



CLIMATE ACTION PLAN

2021

INTRODUCTION

Determining specific greenhouse-gas reduction goals and strategies to achieve those goals is the responsibility of many minds to create a shared vision. Therefore, the purpose of this **Climate Action Plan** is not to set requirements but rather, to help present and organize the many dozens of recommendations and strategies that volunteers have compiled for the City of Salida to enable the community to create achievable goals.

This Plan outlines a process and should be considered a living document to be revised as new businesses and technologies arise and as the feasibility of the ideas presented here are fully assessed.

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PHOTO BY: Hayden Mellso





WASTE AND LANDFILL

Waste diversion is the process of reducing the amount of waste that enters landfills. Increased diversion is commonly achieved through six primary activities, including expanding source reduction activities, recycling, mulching, composting, returning waste to the original provider, and reusing waste generated within a community.

This sector aims to document the status of existing waste and landfill initiatives and identifies the opportunities below to increase waste diversion.

1 Increase rates of, and participation in, composting and recycling through:

- Education
- Incentives
- Accessibility
- Use of post-composted products

2 Maximize diversion of construction and demolition waste through:

- Education
- “Pay as you throw” services
- Incentives
- Updated building codes
- A “haul-away” salvage program
- Reuse of building materials

3 Increase community compliance with waste diversion ordinances through:

- Education
- “Zero waste” public events
- Aligning city, county, and regional codes
- Hosting events for “hard to recycle” items

4 Consume fewer products and resources through:

- “Buy Local” campaigns
- Mandated bans on plastic and Styrofoam
- Incentives
- Education
- Waste-to-energy technologies at the landfill





WASTE AND LANDFILL

Increase rates of, and participation in, composting and recycling.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Encourage and enable recycling and composting through education and incentives	CO ₂ CO ₂ ○ ○	= \$ 🌳 + ♻️	Julie Mach - Elements Composting
2. Create convenient, accessible neighborhood compost drop-off locations	CO ₂ CO ₂ CO ₂ ○	= \$ 🌳 ○ ♻️	Elements Composting
3. Equip an entity like the landfill with resources to turn organic waste into a safe and usable compost product	CO ₂ CO ₂ ○ ○	○ \$ 🌳 ○ ♻️	Chaffee County
4. Make finished compost product available to gardeners and landscapers	CO ₂ ○ ○ ○	○ \$ 🌳 ○ ♻️	Chaffee County
5. Provide, at reduced cost, a carbon “offset” created by composting	CO ₂ CO ₂ CO ₂ CO ₂	= ○ 🌳 + ♻️	Local Nurseries

Promotes Equity
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WASTE AND LANDFILL

Increase rates of, and participation in, composting and recycling (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
6. Run ongoing public education campaigns to promote composting	○ ○ ○	○ ○	Greater Arkansas River Nature Association (GARNA)
7. Support “Business That Cares” program to incentivize partners through quarterly recognition and feature one excelling business	○ ○ ○	○ ○ ○	
8. Encourage monthly dedicated use of two grinder at facilities to organize matter.	○ ○	○ ○	

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WASTE AND LANDFILL

Maximize diversion of waste, including construction and demolition waste.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Encourage buildings to provide adequate space for composting and recycling collection			Building Owners
2. Encourage multifamily complexes, short-term rentals and other private buildings to provide composting and recycling spaces			Multi-family Building Owners
3. Encourage trash services to offer reduced trash pick-up days			Local Trash-collecting Businesses
4. Expand space at landfill for recycling and composting			Chaffee County
5. Expand business participation in compost collection services			Local Restaurants

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WASTE AND LANDFILL

Maximize diversion of waste, including construction and demolition waste (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
6. Incentivize deconstruction over demolition			New Home Builders
7. Update building codes to prioritize deconstruction over demolition			Chaffee County
8. Create a salvage yard for deconstructed building materials for community access and “haul away”			Greater Arkansas River Nature Association (GARNA), Chaffee County
9. Promote Habitat for Humanity store and other building material reuse			Habitat for Humanity

