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Cincinnati Paves the Way for Equitable, Climate-Forward City Planning

February 12, 2021



Cincinnati, Ohio, is a midsize city that has attracted attention for its outsized climate action. In early 2020, Cincinnati contracted the nation's largest municipal solar farm (<https://www.motherjones.com/environment/2020/02/the-biggest-municipal-solar-farm-in-the-us-is-coming-to-cincinnati/>) as part of its plan to convert the city government's power usage to 100 percent renewable energy by 2035. The 100 percent renewable energy goal is just one of 80 total recommendations in the 2018 Green Cincinnati Plan (<https://www.cincinnati-oh.gov/oes/citywide-efforts/climate-protection-green-cincinnati-plan/>), which aims to reduce city carbon emissions 80 percent by 2050 and implement a suite of other projects in the fields of environmental sustainability, environmental justice, and climate resilience. The plan, the third of its kind, acts as the city's roadmap for climate and environmental action.

According to Carla Walker, Climate Advisor for the City of Cincinnati, the first Green Cincinnati Plan was born out of Cincinnati's engagement with the U.S. Conference of Mayors (<https://www.usmayors.org/>) in 2008. The first plan focused primarily on carbon reduction and sustainability; the second, published in 2013, incorporated climate resilience; and the third and current plan has deepened its engagement with issues of equity and justice.

Beyond this expansion of focus areas, Oliver Kroner, the Sustainability Coordinator for the city's Office of Environment and Sustainability, says the plan has benefited from major advances in science, policy, and technology over the last 10 years. The city has also worked to create a more robust community engagement process, which is central to the creation of the plans.

However, plans are only as good as the actions they inspire. So, Cincinnati got to work and is on track to meet its emissions targets. Relative to a 2006 baseline of 9.3 million tons of carbon dioxide (CO₂), the city's emissions have decreased 18.4 percent. Emission reductions have been realized due to trends in population movements, grid decarbonization, and city policies. The city's Energy Aggregation (<https://www.cincinnati-oh.gov/oes/energy/energy-aggregation-program/>) program, introduced in 2012, provides 100 percent renewable energy or natural gas to tens of thousands of households, abating 250,000 tons of CO₂ per year. Over the same period, emissions from municipal government facilities dropped 36.3 percent from about 432,000 tons due to solar installations and efficiency upgrades to the municipal water works and other government systems.

A major initiative in the latest Green Cincinnati Plan is an effort to create a 2030 District (<https://www.2030districts.org/cincinnati/about>), or a collection of buildings and neighborhoods committed to reducing energy usage, water consumption, and transportation emissions by 50 percent by 2030. The project has required collaboration with large corporate and institutional partners. Though the city had limited experience engaging with such partners on a project of this scale before, Kroner says the District has seen enthusiastic uptake by stakeholders across the city. According to Kroner, the 2030 District has been one of his office's "faster growing efforts" and now covers around 25 million square feet of property.

Like cities across the United States, Cincinnati has limited municipal resources at its disposal. While increased federal support would be beneficial, the city has found creative ways to implement its programs. According to Kroner, the Office of Environment and Sustainability (OES) has unlocked resources by winning grants and saving the city money in operations. But one of its most important resources has been the local community itself.

"We have relied heavily on community support," Kroner said.

Indeed, the 2018 plan came about through an extensive community engagement process. The first consultation meeting in 2017 attracted about 350 attendees. From there, the city convened over 30 meetings, resulting in a list of over 1,400 recommendations that were later distilled down to the 80 included in the plan. A wide range of stakeholders, including individuals, businesses, community groups, faith organizations, and nonprofits, all contributed.

"Anyone who wants to help out with the implementation of the plan, you are more than welcome to do so," Walker said. "That's really part of OES' DNA. We're always reaching out to partners, not only in the development of programs, but also in the execution of the Green Cincinnati Plan."

The city has made strides to center equity for underserved communities in its community engagement process. Savannah Sullivan, Climate and Community Resilience Analyst at OES, says the city is working on "centering equity within the work, not only with outcomes but also with processes." She cited work with Groundwork USA (<https://groundworkusa.org/>) on the city's Climate Safe Neighborhoods project, which analyzes the relationship between historical patterns of urban racial segregation and climate risk to inform the development of participatory resilience plans in at-risk communities.

"This work is focused on developing community engagement structures that are inclusive and center racial equity, and not only learning from the lived experiences of people within climate-impacted neighborhoods, but also creating feedback and connection systems with our office that can then inform our future plans," Sullivan said.

