



CITY OF ASPEN

ASPEN SUSTAINABILITY ACTION PLAN

2024

ASPEN SUSTAINABILITY ACTION PLAN

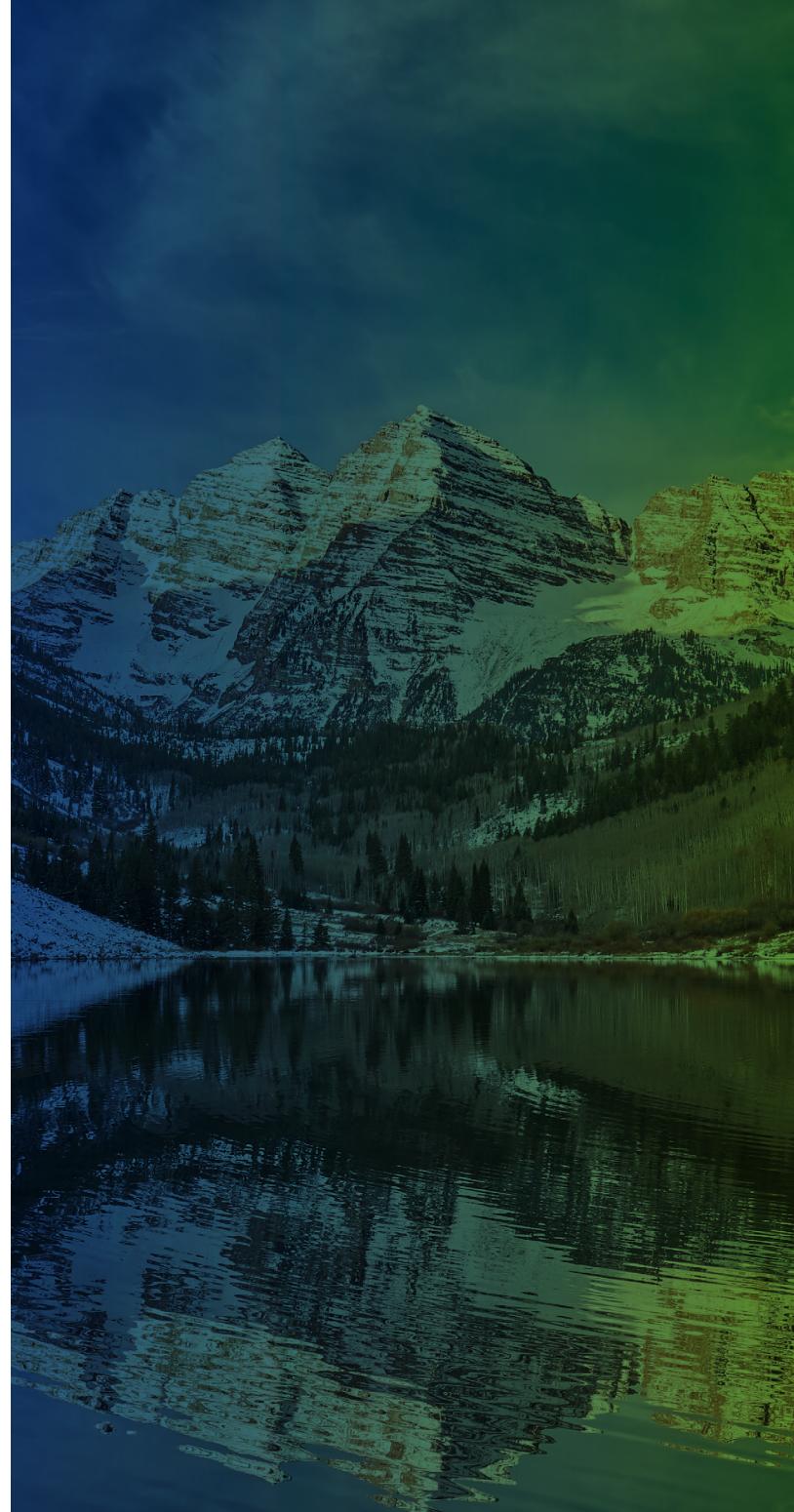
The City of Aspen developed the Aspen Sustainability Action Plan as a roadmap of the goals, objectives, and action items for us to accomplish our science-based targets of

**REDUCING GREENHOUSE GAS EMISSIONS
(GHG) BY 63.4% BY 2030 AND 100% BY 2050.**

This plan looks at what the City of Aspen can achieve or plan for in the next five to seven years. This document will be updated regularly as we accomplish items and adapt to changing science, climatological conditions, and national dynamics.

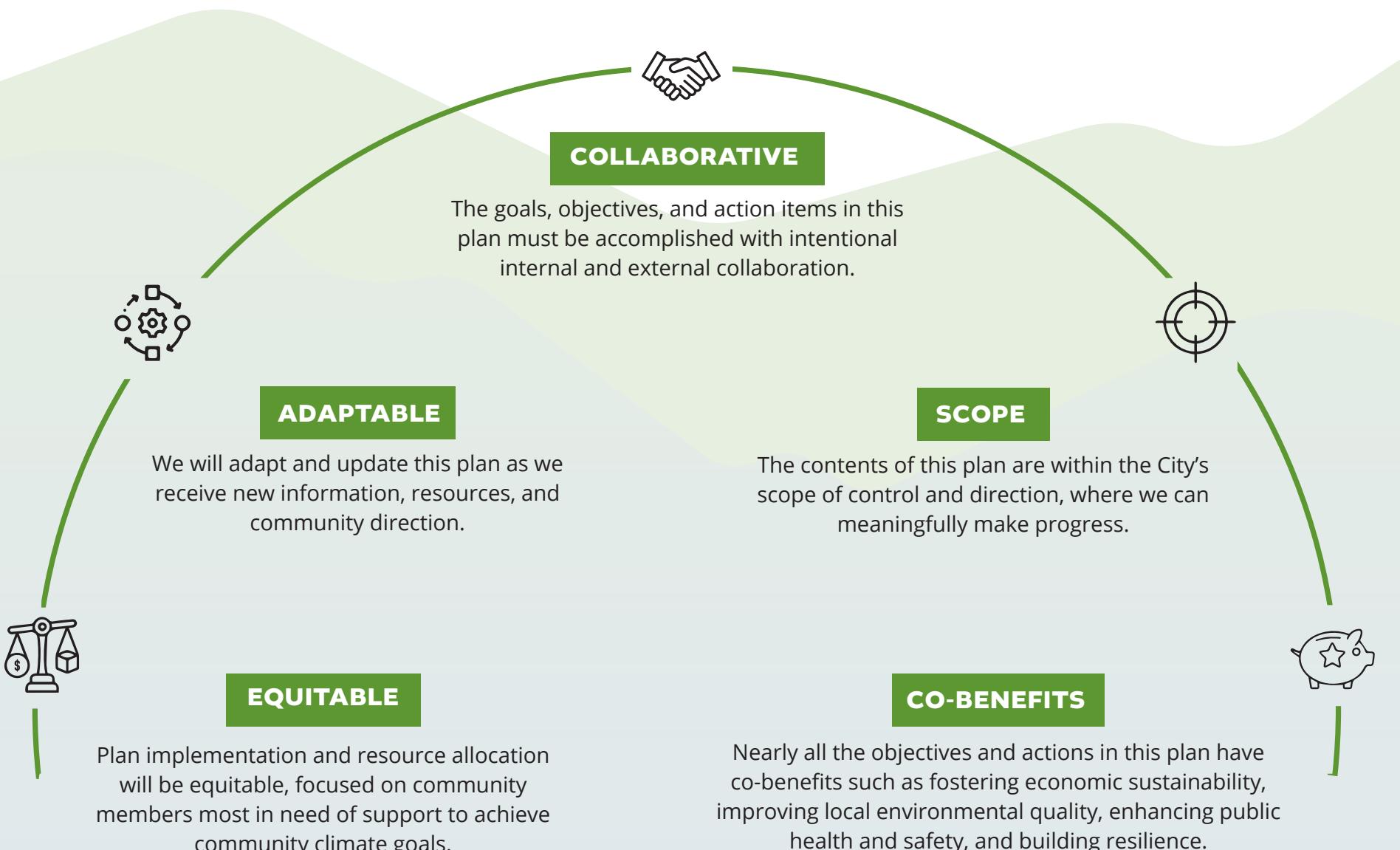
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GUIDING PRINCIPLES

These are values on which the City of Aspen developed and will implement this plan.



KEY TAKEAWAYS

REGIONAL COLLABORATION IS KEY.

Greenhouse gas emissions know no boundaries. The Roaring Fork Valley has both unique challenges and opportunities we'll need to tackle as a region to be successful.

WE NEED TO WORK FAST AND SMART.

We are facing a climate crisis, and we need to work quickly to mitigate the worst effects of climate change. Simultaneously, we need to ensure that our progress is driven thoughtfully, intelligently and leaving no one behind.



