Green Cincinnnati Plan
2023

What is the Green Cincinnati Plan?

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

What Is the Green Cincinnati Plan?

A bold, collaborative reach for carbon neutrality

The Green Cincinnati Plan (GCP) is a community vision to address climate change and build a more sustainable, equitable, and resilient future. The GCP was first introduced in 2008 and has become a central tenet of city planning. As science, politics, and technology have evolved, the City has updated the GCP every five years (2008, 2013, 2018).

Building on the successes of the previous plans, the City of Cincinnati is proud to present the 2023 Green Cincinnati Plan. For the first time ever, this plan charts a path to carbon neutrality, marking the most ambitious climate action plan in Cincinnati's history. The Plan focuses on the intersectional environmental systems that shape our lives, offering near-term steps toward long-term transformational goals.

The Green Cincinnati Plan reflects many aspects of the award-winning Plan Cincinnati[22]— particularly three of Plan Cincinnati's five initiative areas: Sustain, Connect and Compete. The Green Cincinnati Plan builds on Plan Cincinnati to create an implementation framework for portions of these initiatives. The City and community partners will work with communities to incorporate the Vision, Goals, Strategies, and Actions outlined in this document in developing neighborhood plans.

The Green Cincinnati Plan was first introduced in 2008 and has been updated every five years to maintain relevant recommendations as science, politics, and technology have evolved.

Green Cincinnati Plan Sustainability Milestones

The GCP has served as a rallying call for individuals and organizations to come together to take strategic action. Over the years, this collaboration has produced a growing momentum with many notable accomplishments:

2006

- The City of Cincinnati Office of Environmental Quality is formed.

2007

- LEED Tax Abatement introduced to encourage high-performance buildings.

2008

- Cincinnati adopted the 2008 Green Cincinnati Plan as a roadmap for how Cincinnati can be a national leader in addressing global climate change and make Cincinnati a healthier place to live.

2009

- Free parking for electric vehicles at all City parking meters, and some City garages.
- Phase 1 of Energy Efficiency Retrofits in City buildings. In 3 phases, the City completed deep retrofits on more than 60 buildings, reducing the City's energy bills by more than $2 million per year.
- The City's Urban Agriculture Program begins, with six city-owned parcels being leased for $1 each.

2010

- Enhanced curbside recycling offering new, larger recycling carts.

2011

- Green Umbrella restructured as regional sustainability alliance, becoming a backbone organization for sustainability efforts in the region.
- Cincinnati Zoo & Botanical Garden installs 1.5 mW solar canopy over parking lot.

Cincinnati Zoo & Botanical Garden solar canopy.

2012

- 100% Renewable Electricity—The City of Cincinnati completed the "electricity aggregation" process in 2012, buying electricity in bulk on behalf of approximately 60,000 residential and small commercial accounts.
- Car Sharing—Zipcar became Cincinnati's first car sharing company, with vehicles located in Downtown and Over-The-Rhine.
- Cincinnati adopted a new comprehensive plan, called Plan Cincinnati, and one of the five primary initiatives at the core of the plan is to "Sustain—Steward resources and ensure long term viability."
- Solar Power Purchase Agreement (PPA)—Installed solar panels on 3 City facilities: College Hill Rec Center, Beekman Garage, and One-Stop Permit Center.

2013

- 2013 Green Cincinnati Plan published.
- Lick Run Greenway project launched in South Fairmount to reduce combined sewer overflows (CSOs) into the Mill Creek.

2014

- Red Bike bikeshare launched in Downtown and Uptown neighborhoods.

Photo courtesy of Red Bike.

2015

- Cincinnati District 3 police station—Built as a sustainable, energy efficient and environmentally friendly facility meeting LEED Platinum status, the new station is designed to generate as much energy as it consumes.
- Expansion of the Red Bike system, which increased the size from 35 stations to 50 stations.
- First Annual Midwest Regional Sustainability Summit—attended by more than 300 individuals representing 150 businesses and organizations.
- The Greater Cincinnati Regional Food Policy Council is formed to address food access & consumption, production & land use, distribution and assessment, planning & zoning.

