

Zero Cities Project

Reflections on a three-year project to engage communities and support cities to achieve equitable building decarbonization



The Zero Cities Project began in 2017 with a vision to support cities in the development of actionable and equitable pathways to achieve zero net carbon in the built environment by 2050. For the past three years, 11 cities have worked to advance these goals by examining their local context through technical analyses and relationship-building with community partners and practitioners.

The project provided each community with an understanding of its built environment through a bottom-up building stock assessment in which every building in each city was analyzed and projections for floor area growth, energy, and emissions changes over time were modeled at a subsector level. Three of the cities progressed to the stage of exploring the energy and emissions impacts of various decarbonization policies impacting different building subsectors, and for these cities a dynamic decarbonization scenario dashboard was created within their building stock assessment to support real-time analysis and comparisons of policy combinations.

This analysis was paired with a community ecosystem map, which was designed to deepen

knowledge of local organizations and practitioners in environmental justice and sustainability. These maps were used to identify community partners to help co-develop engagement strategies and future policies. Utilizing these tools, participants in each Zero Cities community began to pursue a work plan tied to their local context.

This document outlines the practices and lessons learned from the work completed by city staff and community partners throughout the Zero Cities Project. Due to the differences between individual work plans, each of the Zero Cities communities are currently in different phases of policy development. Some are focused on deep community engagement and outreach to help prioritize future policy choices.

Others used the project to gather more in-depth information about policy pathways to achieve high-performance buildings and will soon embark on community dialogue based on their early concepts. Two of the cities were able to advance both objectives during the duration of the three-year project. Regardless of the approach, there are applicable lessons learned from all of the Zero Cities partners about the different phases of equitable policy development.

This document focuses on reflections and lessons learned from cities and their community partners who utilized both of the described approaches during the Zero Cities Project. The cities and their local partners are continuing to center equity in building policy and empower community decision making. Updates on their progress will be made available on USDN's [website](#).

COMMUNITY ENGAGEMENT IN POLICY DEVELOPMENT

Who decides what is best for communities when it comes to local building policies? Without the benefit of an equitable policy development process, where the most impacted communities have decision-making power over how policies are designed and implemented, local building regulations and practices run the risk of doing more harm than good. We have already seen the negative impacts of such inequitable policy planning in cities across the US where many low- and middle-income households, business owners, and communities of color are being displaced from their historic neighborhoods and storefronts as new development and redevelopment increases housing prices and rents. In many cases, building improvements aren't reaching deep enough into communities that would benefit the most.

As more cities look to "green up" their building stock to meet climate goals, a whole new slew of building policies is gaining momentum, such as mandatory building energy retrofits, more stringent building energy codes, gas bans in new construction, and

WHAT IS THE ZERO CITIES PROJECT?

The Zero Cities Project is a three-year effort to support cities and their most impacted communities* to co-develop and implement roadmaps and policy strategies to achieve a zero-carbon building sector by 2050. The project launched in 2017 with 11 leading cities and their local community partners and will conclude in 2020. Through a community collaboration process centering on equity and analysis that draws on city data, the Zero Cities Project generated a planning model, common roadmap, and a suite of tools to assist this broad network of cities. The project is supported by the national Zero Cities team made up of representatives from the Urban Sustainability Directors Network, Carbon Neutral Cities Alliance, Architecture 2030, Movement Strategy Center, Race Forward, New Buildings Institute and Resource Media.

For more information, please visit usdn.org/projects

*Most impacted communities include low income people of color; women; indigenous, LGBTQ+, elderly, young, and disabled people, and others.

local ordinances requiring building electrification and housing that is equipped for solar and electric vehicles. Rather than perpetuate the problems with inequitable policy-development practices, cities can create more just, vibrant, and resilient communities by centering equity and deferring to local residents and organizations that have not historically had a seat at the table.

As participants in the Zero Cities Project, cities were encouraged to partner directly with community-based organizations (CBOs), which supported cities' efforts to expand and deepen engagements in the creation of building decarbonization policies. Across these partnerships, cities and CBOs expressed that this project fostered a new level of collaboration, trust, and relationship-building. Here, we showcase three partnerships driving this work and the lessons stakeholders are learning along the way.

Portland

Portland's journey toward a more equitable policy planning process began about 10 years ago when the City of Portland started gathering community input for its first Climate Action Plan. What the City learned through that experience was that racial equity was a core concern among community members and that residents wanted a bigger role in the policy planning process to ensure their needs were being met. This led the city to form an **Equity Work Group** made up of local environmental and racial justice organizations, which helped shape the update to the City's Climate Action Plan in 2015. This deeper engagement with CBOs helped the City evolve its traditional approach to policy planning from one where people are asked to *react to something that's already well developed* to a more movement-building approach where the community *helps guide the planning process from the beginning and makes policy decisions*.