We will measure the success of this plan in two ways:

1

By seeing year over year reductions in our emissions inventories.

2

By accomplishing action items, which will be reported in annual sustainability reports.

WE NEED THE COMMUNITY'S INPUT ON HOW TO IMPLEMENT AND CONTINUOUSLY UPDATE THIS PLAN.

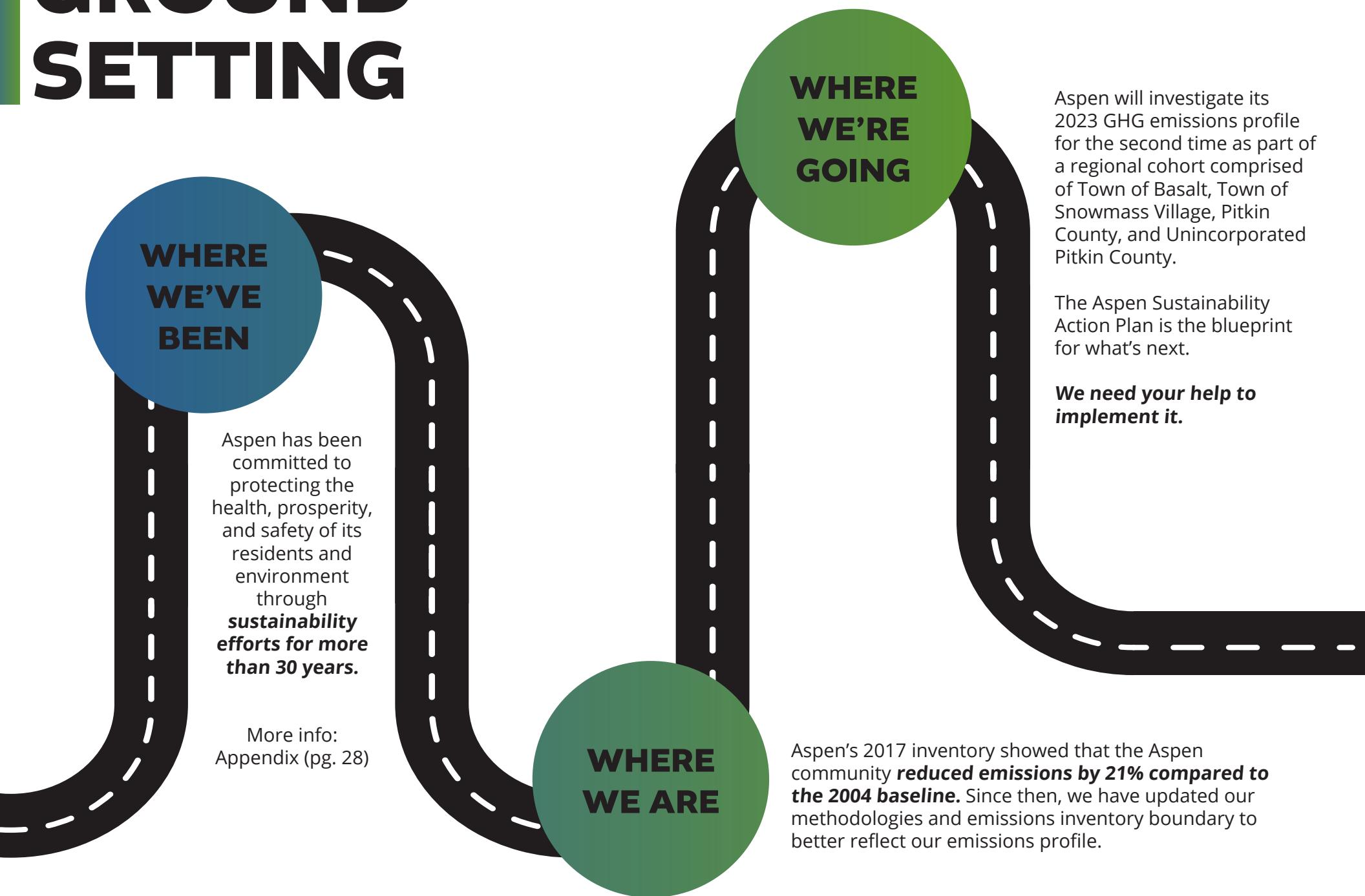


Reaching the City's climate goals requires decarbonizing the Roaring Fork Valley's electrical grid, maximizing efficiency, switching from non-renewable fuels to clean electricity and other sources, and eliminating the landfill disposal of recyclable and reusable materials. While these actions are clear, we need the community and region's input on how we build programs, offer support, provide resources, and change policies. Getting the community's input and feedback will be a vital component of implementing this plan.

INCORPORATE ADAPTATION AND RESILIENCE.

As the City adjusts to new climate realities facing the Roaring Fork Valley, we look to solutions that will strengthen our local and regional environment and prepare us to bounce forward when faced with climate change impacts.

GROUND SETTING



VISION FOR A SUSTAINABLE FUTURE

The picture of what a bright climate future looks like for the community of Aspen if we work together includes:



WHY A SUSTAINABILITY ACTION PLAN?

1

We're facing a climate emergency and need to act, but governments need to work quickly to mitigate climate change. Business-as-usual operations are not responsive to the emergency.

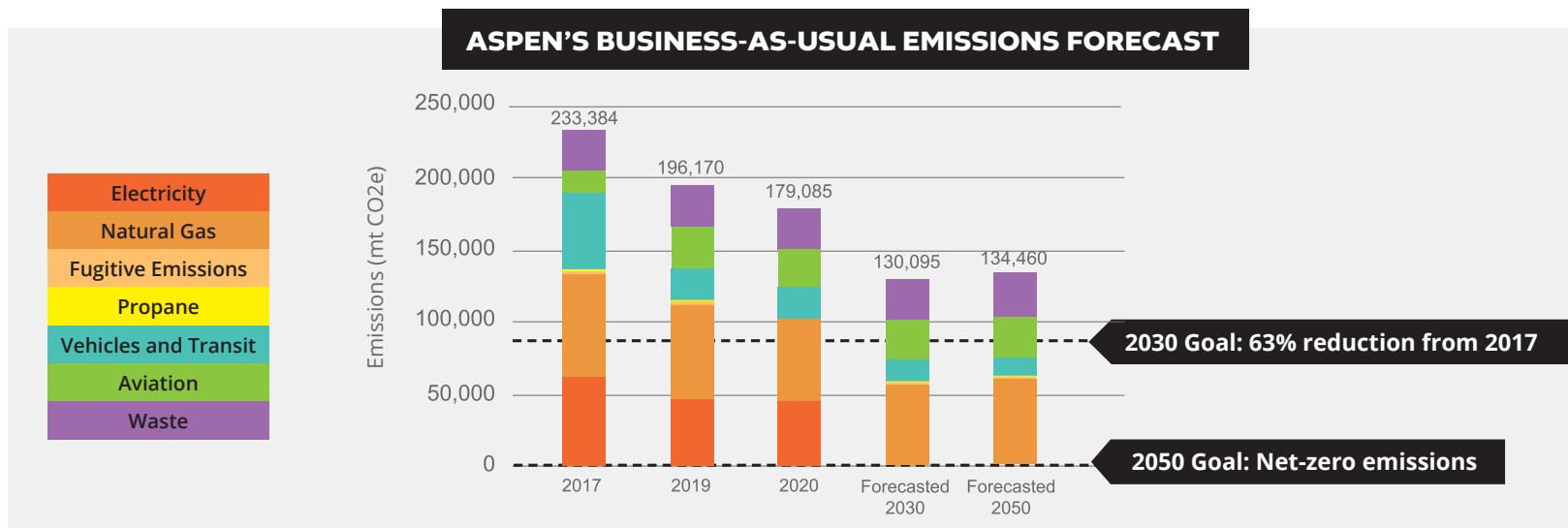
According to the 2023 report by the Intergovernmental Panel on Climate Change (IPCC), human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C (33.98°F) above 1850-1900 in 2011-2020.

Aspen's emissions are contributing to this climate reality and we're already experiencing impacts such as warmer temperatures, shifting rain and snow patterns, and more precipitation arriving as rain rather than snow. As a community that relies on its environment as part of its appeal for recreation and tourism, we have a responsibility to reduce emissions.



The average number of consecutive frost-free days in Aspen has *increased by forty-six days since 1940 and by thirty days since 1980*, representing the loss of more than a month of winter in less than a lifetime.

https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf



2

We have science-based targets to measure GHG reduction.

Aspen updated longstanding climate goals in 2022 with new science-based targets which are more representative of its fair share of global emission reduction needed to fight the worst impacts of climate change. Aspen's commitment to Race to Zero and adoption of science-based targets position local climate action amongst global efforts to draw-down emissions:

63.4%

reduction of 2017 GHG levels by 2030

100%

reduction of 2017 GHG levels (net-zero) by 2050

3

We need an updated, adaptable roadmap to act on climate and reach our community's science-based targets.

