agenda item is the first reading of Ordinance No. 13, Series 2022, which is an ordinance to adopt the 2021 building code. Every six years, the Town of Crested Butte adopts the International Construction Council (ICC) family of building codes, along with the Town of Mt. Crested Butte, City of Gunnison, and Gunnison County, to ensure public health, safety, and efficiency of construction practices within each jurisdiction. The Town currently enforces the 2015 ICC family of building codes and intends to adopt the 2021 family of ICC codes this year, with effective enforcement starting January 1, 2023. The six-month lag is intended to allow property owners, architects, and contractors time to adjust to the new codes.

The 2021 code adoption includes changes to the 2021 ICC codes from the 2015 code, as well as considers several above code requirements that align with the Town's adopted Climate Action Plan. The following memo is organized into two sections. The first describes the background and objectives of the building code adoption by outlining how this topic can be framed within the draft Community Compass framework. The second half of the memo summarizes the ordinance by providing details on the changes to the 2021 code as well as explanations and supporting information for above code recommendations.

Part 1: Framing the 2021 Building Code Adoption within the Draft Community Compass Framework

On July 5th, Town Staff presented the draft Community Compass plan to the Town Council. As the draft continues to be refined, staff intends to demonstrate how current decisions the Town Council is facing can be applied to the Compass framework, to test and refine the Compass to ensure it can be actively used once adopted.

The draft Compass decision-making framework outlines a four-step process that can help the Town Council make informed decisions for complex challenges in a way that is aligned with the community's core values.

Step 1: Identify the challenge, outline a scope of work, and commit to a community engagement strategy

The Challenge: The Town Council set a 2022 goal of integrating the 2019 [Climate Action Plan](#) (CAP) into the 2021 building code update. The Town's CAP included a short-term goal of reducing the Town's greenhouse gas emissions by 50% and the community at-large's emissions by 25%, by 2023. The CAP's building energy use chapter identified a strategy of adopting above building code standards, with a focus on driving energy efficiency, promoting onsite renewable energy, preparing for electric vehicle infrastructure, and considering an electrification policy. The overall challenge of this adoption is to find a way to introduce above code standards that take a significant step towards meeting the Town's CAP goals that will continue to be improved with each future building code adoption, while not placing a significant burden on residents in the Town and being realistic with what construction practices can feasibly occur in this environment.

The Scope of Work: Utilizing the CAP as a guide, Town Staff worked with Resource Engineering Group (REG) as technical advisors to identify policy and program considerations for the 2021 building code adoption. The overall scope of work included outlining the changes from the 2015 code to the 2021 code and researching considerations for above code measures that can drive energy efficiency, onsite renewable energy opportunities, electric vehicle preparedness, and building electrification. The scope of work utilized expertise from the technical advisors, as well as research into how other jurisdictions in similar environments were approaching above code considerations.

The Community Engagement Commitment: When the Town adopts the new building code every six years, there has typically been little community engagement outside of the public hearing to approve the ordinance. However, because the Town is 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.

The first round of community engagement included a hybrid public meeting on May 25th which presented the draft above code considerations ([a recording of the meeting can be viewed here](#)). 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. One comment was received, which is attached in Attachment 2.

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 and Atmos Energy.

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

Step 2: Define Success Measures from Established Core Values

Once the project approach and community engagement strategy are developed, the Compass framework encourages measures of success to be developed from the core values, with the community and Town Council, which address the challenge. Because the draft core values were not shared with the Town Council until after the community engagement wrapped up for the building code adoption, staff has drafted example success measures that can apply to this challenge below. We intend vet and refine to these success measures with the Town Council going forward thought this adoption. Future building code adoption success measures will be refined with the community during each subsequent building code adoption.

Being authentic means ...

- The building code adoption recognizes the community's connection to our natural surroundings and economic relationship to our environment's sensitivity to climate change.
- Town improves building efficiency and renewable energy opportunities without sacrificing the historic character of our built environment.
- The building code adoption improves safety of residents by increasing building performance, indoor air quality, and reducing risk of fire.

Being connected means...

- The 2021 building code adoption is focused on reducing the Town's climate impact in buildings for future generations.
- The 2021 building code adoption is connected to the construction industry and solutions were vetted to ensure they are feasible to implement in this environment.
- The Town coordinated and collaborated on the building code adoption with our regional partners and stakeholders.

Being accountable means...