In 2018, the City worked with Zero Cities Project national team partner **Movement Strategy Center** and **Verde**—a CBO focused on bringing new environmental investments to Portland's lower-income neighborhoods—to organize and host an

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Energy Justice Summit. That summit helped open new doors between the City, CBOs, and community members and allowed for trust to begin to grow.

Through the Zero Cities Project, the City of Portland was able to expand its work with Verde and community members. Verde was tapped by the Zero Cities team as a community anchor partner that could help the City deepen its engagement with local communities around building decarbonization policy. In 2019, Verde worked with the City and the national Zero Cities team to develop an energy curriculum and training for community leaders. This curriculum focused on introducing key energy efficiency concepts. The curriculum featured information about how residential buildings in Portland use energy,

explained concepts such as return on investment (ROI), and presented different opportunities for occupants to save energy. In doing so, it addressed a variety of housing scenarios, including community and intergenerational living, and included common barriers and opportunities related to different ownership models. In November and December of 2019, Verde hosted a policy forum for community members of color. During this forum, organizers used a **“Participatory Action Research”** approach to give community members the opportunity to define the challenges they face around energy, housing, and the environment in their own terms and identify possible solutions and implementation strategies. There was also a Policy Solutions Lab session at the forum, where community members discussed possible solutions around the split incentive issue, where landlords are not incentivized to make energy improvements to buildings because they don’t pay the utility bills. Verde also conducted focus groups with community members to learn more about the makeup of their households; their concerns around energy burdens, displacement, and affordable housing; and what types of environmental and building projects they wanted to see in their neighborhoods.

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Portland’s bottom-up building stock assessment allowed the City and Zero Cities Project partners to quickly respond to and analyze these community-identified priorities and model the emissions reduction impacts of potential policies that respond to communities needs. For example, in the building stock assessment, rental housing was segmented into single-family rental, regulated affordable multifamily rental, and market-rate multifamily rental. This allowed the Zero Cities Project team to analyze the emissions reduction impact potential of various rental property energy performance standards which, when coupled with rent control policies, could reduce the energy cost burden on tenants, eliminate the split incentive, and support the City in meeting its climate goals. Rental housing policy scenarios were modeled along with a suite of decarbonization policies impacting the entire building stock. With their dynamic decarbonization scenario dashboard, the City and community can join forces to explore the energy and emissions impacts of various policy sets as community engagement and policymaking continues.

With the emergence of COVID-19, the City and Verde have had to move their community engagement work online. They will be hosting a virtual workshop on energy, housing, and transportation later in 2020. The City is also working on a Zero Cities Resolution and residential energy efficiency standards based on community input gathered at the forum and through focus groups. Going forward, the community engagement work completed through the Zero Cities Project is continuing under a new name; the “Build/Shift Project” will further build community and shift power where policymaking is happening.

Key lessons the City and Verde learned through this work include:

The importance of building trust. Initially, Verde and other CBOs and community members were skeptical that working with the City would lead to a true shift in power and decision-making. By being flexible, listening, and letting communities lead, the City was able to build and repair trust with CBOs and community members and have productive and honest discussions around climate policy.

The need for City accountability. Community members needed to know that the City would follow through with incorporating their ideas into policies and plans and the hard work they put into participating in workshops, forums, and focus groups would actually be put to good use. Many residents overcame their initial distrust when they saw the process had “teeth” and witnessed their work leading to future policies and a citywide resolution.

Commit to the work over the long term. Community engagement should not be a one-off, check-the-box activity. To ensure communities’ needs are being met and that the relationship between the City and local communities remains strong, city staff must commit to sustaining regular in-community conversations and community-led planning and decision making.

Adequately compensate community members and CBOs for their time. Taking the time to attend a workshop or meeting and share lived experiences can be a financial, personal, and logistical hardship for many community members. Cities should adequately compensate community members for their attendance and participation at meetings, workshops, and forums, etc. by providing stipends to cover childcare, food, travel, and other expenses. Financial support is also essential for CBOs like Verde that serve as planners, facilitators, and connectors between cities and community organizations and local residents.

San Francisco

In 2017, the City and County of San Francisco (SF) made a commitment to fully decarbonize buildings by 2050. Since then, SF has been working on a plan to meet building decarbonization with the twin goals of racial equity and zero-carbon buildings.

