

Climate Positive 2040

*Reduce pollution,
save resources &
empower our city*



Climate Positive 2040



“The Department of Sustainability is an expression within local government of broader values and priorities shared by our residents. Climate Positive 2040 is a synthesis of these goals that not only conveys how to address climate change, but also how to pursue system level change and create outcomes desired by local individuals, families and businesses.”

Director of Sustainability, Vicki Bennett

DEFINING CLIMATE POSITIVE

Salt Lake City is committed to protecting the public health and safety of its residents, including ensuring access to clean air, clean water and a livable environment. Climate Positive 2040 highlights the transformational changes needed for Salt Lake City to reach long-term climate and energy goals. Salt Lake City is prioritizing a near-term transition to clean, renewable energy to remove carbon pollution from electricity generation that makes up over half of the community carbon footprint.

This plan represents a holistic approach for Salt Lake City government, businesses and households to reduce carbon pollution and build resiliency to impacts and vulnerabilities in a warming world. A high-level timeline with key target dates is included below and complements strategic steps for energy, food and social systems that are detailed in the following pages. Climate Positive is supported by more detailed, prescriptive action plans already created or in development for Salt Lake City – hyperlinks to these reports are included in the online version of Climate Positive.

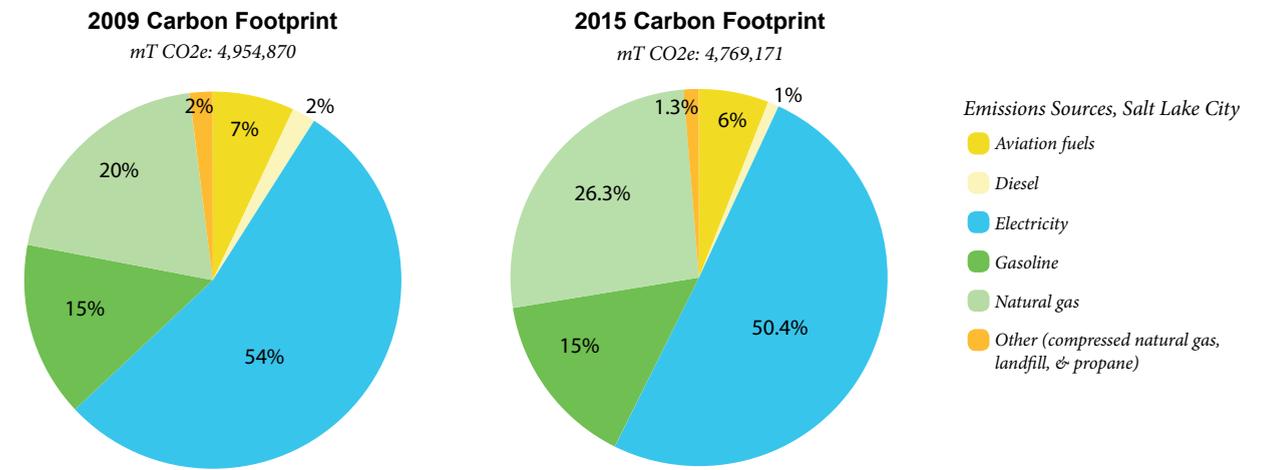




EMISSIONS BASELINE & SCOPE

Salt Lake City first published a community greenhouse gas inventory for 2009 and tracks changes in emissions annually. The City is part of national and international efforts committed to the tracking, reporting and reduction of carbon emissions, including the Carbon Disclosure Project (CDP), Compact of Mayors and Mayors National Climate Action Agenda. CDP reported that in 2016 533 cities globally representing over 600 million people published emissions data through their platform.

The following pie charts represent most Scope I and Scope II emissions for the Salt Lake City community. The charts include fuels combusted locally, as well as upstream emissions associated with electricity generation. Scope III emissions such as those associated with the production of food and goods consumed locally are important contributors to climate change, but are not quantified in this report.



