

WHERE DO BOZEMAN'S GREENHOUSE GAS EMISSIONS COME FROM?

35%
vehicle transportation

23%
residential buildings

30%
commercial buildings

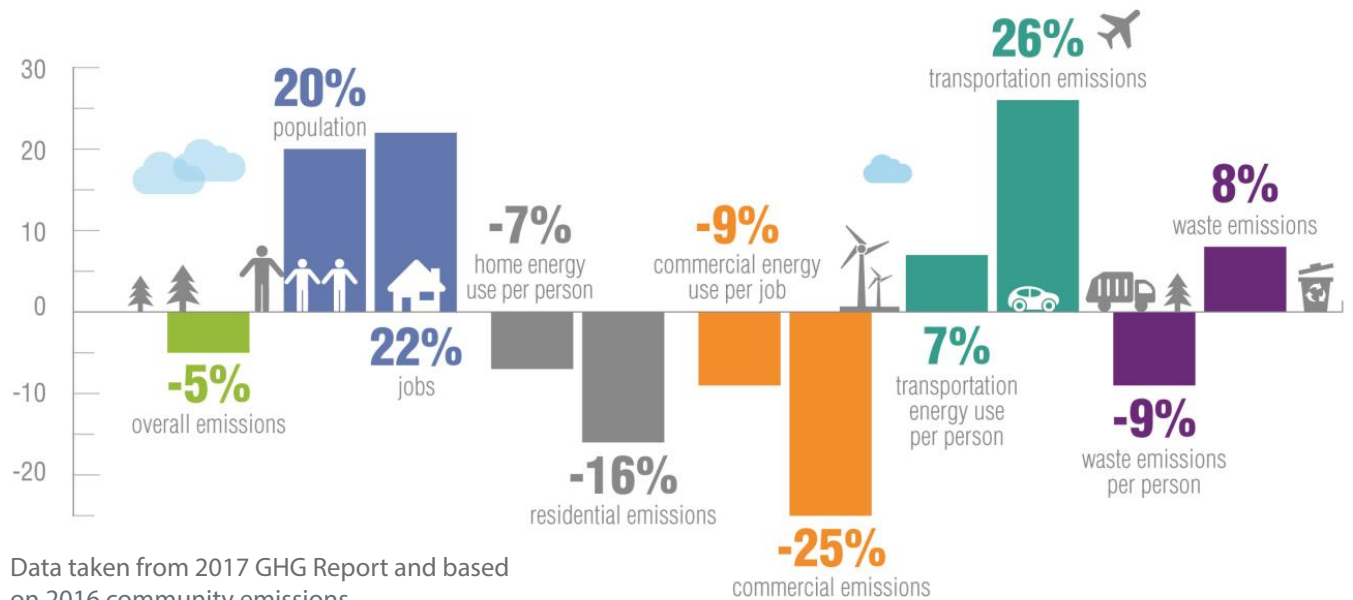
7%
aviation

.2%
water & wastewater

5%
landfilled waste

HOW HAS POPULATION AND ECONOMIC GROWTH AFFECTED BOZEMAN'S EMISSIONS?

Since 2012, Bozeman has seen growth in population, commercial activity, and tourism. Despite these trends, greenhouse gas (GHG) emissions have decreased overall.



Data taken from 2017 GHG Report and based on 2016 community emissions.

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WHAT IMPACT HAS BOZEMAN MADE?

Streamline Transit provided

283,714

fare-free rides in 2018

Community emissions per person have declined

22%

Bozeman was designated a 2016 Silver Bike Friendly Community by the League of American Bicyclists

BUILDING ON SUCCESS

The City of Bozeman is working to develop a Climate Plan to serve as a comprehensive strategy for addressing climate change in Bozeman. The plan will identify solutions to reduce our community's greenhouse gas emissions and build resiliency to the impacts of climate change.

Continuing the City's legacy of climate action and progress, the City of Bozeman passed a resolution in 2017 to join Climate Mayors, a partnership of over 400 United States mayors committing to uphold the goals of the Paris Climate Agreement through local action.

The City established the following objectives to guide development of the Bozeman Climate Plan:




1. Align the City's emissions reduction goals in accordance with the Paris Climate Agreement.
2. Create an actionable project implementation and policy-making guide.
3. Include a diverse group of stakeholders in shaping Bozeman's response to climate change.

City Comparison

GHG emissions per person in Bozeman are 42% lower than the 2016 national average of 16.5 MT CO₂e per person but 58% higher than the global average of 4.8 MT CO₂e per person.



Progress at a Glance

From 2012-2019, Municipal energy efficiency upgrades saved 3,583 MWh and \$371,440	=	Equivalent to avoiding the emissions of 538 Subaru Foresters driven for a year	
Bozeman Energy Project business partner savings from 2015-2019 equaled 522 MWh and \$54,882	=	Equivalent to the carbon sequestered by 6,104 tree seedlings grown for 10 years	
From 2009-2019, Solar PV on city property generated 1,390 MWh of electricity	=	Equivalent to avoiding the emissions from burning 13 tanker trucks of gasoline	

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Bozeman Climate Plan

HOW DO EMISSIONS AFFECT OUR COMMUNITY?

Montana's annual average temperatures have risen **2.0 to 3.0°F** since 1950


GHGS AND AVERAGE TEMPS

Carbon dioxide and other GHGs in the atmosphere trap some of the sun's heat at the planet's surface, which is important for maintaining a livable biosphere. Through burning of fossil fuels, human activity has dramatically increased the concentration of GHGs occurring in our atmosphere. As a result, the average global temperature is rising as more of the sun's heat is trapped at the surface. This causes disruptions to normal climate patterns around the world.