To inform its strategy for residential building decarbonization, SF embarked on a community engagement process in fall 2019 with support from the Zero Cities Project. Two CBOs recommended by the Movement Strategy Center, **PODER** and **Emerald Cities Collaborative** San Francisco, worked with SF and Zero Cities Project team to lead an equity-focused workforce and residential building

decarbonization community engagement effort. The CBOs and SF Department of the Environment staff formed the Anchor Partner Network (APN). The purpose of the APN was to convene a diverse set of stakeholders who could advocate for an equitable, just transition by:

- Providing education on the science behind building decarbonization, electrification, renewable energy, and energy efficiency in the context of climate action
- Reviewing decarbonization strategies to enhance equity and develop local green social enterprises, jobs, and a just transition for workers
- Ensuring that equity and climate justice principles were maintained throughout implementation of a transition to 100 percent electric buildings in SF
- Prioritizing policy and project opportunities, and community messaging for implementing the recommended actions

The APN organized a series of five meetings and dozens of one-on-one conversations with local racial and environmental justice organizations, affordable housing advocates, tenants rights advocates, labor groups, building industry representatives, and those representing other community interests over the course of eight months, eventually reaching more than 250 stakeholders. In addition, the APN effectively engaged the mainstream environmental movement, including Climate Emergency, to support an equity process and strategy for building decarbonization in San Francisco.

The meetings touched on several themes related to building decarbonization and equity, such as how to mitigate the impact of building retrofits and electrification so they don’t lead landlords to evict tenants to make building upgrades, a harmful practice known as “renovictions.” Participants also discussed strategies to enhance racial, social, and economic equity through building decarbonization, such as supporting local workforce development, worker training, and green social enterprises.

Through the process, stakeholders understood that the climate crisis itself is an equity issue, with low-income communities of color being hit first and worst by the climate crisis. In addition, the approach to addressing the causes of the climate crisis, including building decarbonization, will result in a significant worsening of equity, if efforts to end inequity are not incorporated into the process. Finally, through this process, all stakeholders came to further understand that the climate crisis itself cannot be effectively addressed without addressing the same structural issues that create both inequity and the climate crisis.

The ideas and strategies that surfaced from these conversations were included in a set of proposed policy actions that stakeholders had an additional opportunity to weigh in on through an online survey. Based on all the input gathered, SF will include the priority actions identified by community stakeholders in a set of recommendations that will inform the Climate Action Plan, which the City will release in early 2021. Further steps include developing an implementation plan that is further informed by procedural equity and community collaborative governance.

Key lessons SF and the APN learned through this work include:

Cultivating relationships is key. The SF Department of Environment had an existing relationship with PODER and Emerald Cities Collaborative through its Environmental Justice and Climate and Energy teams but had not worked directly with these CBOs before. With the Zero Cities Project, they began meeting one to two times a week, cultivating deeper connections and an even better working relationship.

Deep community engagement takes time. The community engagement process took longer and entailed more work than anchor partners and SF staff anticipated. But they recognized that while deep community engagement takes time, it results in better policy in terms of ending inequity and the climate crisis when it is done properly, and it avoids unintended consequences.

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Community engagement adds capacity to SF staff in devising and implementing equitable policy options to address climate. Leveraging long-standing relationships, information sharing, and strategic conversations, CBOs are able to build their knowledge base and exert their support for the policy recommendations.

Equity requires community engagement during planning and implementation. Community engagement shouldn't stop at the policy planning phase. For truly equitable outcomes, local engagement, ownership, and participation must happen during both policy planning and implementation.

Local environmental justice groups are at capacity. CBOs and community members need and deserve adequate compensation for their time to stay at the table. Cities and counties need to commit to consistently set aside funding for community engagement and/or collaborate in joint funding efforts with community partners.

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A diverse, large coalition is vital to build the capacity necessary to address all stakeholder concerns at the front end. This ensures procedural equity and consensus-based planning leads to better and more inclusive policy outcomes.

Washington, DC

Washington, DC’s climate policy planning process has evolved since the City released its first sustainability plan in 2013. Back then, only those who had the luxury of attending meetings convened by the City—mostly white-led professional organizations—contributed to the planning process. Today, frontline communities and CBOs have a seat at the table, thanks to the City’s close collaboration with CBOs like **Empower DC** and its participation in the 100 Percent Cities and Zero Cities projects.

The **100 Percent Cities Project** brought together the City, Empower DC, and other CBOs in 2018 to create an equity-centered planning process to move toward 100 percent renewable energy in DC. Through this partnership, the City and CBOs joined forces to facilitate monthly meetings with community members over the course of two years to discuss issues of

greatest importance to them—such as gentrification, displacement and affordable housing—and how the City could help address and redress these issues through clean energy policies and programs.