2016

- Electric Vehicle Chargers—the Office of Environment and Sustainability brokered resources from Nissan and Clean Fuels Ohio to obtain electric vehicle DC fast chargers at 5 locations in Cincinnati.
- Natural Gas Aggregation—the City entered a new Natural Gas Aggregation Contract with Constellation Natural Gas as the provider. Approximately 46,000 of 69,000 eligible households were purchasing their natural gas through this program.
- Opening of Cincinnati Bell Connector—The streetcar operates on a 3.6-mile loop.
- Solarize Program launches, accelerating the pace of residential solar installations.
- The first Food Waste Forum convenes 150 stakeholders to create a regional food waste action plan.

2017

- Curbside textile recycling—Residents are now able to recycle clothing, textiles and housewares just as easy as they can recycle other items.
- Cincinnati signs a contract to provide 100% green energy to City facilities.
- Cincinnati becomes the 1st aggregation program in the US to offer 100% green energy for both electricity and natural gas.
- Mayor Cranley signs the Compact of Mayors—a global agreement of 648 cities that have agreed to measure emissions and climate risk and publicly report findings.
- Mayor Cranley commits Cincinnati to 100% Renewable energy by 2035.

2018

- 2018 Green Cincinnati Plan adopted by City Council.
- Cincinnati selected for the American Cities Climate Challenge, infusing money and technical support into accelerating climate strategies.

2019

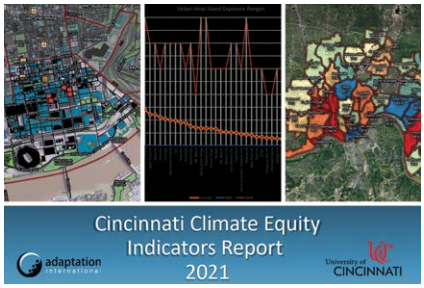
- 100 MW Solar PPA contract signed.
- Warm Up Cincy launched to address energy poverty in multi-family buildings.

2020

- Issue 7 Bus levy passes, significantly increasing funding for regional public transit.

2021

- First Climate Equity Indicators Report published, assessing neighborhood level climate vulnerabilities
- Climate Safe Neighborhoods launches, starting neighborhood-scale climate resilience planning.



The report prioritizes neighborhoods which are hardest hit by climate change.

- Contract signed for LED lighting upgrades to 94 facilities and the installation of 1.34 MW of solar across 9 facilities.
- Lick Run Greenway project completed—a bioengineered surface stream and separated stormwater sewer which eliminates approximately 800 million gallons annually of combined sewer overflows into the Mill Creek.
- Cincinnati secures USDA funding to start community composting <500 sq ft. at various neighborhood sites.

2022

- Climate, Environment & Infrastructure Committee becomes the first climate-focused committee in City Council history.
- Cincinnati signs the Milan Urban Food Policy Pact, and is awarded Special Mention for food waste prevention efforts.
- Complete Streets policy passed by City Council.
- Cincinnati secures grant to launch biochar program to handle Park's wood debris.
- Inaugural Equity Committee formed to shape the 2023 GCP Vision, Goals, & Strategies and establish a formal Equity Commitment and strategic engagement metrics.

2023

Carbon Emissions

To address the climate crisis, the global community is organizing to drastically reduce carbon emissions around the globe. As a city, Cincinnati is working to address carbon emissions at home. Cincinnati first adopted carbon reduction goals in the 2008 Green Cincinnati Plan, establishing a commitment toward an 80% reduction in carbon emissions by 2050, from a 2006 baseline. In order to reduce emissions, it is critical to understand where local emissions are coming from.

Community Emissions Inventory

The Office of Environment & Sustainability models greenhouse gas emissions produced by Cincinnati over the course of a year to measure the climate impact of the City. The Cincinnati Community Emissions Inventory quantifies the amount of carbon emissions from different sources within the City. The inventory is broken down into three major components: stationary energy sources (buildings, factories, etc.), transportation, and waste. Of these three, stationary sources account for approximately 66% of all emissions. Focusing on ways to improve the energy efficiency of stationary sources and to acquire clean sources of power will be critical to reducing emissions citywide.