2007

2017

2022

2023

Aspen's first Climate Action Plan (Canary Action Plan) was approved which set ambitious goals to **reduce GHGs by 30% below 2004 levels by 2020, and 80% below 2004 levels by 2050.**

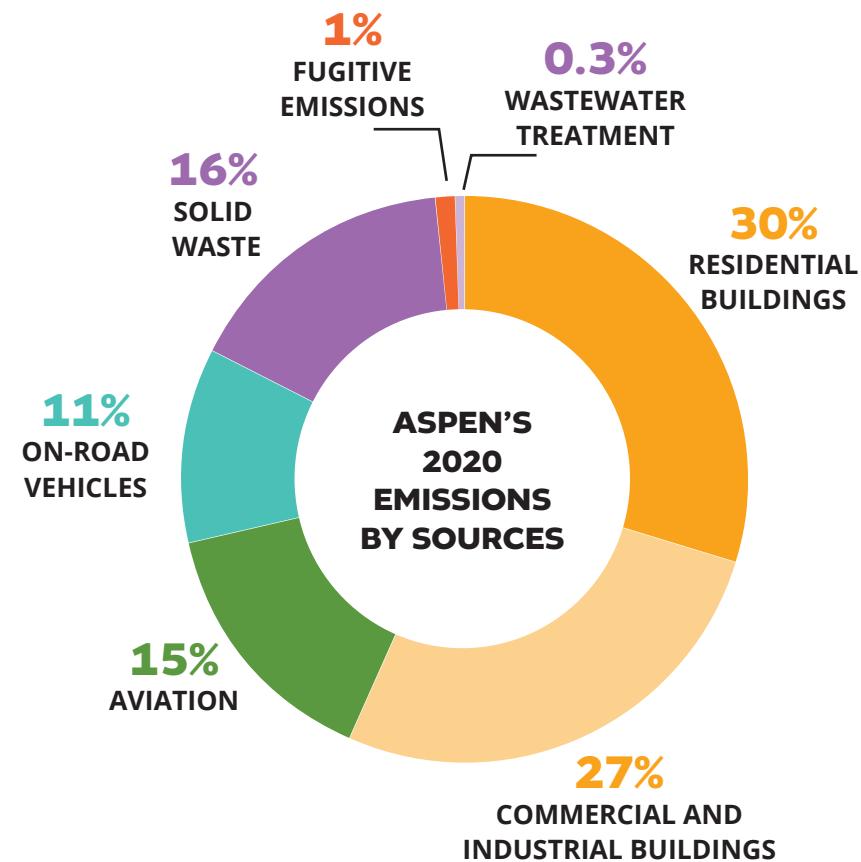
Aspen published its most recent Climate Action Plan and accompanying Greenhouse Gas Reduction Toolkit.

Aspen City Council adopted ambitious science-based targets to **reduce GHGs by 63.4% below 2017 levels, and 100% below 2017 levels by 2050.**

The City updated the 2017 Climate Action Plan to create the **2023 Aspen Sustainability Action Plan.**

SUMMARY OF THIS PLAN

The Aspen Sustainability Action Plan provides recommendations in five high-impact sectors that are based on extensive analysis, modeling, deliberation, stakeholder input, and community engagement to ensure buy-in and feasibility.



Source: City of Aspen 2020 Greenhouse Gas Emissions Report (published in January 2022).

The City of Aspen performs Greenhouse Gas Emissions Inventories (GHG inventories) of both its community wide emissions and its municipal operations every 3 years. The 2020 GHG inventory is the latest inventory depicting Aspen's community wide emissions footprint. The next inventory will be compiled in 2024.

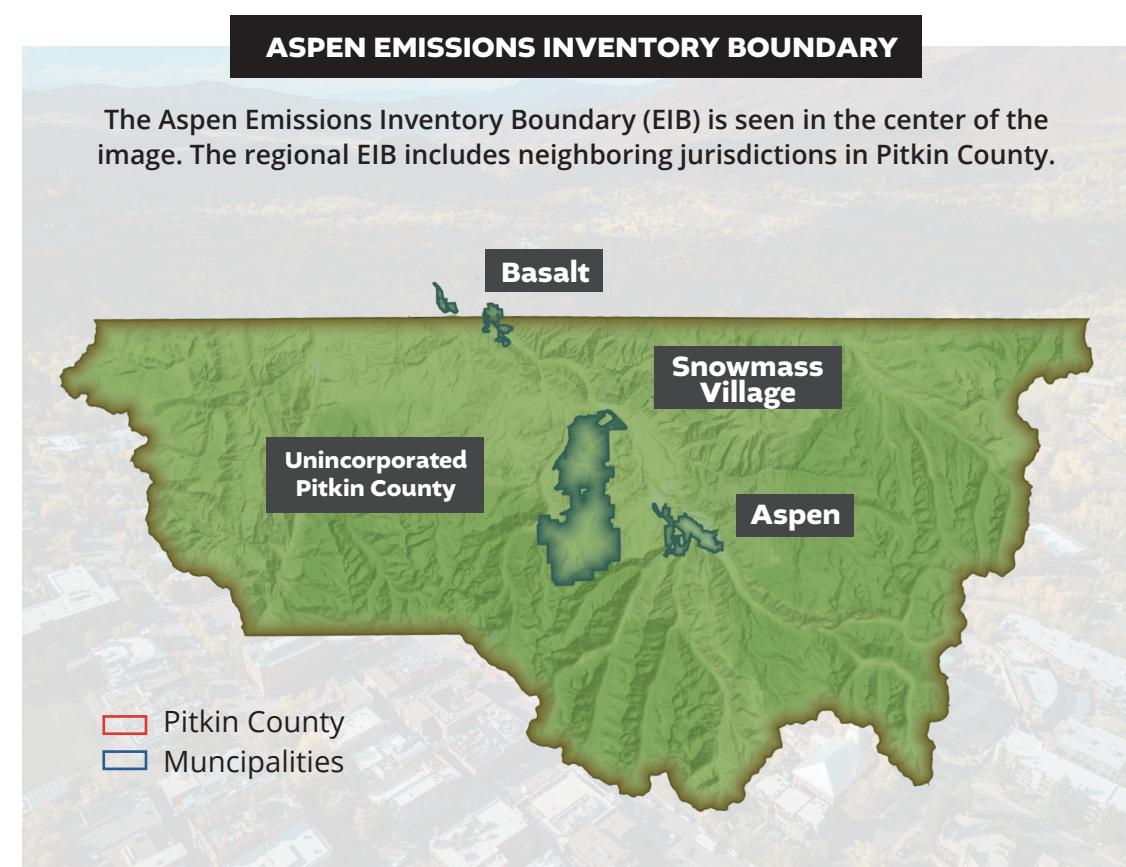
ASPEN'S GHG EMISSIONS

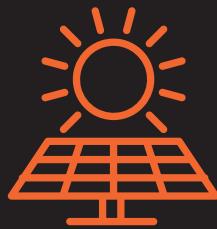
This roadmap is guided by data outlined in the 2019-2020 Greenhouse Gas Emissions (GHG) Inventory which is a semi-annual (every 3 years) inventory of both Aspen's municipal-operations emissions and community-wide emissions.

The 2019-2020 GHG Inventory is different to previous inventories as it analyzed two years of data to get a more accurate representation of the impacts of COVID-19 and broader trends both before and during the pandemic.

The Greenhouse Gas Emissions Inventory also encompasses a smaller geographic area. All of Aspen's past inventories collected data from a geographic region that was similar to the Urban Growth Boundary and included the City of Aspen and parts of unincorporated Pitkin County around the city, including ski areas, residential neighborhoods, and the Aspen/Pitkin County Airport.

In 2020, other governments in the region, including Pitkin County, the Town of Basalt, and the Town of Snowmass Village, joined in partnership with the City of Aspen to conduct a region-wide inventory. According to global reporting protocols, Aspen's GHG boundary became about 20% smaller (more reflective of the City's municipal boundaries) to not double count areas where other governments were claiming responsibility for the emissions. All areas covered in the previous Emissions Inventory Boundary that are not included in Aspen's legal boundary are captured in emissions totals for unincorporated Pitkin County.