The Zero Cities Project was a natural extension of this work, supporting the City and Empower DC to host an additional five meetings to dig deeper into these conversations and explore the intersections between people’s lived experiences, carbon neutrality, and the built environment. The first three meetings have already occurred, and two more will be conducted virtually. Empower DC also conducted a 3,000-person survey and 800 phone interviews with community members. At the end of the project, the City and Empower DC will end up with a community vision for what an equitable approach to achieving carbon neutrality would look like for DC’s frontline communities.

Key lessons the City and Empower DC learned through this work include:

The difference between outreach versus engagement. Through this process, DC has come to realize what it means to truly engage with community members rather than taking a “one and done” approach. City staff learned that only through deep and consistent engagement can DC and community members achieve their shared goal of an equitable, carbon-neutral city.

Depth of relationships matter. What helped this process work so well was the existing relationship and trust between the City and Empower DC and the CBO’s deep connections with community members, who in turn trusted Empower DC not to lead them down the wrong path. Without those existing relationships and the third-party validation that Empower DC provided, it would have likely been difficult for community members to openly and honestly share their perspectives and for the process to advance.

Truly listening moves us forward together. Some community members expressed justified anger and distrust toward local government, which has a history

of perpetuating harmful policies driven by racism. DC staff had to acknowledge that truth, de-center themselves, and truly listen to community members' feelings and experiences in order to build cohesion and forward momentum among the group.

Accountability counts. The frequency of meetings really helped the City remain accountable to community members. When they said they were going to do something, they had to follow through because they were going to see each other the next month. Given that the Zero Cities Project work is coming to a close and the next few meetings will be virtual, the City is thinking about how to maintain that rhythm and sustain accountability over the long-term.

The experiences of these three cities and their anchor partner CBOs are helpful examples of what it means to center equity and community decision making in the development of local building decarbonization policy.

Other Zero Cities Project partners embarking on community engagement processes to inform policy development include the Cities of Seattle, Grand Rapids, and Minneapolis and their respective community anchor partners.

In 2019, the City of Seattle helped to convene a Working Group of 10 people representing various frontline communities and CBOs, and facilitated by a consultant specializing in equity and community engagement, to work with the Zero Cities team to provide a community-centered perspective on the priorities in Seattle. This group met monthly to discuss concerns around the environment, housing, energy, and local policy development and programs; they also talked about efforts to increase engagement from community members most directly impacted by policies intended to achieve carbon neutrality in the city and region. The outcome was a set of work group recommendations to the City on how to better prioritize the leadership and decision-making of communities of color and other historically oppressed communities in the planning, design, and delivery of its programs and services.

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Efforts are continuing in Seattle to find the best community or organization to steward and help realize the recommendations based on guidance from the participants in the Working Group and in partnership with the City.

In Minneapolis, work is underway by the [Center for Earth Energy and Democracy](#) to develop a community engagement process to help shape a whole-house retrofit program targeting two of the city's [Green Zones](#), communities overburdened by environmental pollution and that face greater social and economic vulnerability. And in Grand Rapids, [Urban Core Collective](#) (UCC) is developing a multiyear process to engage local residents who are most vulnerable to the impacts of climate change to guide and inform the city's Climate Action and Adaptation Plan and policy recommendations. Both cities are utilizing dynamic decarbonization scenario dashboards to support policy development.

EXPLORING BUILDING DECARBONIZATION PATHWAYS

For full building sector decarbonization, every existing building will need to undergo an energy upgrade involving a combination of 1) energy efficiency improvements, 2) a shift to electric or district heating systems powered by carbon-free renewable energy sources, and/or 3) the generation and/or procurement of carbon-free renewable energy. All new construction will need to be constructed efficiently with systems that can be fully powered with carbon-free renewable energy sources.

To achieve these goals, every city's building decarbonization policy roadmap should respond to the physical, economic, and social characteristics of each jurisdiction's local building sector, and policymakers should employ a combination of quantitative analysis and qualitative assessment with community stakeholders to determine the greatest opportunities to positively impact climate, equity, and resilience goals in the building stock.

Throughout the Zero Cities Project and the completion of Building Stock Analyses for each city, the Zero Cities team was able to determine a set of building sector characteristics that are consistent across the majority of cities and use these to create a decarbonization framework that can serve as a starting point for all jurisdictions.¹ Multiple cities within the Zero Cities cohort have begun to apply this framework to their local context. Cities have varying pathways of influence to exert change and they explored local ordinances, zoning, and codes as pathways to decarbonization. More details about these cities' processes in cities are below.