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WASTE AND LANDFILL

Increase community compliance with waste diversion ordinances.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Provide education across relevant target audiences	CO ₂ CO ₂ ○ ○	= ○ ○ + ○	(GARNA), Mickey Barry (Angel of Shavano Recycling)
2. Create and enforce zero-waste event requirements	CO ₂ CO ₂ CO ₂ ○	= ○ 🌳 ○ 🔄	
3. Require recycling and compost bins at public events	CO ₂ CO ₂ CO ₂ ○	= ○ 🌳 + 🔄	
4. Align city, county and regional waste policies and codes	CO ₂ CO ₂ ○ ○	= ○ ○ ○ 🔄	Chaffee County, Pagosa Springs, Buena Vista
5. Host community-wide events to support proper already in progress disposal of hard-to-recycle items	CO ₂ CO ₂ ○ ○	○ \$ 🌳 + 🔄	Michael Kunkel

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WASTE AND LANDFILL

Consume fewer products and resources.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Conduct “buy local” campaigns			Chamber of Commerce
2. Promote reusable mugs and water bottles			Short-term Rental Owners
3. Develop and adopt ban on single-use plastic bags, Styrofoam and plastic			
4. Develop programs to reduce use of plastic food service packaging			Local Restaurants
5. Incentivize use of reusable containers over disposable			Local Media
6. Promote government and corporate purchasing policies favoring low waste and support food-waste programs			Chaffee County, Local Restaurants

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WASTE AND LANDFILL

Consume fewer products and resources (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
7. Require use of recycled asphalt and glass in streets		
8. Discourage or place fee or ban single-use plastic bags		
9. Research and promote waste-to-energy technologies at landfill		

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VEHICLES AND TRANSPORTATION

GHG emissions in the Vehicles and Transportation sector are associated with the combustion of liquid fuels in the wide range of vehicles traveling within, to, from, and through the City. Opportunities to reduce emissions in this sector include shifting transportation modes away from single-occupancy vehicle use and transitioning personal and commercial vehicle fleets to low- or zero-emission options such as electric vehicles.

The primary objective to reduce GHG in this sector is to promote options to and ultimately completely replace the use of fossil-fuel vehicles by:

- 1** Expanding all types of mobility services, such as mass transit, bike-walk networks, on-demand services, ride-sharing, carpooling, etc.
- 2** Enabling wide-spread adoption of alternative-fuel vehicles.
- 3** Supporting changes to relevant local, state and federal policy.
- 4** Increasing the cost of owning and operating fossil-fuel vehicles.
- 5** Adopting new technologies and business models.





VEHICLES AND TRANSPORTATION

Reduce VMT (Vehicle Miles Traveled) by promoting alternative to single-occupancy vehicles.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Create funding mechanism for free regional bus ridership	<input type="radio"/> <input type="radio"/>	<input type="radio"/>	Bike Shops
2. Promote and incentivize carpooling	<input type="radio"/> <input type="radio"/>		
3. Promote teleworking as an alternative to commuting	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>	Heart of the Rockies Medical Center, Salida School District
4. Increase the number and quality of safe routes and transit options to schools	<input type="radio"/>	<input type="radio"/>	Chaffee County, Chaffee Shuttle
5. Enable growth of on-demand mobility services (ride-sharing, e-hailing, bike-sharing, car-sharing, etc.)	<input type="radio"/>	<input type="radio"/> <input type="radio"/>	Colorado Department of Transportation, Colorado Communities for Climate Action
6. Place 'air-pollution disclosure' labels on gas pumps (similar to Surgeon General's warnings on cigarettes)	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>	Bike Shops, Salida School Districts

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VEHICLES AND TRANSPORTATION

Enhance first- and last-mile connectivity to transit.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Establish bike-share network to better connect neighborhoods and work centers			Bike Shops
2. Establish ride-share network to better connect people traveling to similar destinations			Heart of the Rockies Medical Center, Salida School District
3. Promote zero-emission and driver-less technologies for expanded mobility services			Chaffee County, Chaffee Shuttle
4. Expand bicycle network to better connect work centers and neighborhoods			Colorado Department of Transportation, Colorado Communities for Climate Action, Bike Shops, Salida School Districts

