# **Equity Assessment Tool**

# ZERO CITIES PROJECT

Prepared by Race Forward for the Zero Cities Project



### **Acknowledgements**

Thank you to all of the Zero Cities Project participants for their commitment to racial equity and their feedback, advice, and input on this document, including: Vinh Mason, City of Portland, OR; Rich Chien, Sraddha Mehta and others, San Francisco Department of Environment; Dan Guilbeault, Government of District of Columbia; Kelly Muellman, City of Minneapolis; Christine Bunch, Tracy Morgenstern, City of Seattle; Debolina Banerjee, and Puget Sound Sage. Thank you to the Zero Cities Project partners, including: Vincent Martinez, Architecture 2030; Corrine Van Hook-Turner and Rosa Gonzalez, Movement Strategy Center, Debbie Slobe, Resource Media, Mark Frankel, New Buildings Institute, and Christie Baumel and Rupal Prasad, Urban Sustainability Directors Network. Special thanks to Rachael DeCruz, and Nalani "Emi" Yoko at Race Forward, Jeremy Hays at Kapwa Consulting, and Aurash Khawarzad for their work on this.

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This Equity Assessment Tool builds on the Urban Sustainability Directors Network's (USDN) "Equity Foundations" program, as well as the work and tools of Race Forward's joint initiative with the Haas Institute for a Fair and Inclusive Society – the Government Alliance on Race and Equity (GARE).

The USDN Equity Foundations program provides a thorough curriculum with videos, worksheets, and facilitation guides to help teams of public sector sustainability professionals gain a foundation in equity as it pertains to their work. Visit: <a href="https://www.usdn.org/public/page/55/Equity-Foundations-Training">https://www.usdn.org/public/page/55/Equity-Foundations-Training</a>

GARE's website provides profiles of local leaders and efforts from around the country, as well as well as tools, resources guides, and issue papers. Visit: <a href="https://www.racialequityalliance.org/tools-resources/">https://www.racialequityalliance.org/tools-resources/</a>

### **Table of Contents**

Introduction	4
Zero Cities Project Overview	4
The Importance Of Leading With Racial Equity	4
The Twin Goals of Racial Equity and Carbon Reductions	5
Equity Assessment Tool - Summary	6
Equity Metrics and the Building Environment	7
1. Energy Cost Burden on People of Color	8
2. Economic Prosperity (Wealth, Jobs, and Business Opportunities for People of Color)	9
3. Gentrification and Displacement	13
4. Substandard Housing and Exposure to Health Risks	16
5. Geographic Location and Exposure to Environmental Risk	18
6. Urban Heat Island Effects	20
7. Community Engagement	24
How to Use Equity Metrics	26
Start with Community Partnerships	26
Work Together to Identify Appropriate City-Specific Metrics	26
Work Together to Use the Sample Metrics to Assess Potential Strategies	27
Conclusion and Next Steps	29

### Introduction

### **Zero Cities Project Overview**

The **Zero Cities Project** is a three-year project supporting cities to develop policy roadmaps and strategies to achieve a zero-carbon building sector through a community collaboration process that centers on racial equity and is informed by technical analysis. The project's goal is to develop and implement policies to achieve a zero net carbon (ZNC) building stock and create a replicable model to share with a broad network of cities. Project partners include the Urban Sustainability Directors Network (USDN) and Carbon Neutral Cities Alliance (CNCA), Architecture 2030, Race Forward, Movement Strategy Center (MSC), New Buildings Institute (NBI), and Resource Media.

The **Zero Cities Project** team partners with eleven U.S. cities that have committed to advanced carbon reduction goals. The project builds on each city's current progress to create a comprehensive set of policies to achieve their goals, and sets pathways for implementation. It will also accelerate current programs that can begin making dramatic carbon reductions from buildings in the near term. This process for developing a comprehensive policy roadmap will model a commitment to equitable outcomes and planning processes, acknowledging that generating the political capacity for aggressive carbon reductions in buildings can only be achieved in partnership with, and to the benefit of, all communities. Thus, the Zero Cities Project partnership with cities will focus on advancing racial equity principles in their roadmap and policy' development processes.