- The 2021 building code adoption is accountable to the Town's declaration of a climate emergency and the strategies adopted in the 2019 Climate Action Plan.
- The Town is putting skin in the game by committing funding and resources to ensure the Sixth & Butte and Paradise Park Workforce Housing Project meets or exceeds the standards set in the building code adoption.
- The Town is holding the property owners accountable to increase energy efficiency, initiate electrification, accommodate renewable energy with clear standards rather than providing an opportunity to buy a way out of it.

Being bold means...

- The building code adoption is paced in an aggressive yet responsible way that boldly implements the climate action plan without placing an unnecessary burden on residents.
- The Town is willing to set a new standard that may influence the market to change current practices.
- The Town is willing to revisit the code to make amendments every three years to ensure the construction industry's transition is practical.

Living by these values means...(Draft Success Measures):

- The 2021 building code adoption reduces greenhouse gas emissions from new construction and significant remodels through increased building efficiency, onsite renewable energy opportunities, electrification, and electric vehicle charging stations.
- The 2021 building code adoption increases building safety for new construction and significant remodels through technology and construction techniques, fire detection and suppression, and indoor air quality
- The 2021 building code adoption will not impact the Town's Design Standards and Guidelines.
- The 2021 building code adoption manages the pace of needed change to meet climate action goals with proven technology and techniques available for the construction industry.

Step 3: Create alternatives and filter the solution through agreed to success measures

Based on the research completed and community engagement process, staff has identified three alternatives to the building code adoption and the attached ordinance reflects the recommended alternative that has been filtered against the four success measures.

Alternative 1:	Alternative 2:	Alternative 3:
Adopt the 2021 ICC family of building codes as is with minor amendments (as the Town has done in the past)	(Recommended Alternative) Adopt the 2021 ICC family of building codes as is with minor amendments and introduce above code requirements relating to energy efficiency, renewable energy, electric vehicle readiness, and electrification and commit to amending and improving the code every three years going forward.	Adopt the 2021 ICC family of building codes with minor amendments, as well as require all new construction to be net-zero when it comes to energy usage.

Staff's interpretation of the draft success measures is that the recommended alternative summarized in the second half of this memo best strives to be accountable in taking steps above code to implement the Town's climate action plan while remaining connected to the construction industry and ensuring new standards are feasible to implement, while remaining authentic and committed to our historic architecture. The Town intends to hold building developers and owners accountable by setting clear standards to meet and not allowing op-out options, or exemptions for new construction and holding builders accountable to improve safety, energy efficiency, and indoor air quality.

The Town intends to hold itself accountable when it comes to the Sixth & Butte/Paradise Park workforce housing project, as well as facilitating educational opportunities and rebate incentives to support

homeowners and builders to meet the new code. This alternative exceeds national trends, and the Town is additionally being bold in recommending that the building code moves to the three-year adoption cycle to ensure continuous progress towards climate action goals as technology and building techniques rapidly evolve in the years ahead.

Step 4: Make decisions based on an informed consent model

The Compass framework sets up the Town Council to make a decision with an informed consent model. When reviewing the background information on the process and resulting recommendation, the Town Council should be asking:

1. Did the community have sufficient opportunity to be informed of this decision?
2. Did the community have an opportunity to participate and be heard in this process?
3. Does the recommendation align with the core values and their associated measures of success?
 - a. The 2021 building code adoption reduces greenhouse gas emissions from new construction and significant remodels through increased building efficiency, onsite renewable energy opportunities, electrification, and electric vehicle charging stations.
 - b. The 2021 building code adoption increases building safety for new construction and significant remodels through technology and construction techniques, fire detection and suppression, and indoor air quality
 - c. The 2021 building code adoption will not impact the Town's Design Standards and Guidelines.
 - d. The 2021 building code adoption manages the pace of needed change to meet climate action goals with proven technology and techniques available for the construction industry.