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VEHICLES AND TRANSPORTATION

Promote adoption of alternative fuel vehicles for individuals and fleets.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Increase proportion of EVs in fleets	○ ○	○ ○	Chaffee County, Salida School District
2. Increase EV charging stations in visible, accessible locations	○ ○		Colorado Department of Transportation, Chaffee County, Michael Kunkel
3. Require EV charging stations (or EV readiness) in all new commercial developments	○ ○	○	Developers, Builders
4. Require EV charging stations (or EV readiness) in all new multi-family developments	○ ○		Developers, Builders
5. Require all new single-family construction to be EV-ready	○ ○	○	Builders, Developers
6. Provide incentives to tie PV (and storage battery) installation to EV purchases	○ ○	○	

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VEHICLES AND TRANSPORTATION

Promote adoption of alternative fuel vehicles for individuals and fleets (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
7. Provide free public EV charging stations			Xcel Energy, Colorado Department of Transportation
8. Support full spectrum of low-emission vehicles			Colorado Department of Transportation
9. Convert fleets to low-carbon-fuel vehicles			Salida School District
10. Provide financial incentives to convert fleets to low-carbon-fuel vehicles			
11. Make transportation fuels at landfill using Methane capture			Chaffee County
12. Deploy public-outreach campaign and give public opportunity to drive an EV			
13. Facilitate EV bulk-purchase program			Salida School District, Chaffee County
14. Encourage and educate the public about CVs			

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VEHICLES AND TRANSPORTATION

Redesign urban form and population density to reduce vehicle use.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
1. Use zoning to site new development near work centers		
2. Enable a greater percentage of workforce to live near work		
3. Improve pedestrian options		
4. Improve and expand pedestrian infrastructure		
5. Create and expand no-car zones		
6. Improve and expand bicycle infrastructure		

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VEHICLES AND TRANSPORTATION

Redesign urban form and population density to reduce vehicle use (continued).














































ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
7. Place bike racks in strategic locations; consider covered and winter bike racks			Bike shops, Local Businesses, Chamber of Commerce
8. Support local food production and sale at scale			Chaffee County Food Group, Farmer's Market, SOIL Sangre de Christo
9. Eliminate minimum-parking requirements for development; instead, require transit and mobility services			Salida School District






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VEHICLES AND TRANSPORTATION

Support relevant federal, state and local policy through active legislative and regulatory engagement.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Support local, state and federal incentives, policies and programs to grow EV adoption and infrastructure	   	    	Colorado Communities for Climate Action
2. Actively support state transit grants	   	    	Colorado Communities for Climate Action
3. Support EPA GHG emissions standards and fuel-efficiency standards for medium- and heavy-duty engines and vehicles	   	    	Federal Government
4. Promote state fuel-economy standards (like CA's)	   	    	Colorado Communities for Climate Action
5. Advocate to strengthen the national fuel-economy targets (CAFE standards)	   	    	

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VEHICLES AND TRANSPORTATION

Promote new mobility technologies and business models.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Integrate a multi-modal mobility system at the regional or state level			Colorado Communities for Climate Action, Chaffee County
2. Pilot on-demand bus and/or van share			Colorado Department of Transportation
3. Address regulator barriers to shared-use mobility and driverless vehicles			Colorado Communities for Climate Action
4. Support on-demand parking apps to reduce vehicle circulation and congestion			

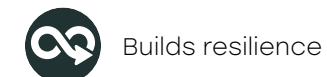
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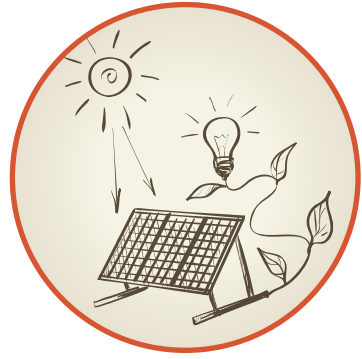