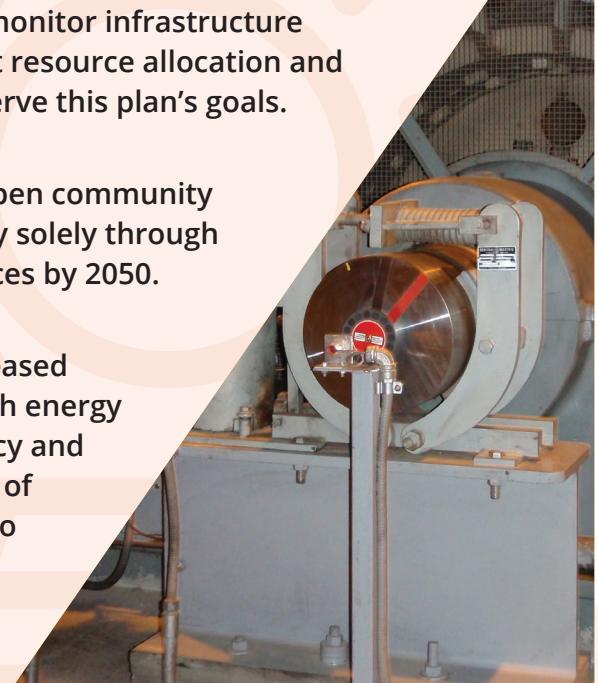
ENERGY SUPPLY

KEY TAKEAWAYS

- The City of Aspen Utilities' 100% renewable energy achievement and the speed at which Holy Cross Energy is looking to secure its goal of reach 100% renewable energy by 2030 provides a strong foundation for GHG reductions in all sectors.
- By working with partners to eliminate carbon-sourced energy from Aspen's grid, the City will be positioned to take full advantage of electrification initiatives.
- There is still a significant opportunity to support and expand local renewable energy sources, including utility-scale generation. Due to the costs involved with upgrading local infrastructure, a push for greater local renewables would require full commitment from City Council and voters.

SECTOR GOALS

- The City will continue to monitor infrastructure development and support resource allocation and field advancement that serve this plan's goals.
- All utilities serving the Aspen community will procure energy supply solely through renewable energy resources by 2050.
- The City will balance increased demand for electricity with energy conservation and efficiency and support the development of electricity infrastructure to lay the groundwork for electrification.





Energy Objectives (EO)

Action Items

EO1

Continue to encourage Holy Cross Energy, and Black Hills Energy to decarbonize Aspen's energy supply by 2050.

- 1 Identify gaps and support opportunities to help Holy Cross Energy, Black Hills Energy, MEAN, and other regional utilities to move towards and continue 100% renewable energy.
- 2 Participate in regional and state collaboratives of governments, businesses, and utilities (e.g. MEAN) to drive clean energy transition.
- 3 Support policies that retire, convert or sell fossil-fuel plants serving the area.
- 4 Assess opportunities including rate assessments, grants, and incoming technologies, to help utilities and customers prepare for electrification.

EO2

Support efforts to maximize local and regional production of renewable energy.

- 5 Explore opportunities for consumers to purchase and generate renewable energy including the development of micro and utility-scale renewables.
- 6 Support distributed and utility-scale energy storage to address the intermittency of wind and solar resources as well as grid delivery.
- 7 Assess local codes and policies to enable renewable energy development.
- 8 Encourage regional renewable energy development.

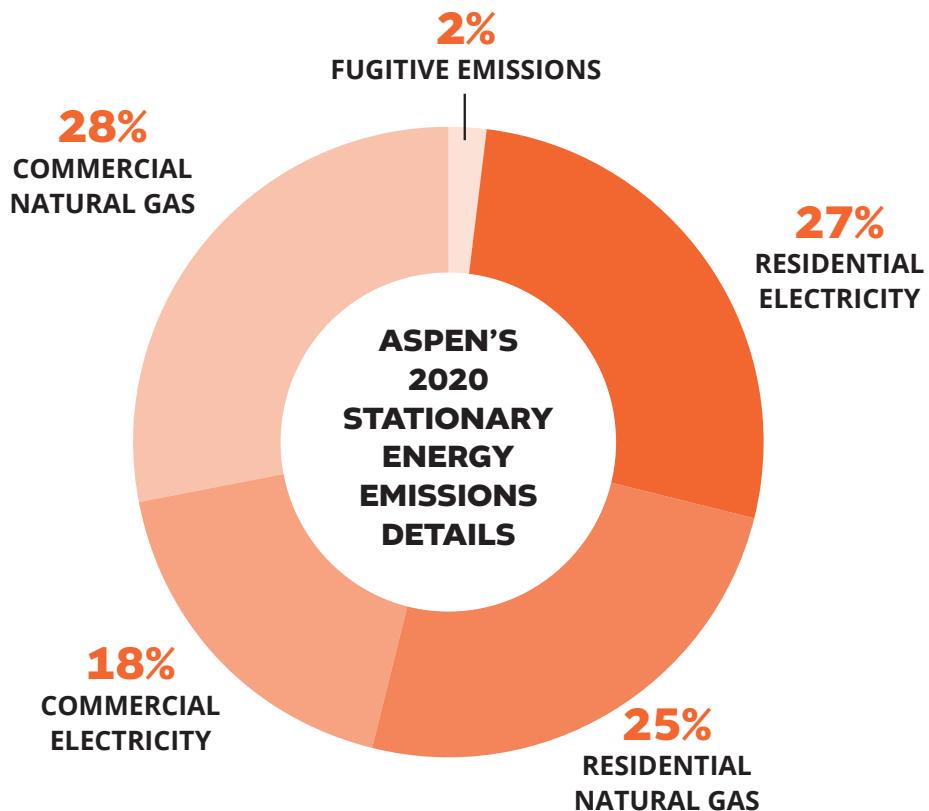
EO3

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

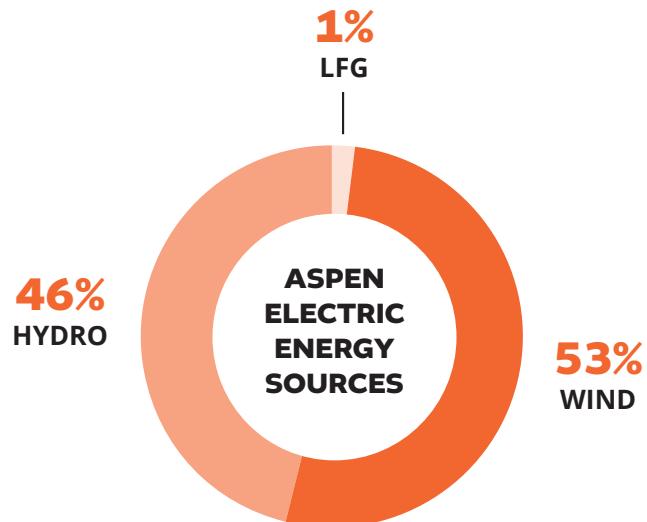
- 9 Through continued engagement with community members, elected officials, and partner organizations, Aspen will advance relevant energy related policy to the benefit of the community. Given the dynamic nature of the policy landscape, Aspen will continue a formal process for prioritizing and advocating on key issues including grants and expanded rebates.



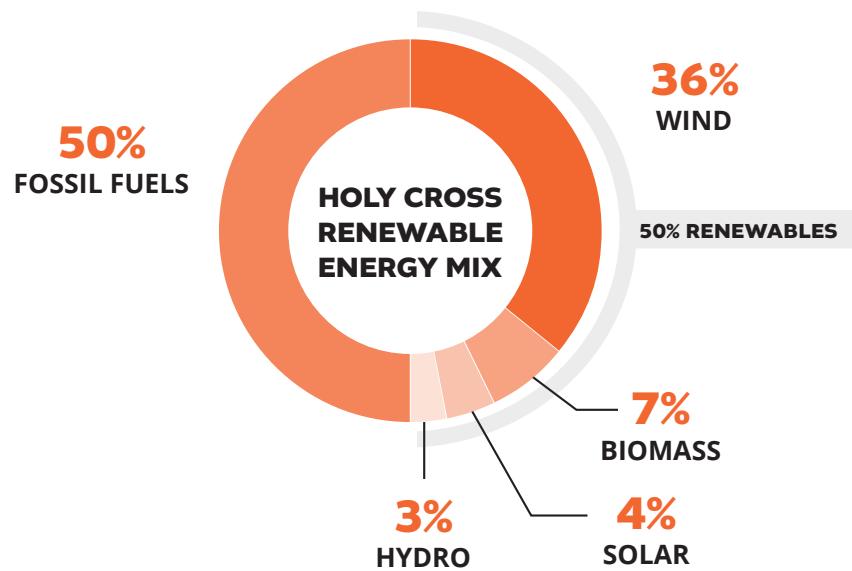
Energy Supply



Source: City of Aspen 2020 Greenhouse Gas Emissions Report
(published in January 2022).



Source: Aspen Electric, 2022, aspen.gov/1202/Renewable-Energy



Source: Holy Cross Energy. 2022 Energy By Fuel Source
https://www.holycross.com/wp-content/uploads/2023/10/HCE_PowerSupplyRoadmap2023_upload.pdf



BUILDINGS

KEY TAKEAWAYS

- Advancement in the building sector towards community climate goals needs to prioritize the lowest income community members in both reducing costs and realizing benefits.
- The building sector will be through energy and water conservation and efficiency, renewable energy transition (e.g., electrification), and addressing embodied carbon* for new and existing buildings.
- Cost, available technology, and feasibility are key factors in determining the speed and scale of building decarbonization.
- Workforce development will be key to the success of this section's implementation.