Part 2: Summarizing the 2021 Building Code Adoption Recommendation

The community discussed the Town's Renewable Energy Mitigation Program (REMP) during this project's community engagement effort, along with water conservation and many other important topics that are more traditionally managed within the Town's zoning code. Ordinance 13, Series 2022, focuses solely on the Town's adoption of ICC's 2021 Building Codes and select above code building standards related to electrification, solar readiness, and electric vehicle (EV charging stations). The 2021 building code adoption recommendation emerged from alternative 2 and strives to:

1. 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:
 - a. Improving energy efficiency of the building envelope in all new construction
 - b. Preparing new buildings to accommodate renewable energy and require new large buildings to supply renewable energy
 - c. Preparing new buildings to accommodate electric vehicle chargers and require commercial buildings to install chargers
 - d. Electrify all new buildings and prepare significant remodels for electrification
2. Increase building safety for new construction and significant remodels through technology and construction techniques, fire detection and suppression, and indoor air quality by:
 - a. Adopting the 2021 family of building codes

- b. Increasing building ventilation
 - c. Increasing fire suppression requirements in all attached structures
- 3. Not impact the Town's Design Standards and Guidelines by:
 - a. By focusing on improvements to construction practices in the 2021 adoption and waiting until the 2024 adoption to further align with the Town's zoning regulations and design standards in guidelines in alignment with a much broader community engagement effort and after a needed historic preservation master plan, strategic infill study and updates to the Climate Action Plan are completed.
- 4. Manage the pace of needed change to meet climate action goals with proven technology and techniques available for the construction industry by:
 - a. Changing the update cycle from every six years to every three years (A draft trajectory or key policy topics and educational programs are outlined in Attachment 3).
 - b. Committing to continuous engagement with architects and builders in the community
 - c. Developing incentives and education programming for construction community

2021 ICC Code Adoption:

The attached ordinance adopts by reference most of the International Code Council's 2021 family of codes, specifically:

- International Building Code (IBC)
- Selected sections of International Green Construction Code (IgCC) (*above Town's traditional code adoption*)
- International Residential Code (IRC)
- International Existing Building Code (IEBC)
- International Mechanical Code (IMC)
- International Fire Code (IFC)
- International Energy Conservation Code (IECC)
- International Property Maintenance Code (IPMC)

The ordinance will also adopt above code provisions, including:

- Department of Energy National Zero Ready (ZERH) certification program requirement for new residential projects
- Colorado Department of Public Health and Environment "Measuring and Mitigating Radon in Colorado Technical Guide" Year 2018, for both residential and commercial projects.
- Solar ready and installation requirements
- Electrification requirements
- Electric vehicle charging requirements

Ordinance 13, Series 2022 is being presented for first reading July 18th, second reading on August 2nd. Enforcement will start on January 1, 2023, for new projects not yet permitted.

The details of the adoption elements and supportive information are described below within the following organization:

1. New Commercial Construction
2. Commercial Remodels

3. New Residential Construction
4. Residential Remodels

New Commercial Construction: ICC building codes adopted by reference that will govern new commercial construction include:

- International Building Code (IBC)
- International Mechanical Code (IMC)
- International Fire Code (IFC)
- International Property Maintenance Code (IPMC)
- International Energy Conservation Code (IECC)
- International Green Construction Code (IgCC)

The following codes are also followed in commercial construction but are not inspected by the Town but by State of Colorado certified inspectors. These code updates follow the State of Colorado's adoption timeline and were last updated in 2020 and 2021.

- *International Plumbing Code (IPC)*
- *National Electric Code (NEC)*
- *International Fuel Gas Code (IFCC)*

Baseline Code Elements: Changes from the ICC between 2015 and 2021 that will impact commercial development:

- Building envelope increased insulation requirements for ceilings, slab foundations, floors over crawl spaces, and concrete stem walls.
- Solar Heat Gain Coefficient (SHGC) increased requirements
- New building envelope air leakage testing methods (For example, one option is measuring portions of the building by using area weighted by surface areas of the building envelope in each portion, or testing a representative of above-grade sections of the building totaling at least 25% of the wall area enclosing the remaining conditioned space.)
- Lowered U factor for operable fenestration and entry doors
- New mechanical efficiency tables and more types of mechanical equipment added
- Lamp efficiency increased to 95% of light fixtures shall have low energy use bulbs installed

Above Code Elements: The following are recommended above code requirements that would impact commercial development:

1. **International Green Construction Code (IgCC):** Selected sections of the IgCC outlined below are recommended to improve commercial construction above the IECC requirements.
 - a. Building water use reduction
 - b. Interior environment improvements regarding materials and ventilation
 - c. Increased stormwater management
 - d. Addition of construction site requirement of providing recycling bins for cans, bottles, paper and cardboard, and wood scraps for free pile for the public to pick up.
2. **Electrification Requirements:** 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

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 grid.

