GREENLINK EQUITY MAPS

Stories from Portland, Atlanta and Philadelphia

As cities navigate two mounting existential threats, social inequality and climate change, they risk further exacerbating these crises if they fail to center community perspectives in policymaking. The Greenlink Equity Map (GEM) is mapping software designed to support cities with demographic information and data on disparities like asthma rates or energy burden, which is the proportion of household income spent on utilities. GEM can, for example, display a city's racial makeup and energy burden by census tract, revealing correlations between the two.

Recognizing that data alone are not enough, the GEM Process Guide offers a set of guideposts to support city staff in designing and implementing inclusive processes for analyzing and sharing equity data. Not only does the guide lay out how to use the software, but it also flags inequities that cities are frequently blind to, and encourages active community engagement for collaborative use of GEM's insights. That combination provides a new way for cities to break patterns of limited engagement with constituents to move toward centering the needs and perspectives of impacted and historically underserved community stakeholders. Below we provide examples of how equity data are supporting cities to center equity in their climate initiatives.

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> *—Daryl Wright, the chief strategy officer for ECC in Boston.*

Identifying the Need for More Seats at the Table

The city of Portland plans to reduce its carbon emissions to 40 percent below 1990 levels by 2030. As it works toward this goal, it has more than just greenhouse gases to worry about. If the city pursues aggressive climate policies without full consideration of their impact, it could unintentionally pass the costs of compliance down to vulnerable residents. For instance, mandatory energy-efficient retrofits that lower building emis-

sions could be expensed from landlords to tenants. To avoid burdening and displacing those tenants—often Black or brown, already disporportionately impacted by the very environmental effects Portland now seeks to remedy—the city is putting these community members at the forefront of policy discussions.

As a result, Portland's climate change policies have shifted. Not only will the city continue to pursue its emissions targets, but the positive impacts will be aimed at low-income residents first—without increasing their cost of living. In addition, the city has partnered with climate justice leaders on community-led engagement to identify community priorities that intersect with carbon emission reductions and resilience to climate change disasters, like the Pacific Northwest wildfires in 2020 and heat dome in 2021.

A keystone in Portland's community decision-making process was the creation of an energy cost burden "heat map" to complement the city's map of residents vulnerable to housing displacement. Making connections visually between energy cost burden, housing affordability, and economic vulnerability helped spur community discussions about the l ived experience of paying energy bills, especially winter-month heating bills, which consumed up to 45 percent of the income of some of Portland's Black and brown community members.

Portland's creation of an energy cost burden heat map is an example of city efforts that inspired the need for the Greenlink Equity Map and Process Guide, a national dataset now available to empower cities and stakeholders to address inequities in tandem.

Building Momentum in Atlanta and Nationally for City Equity Data

When cities inventory their largest emissions sources, buildings frequently top the list. In 2014 Atlanta began the work of inventorying its inefficient building stock and identifying how these inefficiencies impacted both its climate goals and its residents. In 2017 Atlanta started drafting the Atlanta Clean Energy Plan, a road map for the city to achieve 100 percent clean energy citywide by 2035. As a part of the effort, it tasked Greenlink Analytics with modeling an energy burden map of the city using utility-provided data. What emerged—in addition to a prototype that would eventually become GEM—was a clear connection between equity and a clean energy transition.

The national average for energy burden tends to hover around 3 percent of household income. In the wealthy stretches of northeast Atlanta, the average fell below 2 percent, but in one tranche of underserved zip codes, it was up to 10 percent. "I think this really helped inform and change the conversations around energy burden and energy equity in the city," says Diamond Spratling, Greenlink's GEM project manager. "Energy burden wasn't really part of the city's clean energy project or policy portfolio prior to its Clean Energy Plan." Initially, the plan's community engagement strategy was to target all city sectors equally, but the Greenlink map prompted greater outreach to the most burdened areas, and equity became a more central theme of the plan.

Subsequently, Greenlink built a handful of one-off energy burden maps for other jurisdictions, gaining the attention of the Urban Sustainability Directors Network (USDN) along the way. A survey of more than 100 cities showed there was a clear appetite for a nationwide platform for municipalities that could act as a nexus for climate change and equity. With support from the Kresge Foundation and Bloomberg Philanthropies and input from cities, academia, nongovernmental organizations, a national team of climate and equity advisers, and more, Greenlink developed the nationwide GEM energy burden platform. It also expanded the types of data that could be viewed through GEM. Today the GEM platform includes more than 30 indicators, such as health insurance, asthma, eviction, and internet access rates. Groups like Upright Consulting Services and Facilitating Power were also brought on to help create the Process Guide, which would show cities and communities how best to make use of the data.

The goal of the Process Guide, says Upright Consulting's principal, Jeremy Hays, is to help decision makers understand the "full story" rather than just crunch GEM data. "What you really need is the ability for

people who are impacted by the data, living in low-income communities of color, and city officials to come together," he says. Together they can look at the data, exchange stories that explain the data trends, and scrutinize their own conception of neighborhood characteristics. Eviction policies, for example, might take on a new form when statistics are accompanied by the voices of people who've faced eviction themselves.

Expanding Community-Led, Data-Based Efforts

With the help of Upright Consulting, Greenlink launched pilot programs in Portland, Atlanta, and Philadelphia in 2019. Though dozens of cities had access to GEM by then, the pilots aimed to put the software and guide directly into the hands of community-based organizations, which could then use insights derived from the platform to propose policy recommendations to the city.

Shortly after the GEM pilots launched, COVID-19 reached the United States, impacting the timeline for the three pilot projects. Despite challenging conditions, GEM continued to support equity and climate conversations throughout the pandemic, with cities advancing new approaches to climate policies and programs.

- In Portland, the city will pursue retrofitting building stock without raising living costs for low-income residents, who will also reap the benefits of power grid and solar investments made by the city.

- In Atlanta, GEM data have been essential to advancing the city's 100 percent clean energy plan. Representatives from the most heavily energy-burdened neighborhoods now have seats on the Clean Energy Atlanta Advisory Board, ensuring that as clean energy efforts move forward, they serve the most energy-burdened sectors of the city.

- In Philadelphia, six community-based organizations and 60 residents worked with the city to launch community conversations around experiences with energy burden in the neighborhoods with the highest rates. The findings from this project, including needs and recommendations regarding energy use, utility assistance programs, and home comfort and safety, will inform the development of equitable climate-readiness housing policies in Philadelphia.

Additional cities beyond the three pilots are utilizing GEM and the Process Guide to adjust their approach to new climate policies and programs. Cleveland, for example, is not only looking at the existing energy burden data that GEM provides but also adding two more equity indicators: tree coverage and heat islands. By layering the three data sets atop one another, Cleveland is mapping out how to most efficiently plant new trees that cool and shade energy-burdened neighborhoods. Honolulu is another city using GEM data as part of its climate action plan development.

What's Next?

Even in the short time that it has been available, GEM has proved valuable for the cities and stakeholders that have used it. As cities and states seek to advance the twin goals of increasing equity and minimizing climate change, they will need more tools to plot out policies that serve both of those priorities. The Greenlink team is envisioning ways to build out GEM and the Process Guide even further, including creating a scorecard program that cities can use as an abridged way to mark their progress, as well as expanding the types of data that GEM can accommodate. The 30 equity indicators it currently uses come from a pool of almost 200 suggestions. But more than additional scorecards or data sets, Greenlink hopes that GEM can provide a collaborative dialogue between cities and residents to jointly develop the narrative and priorities for equitable climate action.