SECTOR GOALS

- Increase efficiency and reduce energy and water consumption in buildings.
- Buildings are fully electric when feasible.
- Newly constructed buildings and remodels have goals and pathways to reduce embodied carbon.
- Ensuring decarbonization plans consider utility costs and energy transformations, and an equitable transition for customers
- Ensure City development regulations support building and energy sector goals.



Embodied carbon refers to the greenhouse gas emissions arising from the manufacturing, transportation, installation, maintenance, and disposal of building materials."

- CARBON LEADERSHIP FORUM



Building Objectives (BO)

Action Items

BO1

Support and incentivize the reduction of energy and water consumption and high-efficiency performance of buildings.

- 1 Model best practices in City of Aspen buildings and properties through design review for new construction, and assessments, cost analysis, capital planning, and electrification and efficiency retrofits for existing buildings.
- 2 As part of the Building IQ ordinance and program, implement benchmarking and explore opportunities to expand to include additional building types and sizes.
- 3 As part of the Building IQ ordinance and program, develop and implement a building performance standard that aligns with the City's climate goals and provides resources for support.
- 4 Identify and work with community partners to support the activation of a sustainable building workforce.
- 5 Require energy performance disclosure at the point of lease or sale.
- 6 Evaluate sub-metering requirements for buildings, and implement if beneficial and allowed by utility provider
- 7 Leverage business licenses renewal and/or permitting process to increase benchmarking participation and performance.
- 8 Explore opportunities to decarbonize residential buildings.

BO2

Support electrification in residential and commercial properties where financially and practically feasible while mitigating energy burden faced by tenants electrifying.

- 9 Consider a component in building performance standards guidelines to require electrification over time
- 10 Leverage electrification task force to develop a roadmap to electrify buildings in Aspen.
- 11 Encourage and incentivize conversions and retrofits to high-efficiency electric for space and water heating and cooling.

BO3

Mandate no- to low-carbon standards for new construction and major remodels including considerations for energy use and embodied carbon.

- 12 Integrate space and water heating and cooling equipment standards into building codes.
- 13 Develop roadmap for all-electric, highly efficient building and energy codes that align with building performance standards.
- 14 Limit GHGs from future development using controlled growth with careful consideration for developments like affordable housing.
- 15 Explore incentives and requirements to address embodied carbon."

BO4

Support utility rates optimization.

- 16 Support the adaptation of the City of Aspen's Electric Utilitiy rates as necessary to incentivize and balance current and future priorities (i.e., electric vehicles, fuel switching, peak shaving, energy efficiency, demand side management).

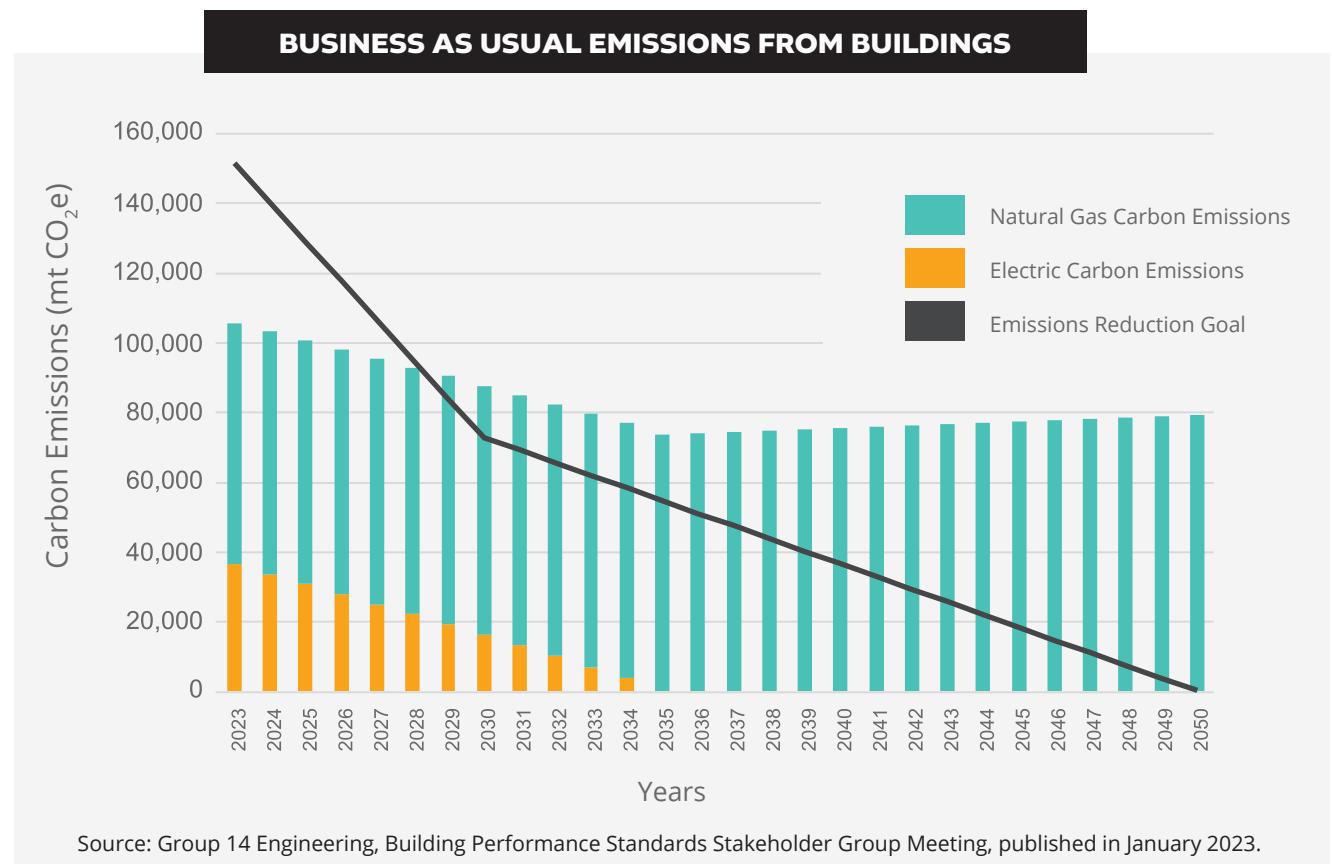
BO5

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

- 17 Through continued engagement with community members, elected officials, and partner organizations, Aspen will advance relevant buildings-related policy to the benefit of the community. Given the dynamic nature of the policy landscape, Aspen will continue a formal process for prioritizing and advocating on key issues.



Buildings account for 57% of our community's greenhouse gas emissions, so action in this sector is especially important and impactful.





VEHICLES & TRANSPORTATION

KEY TAKEAWAYS

- As a starting point, the City aim to prioritize active and shared transportation options i.e. walk, run, bike, or ride transit. If one must drive, then electric and zero emission vehicles are preferred. Aspen is supporting policy and building the infrastructure to support large-scale adoption of EVs.
- Opportunities to reduce transportation sector emissions will only be realized through collaboration across multiple city departments and community partners.
- Beyond saving the community time and money, low and zero-emission transportation offerings and programs need to remove accessibility barriers.

SECTOR GOALS

- Reduce solo vehicle miles traveled, both locally and regionally.
- Promote public (mass) transit and mobility-as-a-service, which describes more connected and on-demand mobility services often accessed through a digital app or platform, and the associated infrastructure.
- Incentivize electric and zero-emission vehicle adoption for individuals and fleets, including supporting charging infrastructure build-out.