During the community outreach, the Town presented two policy considerations for electrification, which included:

- Option A: Require all new construction (with an exemption of commercial kitchens) to not utilize natural gas and instead utilize electricity for heating, hot water heating, and appliances
- Option B: Require all new construction to be electric ready and incentivize the use of electricity for heating, hot water heating, and appliances by charging a renewable energy mitigation fee for use of natural gas.

Based on the culmination of community feedback, Tri-State's commitment electric resource plan commitment, and the Compass values, staff recommends Option A to begin driving electrification for new construction and not providing an exemption (other than commercial kitchens) or a "payment in lieu" option. In reference to the timeline shared in Attachment 3, the 2021 code adoption recommends electrifying new construction and preparing Level 3 Alteration remodels to be electric ready.

If approved, Crested Butte would be the first jurisdiction in Colorado to not allow natural gas in buildings beginning in 2023. Other jurisdictions are setting electrification targets with examples being Louisville requiring all construction utilizing natural gas to be electric ready and Denver requiring partial or full electrification of certain types of space and water heating requirement at the time of replacement in 2025 or 2027, depending on the equipment type used.

Staff has vetted that electric heating and appliance technology will work in this environment. Examples of commercial projects utilizing ground source heat pumps includes Gunnison County's courthouse and retrofit of the Blackstock Building and Airport. REG's offices in the Horseshoe Building utilize air source heat pumps. Additionally, the upcoming Crested Butte Nordic outpost project will utilize air source heat pumps. Staff is gathering cost estimates on utilizing heat pumps for heating compared to a gas boiler from Crested Butte Nordic and will provide this information at the Council meeting.

An exemption for commercial kitchens is included as staff has found there is not currently a sufficient electric alternative for commercial cooking and that many cities and towns that are electrifying are including exemptions for this activity.

- 3. Solar Ready and Installation Requirements:** Staff recommends requiring all new commercial buildings constructed, less than 5,000 square feet, be solar ready, with the ability to accommodate solar panels in the future. This ordinance would require all new commercial buildings 5,000 square feet or larger install solar panels. Solar installation with the IgCC above code requirements, if approved, would eliminate the need for the Town's current code provision of requiring large buildings of 20,000 square feet, or more, be LEED certified. This code provision was rarely used and staff proposes moving away from LEED as it is a proprietary certification process which adds significant cost to construction. In summary, it is recommended to:
- a. Delete the existing Town Code LEED requirement for structures larger than 20,000 square feet and replace with:
 - i. Solar ready requirement for structures that are less than 5,000 square feet.
 - ii. On-site solar panels requirement for structures that are 5,000 square feet and larger.

The size of the solar ready or installed area is defined in the IgCC where building projects shall contain on-site photovoltaic systems with a rated capacity of not less than 2 W/ft² (22 W/m²) multiplied by the horizontal projection of the gross roof area over conditioned spaces and semi heated spaces with exceptions, not to exceed Gunnison County Electric Association's net metering limit.

At the Town Council meeting, staff will share example building sizes with their associated solar ready or required array size, in comparison to GCEA's net metering limit of 25 kW for commercial buildings.

Additionally, to consistently accommodate solar, it is recommended to add a requirement of increasing roof structural load capacity by 5 psf for roof pitches greater than 2/12 and 10 psf for roof pitches 2/12 and flatter.

- 4. Electric Vehicle Readiness and Charger Requirements:** As more electric vehicle and plug in hybrid cars come on the market, it is recommended to facilitate requiring buildings to provide charging infrastructure. For new commercial construction, the 2021 recommendation is to require all commercial buildings to:
- a. Install 1 Level II charger per building (for buildings that generate 2 or more parking spaces)
 - i. Electric Vehicle Supply Equipment (EVSE) is defined as: the conductors—including the ungrounded, grounded, and equipment grounding conductors—and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.
 - ii. Level II EVSE is defined as: An EVSE capable of charging at 30 amperes or higher at 208 or 240 VAC.
 - b. Prepare 10% of parking spaces (rounded up with a minimum of 1) to be Electric Vehicle (EV) ready
 - i. An EV ready space is defined as: a designated parking space provided with a 50 A, 208/240V dedicated branch circuit for Level 2 EVSE. The circuit shall include an overcurrent protective device and shall terminate in a junction box, NEMA 6-50 or NEMA 14-50 receptacle, or EVSE and be located in close proximity to the proposed location of the EV parking spaces.

