



CITY OF ASPEN

# 2023 MUNICIPAL GREENHOUSE GAS INVENTORY



## INTRODUCTION

The City of Aspen completes both community-wide and municipal (city organizational operations) greenhouse gas (GHG) emissions inventories every three years. GHG reporting at the City of Aspen dates back to 2004. This report details the GHG emissions from city (municipal) operations, which are the result of city owned building energy use, fleet vehicle and equipment fuel use, waste created at city-owned buildings, employee business travel, and employee commuting.

In 2023, the City of Aspen, in collaboration with neighboring communities Town of Basalt, and Town of Snowmass Village, partnered with Pitkin County to complete a regional Pitkin County GHG inventory. Lotus Engineering and Sustainability, LLC (Lotus) was selected as the consultant team to complete both the community-wide and the City of Aspen municipal GHG emissions inventory as part of the regional Pitkin County GHG Inventory.

In 2022, the City of Aspen adopted science-based targets that represent the Aspen community's fair share of emissions reduction needed to limit global warming to 1.5 degrees Celsius above pre-industrial levels (as outlined in the Paris Agreement). Aspen's science-based targets are as follows:

**63.4% REDUCTION**  
based on 2017 emissions levels.

**100% REDUCTION**  
based on 2017 emissions levels.

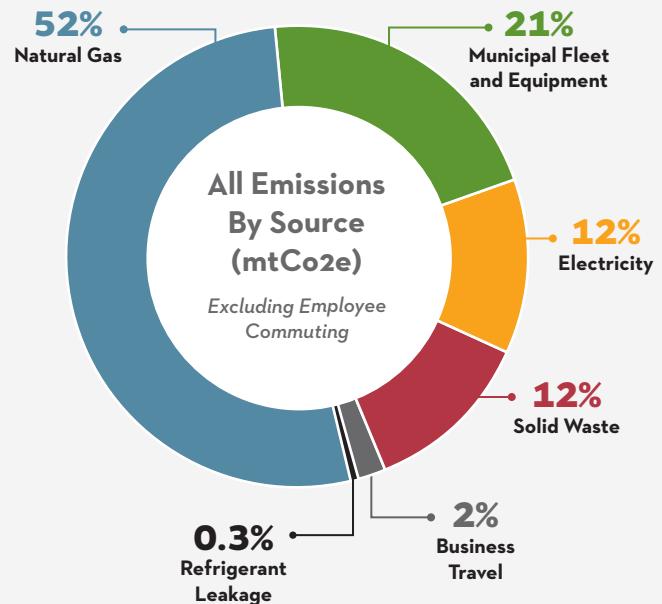
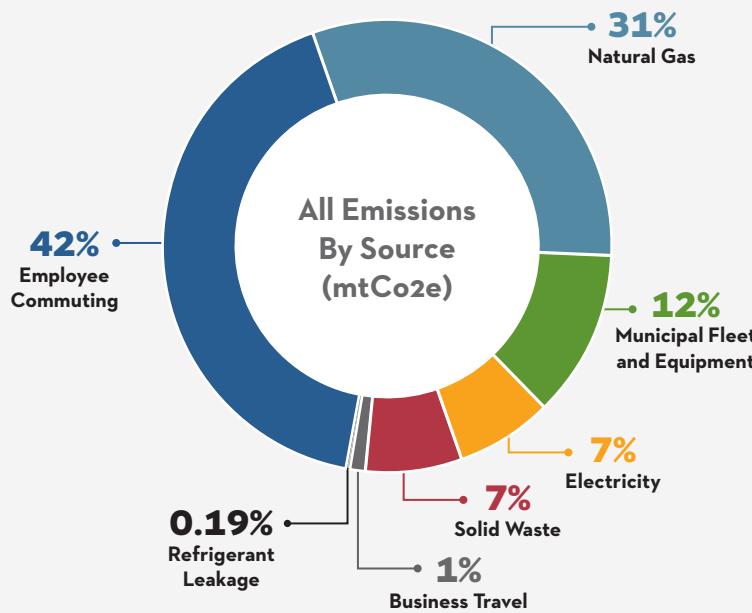
In addition, the city adopted targets to reduce waste emissions:

**25% REDUCTION**  
in organic material buried in the landfill by 2025 and  
100% reduction by 2050

**70% REDUCTION**  
in all waste going to the landfill by 2050

The City of Aspen's operational GHG reduction goals follow the science-based targets outlined above.

**TOTAL EMISSIONS:** The graphs below display the City of Aspen operational emissions with and without employee commuting:



## KEY FINDINGS

The City of Aspen's operational greenhouse gas emissions (GHG) in 2023 totaled 6,006 metric tons of Carbon Dioxide Equivalent (Co2e). Excluding employee commute emissions, operational GHGs in 2023 totaled 3,511 MTCO2e. This represents a 5.5% decrease in emissions from the 2019 municipal GHG inventory (which is considered a more representative year for emissions than the 2020 municipal GHG inventory). Excluding employee commuting, emissions trended slightly down from previous inventories. Gas use in buildings is the most significant source of emissions followed by gasoline/diesel use in the city fleet.



### EMPLOYEE COMMUTING

Employee commuting is a newly included source of operational emissions and makes up the largest portion of emissions at 42% of the total.

#### What the city can do:

The city can investigate ways to reduce employee commuting emissions through policy and programs and establish ongoing trends by surveying employees in future inventories.



### BUILDINGS

Electricity use in City buildings increases from the last inventory due to the occupation of the new City Hall building but electricity emissions overall decrease.

Gas use is significantly up from the 2019/2020 inventory due to better data collection and analysis performed in 2023.

#### What the city can do:

Decreasing gas use in city buildings represents one of the most impactful ways the city can reduce its overall emissions footprint. By tracking city-owned building energy and water use over time through a process called benchmarking, staff can plan for eventual gas equipment replacements. The city should continue internal collaboration to reduce barriers to greater building electrification.



### FLEET

City of Aspen fleet fuel usage overall saw a slight decrease from the 2019 inventory largely due to successes with the introduction of electric vehicles and equipment to the fleet.

#### What the city can do:

The city should continue to transition fleet vehicles and equipment as they reach the end of their useful life to electric and zero emission alternatives.



### WASTE

Emissions from waste produced from city operations are difficult to measure, but data the city has collected shows waste emissions have trended downwards since the 2019 inventory was performed.

#### What the city can do:

The city should continue to collaborate on employee education to reduce solid waste totals through compost and recycling. The city should also look to purchase goods and supplies that have less packaging and are from local sources.



### REFRIGERANTS

Buildings consider the impacts of refrigerants for the first time in this inventory which make up less than 1% of total emissions. Including refrigerants is a best practice for recording emissions and air quality in buildings.

#### What the city can do:

The city should continue to improve data collection/accuracy to understand the impacts of cooling systems in use in city buildings in future years.