# The Importance Of Leading With Racial Equity

Racial disparities are not natural, or random. From the inception of our country, government at the local, regional, state, and federal level has played a role in creating and maintaining racial inequity. A wide range of laws and policies were passed, including everything from who could vote, who could be a citizen, who could own property, who was property, and where one could live.

With the Civil Rights movement, laws and policies were passed that helped to create positive changes, including making acts of

discrimination illegal. However, despite progress in addressing explicit discrimination, racial inequities continue to be deep, pervasive, and persistent across all indicators of success including in education, criminal justice, jobs, housing, public infrastructure, environment, and health-regardless of region. Many current inequities are sustained by historical legacies and systems that repeat patterns of exclusion. Institutions and structures have continued to create and perpetuate these inequities, despite the lack of explicit intention. Put in its simplest form, racial disparities are symptoms of an uneven playing field, created out of multiple, distinct and interlocking decisions that dictate how our common resources are developed and deployed. Without intentional intervention, institutions and structures will continue to perpetuate racial inequities. Given this reality, it is critically important for cities across the country to be proactively focused on advancing racial equity and to use tools—like this equity assessment—to disrupt the status quo.

It is also necessary to focus efforts at the institutional and structural level, instead of thinking about racism solely in the context of individual acts of bias. While discrimination is still very much a reality, focusing on individual acts of racism, or people's "bad intent," can sometimes obscure the institutional and structural realities that create and maintain racial inequity more broadly. In order to improve outcomes for the greatest number of people, we encourage cities to focus on making changes to *broken systems* and to de-emphasize interventions that are focused on individuals or "broken people."

Utilizing a root cause analysis will allow us to gain a deeper and more nuanced understanding of institutional and structural racism. The five WHYs exercise is a simple way to help identify root causes. Take a problem statement and ask WHY the problem exists and note the answer. Ask WHY of this answer again four times noting the result each time. This will further deepen understanding of the root causes related to the issue.

For example, today, if you ask an audience why we have an obesity epidemic in the United States, most frequently the responses you will get cite food deserts, lack of access to safe spaces to exercise, families with onerous work requirements not leaving time to prioritize wellness activities, and barriers to preventative health care. Fifteen years ago, the overwhelming response would have been variations on 'bad personal choices.' The change in perspective is the result of a root cause analysis coupled with concerted awareness building in the health,

community development, and public policy sectors.

The root cause analysis unpacked this notion of personal choice to reveal the underlying systemic issues that lead people to miss the critical elements that can improve their dietary security and prevent the risk of obesity. Someone may be eating disproportionate amounts of junk food because of food deserts, failing to exercise because there are not safe pathways for pedestrian access, and not maintaining preventative health because they have two stressful jobs. Root cause allows us to understand not only what is happening in communities experiencing racial inequities, but why.

Throughout the remainder of this assessment, we will share data highlighting how people are situated differently based on race. The root causes of those disparities vary, but it is important to remember the ways in which institutional and structural racism are driving the current outcomes we see in our communities, since that is our greatest leverage point for sustainable change.

### The Twin Goals of Racial Equity and Carbon Reductions

The **ROADMAPS** that individual cities develop as part of the Zero Cities Project should prioritize two co-equal goals: Increased racial equity<sup>1</sup> and decreased carbon emissions from the building sector. Taking aim at these twin goals has important implications for the development of policies and strategies that make up the Zero Cities roadmap.

Zero Cities Project team and participants are committed to improving or increasing racial equity¹ throughout the development and implementation of the roadmaps. This goal of improving or increasing equity is markedly different from simply committing to pursue carbon reductions in a manner that doesn't exacerbate existing inequities – a "do no harm" approach. Doing no harm is critical, but it is not sufficient.

Consider racial and social inequities to be an illness that afflict American society as a whole and cause a range of negative effects. When we commit to advancing racial equity, we are committing to healing the "patient", i.e. healing American society. This is very different than simply committing not to cough directly on our sick patient or to keep them up at all hours of the night. This commitment goes beyond a "do no harm" approach to ask: How can we improve the situation? What remedies might we be able to incorporate into our zero net carbon strategies that will advance racial equity?

Integrating racial equity into climate change mitigation strategies will help those strategies be more effective.