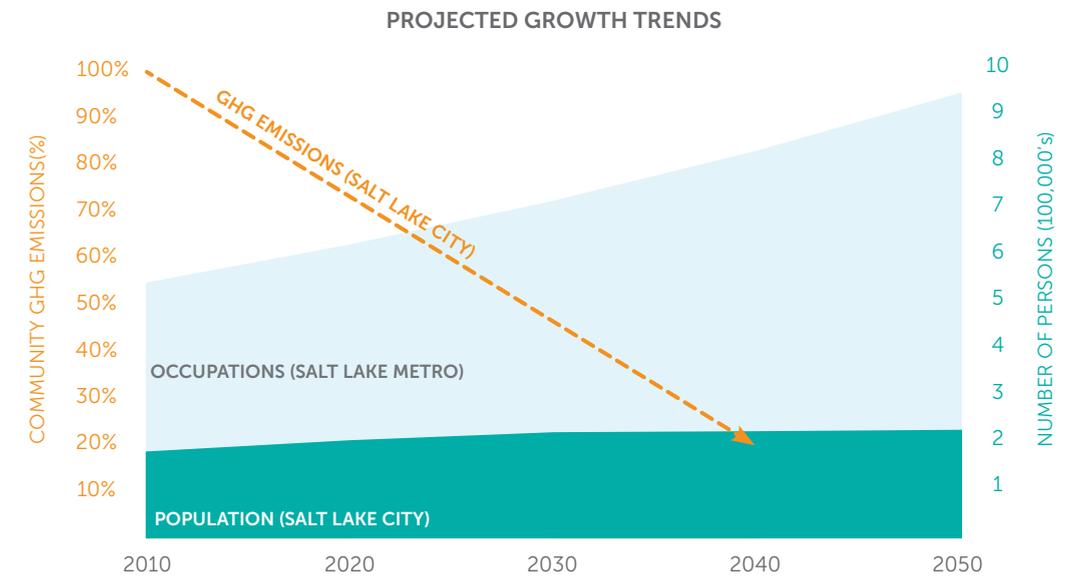
Salt Lake City partnered with the Carbon Neutral Cities Alliance on an analysis of dollars spent locally on fossil fuels associated with its community carbon footprint. This analysis estimated that in 2014, \$804 million was spent on coal, oil and natural gas in the community. Climate Positive is about reducing energy waste through efficiency and conservation and reorienting this expenditure to clean, renewable resources developed in Utah.



DEMOGRAPHICS & TRENDS

Nearly all daily activities of households and businesses are supported by the use of energy and its associated emissions. [SLCgreen has estimated](#) that typical energy use associated with Utah households requires an average of 17 pounds of coal, 208 cubic feet of natural gas and 3 gallons of gasoline every day.

Growth in population and economic activity puts upward pressure on emissions while more efficient use of cleaner energy resources at a community scale can reduce pollution totals. For Salt Lake City to become Climate Positive the reduction of energy waste and transition to renewable energy must be sizable enough to produce an 80% net reduction in carbon pollution. This transformation can also ensure the growth of green local jobs, enhanced self-reliance, a cleaner environment and improved public health.

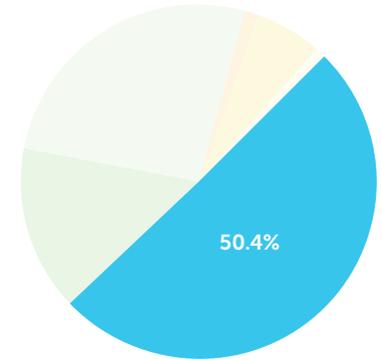




RENEWABLE ENERGY

Salt Lake City is working to ensure that renewable energy provides 100% of community electricity needs by 2032. This goal is foundational to the success of Climate Positive given that more than 50% of community carbon pollution is associated with electricity generation.

The City is working locally and regionally with a multitude of stakeholders to accelerate the momentum of clean energy development. Essential aspects of this collaboration are detailed below, along with key project, planning and policy deliverables.