The property owner would oversee the operation of the charging station and has the authority to decide the station's use, be it for their patrons and/or employees, and to charge for the facility, or not.

Commercial Remodels: Commercial remodels must follow the requirements of the International Existing Build Code (IEBC), and significant remodels, explained below, trigger additional requirements.

This code adoption recommends revising the IEBC's "Work Area" definition to be more clearly interpreted. The revised definition is recommended to read: "the portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents as measured from the inside face of the exterior walls." Remodels that achieve a Level 3 Alteration are remodels that disturb 50% or more of the work area. Facelifts such as replacing flooring would not trigger a Level 3 alteration.

In this code adoption, it is recommended that commercial projects that meet level 3 alteration are required to comply with the 2021 IECC, as well as provide the following above to provide the following above code requirements:

- Solar Ready (<5,000 square ft) or Solar Installation (5,000 square ft or larger) requirements consistent with new commercial construction requirements
- Electric Vehicle ready and charger requirements consistent with new commercial construction requirements
- Meet electric ready requirements as defined by:
 - Where a gas heating system is installed provide a dedicated electric circuit, panel space and location for condensate drainage.
 - Where a gas water heating system is installed provide a dedicated electric circuit, panel space, location for condensate drainage.
 - Where a gas cooking stove is installed, a dedicated circuit and panel space for electric appliance replacement is provided.
 - Where a gas dryer is installed, a dedicated circuit and panel space for electric appliance replacement is provided.

New Residential Construction: ICC building codes adopted by reference will govern new residential construction include:

- International Residential Code (IRC), which includes references to:
 - International Mechanical Code (IMC)
 - International Fire Code (IFC)
 - International Energy Conservation Code (IECC)
 - *International Plumbing Code (IPC) (on State of Colorado adoption timeline (updated 2020))*
 - *National Electrical Code (NEC) (on State of Colorado adoption timeline (updated 2020))*
 - *International Fuel Gas Code (IFGC) (on State of Colorado adoption timeline (updated 2020))*

Baseline Code Elements: The following are changes in the 2021 IRC/IECC from 2015:

- Building envelope increased insulation requirements for ceilings, slab foundations, floors over crawl spaces, and concrete stem walls.
- Windows lower U Factor requirement.

- Increased requirements for whole house ventilation systems to meet minimum airflows per ASHRAE 51.
- Updates to requirements for hot water piping and recirculation including controls.
- Lighting controls motion or dimming devices for interior and exterior lighting
- Radon testing requirement.

Sprinklers: The ICC has required sprinklers in all residential buildings since 2011, but the Town has historically amended the code to exempt single family homes, accessory dwelling units, 2-family units (under one ownership), and two-unit Townhomes from requiring sprinklers.

To become consistent with our neighboring jurisdictions and increase safety, staff is recommending only exempting single family homes and accessory dwelling units from sprinklering and requiring all shared-wall units (included 2-family dwelling and townhomes) to require sprinklers.

Based on the Block 76 affordable housing project, completed in 2020, the cost of sprinklering each unit was about \$6 per square foot. The average cost of installing sprinklers varies widely in mountain towns, between \$9 per square foot to \$30 per square for if you are required to provide onsite tanks or cisterns.

There are a number of benefits to the cost of construction and Town when sprinklers are required in one- and two-family dwellings and townhomes. These are presented as an attachment to this report in Attachment 4.

Above Code Elements: The following are recommended above code requirements that would impact new residential construction:

1. **Department of Energy (DOE) Zero Energy Ready Home (ZERH) Certification:** Staff is recommending that new residential construction be required to become certified through the Department of Energy's ZERH program. The ZERH program represents performance standards that ensure above code levels of energy savings, comfort, health, and durability. This adoption would adopt the [ZERH Version 1, Rev. 07](#) and each future building code adoption would consider adoption of the latest version released by the Department of Energy.