Communities of color, low income people, and other vulnerable populations are already experiencing the negative impacts of climate change and will be hit "first and worst" as impacts intensify.<sup>2</sup>

Good planners and problem solvers know that designing programs and solutions with affected communities (instead of for them) produces better outcomes.<sup>3</sup> Pursuing the twin goals of racial equity and carbon reduction will bring the genius of a much broader group of constituencies to the task of developing the Zero Cities roadmaps and policies. In addition, the active support of those broader constituencies can help secure new policies and resources necessary to implement the strategies identified in roadmaps.

Ultimately, the work of advancing racial equity is about addressing failed systems and improving outcomes for all residents of our cities.<sup>4</sup>

<sup>1</sup> Race Forward defines racial equity as "closing the gaps" so that race does not predict one's success, while also improving outcomes for all. Our approach can be described as "race and;" we talk about race explicitly but not exclusively. Given the deep and pervasive nature of racial inequities and the importance of specificity in our strategies, it is important to lead with race, while acknowledging the ways that race intersects with other forms of oppression. By targeting our strategies toward those the system is failing the most—which in many cases is communities of color—we can improve outcomes for everyone

<sup>2</sup> See for example: UW Climate Impacts Group, UW Department of Environmental and Occupational Health Sciences, Front and Centered and Urban@ UW, 2018. An Unfair Share: Exploring the disproportionate risks from climate change facing Washington state communities. A report prepared for Seattle Foundation. University of Washington, Seattle. Available at: <a href="https://cig.uw.edu/our-work/applied-research/an-unfair-share-report/">https://cig.uw.edu/our-work/applied-research/an-unfair-share-report/</a>

 $<sup>3\</sup> Wicked\ Problems: Problems\ Worth\ Solving.\ ACD4.\ Available\ at: \underline{https://www.wickedproblems.com/2\ building\ empathy\ by\ designing\ with.php}$ 

<sup>4</sup> See the concept of Targeted Universalism, including this resource: <a href="https://haasinstitute.berkeley.edu/targeteduniversalism">https://haasinstitute.berkeley.edu/targeteduniversalism</a>

#### The Government Alliance for Racial Equity writes:

"The goal is not to just eliminate the gap between white people and People of Color, but to increase the success for all groups. Racial equity develops goals and outcomes that will result in improvements for all groups, but the strategies are targeted based on the needs of a particular group. Systems that are failing communities of color, are actually failing all of us. Targeted universalism [solving problems for everyone while paying special attention to communities suffering disproportionate burdens] will increase our collective success and be cost effective."

### **Equity Assessment Tool - Summary**

The next section, Equity Metrics and the Building Environment, presents a series of sample metrics that illuminate the intersection between racial equity and potential strategies to reduce carbon emissions from a city's building stock. The sample metrics are intended to prompt questions about how these inequities show up in your city and how your roadmap and policy strategies might address them.

The final section of the tool – How to Use Equity Metrics – goes into more detail about how to apply equity metrics to the development and implementation of your zero net carbon roadmaps or policies. It includes guidance for creating a version of the metrics with local data to reflect local conditions and priorities. It also includes a method for your team to use either the sample equity metrics or refined city-specific metrics to evaluate potential strategies to include in your roadmaps.

This **EQUITY ASSESSMENT TOOL** is intended to be used collaboratively by city and community leaders in order to develop mutual understanding of relevant disparities in your city and to develop local analyses and roadmap strategies to address those disparities. **If the tool is not being used in partnership with community leaders, it is not being used as intended.** 

https://www.racialequityalliance.org/about/our-approach/benefits/

<sup>5</sup> See: Government Alliance for Race and Equity. "Why Working for Racial Equity Benefits Everyone"

### **Equity Metrics and the Building Environment**

The following are examples of racial equity metrics that are relevant to the work of reducing carbon emissions from buildings and energy systems. Having a good understanding of these existing inequities will help your team develop strategies that advance the twin goals of racial equity and zero net carbon buildings.