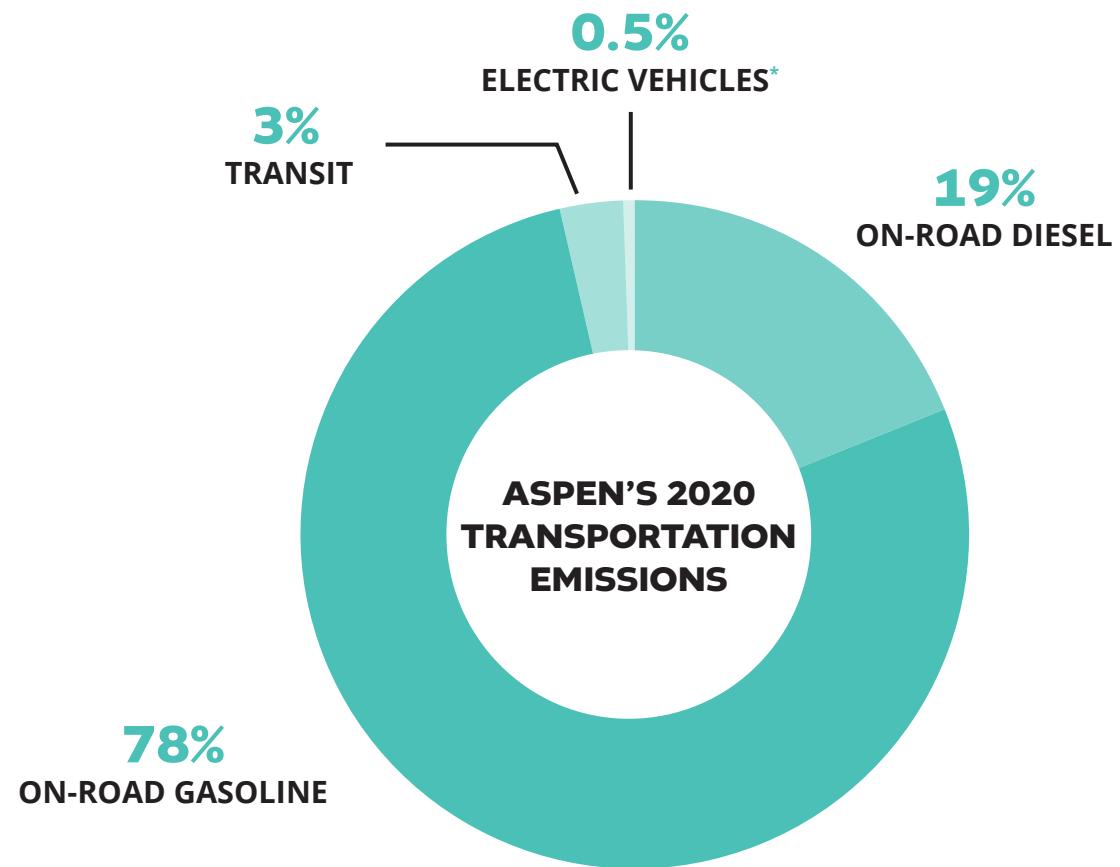




Transportation Objectives (TO)	Action Items
TO1 Reduce vehicle miles traveled by promoting alternatives to single-occupancy vehicles including active, shared, and public transportation.	<ol style="list-style-type: none">1 Collaborate with employers to subsidize transit and mobility options for employees.2 Further support the development of bicycle infrastructure (e.g., more bike and shared lanes in key locations, bike parking, and solutions to key locational conflict/hazard areas).3 Enable the growth of on-demand mobility services (e.g., ridesharing, bike-sharing, car-sharing, etc.) for the first- and last-mile of transit connections and/or full trips.4 Advocate for pedestrian and bicycle safety in ongoing and future projects.5 Support and research policies to disincentivize single-occupant vehicle travel.
TO2 Enhance first- and last-mile connectivity to transit.	<ol style="list-style-type: none">6 Support expansion of feeder transit networks to increase access to primary transit stops (e.g., circulators, on-demand mobility).7 Support and expand mobility offerings for the first- and last-mile and/or full trips.
TO3 Promote the adoption of electric and zero-emissions vehicles for individuals and fleets.	<ol style="list-style-type: none">8 Support opportunities for equal access to charging (e.g. public charging, and multifamily housing charging).9 Facilitate partnerships to create electric vehicle charging hubs for taxis and other fleets.10 Prioritize electric vehicle charging stations in visible, accessible locations.11 Communicate wins and share lessons learned from internal fleet electrification efforts with the wider community.
TO4 Support relevant federal and state transportation policies through active legislative and regulatory engagement.	<ol style="list-style-type: none">12 Through continued engagement with community members, elected officials, and partner organizations, Aspen will advance relevant energy-related policy to the benefit of the community. Given the dynamic nature of the policy landscape, Aspen will continue a formal process for prioritizing and advocating on key issues.



Vehicles & Transportation



EVs are listed as having a 0.5% emissions footprint due to vehicles being charged on non-renewable resources. As surrounding utilities transition to greater renewables, this percentage will shift to zero.



Source: City of Aspen 2020 Greenhouse Gas Emissions Report (published in January 2022).



WASTE

KEY TAKEAWAYS

- Landfilling resources adds to Aspen's GHG emissions and shortens the usable life of the landfill. Once the Pitkin County Landfill closes, solid waste will have to be transported out of the Roaring Fork River Valley, increasing emissions from the miles traveled for disposal.
- Opportunities exist to divert organic materials, recyclables, and construction and demolition debris away from the landfill and into a circular economy.
- The two largest categories of solid waste generated in Aspen are construction and demolition debris and organic material.

SECTOR GOALS

- Reduce organic material going from Aspen to the landfill by 25% by 2025 and by 100% by 2050.
- Reduce construction and demolition debris buried in the landfill by 50% by 2030 and 80% by 2050.
- Divert 70% of all solid waste from the landfill by 2050.





Waste Objectives (WO)

Action Items

WO1

Decrease municipal solid waste generation.

- 1 Implement City of Aspen ordinance changes related to resource reduction, reuse, and recycling (e.g., organics and single-use materials).
- 2 Enforce regulations related to waste avoidance, diversion, and reduction.
- 3 Incentivize waste diversion practices, such as composting, recycling, and reusing materials.
- 4 Educate and inform the community about systems, ordinances, practices, and rules regarding waste diversion, such as composting, recycling, and reusing materials.

WO2

Decrease construction and demolition debris generation.

- 5 Phase out the practice of demolition through deconstruction standards.
- 6 Establish recycled content standards in all construction activity.
- 7 Introduce or enhance City ordinances and codes to promote and incentivize recycling and the reuse of building materials.
- 8 Align with City, Pitkin County, and regional waste codes that promote recycling and reuse of building materials.

WO3

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

- 9 Through continued engagement with community members, elected officials, and partner organizations, Aspen will advance relevant waste-related policy to the benefit of the community. Given the dynamic nature of the policy landscape, Aspen will continue a formal process for prioritizing and advocating on key issues.

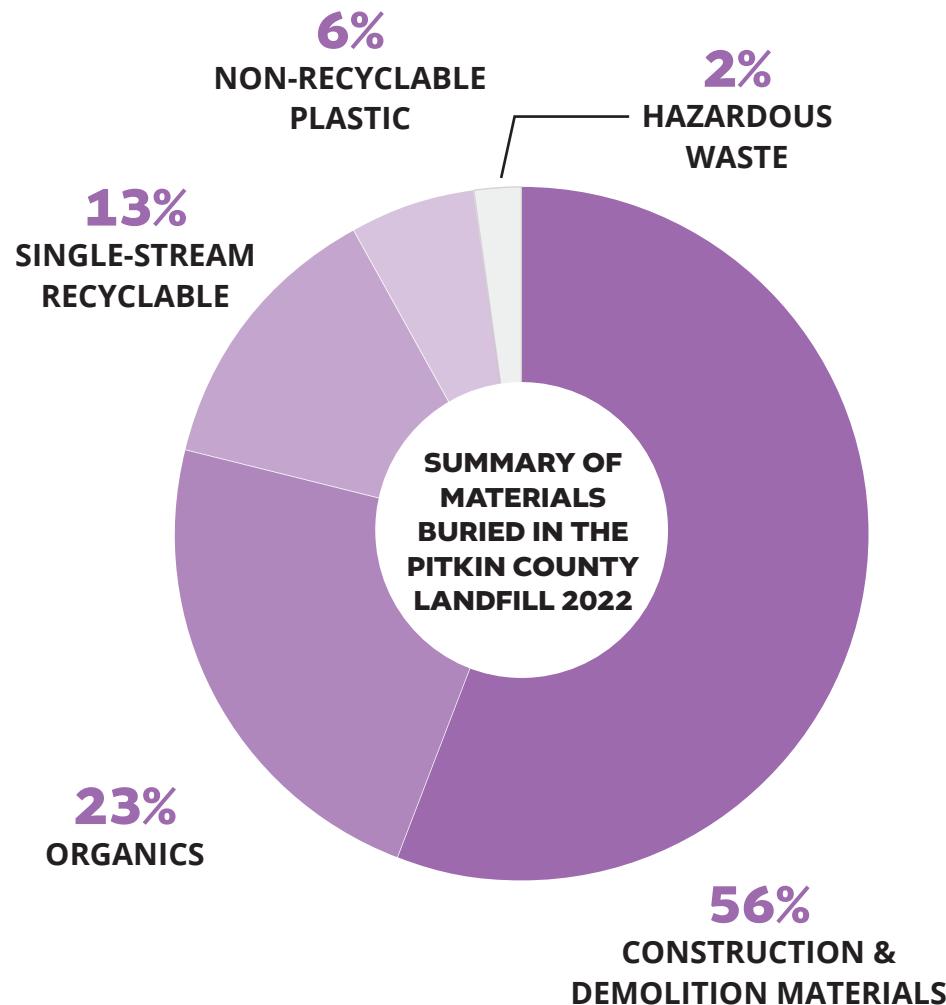
WO4

Reduce vehicle emissions from solid waste haulers.