Cambridge

The City of Cambridge was interested in exploring the economic and climate impact potential of various decarbonization policies, and with the support of

the Zero Cities team, chose to complete a deep-dive analysis of the energy, emissions, job creation, and tax revenue impact potential of point-of-sale and point-of-renovation energy upgrade policies for small residential buildings. This analysis included a series of stakeholder interviews around the barriers and opportunities of residential energy upgrades within the city. The results of this analysis, including recommendations stemming from the stakeholder interviews, are being used to support community engagement processes now happening around policy development to meet the city's environmental, economic, and social goals.

The Zero Cities team also supported the City in the development of a comprehensive policy recommendation report for the design of a density bonus program tied to the achievement of net zero emissions buildings, including criteria for energy efficiency and renewable energy supply for these buildings.

Boston

A number of cities participating in the Zero Cities Project are limited in their ability to target emissions reductions through more stringent building codes and policies due to their location in a "non-home rule" state. This designation limits cities from adopting a different energy code than the one adopted by the state in which they're located. Facing such a challenge, Boston has pursued a variety of innovative policy work-arounds in order to improve its building stock and meet its climate action plans. The Zero Cities team worked with the Boston Planning and Development Agency on several aspects related to enhancing its existing Green Buildings Zoning (Article 37) and the development of a new Zero Net Carbon Zoning ordinance, including providing them with net-zero-ready energy building targets and strategies and off-site renewable energy procurement guidance. The public engagement phase of the ZNC Zoning Initiative kicked off in August. The development of this standard represents a critical next step toward achieving the City's goal of carbon neutrality.

1. Architecture 2030 has detailed decarbonization opportunities and intervention points identified through the Zero Cities project on their Leveraging Intervention Points website. For further details: <https://achieving-zero.org/leveraging-intervention-points/>.

Other cities

The Zero Cities team worked with a number of additional cities through the partnership to advance building codes and policies, often in more of a technical advisory capacity. The focus of this work was often driven by a desire to understand the application of Zero Energy building targets and the Roadmap for Getting to Zero Outcomes to their energy code development process. In the case of Boulder, this led to Zero Cities national team partner New Buildings Institute to work directly with the City to update its most recently adopted energy code, which includes an energy target pathway as well as specific elements identified in the roadmap. For New York City, where there is a locally mandated requirement to consider energy performance targets, the Zero Cities team tailored specific building performance targets and a framework for addressing a number of code considerations that would need to be addressed as part of their code development process.

WORKING TOGETHER TO ADVANCE ENERGY CODES

Cities can play a critical role in the approval and adoption of the national model energy code, as many of the eligible voters include local government and related agencies. With a slate of proposals for the 2021 International Energy Conservation Code (IECC) that made significant efficiency gains for all new buildings, these voters, including representatives from 10 of the 11 Zero Cities, delivered the second biggest efficiency gain in the last decade for the IECC.

The 2021 IECC also incorporates the Zero Code Renewable Energy Appendix submitted by the American Institute of Architects and Architecture 2030. The Appendix will allow jurisdictions to adopt mandatory provisions to meet or exceed the efficiency standards of the IECC and achieve zero-net-carbon emissions annually. It encourages on-site renewable energy systems when feasible and also supports the use of off-site renewable energy.

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Adoption of the 2021 IECC and the additional Zero Code Appendix will put buildings on a quick path to deliver better comfort, higher productivity, increased value, lower operating costs, and zero net emissions.

NEXT STEPS

All of the Zero Cities teams are continuing their work to create policies and programs that center community needs for the built environment. To learn more about their progress over time, please visit: [https://www.usdn.org/projects/zero-cities-project.html#/.](https://www.usdn.org/projects/zero-cities-project.html#/)

Zero Cities Project Partners

National Partners

- Architecture 2030
- Movement Strategy Center
- New Buildings Institute
- Race Forward
- Resource Media
- Urban Sustainability Directors Network
- Carbon Neutral Cities Alliance



Local Teams

- City of Boston
- City of Boulder
- City of Cambridge
- City of Grand Rapids and Urban Core Collective (UCC)
- City of Minneapolis and the Center for Energy Earth and Democracy (CEED)
- New York City
- City of Phoenix
- City of Portland and Verde
- City of San Francisco, Emerald Cities, and PODER
- Washington D.C. and Empower DC
- City of Seattle and a working group of neighborhood and community partners