VEHICLES AND TRANSPORTATION

Increase the cost of using fossil-fuel vehicles.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Establish CO ₂ fees on fossil-fuel vehicles at purchase or registration	○ ○ ○	○ ○ ○	Colorado Communities for Climate Action
2. Establish congestion fees on fossil-fuel vehicles in designated areas or for driving during high-use time	○	○ ○ ○	Chaffee County
3. Tax gasoline sales locally or regionally	○	○ ○	Chaffee County





ENERGY SUPPLY

GHG emissions in the Energy Supply sector are associated with purchased electricity and natural gas and propane use in residential and commercial buildings. Fossil-based resources are significantly more carbon-intensive than renewable energy sources. Opportunities to reduce emissions in this sector range from fuel switching to decentralizing production.

Major objectives to reduce GHG in this sector are to:

1 Mandate decarbonization of energy supply.

- Participate in regional collaboration of governments, businesses, and utilities to drive clean-energy transition.
- Pursue retirement, conversion, or sale of fossil-fuel plants serving the area.
- Establish regional market-based mechanism favoring low-carbon energy (e.g. carbon tax).

2 Enable consumers to purchase and produce renewable energy.

- Pilot micro-grid infrastructure to create districts that produce the same amount of energy they consume.
- Install renewable systems on municipal facilities.
- Expand municipal renewable-energy-power purchasing when on-site renewables are unsuitable.

3 Reduce the cost of renewable energy.

- Facilitate solar PV and/or solar-thermal bulk purchase program.
- Incentivize community solar.
- Provide funding and incentives for residential and commercial solar projects.

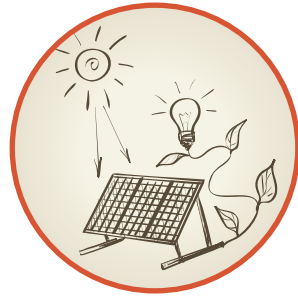
4 Invest in renewable generation at the community and utility levels.

- Site and develop utility-operated renewable capacity in local service area.
- Advance regional grid flexibility to enable a predominantly renewable electricity supply.
- Invest in energy storage to address the intermittency of wind and solar.

5 Support relevant federal and state policies through active legislative and regulatory engagement.

- Support continuation and strengthening of Colorado's renewable energy standard.
- Support state or national price on carbon.
- Join a coalition of communities advocating for federal climate/energy policies.



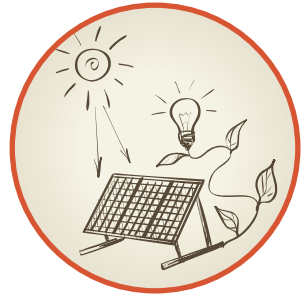


ENERGY SUPPLY

Mandate decarbonization of energy supply.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Participate in regional collaboration of governments, businesses, and utilities to drive clean-energy transition	CO ₂ CO ₂ CO ₂ CO ₂	○ \$ 🌲 + ○	Heart of the Rockies Medical Center, Salida Airport at Harriet Alexander Field, Salida School District, Walmart, etc.
2. Establish regional market-based mechanism favoring low-carbon energy (e.g. carbon tax)	CO ₂ CO ₂ CO ₂ ○	= \$ ○ ○ ○	State Government
3. Pursue retirement, conversion, or sale of fossil-fuel plants serving area	CO ₂ CO ₂ CO ₂ CO ₂	○ ○ 🌲 ○ ∞	Atmos Energy, Xcel Energy
4. Remove barriers to local renewable-energy generation	CO ₂ CO ₂ ○ ○	○ ○ ○ ○ ∞	Chaffee County
5. Pursue options for local renewable-energy-generation	CO ₂ CO ₂ CO ₂ ○	○ \$ 🌲 ○ ∞	
6. Communicate to utilities the importance of reducing the carbon content of electricity	CO ₂ CO ₂ ○ ○	○ \$ 🌲 ○ ∞	Atmos Energy , Xcel Energy

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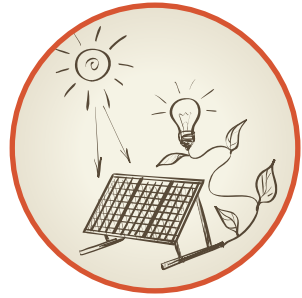