Electricity share of footprint (2015)



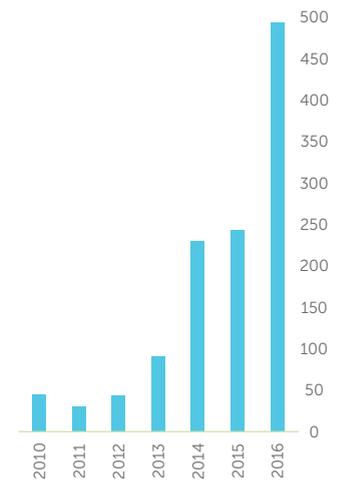
Cooperation with Electric Utility: Salt Lake City Mayor Jackie Biskupski and Rocky Mountain Power CEO Cindy Crane signed a [Joint Clean Energy Cooperation Statement](#) in August 2016 that details a vision to work together in good faith on energy goals. Energy efficiency, electric vehicle infrastructure, smart grid investments and pathways to net-100% renewable energy are all [part of the vision](#).



Renewable Energy Feasibility Study: The City partnered with Summit County and Park City to commission a [third-party study](#) on pathways to 100% renewable energy for each individual community. This study will be published in early 2017 and help inform ongoing priorities and investments.



Sustained Growth of Rooftop Solar: Households and businesses play an essential role in reducing carbon pollution and the City encourages customer-side investments in renewable options like rooftop solar. Net metered solar installations in Salt Lake City grew at roughly exponential rates from 2010-16, helping empower residents and create local jobs.

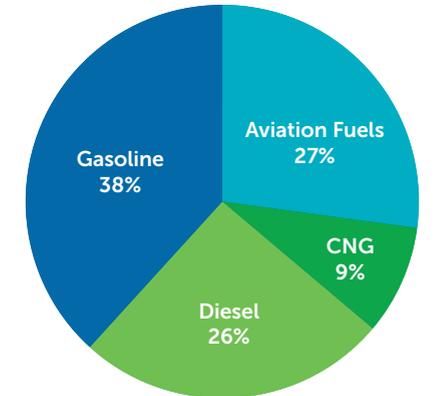


Salt Lake City rooftop solar installations



CLEAN TRANSPORTATION

There are a variety of ways to reduce carbon pollution associated with travel and all are of crucial importance in order for the community to reach its Climate Positive goals. Existing programs and emerging opportunities are highlighted below and described in greater detail in online reports.



GHG emissions from transportation fuels in Salt Lake City, 2015



Increasing Use of Public Transit. Expanding public transit options and encouraging ridership are essential to Climate Positive success. The City released its first [Transit Master Plan](#) in 2016 and continues to collaborate with Utah Transit Authority (UTA) on enhanced service options. Affordability is also crucial and served as a catalyst for the discounted transit [Hive Pass](#) for City residents.



Promoting Active Transportation. The Salt Lake City [Transportation Division](#) has developed plans and invested in infrastructure to support active, zero-emissions transportation options such as walking and biking. These solutions will be increasingly important as we strive for sizable emissions reductions and healthier forms of travel.



Accelerating Electric Vehicle Adoption. Electrified transportation powered by renewable energy is a cornerstone of holistic carbon emissions reduction plans. The City has invested in public EV charging infrastructure and collaborated on programs to offer discounted EVs to residents. Work on related initiatives, plus broader policy measures, will remain a priority for Salt Lake City going forward.



Reducing Emissions from Air Travel. Technological innovations offer the ability to shift fuel sources and greatly reduce greenhouse gas emissions from air travel over time. Residents and businesses can support Climate Positive in the near-term by reducing the use of long-distance air travel.



Photo by Kyle Strayer

HIGHLY EFFICIENT BUILDINGS

Better performing new and existing buildings are crucial to the Climate Positive plan since emissions associated with electricity and natural gas use represent the largest part of the community carbon footprint. Reducing energy waste through efficiency and conservation measures represents a cost-effective way to address climate change while also saving businesses and households money.