These metrics reflect the most prominent and well-documented points of intersection between racial equity, carbon emissions, and the built environment. However, they are not exhaustive or definitive. As you review each sample metric, keep these questions in mind. How does this issue show up in my city? How could our efforts to get to zero net carbon buildings incorporate a commitment to addressing these inequities? How could efforts to eradicate racial inequities be accomplished through the decarbonization of the building sector?

### 1. Energy Cost Burden on People of Color

**KEY TAKEAWAYS**: People of Color pay a larger percentage of their income to energy bills. Zero-net carbon strategies should refrain from exacerbating this, while also taking steps to reduce this burden.

**ENERGY BURDEN**: A 2016 study by ACEEE (American Council for an Energy-Efficient Economy) examined the relationship between energy costs, income levels, and race. The following chart and the descriptions that follow are excerpts from that report – "Lifting the High Energy Burdens in America's Largest Cities: How Energy Efficiency Can Improve Low-Income and Underserved Communities."

As can be seen in Figure 1, in many areas across the country

stock and the effectiveness and reach of energy efficiency investments, among other factors, may play a role." In general, energy cost burden on any given household is the result of some combination of higher than normal energy costs (often the result of inefficient buildings and systems) and/or lower than average household income relative to average energy bills.

**IMPACT FOR PEOPLE OF COLOR**: The ACEEE analysis found "low-income multifamily, African-American, Latino, and

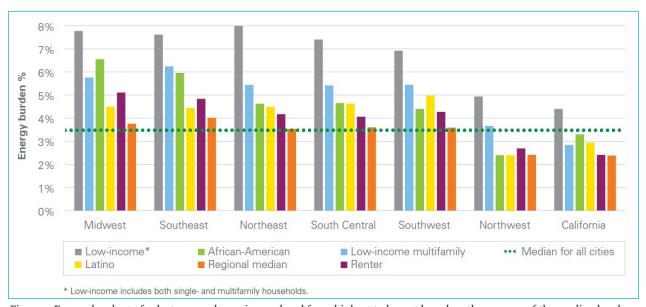


Figure 1. Energy burdent of select groups by region, ordered from highest to lowest based on the average of the median burdens across all groups<sup>7</sup>

People of Color have a higher energy burden than the regional median (and often the national median as well). The data in the report shows that, on average, low-income households pay 7.2 percent of household income on utilities – more than three times the amount that higher income households pay (2.3 percent).

**WHY?**: The study concluded it could not make a causal argument as to why a particular city has high or low energy burden, but states, "Factors such as the efficiency of housing

renters—devote a disproportionate share of their income to energy expenses."

The report also found, "if low-income housing stock were brought up to the efficiency level of the average US home, this would eliminate 35 percent of the average low-income energy burden of low-income households. For African-American and Latino households, 42 percent and 68 percent of the excess energy burden, respectively, would be eliminated."

6"Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities." By Ariel Drehobl and Lauren Ross. Energy Efficiency for All and ACEEE. April 2016. Available at: <a href="https://aceee.org/research-report/u1602">https://aceee.org/research-report/u1602</a>

7 Ibid. 8 Ibid.

# 2. Economic Prosperity (Wealth, Jobs, and Business Opportunities for People of Color)

**KEY TAKEAWAYS**: People of Color have less wealth, higher unemployment, and fewer business opportunities than whites. Investments in reducing carbon emissions from buildings provide opportunities to address these structural inequities.

#### WEALTH DISPARITIES FOR PEOPLE OF COLOR:

According to a Demos analysis, which analyzed data on white, Black, and Latino households from the nationally representative Survey of Income and Program Participation (SIPP) collected in 2011, the median white household had \$111,146 in wealth holdings, compared to just \$7,113 for the

result of homeownership, median white households accrue \$1.34; meanwhile for every \$1 in wealth that accrues to median Latino households as a result of homeownership, median white households accrue \$1.54.