ENERGY SUPPLY

Enable consumers to purchase and produce renewable energy.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Install renewable systems on municipal facilities	CO ₂ CO ₂ CO ₂ ○	○ \$ 🌲 ○ ∞	
2. Expand municipal renewable-energy-power purchasing when on-site renewables are unsuitable	CO ₂ CO ₂ CO ₂ ○	○ \$ 🌲 ○ ○	High-energy-usage businesses
3. Pilot microgrid infrastructure high-energy-usage to create districts that produce the same amount of energy they consume	CO ₂ CO ₂ CO ₂ CO ₂	○ \$ ○ ○ ∞	Atmos Energy, Xcel Energy
4. Enable consumers to participate in wholesale clean-power market	CO ₂ CO ₂ CO ₂ ○	= \$ ○ ○ ∞	
5. Promote access to rooftop solar for homes and businesses through code and utility policy	CO ₂ CO ₂ ○ ○	○ \$ ○ ○ ∞	Chaffee County

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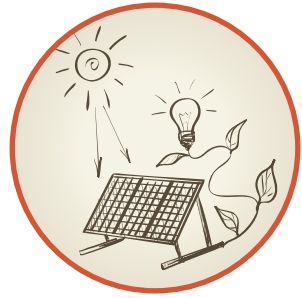


ENERGY SUPPLY

Enable consumers to purchase and produce renewable energy (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
6. Assist large entities in implementing clean energy purchasing			Heart of the Rockies Medical Center, Salida School District, Large businesses
7. Use PACE (Property Assessed Clean Energy) and other financing mechanisms to fund renewable installations			Colorado Office of Energy, Chaffee County
8. Address the soft costs of solar energy installations such as permitting and interconnection fees			Chaffee County, Xcel Energy, Atmos Energy
9. Change land-use codes to encourage regional solar development			Chaffee County

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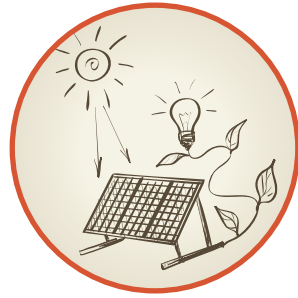


ENERGY SUPPLY

Reduce the cost of renewable energy.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Expand Advanced Metering Infrastructure (AMI)			Atmos Energy, Xcel Energy
2. Facilitate solar PV and/or solar-thermal bulk purchase program			Colorado Office of Energy, Peak Solar
3. Provide funding and incentives for residential and commercial solar projects			Chaffee Housing Authority, Colorado Office of Energy
4. Expand solar programs for low-income households			Colorado Office of Energy
5. Streamline and incentivize rooftop solar installation process (e.g. sales tax legislation)			Colorado Office of Energy, Colorado Communities for Climate Action
6. Incentivize community solar			Colorado Office of Energy

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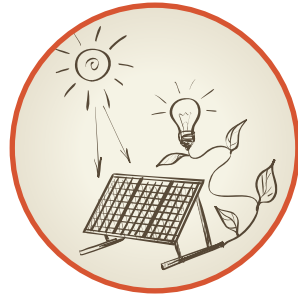


ENERGY SUPPLY

Invest in renewable generation at the community and utility levels.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Develop goal to self generate a given percentage of government, public and non-profit buildings' energy needs, and install corresponding renewable capacity			Colorado Office of Energy
2. Develop geothermal energy			Xcel Energy
3. Develop local hydropower capacity			Xcel Energy
4. Site and develop utility operated renewable capacity in local service area			Xcel Energy, Atmos Energy
5. Advance regional grid flexibility to enable a predominantly renewable electricity supply			Colorado Office of Energy
6. Invest in energy storage to address the intermittency of wind and solar			Colorado Office of Energy
7. Install methane digesters in city facilities			

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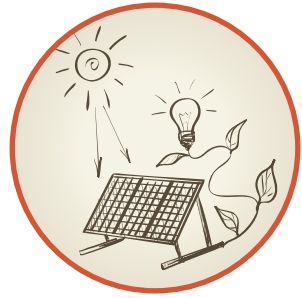