Since 2008, the actions set forth by the GCP have helped the City make significant progress toward its carbon reduction goals. Cincinnati's 2021 community emissions inventory estimates total community-wide emissions of 5.9 MMT CO2e (million metric tons of carbon dioxide equivalent), representing a 36.6% decrease from the 2006 baseline of 9.3 MMT CO2e. While there have been reductions across each of the major categories, energy efficiency and renewable energy projects to stationary energy sources (buildings, factories, etc.) have been the driving force behind the reductions. **The current trajectory of carbon emissions reductions puts the City on track to meet its decarbonization commitments.**

2022 COMMUNITY CARBON EMISSIONS

24.75%

COMMERCIAL BUILDING ENERGY USAGE

17.53%

RESIDENTIAL BUILDING ENERGY USAGE

32.35%

TRANSPORTATION

1.97%

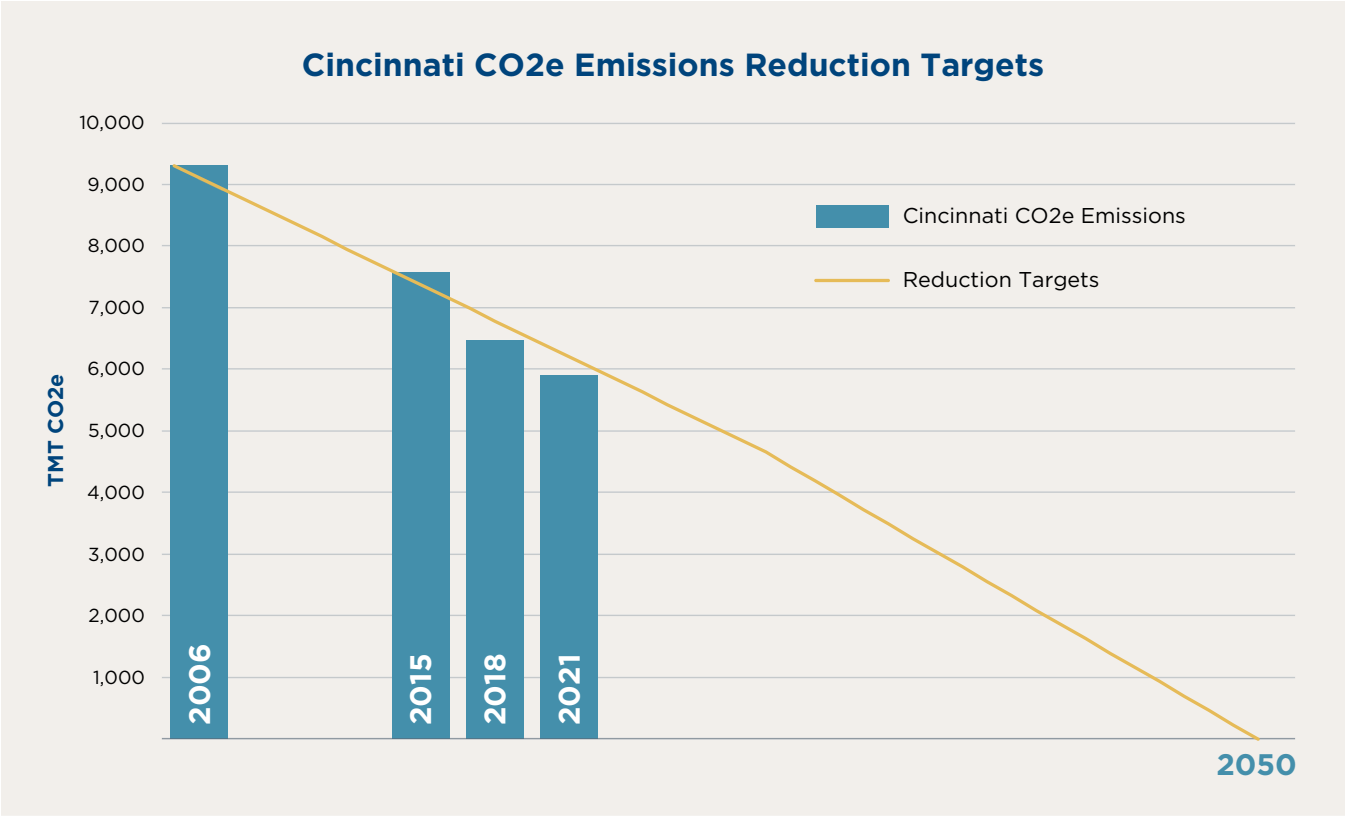
SOLID WASTE

2.99%

GOVERNMENT OPERATIONS

20.41%

INDUSTRIAL BUILDING ENERGY USAGE



Moving forward toward Carbon Neutrality

The 2023 Green Cincinnati Plan marks a departure from the carbon goals of the past. With recent developments in the science of climate change, it has become apparent that the world will need to accelerate decarbonization. **With the adoption of this plan, Cincinnati commits to 50% reduction in carbon emissions by 2030, and 100% community-wide carbon neutrality by 2050.**

The City of Cincinnati Government is committed to leading by example. But it is important to note that the government accounts for less than 4% of all the emissions in Cincinnati. To achieve carbon neutrality will require all hands on deck, with concerted effort from individuals and institutions.

With a vision of a zero-carbon future, this climate action plan identifies the near-term steps Cincinnati must take to achieve this aspirational goal. **In many ways, this plan is a roadmap for re-inventing a city—re-inventing the way we construct our buildings, the way we power our homes, the way we get around, and the way we interact with and honor nature.**

ClimateOS Overview. Photo Courtesy of ClimateView.

ClimateView—Making climate data accessible and interactive