**WHY?**: The Demos analysis points out the role homeownership

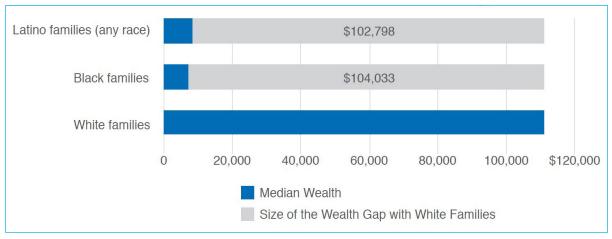


Figure 2. Wealth accumulation and size of the racial wealth gap, 2011; Source Survey of Income and Program Participation (SIPP), 2008 Panel Wave 10. 2011

median Black household and \$8,348 for the median Latino household. (See Figure 2)

The report identified considerable differences among white, Black, and Latino households, including the following excerpts:<sup>10</sup>

- □ In 2011, the median white household had an income of \$50,400 a
   vear compared to just \$32,028 for Blacks and \$36,840 for Latinos.
- While 73 percent of white households owned their own homes in 2011, only 47 percent of Latinos and 45 percent of Blacks were homeowners.
- In addition, Black and Latino homeowners saw less return in wealth on their investment in homeownership: for every \$1 in wealth that accrues to median Black households as a

plays in building wealth in the United States, and how "the nation's public policies have systematically operated to shut Black and Latino families out of numerous opportunities to build housing wealth that benefitted white families." (Note: the report did not include data on other racial and ethnic groups).

In 1934, the Federal Housing Administration was created. This opened up a path to homeownership in our country and created what's now known as the middle class. However it wasn't an opportunity that was shared equally. Due to discriminatory practices, People of Color were largely excluded from the benefits that many white families received. Between 1945 and 1959, African Americans received only 2 percent of all federally insured home loans. Pedlining, the practice of denying key services (like home loans and insurance) or increasing their

<sup>9 &</sup>quot;The Racial Wealth Gap: Why Policy Matters." Amy Traub, Catherine Rutschlin, Laura Sullivan, Tatjana Meschede, Lars Dietrich, and Thomas Shapiro. June 2016. <a href="https://www.demos.org/publication/racial-wealth-gap-why-policy-matters">https://www.demos.org/publication/racial-wealth-gap-why-policy-matters</a> 10 Ibid.

<sup>12</sup> Hanchett, Thomas W., "The Other 'Subsidized Housing': Federal Aid to Suburbanization 1940s-1960s." in John F. Bauman, Roger Biles and Kristin M. Szylvian, From Tenements to the Taylor Homes: In Search of an Urban Housing Policy in Twentieth Century America (University Park, Pa.: Pennsylvania State University Press, 2000), pp. 163-179.

costs for residents in a defined geographical area, was also a common practice at the time and was used as to keep communities of color locked into particular areas.<sup>13</sup>

Redlining, the practice of denying key services (like home loans and insurance) or increasing their costs for residents in a defined geographical area, was also a common practice at the time and was used as to keep communities of color locked into particular areas. FHA manuals often encouraged homeowners and brokers to avoid letting People of Color into neighborhoods, warning that it would bring down the value of surrounding homes.

The impact of this can still be seen in cities across the country today and is why we often see communities of color clustered into neighborhoods that have less access to quality education and services, and more environmental hazards.

The connection between education and wealth as a

achievement."<sup>14</sup> Demos also argues "the policy decisions to not invest in quality education for all young people, compounded by residential segregation contributed to low-income Black and Latinos students being concentrated in "low quality, underresourced schools."<sup>15</sup>

The following statistics and Figure 3 are key excerpts from the Economic Policy Institute Report <sup>18</sup>:

- ⇒ While the African American unemployment rate is at or below its pre-recession level in 17 states (of the 22 states and the District of Columbia for which these data are available), in 14 states and the District of Columbia, African American unemployment rates exceed white unemployment rates by a ratio of 2-to-1 or higher.
- The District of Columbia has the highest black—white unemployment rate ratio overall, at 8.5-to-1, while South Carolina and Maryland have the highest ratios among states (3.2-to-1 and 2.8-to-1, respectively).