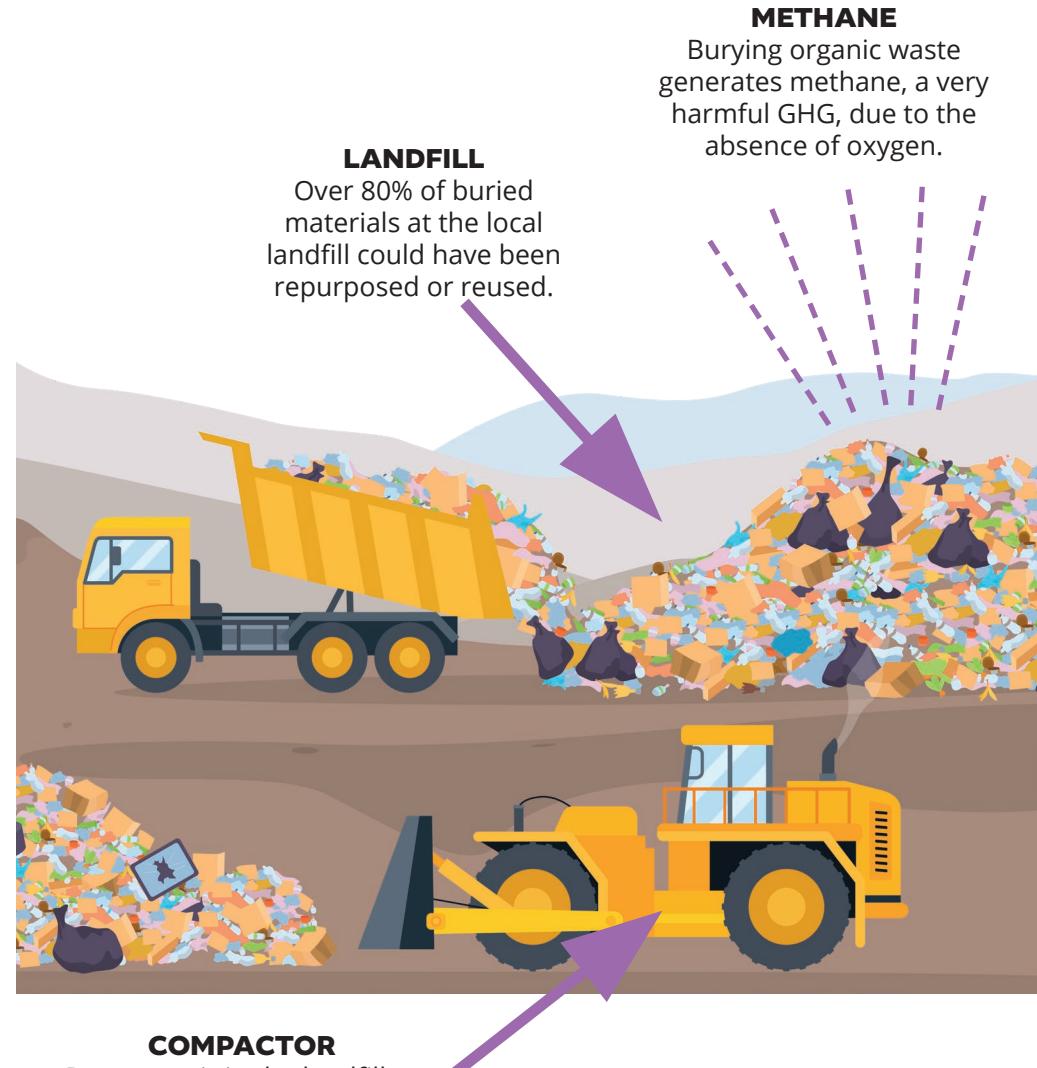
- 10 Incentivize and support GHG reductions through route optimization and zero-emission technology.



Waste



Source: Pitkin County Solid Waste Center,
2022 Waste Characterization Study





AVIATION & AIRPORT

KEY TAKEAWAYS

- Within the transportation sector, aviation is the greatest emitter, accounting for 58% of transportation emissions in 2020 (and 57% in 2019).
- Aspen/Pitkin County Airport (also known as Sardy Field) is the state's third busiest airport.
- Pitkin County manages the Aspen/Pitkin County Airport. The Federal Aviation Administration (FAA) oversees the majority of airport activities and as a result, at the community level, we have little say. The Climate Action Office's role is to collaborate with Pitkin County and encourage sustainable action in acknowledgment of Aspen's role as a destination for tourism and air traffic emissions.
- Due to limitations caused by FAA regulation, the greatest opportunity for emissions reductions at the Aspen/Pitkin County Airport is through aircraft operator and tenant emissions.

SECTOR GOALS

- Support policy and initiatives that reduces airport and aircraft emissions.
- Work with Pitkin County and key partners on driving sustainable tourism practices and education.
- Support sustainable mass transit connection between the city and the airport.





Aviation Objectives (AO)

Action Items

AO1

Encourage the reduction of airport controlled GHGs.

- 1 Support the use of electric vehicles or other zero-emissions vehicles for ground support vehicles and ground support equipment.
- 2 Encourage taxi and airport shuttles to electrify fleet vehicles.
- 3 Support Pitkin County in efforts to incorporate net zero design into future Aspen/Pitkin County Airport development.

AO2

Encourage the reduction of aircraft and aviation related GHGs.

- 4 Promote and incentivize the use of sustainable aviation fuels in aircraft servicing the local airport.

AO3

Encourage passengers to use transit and mobility services to access the airport.

- 5 Encourage rental car companies to have electric vehicle options and support infrastructure development.

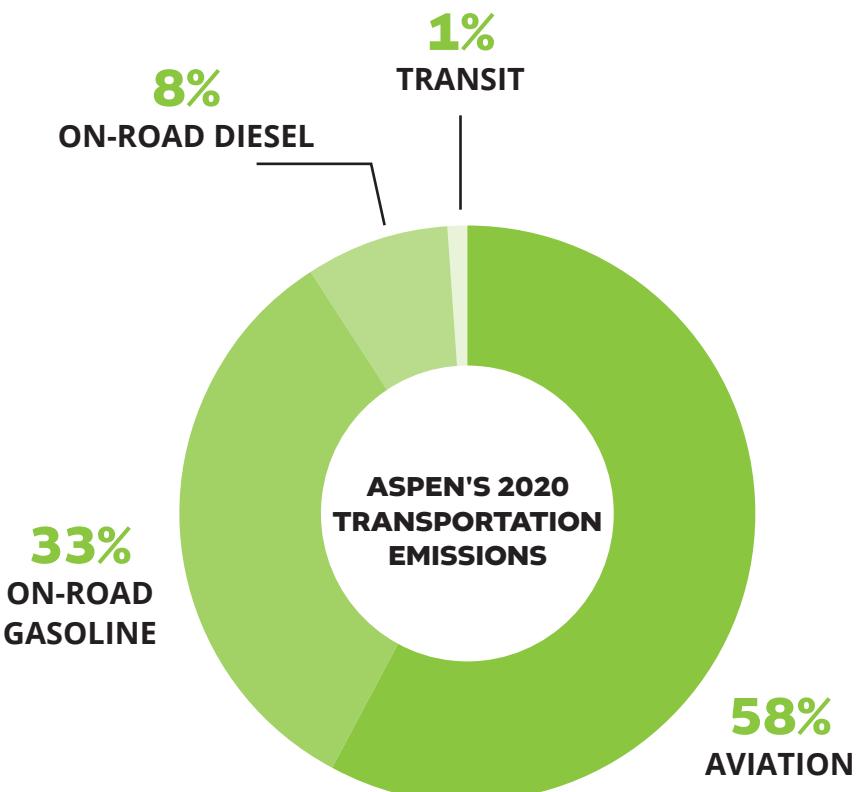
AO4

Support relevant aviation and airport-related federal and state policies through active legislative and regulatory engagement.