Through the Climate Plan, the City of Bozeman looks to not only reduce its contributions to climate change by reducing GHG emissions, but also help the City's residents cope with and respond to the impacts of climate change.

CLIMATE IMPACTS

The [2019 City Climate Vulnerability Assessment & Resiliency Strategy](#) identifies the following consequences of climate change for Bozeman. The Climate Plan will explore solutions to address these climate impacts and improve community resiliency.

	Local impacts	Equity considerations
 more frequent & intense Extreme Heat	Increased incidences of heat-related stress and illness.	Low-income populations, elderly, and children are at greater risk from heat related stress and illnesses.
 more severe Floods	Increased risk of loss of life and injury due to flood waters.	Low-income populations and people with mobility restrictions are less able to respond to and recover from a flood event.
 more frequent & intense Drought	Food supply and security concerns due to lack of agricultural productivity.	Economic stress of drought disproportionately impacts ranching and farming community.
 decline in volume of Mountain Snowpack	Reduced tourism income due to reduced snowpack and stream flow.	Businesses that rely on ski and fishing tourism are most likely to be disproportionately impacted by reduced snow pack stream flow.
 more extensive, frequent, & intense Wildfire	Increased incidence of asthma, cardiopulmonary illness, and death due to poor air quality.	Elderly, children, and people with pre-existing medical conditions are most susceptible to negative health impacts - especially those without access to indoor areas with high quality air filtration.
 More severe Winter Storms	May limit access to emergency services and healthcare including power loss to home healthcare equipment.	Low-income populations are more likely to live in homes that are older or in disrepair that are more vulnerable to damage from winter storms.

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WHERE IS BOZEMAN HEADING?





To limit global warming to 1.5°C, carbon neutrality must be achieved by 2050

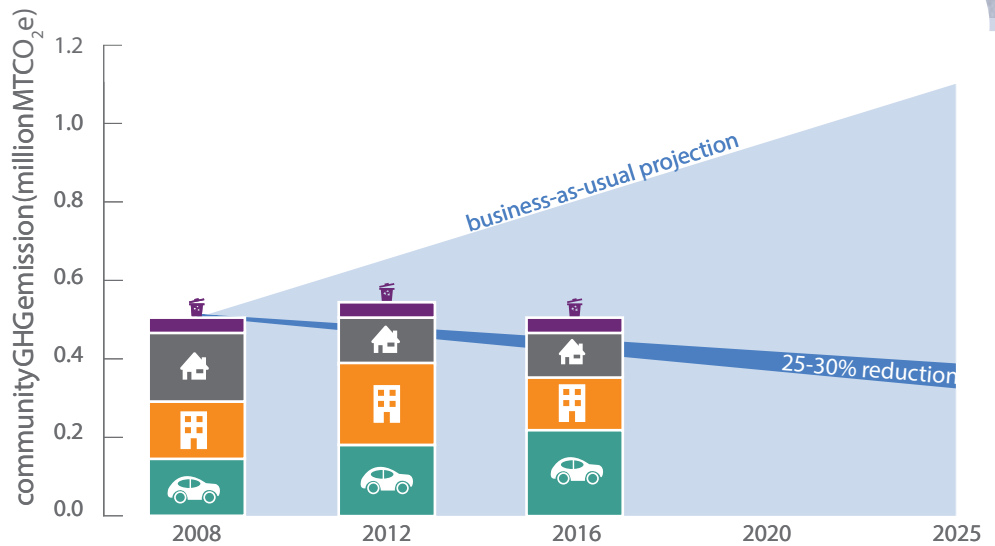
Montana's provisional goal is for net-zero electricity emissions by 2035

The Paris Climate Commitment targets a 26% decrease in emissions from 2005 levels by 2025

EMISSIONS FORECAST

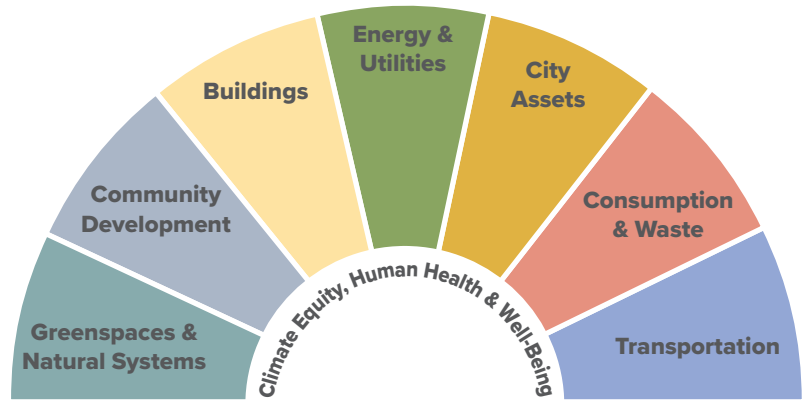
The blue shaded area shows the 2008 projection of what the community GHG emissions would be if no action was taken (business-as-usual projection) as compared to the actual GHG emissions in 2012 and 2016. The 25-30% reduction from the City's 2008 baseline reflects the spirit of the Paris Climate Agreement.

-  landfilled waste
-  residential buildings
-  commercial buildings
-  transportation



OUR CLIMATE SOLUTIONS

The Climate Plan will identify strategies for climate mitigation and adaptation in areas with the greatest opportunities shown to the right. Climate equity and human health and well-being will serve as cross-cutting themes throughout the plan's development.



Stay up to date

The Bozeman Climate Plan will only be successful if there is community engagement and support for the solutions identified. Visit the website to see what opportunities are available to provide your input.

www.bozeman.net/ClimatePlan



Bozeman Climate Plan