ENERGY SUPPLY

Support relevant federal and state policies through active legislative and regulatory engagement.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Promote and share success of local climate initiatives as local narrative for broader climate action	CO ₂ ○ ○ ○	○ \$ 🌲 + ∞	Media, Colorado Association of Ski Towns
2. Cultivate elected officials as local champions for state and federal climate and energy policy	CO ₂ CO ₂ ○ ○	= \$ 🌲 ○ ∞	State Government, Federal Government
3. Track state and federal climate and energy policy and engage when appropriate	CO ₂ CO ₂ ○ ○	○ \$ 🌲 ○ ∞	Colorado Communities for Climate Action, Colorado Association of Ski Towns
4. Advocate for grid modernization and flexibility policies	CO ₂ CO ₂ CO ₂ ○	○ \$ 🌲 ○ ∞	Xcel Energy, Atmos Energy
5. Support continuation and strengthening of Colorado’s renewable Energy Standard	CO ₂ CO ₂ CO ₂ CO ₂	= \$ 🌲 + ∞	Colorado Communities for Climate Action, Colorado Association of Ski Towns
6. Support State Energy Office of Colorado Association of Ski Towns	CO ₂ CO ₂ ○ ○	= \$ 🌲 + ∞	Colorado Communities for Climate Action, Colorado Association of Ski Towns

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ENERGY SUPPLY

Support relevant federal and state policies through active legislative and regulatory engagement (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
7. Remain member of Colorado Communities for Climate Action (CC4CA) to support state climate and energy policies			
8. Join coalition of communities advocating for federal climate and energy policies			Colorado Association of Ski Towns, Mountain Pact
9. Support state or national price on carbon			Colorado Communities for Climate Action, Federal Government
10. Help defend the Clean Air Act and continued EPA regulations of CO ₂ as a pollutant			

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RESIDENTIAL ENERGY

GHG emissions in the Residential Energy sector are associated with the use of electricity, natural gas, and propane in ownership and rental units. Residential units are typically served by electric and natural gas utilities, and opportunities to reduce GHG emissions are tied to decarbonizing the supply of energy flowing to the unit and consuming less of it.

The major objectives to reduce GHG in this sector are to reduce energy consumption and convert most energy use from fossil fuels to renewables by:

- 1** Increasing the energy efficiency of space- and water-heating.
- 2** Converting space- and water-heating to electric.
- 3** Mandating no- to low-carbon standards for new construction and major remodels.
- 4** Improving the energy efficiency of existing buildings.
- 5** Reducing the energy consumption in rental housing and multifamily buildings.





RESIDENTIAL ENERGY

Increase the efficiency of natural gas space- and water-heating, and convert to electric.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Convert natural gas heating systems to electric or renewable energy	CO ₂ CO ₂ CO ₂ CO ₂	○ \$ 🌳 + ∞	
2. Convert natural gas water-heating systems to electric or renewable energy	CO ₂ CO ₂ CO ₂ ○	○ \$ 🌳 + ∞	
3. Heat buildings with geothermal heat pumps, air source heat pumps, or other heat-exchange technology	CO ₂ CO ₂ CO ₂ CO ₂	○ \$ 🌳 ○ ∞	
4. Integrate heat- and space-heating equipment standards into building codes	CO ₂ CO ₂ ○ ○	○ ○ 🌳 ○ ∞	Chaffee County
5. Promote energy efficiency improvements such as adding insulation and pipe wrap to water heaters	CO ₂ ○ ○ ○	= \$ ○ + ○	Energy Smart Colorado
6. Encourage integration with AC systems if AC need is anticipated	CO ₂ CO ₂ ○ ○	○ ○ ○ + ∞	

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RESIDENTIAL ENERGY

Mandate no- to low-carbon standards for new construction and major remodels.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Incentivize above-code buildings			
2. Adopt the latest energy codes with specific local requirements to exceed minimum standards			
3. Adopt net-zero building and energy conservation codes			
4. Require net zero, or near for all new development			
5. Require net zero, or near, for houses over a specific square footage			
6. Strengthen building codes and standards to move toward net zero			
7. Conduct community training on updated code requirements			Colorado Office of Energy