Figure 3. Unemployment Rate; Source: Bureau of Labor Statistics / deptofnumbers.com<sup>17</sup>

compounding factor has also been studied extensively. An Urban Institute report concludes, "Family wealth is strongly associated with both higher educational attainment and upward educational mobility, suggesting that family wealth is an important factor in promoting greater educational

The highest African American unemployment rate is in the District of Columbia (12.9 percent), followed by Illinois (9.1 percent) and New Jersey (9.0 percent). The highest Hispanic state unemployment rate is in Connecticut (10.0 percent). In contrast, the highest white state unemployment rate is 5.2 percent, in West

Jones. May 2018. <a href="https://www.epi.org/files/pdf/146772.pdf">https://www.epi.org/files/pdf/146772.pdf</a>
17 Unemployment Rates. Bureau of Labor Statistics / Department of Numbers. Website: <a href="https://www.deptofnumbers.com/unemployment/demographics/">https://www.deptofnumbers.com/unemployment/demographics/</a>
18 "In 14 States and DC, the African American Unemployment Rate is at Least Twice the White Unemployment Rate". State Jobs by Race & Ethnicity. By Janelle Jones. May 2018. <a href="https://www.epi.org/files/pdf/146772.pdf">https://www.epi.org/files/pdf/146772.pdf</a>

<sup>13 &</sup>quot;How We Built the Ghettos," By Jamelle Bouie. March, 2014. <a href="https://www.thedailybeast.com/how-we-built-the-ghettos">https://www.thedailybeast.com/how-we-built-the-ghettos</a>

<sup>14 &</sup>quot;Wealth Inequality is a Barrier to Education and Social Mobility" Breno Braga, Signe-Mary McKernan, Caroline Ratcliffe, and Sandy Baum. April 2017. https://www.urban.org/sites/default/files/publication/89976/wealth\_and\_education\_o.pdf

<sup>15</sup> Ibid.

<sup>16 &</sup>quot;In 14 States and DC, the African American Unemployment Rate is at Least Twice the White Unemployment Rate". State Jobs by Race & Ethnicity. By Janelle

- Virginia.
- While the Hispanic unemployment rate is at or below its pre-recession level in 13 states (of the 16 states for which these data are available), there is no state where the Hispanic unemployment rate is lower than the white rate.
- □ In five states and the District of Columbia, Hispanic unemployment rates exceed white unemployment rates by a ratio of 2-to-1 or higher (Connecticut, 3.4-to-1; Massachusetts, 2.1-to-1; Washington, 2.1-to-1; Colorado, 2.0-to-1; District of Columbia, 2.0-to-1, and Idaho, 2.0-to-1).

WHY?: Large randomized studies from 2004 found labor markets and unemployment are two of the primary drivers of the racial wealth gap during the preceding 25 years. 19 These drivers also have historical roots. The Demos analysis points out that only after the Civil Rights Act of 1964 was discrimination on the basis of race, color, religion, sex, and national origin, prohibited by federal law. "Yet public policy decisions—from the enduring exclusion of certain job categories to the protections of the Fair Labor Standards Act to immigration laws that inhibit workers from exercising their full rights in the workplace—continue to shape the U.S. labor market in ways that systematically disadvantage Blacks and Latinos, helping to explain why People of Color bring in lower incomes and receive lower wealth returns than white families."<sup>220</sup>

LOCATION MATTERS: The conclusion of a PolicyLink and PERE study, Race, Place, and Jobs states, "Place matters for unemployed People of Color, and it often matters more in regions with large racial inequities in unemployment. Geographically focused employment strategies are an important tool both for improving economic conditions in the neighborhoods that need it most and for reducing region-wide racial inequality in employment."<sup>21</sup>

The PolicyLink analysis looked at racial and spatial inequality of unemployment across the 150 largest metros. Regions with large racial inequalities in unemployment also tend to have greater spatial inequality in unemployment, with unemployed workers more likely to live in high-unemployment neighborhoods, particularly unemployed workers of color. The Race, Place, and Jobs analysis states (Figure 4):

"Detroit, Michigan, exemplifies the overlap between racial and spatial inequality in unemployment. As shown in the following maps, areas of high unemployment and areas where People of Color live have a high degree of overlap. About 18 percent of tracts in the Detroit region are considered high unemployment neighborhoods, and they all tend to be home to large shares of People of Color. Not surprisingly, the Detroit region also has one of the largest unemployment gaps between People of Color and Whites: 10 percentage points, or the seventh highest among the largest 150 regions."<sup>22</sup>