One of Walker's projects is the city's Energy Equity (<https://www.cincinnati-oh.gov/oes/energy-equity/energy-equity-programs/>) program, in which the city provides grant funding and educational assistance to low-income tenants of multifamily housing so they can access energy efficiency upgrades. The project emerged from research showing that this population paid a greater share of income towards energy than most other populations in the country. Energy Equity seeks to fill an important gap—programs encouraging energy efficiency upgrades usually focus on homeowners, not renters, reinforcing structures of inequality.

Another goal at the intersection of environmental justice and climate resilience is to expand urban greenspace by ensuring that every neighborhood has at least 40 percent tree canopy coverage. The city has significant work ahead to achieve this goal. At present, some neighborhoods have as much as 70 percent coverage and others have as little as 10 percent, with sharp divisions along lines of race and income.

Greenspace reduces the urban heat island (<https://www.epa.gov/heatislands>) effect, whereby sunlight is absorbed by dark surfaces, like asphalt, increasing the air temperature. Urban heat islands are disproportionately common (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3684952) in low-income communities and communities of color. The city's work in this area dovetails with a National Oceanic and Atmospheric Administration-funded study (<https://www.fox19.com/2020/08/25/study-uses-data-points-locate-urban-heat-islands-cincinnati/>) on urban heat islands released by the city in fall 2020, which aimed to locate the most heavily impacted areas in Cincinnati.

Cities are well-positioned to be climate leaders. From the adoption of renewable energy to reducing the urban heat island effect, the work to address climate change impacts is happening first and foremost in municipalities.

"We're on the front lines of responding to climate change, climate justice issues, matters of where climate issues intersect with economic issues," Walker said.

Kroner emphasized that while the United States set emissions targets under the Paris Agreement, it did not go into detail on recommending actions to meet those targets. Detailed recommendations to figure out *how* to reduce emissions are just what the Green Cincinnati Plan process generated. Cities only heightened their ambition to create and deploy specific climate plans in the wake of the executive branch's announcement of its intention to withdraw from the Paris Agreement in 2017 (the withdrawal took place in November 2020, but the United States has rejoined the Paris Agreement under the Biden Administration). Along with other cities, Cincinnati has benefited from the funding and technical assistance opportunities created to support the work of sub-national entities, including grants from organizations like Bloomberg Philanthropies and the National League of Cities.

Cities have also been collaborating with one another to share experiences and relevant policy solutions. In Cincinnati's case, their climate planning draws lessons from other cities with an industrial legacy. The city participates in regional initiatives like the Ohio-Kentucky-Indiana (OKI) Regional Council of Governments (<https://www.oki.org/>).

"We learn a lot from peer cities. Cities around the country are all trying to figure this out together, and all of our solutions are open source," Kroner said.

The Green Cincinnati Plan (<http://www.cincinnati-oh.gov/oes/citywide-efforts/climate-protection-green-cincinnati-plan/>) in Brief

The 273-page plan calls for a wide range of investments in environmental protection and sustainability. It includes carbon reduction goals, but also seeks to improve resilience and equity. It is organized into eight main sections:

- The built environment
- Education and outreach
- Energy
- Food
- Natural systems: air quality, water quality, and green space
- Resilience
- Transportation
- Waste

Each section describes a set of measurable goals and a set of recommendations to meet them. Each recommendation comes with an estimated carbon reduction potential and cost-benefit analysis. The city and its community partners actively work to implement each of the recommendations and track their progress over time.

City leaders have also shared their work at the global level through the Global Covenant of Mayors on Climate and Energy (<https://www.globalcovenantofmayors.org/>), which includes representatives from over 10,000 cities in 138 countries. Cincinnati Mayor John Cranley joined the Covenant on the same day that President Trump announced the United States' withdrawal from the Paris Agreement in 2017.

Walker emphasized that while city and subnational leaders have been drawing more attention for their climate work in recent years, this work is not new, "There have been a number of coalitions that have been working on this over the years, not only the last four years, I mean the last couple of decades. The U.S. Conference of Mayors has been working on these issues since I was in Mayor Mallory's office [from 2005 to 2010]."

"We've been taking the lead for a while," Walker said. "It's not like this is a new phenomenon." The experience cities have gained leading on climate action is more important than ever in this critical moment in the climate fight.

Author: Joseph Glandorf

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Contact

Anna McGinn

amcginn@eesi.org (<mailto:amcginn@eesi.org>)

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Environmental and
Energy Study Institute

1020 19th Street, NW, Suite 650
Washington, DC 20036-6101

(202) 628-1400 *phone*

(202) 204-5244 *fax*

info@eesi.org (mailto:info@eesi.org)

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