The program includes requirements in the areas of:

1. Energy Star for homes baseline
2. Building infiltration level of 2.0 (ACH 50 Pascals)
3. Window U factor of .27 or less
4. Efficient whole house ventilation systems
5. Water efficiency improvements for fixtures
6. Lighting and appliances improvements
7. Indoor air quality EPA Indoor Air Plus requirements
8. Solar Ready Checklist requirements with exemptions
 - a. With an addition of increasing roof structural load capacity by 5 psf to accommodate solar

For a home to become certified, it must meet all program requirements through either a prescriptive path or performance path. The prescriptive path provides a single set of measures that can be used to construct a ZERH home. The performance path requires meeting mandatory requirements but

providing flexibility on a custom combination of measures that meet the performance level of the ZERH Home Energy Rating System HERS (Home Energy Rating System) target home. The performance path requires HERS modeling by a licensed HERS rater.

Staff is recommending this program as it is a nationally administered certification that provides standards for exceeding the building code, as well as gathering energy modeling data through HERS. As a reference, Summit County was the first county in Colorado to adopt the ZERH program for new residential construction in 2020 and they have received positive feedback from the construction community.

To better understand a comparison between the 2021 building code baseline the ZERH, staff worked with Deeper Green Consulting in Frisco to model a single-family home and duplex unit in the Town to show the HERS differences between a home that meets the 2021 code vs. a home that qualifies for the ZERH program. The results show an improvement to drive further energy efficiency above the 2021 code. For reference, HERS is a scale of 0-150. Lower scores are associated with decreased energy use. The national average HERS index score in 2021 was 58.

Unit Type	2021 IRC		2021 IRC + ZERH Certified	
	HERS Score	Annual Savings	HERS Score	Annual Savings
Single Family Home	67	\$1,590	50	\$2,116
Duplex	56	\$899	50	\$1000

The ZERH program requirements will come with added construction costs. First, to certify for ZERH, including obtaining a HERS rating, it is estimated that simple, smaller residential units (such as a duplex or triplex unit), would cost \$1,100, while a larger single-family unit could cost in the range of \$2,500 - \$5,000. Staff is recommending subsidizing the cost of ZERH certification for homes that build an accessory dwelling unit, consistent with how the Town subsidizes 2/3 of the cost of tap fees.

As a combination of the 2021 IRC updates and ZERH, there are estimated cost implications for insulation and windows as well. Insulation costs are anticipated to increase approximately 30% to meet R-60 ceiling cavity insulation. Window costs are anticipated change as well for the more efficient U Factor .27 for windows. Example price differences quoted from Eagle Sales for a 36" x 60" Anderson double hung window are shown in the table below:

U Factor (Code Relation)	.32 U Factor (2015 IECC)	.30 U Factor (2021 IECC)	.27 U Factor (ZERH)
Non-Tempered Glass	\$1,105.83*	\$1,302.01*	\$1,143.85**
Tempered Glass	\$1,367.00*	\$1,493.37*	\$1,292.09**

*Metal clad costs, **Fiberglass cost

For energy star lighting and appliance requirements, GCEA provides appliance rebates of \$50 for new energy star fridges/freezers, \$50-60 for new energy star clothes washers, \$30-\$90 for energy star electric clothes dryers, and \$100 for electric-to-induction replacement stoves and \$350 for gas-to-induction replacement stoves. For LED lighting, GCEA will provide a rebate of 50% of lamp/fixture cost up to \$8 per lamp.

- 2. Electrification Requirements:** For the same reasons identified in the Commercial New Construction section, staff is recommending requiring all new residential construction to utilize electricity for heating, hot water heating, and appliances. Staff has vetted that electric heating and appliance technology will work in this environment. First, there are multiple options for electric heating a home/building in the current market including: air source heat pumps (ASHP), ground source heat pumps (GSHP), electric boilers, electric radiant in floor heating mats, electric baseboard heaters, and electric radiant ceiling heating. Each heating option can be utilized in multi system consideration, with associated cost differences. Hot water heating additionally has multiple options which can vary between the systems listed above.

REG has worked on several residential homes in the valley that utilize ASHP, which are currently one of the most efficient options of those listed above. One of the primary public perceptions staff has heard during the feedback is that ASHPs do not work in our climate, nor do they work for larger buildings.

Air Source Heat Pumps (ASHP) can work for any size building, but it is not as straightforward as gas boilers. Boilers come in many sizes, which makes them easier and more cost effective to use for different sized buildings. Heat Pumps currently come in limited sizes.

Local plumbers and suppliers are typically sizing boiler systems for residential projects. However, the ASHP technology is new enough that they often need help from an engineering company to confirm sizing. The industry anticipates this changing in the next few years.