WHY?: One study cited by the Race, Place, and Jobs report points to "America's legacy of racial segregation and continued patterns of exclusion have left many People of Color stuck in neighborhoods where opportunity structures like transit access, clean air, public parks, good schools, retail, and services are largely missing."<sup>23</sup> Another study indicates that "[t]his overlap between racial and spatial inequality conspires against economic success and is a major factor driving high levels of downward mobility among middle-income Black families."<sup>24</sup>

#### **OPPORTUNITIES FOR MINORITY OWNED BUSINESSES:**

Today, U.S. minority business enterprises represent 29% of all firms, but, according to the Minority Business Development Agency at the U.S. Department of Commerce, the gap in combined gross receipts between these firms and their non-minority counterparts is 1 to 10.25 Minority-owned firms are smaller in size and scale than their non-minority counterparts. Only 2% of minority firms generate gross receipts of more than \$1M and only 11% of minority-owned firms have paid employees<sup>26</sup> compared to 22% for non-minority firms.<sup>27</sup> If

<sup>19</sup> Devah Pager, Bruce Western and Bart Bonikowski, "Race at Work: A Field Experiment of Discrimination in Low-Wage Labor Markets," paper presented at Princeton University workshop (2008); Marianne Bertrand and Sendhil Mullainathan, "Are Emily and Brendan more employable than Latoya and Tyrone? Evidence on racial discrimination in the labor market from a large randomized experiment," *American Economic Review 94*, no. 4 (2004): 991-1013. 20 Ibid.

<sup>21 &</sup>quot;Race, Place, and Jobs: Reducing Employment Inequality in America's Metros". By Justin Scoggins, Sarah Treuhaft, and Sheil Xiao. Policy Link, PERE. <a href="http://www.policylink.org/sites/default/files/Race\_Place\_Jobs\_02-15-17.pdf">http://www.policylink.org/sites/default/files/Race\_Place\_Jobs\_02-15-17.pdf</a> (p.2) 22 Ibid.

<sup>23</sup> National Equity Atlas, "Percent living in high-poverty neighborhoods by

race/ethnicity: United States, 2014," <a href="http://nationalequityatlas.org/indicators/Neighborhood\_poverty">http://nationalequityatlas.org/indicators/Neighborhood\_poverty</a>.

<sup>24</sup> The Pew Charitable Trusts, "Pursuing the American Dream: Economic Mobility Across Generations," (Washington, DC: The Pew Charitable Trusts, 2012), <a href="https://www.pewtrusts.org/~/media/legacy/uploadedfiles/www.pewtrustsorg/reports/economic\_mobility/pursuingamericandreampdf.pdf">https://www.pewtrustsorg/reports/economic\_mobility/pursuingamericandreampdf.pdf</a>
25 Minority Business Development Agency Website: <a href="https://www.mbda.gov/page/minority-business-development-agency-vital-making-america-great">https://www.mbda.gov/page/minority-business-development-agency-vital-making-america-great</a>
26 Ibid.

<sup>27 &</sup>quot;Fact Sheet: U.S.Minority-Owned Firms" <a href="https://www.mbda.gov/sites/mbd

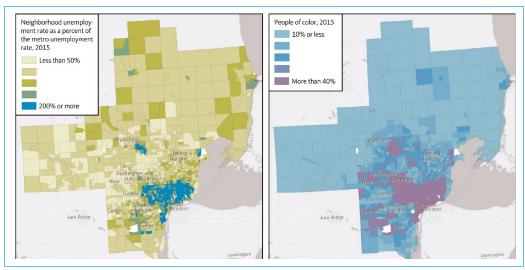


Figure 4. In Detroit, high-unemployment neighborhoods correlate with communities of color; *Source: PolicyLink/PERE analysis of the 2015 five-year American Community Survey (ACS) summary file. Note: Areas in white are missing data. People of color includes all racial/ethnic groups other than non-Hispanic White* 

minority-owned firms were to obtain entrepreneurial parity, the U.S. economy would realize 13 million more jobs.<sup>28</sup>

WHY?: One study reviewed over 2,385 distinct disparity studies from public contracting markets across the country. Disparity studies compute a disparity ratio by dividing the "utilization" of minority business (i.e. contract awards) by the availability of minority-owned businesses in a given geographic or product market. A ratio of .80 or lower is considered to be a substantial disparity.<sup>29</sup> This review documented substantial disparities in over 78 percent of studies conducted across the country. What's more, the disparities were significant and striking. The median disparity ratio from all 2,385 reports was .19, far below the .80 threshold for documenting a substantial disparity.<sup>30</sup>

In addition to inequities in opportunity associated with government contracting, minority-owned firms face welldocumented disadvantages compared to their non-minority counterparts in accessing capital.