Project Skyline

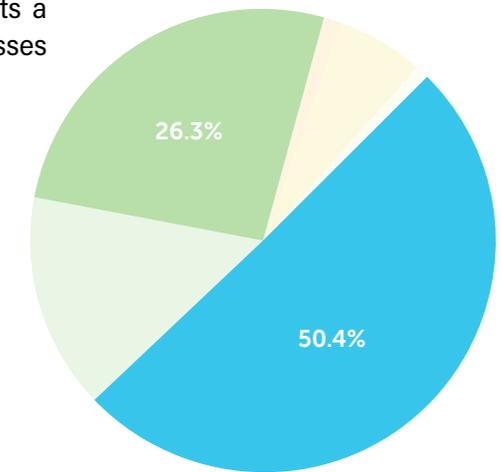
[Project Skyline](#) accelerates investment in energy efficiency and raises public awareness of building energy performance among the largest commercial facilities in Salt Lake City. The initiative also spurs job growth and fosters a stronger local economy. Building owners across the City are encouraged to pursue energy-saving targets by evaluating building energy use, setting energy savings goals and implementing cost-effective improvement projects.

Utility Incentives

Rocky Mountain Power and Questar Gas offer incentive programs to reduce emissions and improve the performance of residential and non-residential properties. Partnering with these utilities is key to ensure the ongoing effectiveness of programs while also catalyzing more robust incentive offerings that eliminate pollution and save ratepayers money.

High-Performance New Construction

Energy codes for new construction are adopted at the state-level in Utah. Salt Lake City will continue to encourage the adoption of updated, increasingly efficient energy codes that support a responsible built environment statewide.



2015 Community GHG Footprint

- Electricity
- Natural gas



AIR QUALITY

Salt Lake City faces significant air quality challenges year-round. In the winter, the Wasatch Front's unique geography leads to periodic temperature inversions that trap cold air underneath a layer of warm air. This phenomenon acts like a lid — causing particulate pollution to double every day during an inversion. In the summer, emissions from vehicles, industry, and a multitude of chemical products, combined with high temperatures and bright sunshine, lead to harmful ozone levels.

As the capital city, Salt Lake City has been a consistent leader in pioneering approaches to reduce air pollution. The City regularly presents its air quality best practices to neighboring cities and towns. This helps smaller municipalities understand how they can begin to engage their residents and businesses on air pollution, while also formulating strategies to reduce emissions from their internal operations. Salt Lake City addresses air quality in each of the following sectors and is supported by strategies described in the previous sections of Climate Positive.



Area Sources

Salt Lake City prioritizes energy benchmarking and tune-ups for commercial buildings through a combination of policy, incentives, and educational resources. The City also provides guides for home improvements, including details on thermostat controls, home insulation and efficient appliances, to help move residential buildings toward a cleaner energy future.



Transportation

In addition to encouraging active and public transportation as a tool for reducing mobile emissions sources, the City sponsors an annual Clear the Air Challenge. The program has reduced over 3,600 tons of carbon emissions since its inception in 2006. In 2011, the City adopted an idle-free ordinance to limit vehicle idling within Salt Lake City boundaries.



Industry

The Utah Department of Environmental Quality leads regulatory efforts related to local industry and the City supports strong pollution reduction programs. Reducing emissions from industry and area sources will become increasingly important as cleaner vehicles and fuels are adopted.



Photo by Kyle Strayer

SUSTAINABLE FOOD

A sustainable, low carbon, equitable system that provides healthy food for the entire community is key to creating a climate resilient and healthy community. In Utah, our food choices contribute to 25% of the household carbon footprint, with impacts occurring throughout the entire life-cycle of the food we eat. From production to plate to food waste, there are countless opportunities to reduce emissions. Key goals of the Climate Positive sustainable food program are listed below.



Improve local, low carbon and diversified food production. In Utah, only 2% of vegetables and 3% of fruit consumed is in grown in-state. To create a more resilient food system, the community must shift from carbon intensive meat and dairy agricultural practices to more diverse produce production methods.