From an economic standpoint as houses grow in size, ASHP will become more expensive, until manufacturers start to produce more sizing options. The reason for this is if a house needs more than a typical 5-ton heat pump, it might require two (\$8,000 each). This could have a significant cost impact on the mechanical equipment. If the same house were being heated with a gas fired boiler, it would mean going from a 200,000 BTU unit to a 250,000 BTU unit. This increment in a gas boiler is very minor (estimated to be \$1,000), and the boiler would be the exact same size physically. In this scenario, the cost would be significantly more with ASHP. In the end, the cost of utilizing heat pumps can vary based on the size and budget of the home.

REG provided an estimation for what it would cost to utilize ASHP in a larger, 3,000 sq ft home compared to a gas boiler. The total cost for an electric or a gas heating system would range from \$75,000 - \$100,000. For the specific equipment cost different between a gas boiler and an ASHP, the gas boiler is estimated to be \$3,500 and the ASHP is estimated to be \$16,000. However, because of the size of the home, this example shows the scenario described above where the system would need two ASHPs, resulting in this larger discrepancy.

In the realm of smaller units, the Town has committed the Sixth & Butte and Paradise Park project to utilize electricity over natural gas. Staff is gathering cost estimates of an electric vs. gas comparison for smaller units for the upcoming Sixth & Butte/Paradise Park project, which will be provided at the Council meeting.

GCEA offers a tiered rebate program for both ASHP and GSHP heat pumps relating to the equipment and installation.

- 3. Electric Vehicle Readiness and Charger Requirements:** Staff is recommending adopting electric vehicle ready standards for new residential construction to facilitate home charging as more electric vehicles and plug in hybrids come on the market. For new residential construction, staff is recommending:

- a. Every residential dwelling shall have one EV ready parking space at a minimum.
 - i. EV ready is defined as: Parking spaces that have full circuit installations of 208/240-volt (or greater), 40-ampere (or greater) panel capacity, raceway wiring, receptacle and circuit overprotection devices. This strategy provides all required electrical hardware for the future installation of EV Supply Equipment (EVSE). Anticipating the use of dual head EVSE, the same circuit may be used to support charging in adjacent EV-Ready spaces.

Installing the conduit and circuit panel space for a future charger will result in cost savings over going back to retrofit for a space in the future. A study from the [Southern Alliance for Clean Energy](#) found that for multi-family buildings, an estimated cost of an EV ready parking space was \$920 compared to a post-construction retrofit cost of \$3,550.

For homes that decide to install a charger, GCEA offers an electric vehicle rebate program of 50% of the total cost of installation and equipment, up to \$1,250.

- 4. Solid Fuel Burning Devices:** The Town currently requires a HERS rating of 80 or lower for homes that want to install a solid fuel burning device (wood stove or fireplace). Staff is recommending continuing to allow solid fuel burning devices as heating back up and improving the standards by requiring a HERS rating of 50 or lower for existing construction or 30 or lower for new construction.

Residential Remodels: Similar to commercial remodels, residential remodels must comply with the International Existing Build Code (IEBC), where level 3 alteration remodels trigger additional requirements.

Residential remodels would follow the same revised “work area definition” described in the residential remodel section, and it is recommended that residential projects that meet level 3 alteration are required to comply with the 2021 IEBC, as well as:

- Comply with the 2021 IECC
- Complete a home energy assessment and share copy of report with the Town prior to issuance of building permit
- Electric Vehicle ready requirements as described above
- Meet electric ready requirements:
 - Where a gas heating system is installed provide a dedicated electric circuit, panel space and location for condensate drainage.
 - Where a gas water heating system is installed provide a dedicated electric circuit, panel space, location for condensate drainage.
 - Where a gas cooking stove is installed, a dedicated circuit and panel space for electric appliance replacement is provided.
 - Where a gas dryer is installed, a dedicated circuit and panel space for electric appliance replacement is provided.

In addition, staff is recommending that all garage remodels require the addition of an EV ready parking space.

While not part of the building code adoption, staff is recommending launching an energy assessment incentive program where the Town would fully subsidize the cost of a home energy assessment (\$350) for any home seeking a remodel permit, up to an annual amount. The goal would be to encourage those conducting a minor remodel to understand opportunities to increase energy efficiency and decrease their utility costs. This program funding will be requested during the 2023 budget discussion. For level 3 alteration remodels, staff is proposing requiring completion of a home energy assessment and sharing a copy with the Town.