Promotes Equity
 Fosters economic sustainability
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 Builds resilience



RESIDENTIAL ENERGY

Improve the energy efficiency performance of existing buildings.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Retrofit buildings to meet updated building codes			Energy Smart Colorado
2. Provide financial incentives for energy-efficient retrofits			
3. Enact ordinances to drive and support energy retrofits			
4. Facilitate education and accreditation for contractors, architects and property managers			Colorado Office of Energy
5. Require and incentivize measurement and verification of energy-efficiency programs			
6. Mandate sleep-mode technology for second homes and STRs when unoccupied			
7. Encourage adoption of building automation systems			

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RESIDENTIAL ENERGY

Improve the energy efficiency performance of existing buildings (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
8. Conduct energy-efficiency challenges and provide incentives to drive energy retrofits	○ ○ ○	○ ○ ○	
9. Encourage cool roofs (white coating) to reduce cooling needs	○ ○	○	
10. Encourage green roofs (covered in soil and plants) to reduce heating and cooling needs	○ ○	○ ○	
11. Facilitate peer-to-peer information-sharing among building owners	○ ○ ○	○ ○ ○	
12. Improve access to PACE and other specialized financing mechanisms	○ ○	○ ○	
13. Provide regulatory and zoning relief for projects that meet verifiable low-energy standards (e.g. LEED)	○ ○	○ ○	
14. Support low-income households with energy upgrades and on-site renewable energy	○ ○		Energy Smart Colorado

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RESIDENTIAL ENERGY

Reduce energy consumption in rentals, apartments and multifamily buildings.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Encourage and incentivize energy-efficient retrofits in rental housing			
2. Partner with utilities to improve tenants' access to energy-usage data			Xcel Energy, Atmos Energy
3. Implement mandatory, phased energy-efficiency upgrades for rental units			
4. Support building automation to optimize efficiency			
5. Deploy a targeted outreach strategy to engage renters			
6. Adopt building energy reporting and disclosure ordinances			

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RESIDENTIAL ENERGY

Reduce energy consumption in rentals, apartments and multifamily buildings (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
7. Require energy performance disclosure at time of lease or sale	○ ○ ○	○ ○ ○ ○ ○	
8. Implement sub-metering for multifamily buildings to provide specific building energy data	○ ○	○ ○ ○ ○ ○	Xcel Energy, Atmos Energy
9. Promote energy-efficiency opportunities through outreach, workshops and neighborhood challenges	○ ○	○ ○ ○ ○ ○	

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RESIDENTIAL ENERGY

Anticipate and mitigate likely expansion of air-conditioning use.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
1. Avoid or delay the need for AC through building design and management		
2. Require high-efficiency AC Systems as AC use becomes more prevalent		
3. Coordinate with efforts to adopt high-efficiency electric heating systems		

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COMMERCIAL ENERGY

GHG emissions in the Commercial Energy sector are associated with the use of electricity, natural gas, and propane in owner- and tenant-occupied businesses in single occupancy and mixed-use buildings. These buildings are typically served by both electric and natural gas (“NG”) utilities. Opportunities to reduce GHG emissions are tied to decarbonizing the supply of energy flowing to commercial properties and consuming less energy in them.

The major objectives to reduce GHG in this sector are to reduce energy consumption and convert most energy use from fossil fuels to renewables by:

- 1** Increasing the energy efficiency of heating systems and appliances.
- 2** Converting natural-gas heating and appliances to electric and/or renewable systems.
- 3** Enhancing energy efficiency in new commercial developments.
- 4** Bringing all buildings up to current codes or retrofitting a majority of existing buildings.
- 5** Improving energy-efficiency education of the public and the construction trades.





COMMERCIAL ENERGY

Promote building-energy benchmarking and reporting.










ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Created commercial energy benchmarking and disclosure ordinance	○ ○ ○		
2. Facilitate sub-metering to provide more specific data and improve building owners' access to utility data	○ ○ ○		Xcel Energy, Atmos Energy
3. Provide technical support to help building owners begin benchmarking	○ ○ ○		

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COMMERCIAL ENERGY

Increase the efficiency of NG heating systems and appliances.


ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
<p>1. Expand participation in voluntary incentive programs for upgrading old or inefficient equipment</p>	   	    

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COMMERCIAL ENERGY

Replace NG heating and appliances with electric and/or renewable systems.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Eliminate NG connections for all new commercial developments			Atmos Energy
2. Integrate geothermal or ground heat to offset NG use			
3. Promote solar thermal for water heating			
4. Provide rebates and incentives to replace old or inefficient boilers with electric			
5. Encourage integration with AC systems if future AC need is anticipated			

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COMMERCIAL ENERGY

Enhance energy and resource efficiency in new commercial developments.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Strengthen building codes to promote energy and resource efficiency in new commercial developments			
2. Provide above-code incentives for new commercial developments			
3. Require new buildings to achieve LEED standards, focusing on energy efficiency			
4. Require new buildings to meet net-zero energy building standards			
5. Use land-use planning to encourage density in development			
6. Coordinate regional alignment of building codes			Chaffee County

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COMMERCIAL ENERGY

Bring all buildings up to current codes or retrofit a majority of existing buildings.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
1. Require or incentivize remodels to meet code		
2. Require commercial lighting retrofits in existing buildings		
3. Require or incentivize refrigeration upgrades		
4. Ban or disincentivize open doors while heating or cooling is operating		
5. Conduct energy assessments		
6. Provide energy efficiency and renewable-energy incentives for large consumers		

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COMMERCIAL ENERGY

Bring all buildings up to current codes or retrofit a majority of existing buildings (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
7. Develop programs targeting specific commercial users	○ ○ ○	○ ○
8. Require deep energy retrofits at designated times, such as time of sale or major renovation		
9. Establish incremental time line to require all commercial building meet current codes		○
10. Develop and implement program for energy efficiency and renewable energy in historical buildings	○ ○	○

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COMMERCIAL ENERGY

Model best practices through energy retrofitting of government buildings and properties.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
1. Implement energy-efficiency measures in city buildings, offices and facilities	CO ₂ CO ₂ CO ₂ CO ₂	○ \$ 🌳 + ∞
2. Improve energy efficiency in affordable housing units and complexes	CO ₂ CO ₂ CO ₂ CO ₂	= \$ 🌳 + ∞
3. Train city building operators and facility managers in best practices for energy-efficiency	CO ₂ CO ₂ ○ ○	○ \$ ○ + ○
4. Ensure new city buildings Achieve high-performance Green-building standards (e.g. LEED, NEZB)	CO ₂ CO ₂ CO ₂ CO ₂	○ \$ 🌳 + ∞

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COMMERCIAL ENERGY

Improve education and infrastructure; optimize utility rates.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS	PARTNERS
1. Integrate carbon sequestration practices and infrastructure into built environment	○ ○ ○	○ ○	
2. Provide contractor education programs in green building and energy-efficiency upgrades	○ ○ ○	○ ○	Colorado Office of Energy
3. Redesign utility rates to incentivize and balance current and future priorities	○		
4. Establish a green business certification program to recognize buildings that achieve energy-efficiency and sustainability thresholds	○ ○ ○	○ ○ ○	

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COMMERCIAL ENERGY

Improve education and infrastructure; optimize utility rates (continued).

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
5. Require higher energy-efficiency standards for major appliances		
6. Optimize water-distribution system to make it as efficient as possible		
7. Promote optimal thermostat settings to couple comfort with efficiency		
8. Expand messaging and communication on energy programs		

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COMMERCIAL ENERGY

Anticipate and mitigate likely expansion of AC use in buildings.

ACTIONS	GHG REDUCTION POTENTIAL	PRIMARY CO-BENEFITS
1. Avoid or delay AC needs through building design and management		
2. Require high-efficiency AC systems as AC use becomes more prevalent		
3. Coordinate with efforts to adopt high-efficiency electric heating systems		

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