The City of Cincinnati is using the ClimateView platform to assist in carbon emissions measurement, tracking, and forecasting. The platform allows the City to identify the optimal pathways to net zero by highlighting which sectors are producing emissions, exploring different emission reduction scenarios, and understanding the impacts different actions have on emissions. Most importantly, ClimateView is intended to allow residents and businesses to track the City's progress by bringing the Green Cincinnati Plan to life through interactive emissions reports and status updates on the Plan's priority actions.

Central Pillars of the Green Cincinnati Plan

The Green Cincinnati Plan Steering Committee determined that the 2023 GCP would have three central pillars: Sustainability, Equity, and Resilience. These three important concepts are closely related and have significant implications for individuals, communities, and the natural world. The pillars serve as central tenets, upon which the Goals, Strategies, and Actions of the 2023 GCP are built. A deeper explanation of each of these pillars follows below.

The 2023 GCP Steering Committee guided the process and was composed of a diverse group of local business, faith, nonprofit, and government leaders. Photo courtesy of Monica Windholz.

Sustainability

Sustainability is the practice of preserving natural resources and ecosystems for the benefit of current and future generations. It involves making decisions and taking actions that minimize the negative impact of human activities on the environment, while also ensuring that the needs of society are met. Ultimately, the goal of environmental sustainability is to create a healthy, balanced, and maintainable relationship between humans and the natural world.

Currently, our culture of extraction threatens sustainability. We take and take and take from the natural environment without replacing or regenerating the extracted resources. The 2023 GCP has many goals, strategies, and actions that seek to restore and regenerate our environment, shift to renewable sources of energy, and eliminate the carbon pollution that is driving climate disruption.

Examples of Sustainability Aligned Strategies in the Green Cincinnati Plan:

- Decrease energy usage in new and existing buildings through the adoption of energy-efficiency program.
- Provide residents and businesses with continual access to power from clean energy sources.
- Amplify the workforce to meet the demands of the green economy.
- Improve bike and pedestrian connectivity so that residents can safely access the places they need to go.
- Improve preservation, health, and maintenance of trees in existing urban canopy.
- Divert food waste through prevention, reuse/recovery, and composting.