Lastly, staff is recommending codifying language in the code pertaining to historic building remodels to read:

- A Historic Building (that meets Town definition of Historic Building) with a work area that exceeds 50% of the building area shall meet 2021 IECC without damaging the existing historic structure.
- No closed cell foam shall be used in the wall framing cavities.
- Closed cell foam insulation can be used in the ceiling framing cavities.
- BOZAR reviews this work on site before any work commences and during the construction process as construction work progresses.
- A blower door test conducted after drywall is optional.

Recommendation:

At the Council meeting, staff will review the recommendation with the Town Council and can adjust the ordinance as requested. Overall, it is recommended for a council member to make a motion, followed by a second, to set Ordinance No. 13, Series 2022 for public hearing on August 2, 2022, with any associated conditions or changes identified at the meeting.

Attachments:

1. Attachment 1: Ordinance No. 13, Series 2022
2. Attachment 2: Public Comment Letter from Gunnison Valley Climate Crisis Coalition
3. Attachment 3: Future Building Code Policy Considerations and Educational Programs to Achieve the Town Climate Action Plan
4. Attachment 4: Benefits of Fire Sprinklers in one- and two-family dwellings and townhomes

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BENEFITS OF FIRE SPRINKLERS IN

1- AND 2-FAMILY DWELLINGS AND TOWNHOMES

The International Codes provide a number of prescriptive benefits for buildings provided with automatic sprinkler systems. These benefits provide cost-savings for builders and property owners and may actually increase profits for developers as decreased setback and access requirements will allow for more or larger buildings on a project.

The benefits shown below are applicable for residential occupancies.

Building Feature	Benefits Provided by Sprinklers	Code Section
Distance to lot line	Sprinklered homes can be built closer to the lot line Where all homes in a residential subdivision are sprinklered, non-fire rated walls and unprotected openings and penetrations are allowed at 0-foot from the lot line	Table R302.1(2) R309.5
Exterior walls	Projection, opening, and penetration restrictions are loosened for sprinklered homes Where all homes in a residential subdivision are sprinklered, exterior walls are not required to be fire rated and openings and penetrations are unrestricted	Table R302.1(2) Table R302.1(2)
Underfloor protection in basements	When fire sprinklers are provided, ½-inch gypsum or 5/8-inch wood panel may be eliminated on the underside of floors	R302.13
Fuel-fired equipment or storage in crawl spaces	Underfloor protection may be eliminated from crawl spaces used for storage or fuel-fired equipment when provided with a fire sprinkler system.	R302.13
Emergency Escape Windows	Only one emergency escape and rescue opening is required in basements of sprinklered homes provided there is at least one compliant exit. Where two compliant exits are provided in sprinklered homes, no emergency escape and rescue openings are required	R310.1
Habitable attics	A habitable attic is NOT considered a story above grade plane when it is not greater than 50% of the floor below when equipped with sprinklers A habitable attic may be located above the third floor on a dwelling unit when the building is provided with sprinklers.	R326.3 R326.3
Townhouses	The common wall between townhouses can be reduced from 2-hr to 1-hr fire-resistance rating where dwellings on both sides of the common wall are sprinklered Sprinklered townhouses built according to the IRC are NOT required to be structurally independent from each other	R302.2.2 R302.2.6
Two-family dwellings	Dwelling unit separation wall can be reduced from 1-hr to 30-minutes where sprinklered	R302.3
Fire apparatus access roads	The fire code official may allow an increase in the distance from a fire apparatus access beyond 150 feet for buildings provided with a sprinkler system. A second point of access is NOT required to serve more than 30 homes when all homes are sprinklered. <i>Appendix must be specifically adopted</i>	IFC 503.1.1 IFC D107.1
Fire flow	Depending upon the method used to determine required fire flow, sprinklers may be used to decrease the required quantity and/or duration. (ISO, IFC, NFPA 1142, and perhaps other methods allow varying decreases for sprinklers.) Fire flow and duration may be reduced by up to 50% for sprinklered homes (500gpm/30 min <3,600 sf / 1,000gpm/60min >3,601) <i>Appendix must be specifically adopted</i>	IFC 507.1 IFC App B
Fire hydrant spacing	Space between hydrants and distance from hydrant may be increased by 25% for homes provided with residential sprinkler systems. <i>Appendix must be specifically adopted</i>	IFC App C