Increase access to fresh, pesticide-free, healthy foods that are grown with ecologically responsible methods. Only 20% of Salt Lake City residents are consuming the daily recommended intake of fruits and vegetables and 15% experience food hardship – not knowing where their next meal is coming from. Increasing availability to affordable, fresh, whole foods is integral to creating a healthy community.



Reduce consumable food waste. Currently, 40% of food purchased in the U.S. goes to waste. Depending on the type of food, waste accounts for up to 35% of the GHG emissions released from our food system.

Investments in Local and Sustainable Food

The Salt Lake City Food Policy Task Force (FPTF) is comprised of a diverse group of individuals and organizations interested in improving food policy in Salt Lake City. They work with the City to identify opportunities to increase access to fresh and nutritious food for all City residents:

Culinary Incubator Kitchen gives food businesses an advantage in the local marketplace by providing an affordable kitchen space for food prep as well as business marketing tools and resources.

Dining with Discretion provides resources to empower residents to make low carbon food choices.

Excess SLC Food Recovery is a partnership between community organizations that diverts consumable food waste from the landfill to food assistance programs.

Green City Growers was created to expand community garden access for residents by making City-owned/managed land available for development.

Salt Lake City FruitShare diverts surplus fruit from local trees to individuals with low access to healthy foods.



ZERO WASTE COMMUNITY

Salt Lake City's Zero Waste Resolution values what we typically throw away as resources that can be returned to the local economy. This reduces negative impacts on the climate, environment and community. The goals of the zero waste pathway work to:

- 1 Engage** the community in recycling and waste reduction to achieve zero waste by 2040
- 2 Improve** local recycling infrastructure and markets through strategic partnerships
- 3 Develop** a materials management system that emphasizes highest and best use of all discards

Through a joint resolution signed in 2011, the City set a goal of Zero Waste by 2040 and a goal of diverting, recycling or composting 70% of the waste stream by 2025. In 2015-16 the City's Waste and Recycling Program diverted 40% of residential waste. Salt Lake City adopted two ordinances that encourage large customer groups to recycle. The Construction and Demolition Ordinance requires recycling of debris for major construction and renovation projects permitted by the City. The Business Recycling Ordinance requires multi-family properties, businesses and special events to implement recycling programs beginning in 2017. Further plans work to enable three key strategies:

Waste Reduction

Establish fee structures for residential waste and recycling services that encourage the reduction of waste.

Increased Recycling

Expand composting capability in the city to enable food waste diversion.

Highest and Best Use

Work with local and state partners to develop a long-term plan for regional materials management and explore recycling market development opportunities.

BY YEAR 2040,
**ZERO
WASTE**
70% WASTE DIVERSION BY 2025.





COLLABORATIVE SOLUTIONS

Salt Lake City prioritizes collaboration to enhance understanding of climate risks and foster joint opportunities to reduce carbon pollution. Working across sectors in non-partisan ways will create climate solutions that align with Utah values and priorities.



Utah Climate Action Network

Salt Lake City is a founding Convener of the [Utah Climate Action Network](#), a collection of organizations across all sectors committed to addressing climate change in Utah. The Network has a formal mission to “Foster diverse conversation, leadership and coordinated action to ensure a collaborative response to climate change and its impacts on the people, economies and prosperity of Utah.”



Urban Sustainability Directors Network

The Urban Sustainability Directors Network is a peer-to-peer network of local government professionals from cities across the United States and Canada dedicated to creating a healthier environment, economic prosperity and increased social equity. The City has been a member of USDN since its inception and Salt Lake City Sustainability Director Vicki Bennett is a current co-chair of the Network.



Western Adaptation Alliance

The Western Adaptation Alliance is a network of local government agencies located in the American Southwest and Intermountain West which explores challenges caused by a changing climate such as drought, wildfires, extreme precipitation events and heat stress. Salt Lake City is one of 14 cities participating across five states in the region.