2023 GCP Definition

Sustainability means creating and maintaining conditions to meet the needs of present generations without compromising the ability of future generations to meet their own needs. It acknowledges that human survival and well-being depends on our natural environment.

2023 GCP Definition
Resilience is a tenacious ability for individuals and communities to collaboratively anticipate, accommodate, and positively adapt to thrive amidst changing climate conditions through greater social cohesion, strong partnerships, and access to resources.

Resilience

Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow—no matter what kinds of challenges and threats they face. In the context of climate change, resilience is like the triage and emergency room of the sustainability building. It measures a community's ability to prepare for and adapt to climate hazards and recover quickly from climate-related disasters. Given this importance, Resilience is both a foundational pillar and the subject of Focus Area for the 2023 GCP.

To increase its own resilience, Cincinnati can empower communities to identify the climate threats unique to them and prepare for possible shocks or disasters. When we work to build resilience in our neighborhoods, we deepen relationships and connections, creating positive social cohesion that spans both the built and natural environments. In other words, people are *collaborating* with the natural environment rather than simply interacting with it.

In the coming decades, building resilience will be essential to urban policy as well as a smart investment for all cities, including Cincinnati. Because resilient cities can better handle natural and human-made disasters, they can protect human life, absorbing the impact of economic, environmental, and social hazards. By taking steps to deepen Cincinnati's own resilience, we are making the City a healthier, more attractive place to live and do business.

Examples of Resilience Aligned Actions in the Green Cincinnati Plan:

- Decrease sewer backups, sewer overflows, and overland flooding (aka flash flooding) by supporting community-wide sewer infrastructure improvements and prioritizing projects in priority communities.
- Establish prioritized facilities as "Resilience Hubs"—centers that foster community connection and preparedness during emergencies.
- Incentivize green infrastructure projects in communities with extreme heat and flood vulnerabilities.
- Conduct inventories, assessments, and clean-ups of contaminated industrial sites—referred to as brownfields—aligned with both community revitalization priorities and city planned reuse.
- Implement affordable housing strategies to stabilize communities.

Equity

Climate change impacts communities of color and other vulnerable populations in disproportionate ways. For example, bad air quality leads to higher asthma rates, degraded infrastructure leads to flooding and sewer backups, and fewer trees and more pavement lead to higher and more unhealthy temperatures. These factors are more prevalent in communities of color and other vulnerable priority neighborhoods.

By centering equity in climate action planning—using tools like the 2021 Cincinnati Climate Equity Indicators Report[23]—we can better reduce the burden of climate events and reallocate the benefits of taking action. To place equity firmly at the center, however, we must purposefully engage with and invest in the people and communities most impacted by environmental injustice. In addition, the City recommends an approach called "targeted universalism": setting universal goals from which all groups benefit yet achieving these goals through targeted approaches. Intentionally prioritizing equity at every stage gives us a better chance of disrupting these cycles of injustice. Supported by the GCP Equity Framework (See Appendix), Cincinnati is on a journey toward more equitable climate action.

Examples of Equity Aligned Strategies in the Green Cincinnati Plan:

- Reduce energy costs for tenants and homeowners experiencing energy poverty to improve the affordability of housing.
- Use a variety of systems to create equitable access to nutritious, affordable food in every neighborhood, prioritizing communities that need it most and creating food sovereignty.
- Provide reliable public transportation options and an improved rider experience to connect residents to the places where they need to go.
- Increase air quality studies and education and reduce pollution from air emissions.
- Reduce extreme heat, overland flooding, landslides, and water pollution vulnerabilities by incentivizing, improving, and increasing green infrastructure.

2023 GCP Definition

Equity is just and fair inclusion in which all can participate, prosper, and reach their full potential. In sustainability work, equity must be recognitional, procedural, distributional, restorational, and transformational.

> A community's success or failure in preparing for the impacts of climate change will be measured by how it is able to address the needs of those on the frontlines of impacts and those already suffering from a range of challenges, including lack of economic opportunity, racism, and pollution.
>
> **GEORGETOWN CLIMATE CENTER**