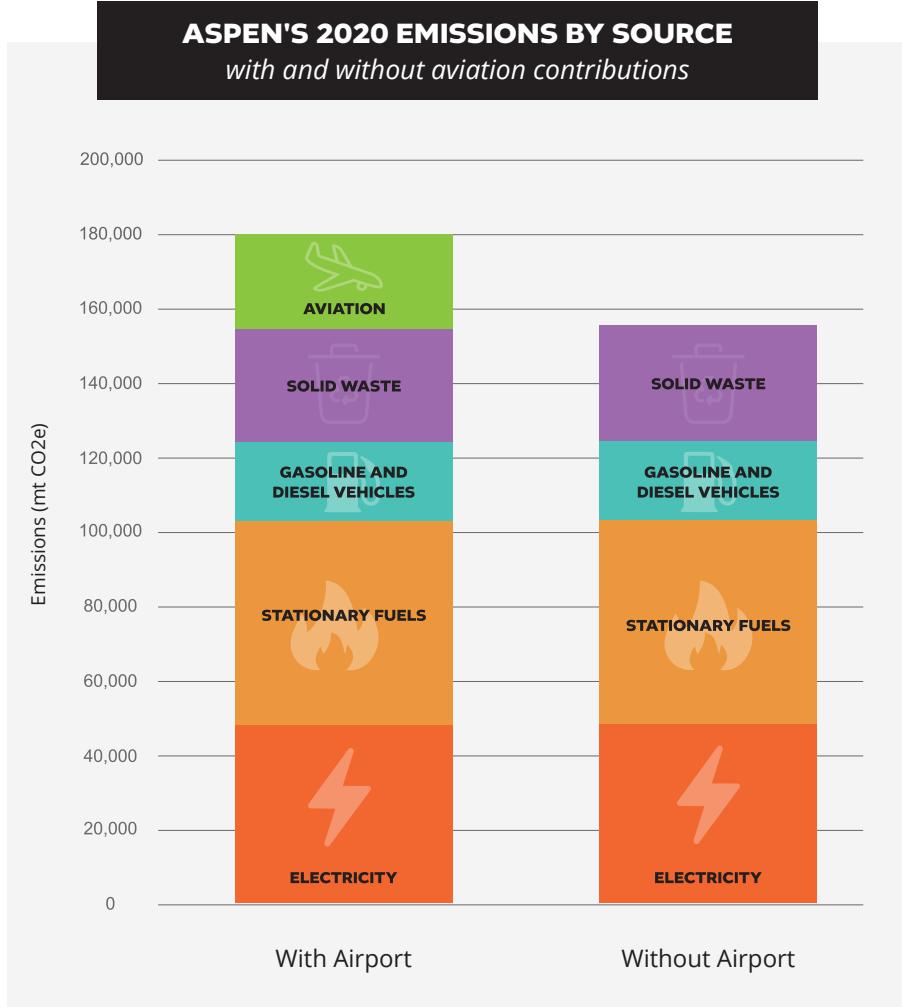
- 6 Through continued engagement with community members, elected officials, and partner organizations, advance relevant aviation and airport-related policy to the benefit of the community.



Aviation & Airport



Source: City of Aspen 2020 Greenhouse Gas Emissions Report
(published in January 2022).



CONCLUSION

Aspen's average annual temperatures are increasing, and according to projections, this trend is expected to continue.¹

Without prioritizing the current climate challenge, hotter springs and summers will lead to more frequent wildfires and increased demand for our limited water supply.

It is critical that we respond to the climate challenges now. The City of Aspen believes that we all have a responsibility to preserve the habitats of our local plant and animal species, our water supply, and the outdoor recreational activities that make this community unique.

We look forward to our continued work with the community so that we can successfully reach our zero-carbon goal by 2050.

¹ <https://www.nci.noaa.gov/access/monitoring/climate-at-a-glance/county/time-series>



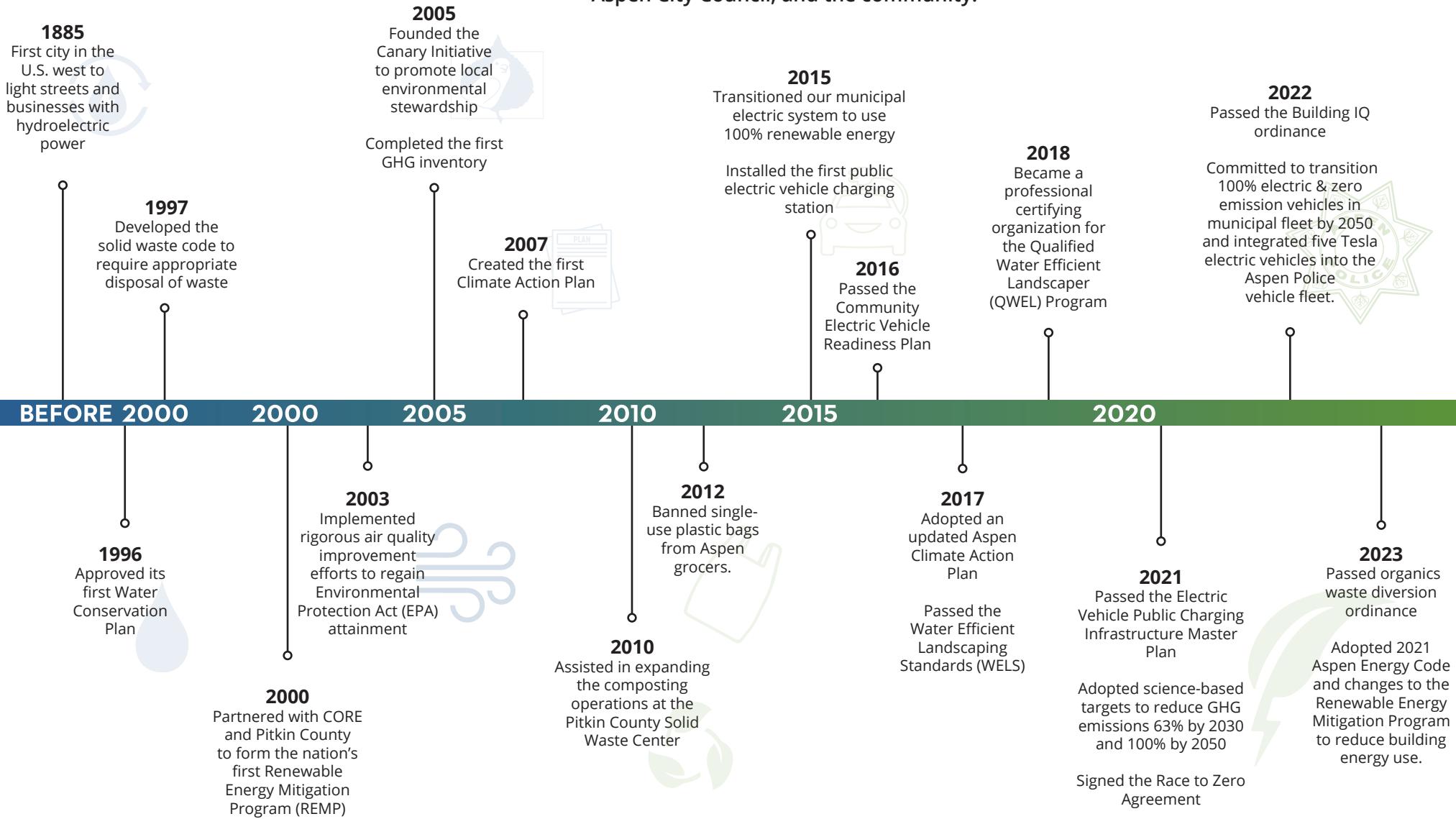
The Aspen Sustainability Action Plan's successful implementation is contingent on collaboration and feedback from the community and our regional partnerships.

The City of Aspen will update this plan annually, prioritizing the feedback that we receive from readers like you, and continuing to center equity in climate solutions.

Please email climate@aspen.gov with feedback and questions.

ASPEN'S CLIMATE ACTION HISTORY

As one of the first cities in the United States to establish a climate division, the City of Aspen prides itself on working for decades to pave a path towards a more sustainable world. This timeline represents some key moments in the history of the City of Aspen's climate action accomplishments. These wins would not be possible without the collaboration and support from all City of Aspen departments, regional partnerships, Aspen City Council, and the community.



ACKNOWLEDGMENTS

- The 2023 Aspen Sustainability Action Plan is an initiative of the City of Aspen in partnership with the Roaring Fork Valley Community. The updated plan builds on the work that was done with the partner organizations listed in this section. The authors of this document thank both Council and the community for their support of the plan's successful implementation.

WE THANK THESE ORGANIZATIONS FOR SUPPORTING THE PREPARATION OF THIS PLAN:

Aspen Center for Environmental Studies (ACES)
Aspen Chamber Resort Association (ACRA)
Aspen Global Change Institute
Aspen Skiing Company
Black Hills Energy
City of Aspen Departments
Community Office for Resource Efficiency (CORE)
Institute for Market Transformation
Holy Cross Energy
Pitkin County
Pitkin County Solid Waste Center
Roaring Fork Transportation Authority (RFTA)
Town of Basalt
Town of Carbondale
Town of Snowmass Village
We-Cycle
350.org

ASPEN'S CLIMATE EFFORTS LEVERAGE SUCCESSES AND COMMITMENTS AT THE STATE, NATIONAL, AND INTERNATIONAL LEVELS.

REGIONAL PARTNERS INCLUDE:

Pitkin County
Town of Snowmass Village
Town of Basalt
Eagle County
Town of Carbondale
City of Glenwood Springs
Garfield County

OTHER PARTNERS:

Compact of Colorado Communities
Colorado Communities for Climate Action
Global Covenant of Mayors
America's Pledge/We are Still In
Climate Mayors
Carbon Disclosure Project
International Council for Local Environmental Initiatives USA and Carbon
Urban Sustainability Directors Network



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