Photo by Sophia Nicholas

CITY OPERATIONS



Salt Lake City leads by example by embedding Climate Positive solutions in its own internal government operations. The City has prioritized carbon pollution reduction and enhanced resiliency to climate change. The following are a few key examples:

- Comprehensive Energy Management**
The City adopted an Executive Order to enhance interdepartmental coordination, encourage energy waste reduction and spur the development of clean energy. This comprehensive Order requires measures such as energy benchmarking, efficiency investments, facility operator training and employee engagement.
- Net Zero Construction**
New Salt Lake City government facilities above 10,000 square feet, with the exception of certain use types, must be constructed to Net Zero Energy standards. These projects must include onsite and/or offsite renewable energy projects that offset the anticipated annual carbon emissions of the facility. The City's Public Safety Building was the first such project developed to meet this requirement.
- Renewable Energy Development**
By the end of 2017, Salt Lake City will have at least 16 separate government properties that include renewable energy generation. The City has also enrolled in the Rocky Mountain Power "Subscriber Solar" program and will receive the equivalent of three megawatts of solar power through this initiative. Salt Lake City is committed to achieving 50% renewable electricity for its government operations by 2020.
- Clean Vehicle Fleet**
Salt Lake City evaluates local air quality impacts, carbon pollution and financial viability when prioritizing fleet vehicle purchases and related operational strategies. Numerous departments and divisions at the City have developed Tailpipe Emissions Reduction Plans to inform their investments and operations. Over 130 hybrid-electric or all-electric vehicles were included in the City fleet at the end of 2016.



RESILIENT CITY

Addressing climate change at the local level means both reducing carbon pollution and enhancing resiliency to negative social, environmental and economic impacts catalyzed in a warming world. Salt Lake City is working on both fronts and collaborating with stakeholders statewide and regionally to document and mitigate risks locally. Below are a few examples of this collaboration.

Climate Response Plans. Internal departments and divisions at the City have developed Climate Response Plans that highlight how to reduce emissions and address vulnerabilities to climate change within operations and on a community-scale.

Salt Lake Climate Leaders. The [Climate Leaders](#) program engages municipal employees and develops their knowledge base and professional skills to create more effective climate change leaders within City operations.

Sector-Based Adaptation Efforts. Efforts are underway in Utah to catalogue vulnerabilities and evaluate climate resiliency measures across a variety of areas: Economy & Tourism, Forestry & Wildfire, Public Health, Transportation, Water and Weather-Related Disasters. Salt Lake City is involved in a number of these initiatives and encourages dialogue through the Utah Climate Action Network.

Utah Climate Action Network. The Network fosters information sharing and development of local best practices for identifying climate vulnerabilities in Utah and enhancing resiliency. Salt Lake City is a founding Convener and active participant in the Network.



WHAT YOU CAN DO

Climate Positive 2040 highlights plans and programs that work towards a cleaner future for Salt Lake City. The work doesn't stop there. Reduction in pollution and carbon emissions can take place at the individual level, by making simple changes and creating new habits.

There are many ways you can reduce your energy use, save money and help pave the way for a clean, healthy and livable future for our community.

A few examples are included on the following page. For more information on actions you can take to reduce your carbon footprint, visit www.slccgreen.com.



Clean Energy

Commit to solar. Electricity emissions are the largest part of our community carbon footprint. Install solar panels on your home or business, or enroll in the Rocky Mountain Power Subscriber Solar program.



Reduced Energy Use

Adjust your thermostat. Every degree saves 3% on cooling and heating costs. By setting your thermostat to 60 at night in the winter and 78 when you're away in the summer, you can reduce your annual footprint by 1,800 pounds of CO₂.



Sustainable Food

Reduce your meat consumption. Choose foods that are less carbon and water intensive, such as fruits, vegetables and grains. Going vegetarian once a week will reduce your household footprint by 700 pounds of CO₂ annually.



Transportation

Ride with Hive. This program makes transit more affordable and accessible. The Hive Pass offers a 50% discount to Salt Lake City residents and covers use on regular buses, TRAX, and the S-Line Streetcar.

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For more information, please visit
www.slccgreen.com/climatepositive.



SLCgreen



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