The findings below are direct excerpts from the analysis:31

- Minority-owned firms are less likely to receive loans; and when approved, receive lower loan amounts.
- Minority-owned firms are more likely to be denied loans at a rate

nearly 3x's higher than non-minority firms.

➡ Minority-owned firms are likely to pay higher interest rates; on average 7.8% while non-minority firms pay on average 6.4%.

<sup>28</sup> Minority Business Development Agency Website: <a href="https://www.mbda.gov/page/minority-business-development-agency-vital-making-america-great">https://www.mbda.gov/page/minority-business-development-agency-vital-making-america-great</a>
29 "Executive Summary – Contracting Barriers and Factors Affecting Minority Business Enterprises A Review of Existing Disparity Studies". January 2017.

Minority Business Development Agency Website. <a href="https://www.mbda.gov/news/news-and-announcements/2017/01/executive-summary-contracting-barriers-and-factors-affecting">https://www.mbda.gov/news/news-and-announcements/2017/01/executive-summary-contracting-barriers-and-factors-affecting</a>

<sup>30</sup> Minority Business Development Agency Website: <a href="https://www.mbda.gov/page/minority-business-development-agency-vital-making-america-great">https://www.mbda.gov/page/minority-business-development-agency-vital-making-america-great</a> 31 Ibid.

### 3. Gentrification and Displacement

**KEY TAKEAWAYS**: People of Color are at risk of being displaced from their neighborhoods as cities and the private sector make investments in the built environment. Investment aimed at reducing carbon emissions could be used to help stabilize these populations and should avoid exacerbating these risks. This metric is also connected to the wealth gap discussed in Metric number two above.

**RENTS AND VACANCY RATES**: Displacement risks due to rising rents are a serious concern for low-income households and People of Color. The Center for American Progress analyzed median incomes, rental rates, and vacancy rates from 2000-2017 and found the following results excerpted in full here:

- Since 2000, rent of primary residences has increased, on average, by 15 percent in real terms, while the median income of renter households has decreased by 2 percent.
- Every year, millions of people are evicted—in many cases, because they cannot afford their rent.
- The National Low Income Housing Coalition indicates that across the nation, it is impossible for a person working full time at the federal minimum wage to afford a two-bedroom rental unit at the fair market rent.
- People of Color are disproportionately represented among renter households, and 1 in 5 renters is foreign-born.<sup>32</sup>

**WHY?**: The study found two explanations for these trends, excerpted in full here:

- Lack of sufficient affordable housing, combined with other barriers such as housing market discrimination, increases the risk of displacement.
- In the years following the Great Recession, rental markets across the nation have become tighter due to the drop in homeownership; the increase in rental demand; and inadequate production of homes, particularly in the lowerincome spectrum of the housing market.<sup>33</sup>

The following chart shows rental vacancy rates going down while the number of renters has gone up (Figure 5). Similar to the wealth gap discussed above, this puts pressure on rental markets, often squeezing out lower-income renters who are disproportionately People of Color.

**HOMEOWNERSHIP**: Related to the wealth gap discussed

in metric two above, rates of homeownership for People of Color remain much lower than rates for Whites. Excerpts from the "The State of the Nation's Housing 2018" from the Joint Center for Housing Studies of Harvard University are excerpted below:<sup>34</sup>

- Homeownership rates for Black households are near a 30 year low.
- Compared with 1994, Black homeownership rates have increased just 0.3 percentage point while white rates have risen
   2.2 percentage points, widening the black-white gap to 29.2 percentage points.
- This disparity is even more troubling given that the gap was 23.5 percentage points in 1983, when the Black homeownership rate was 2.6 percentage points higher than today.
- Although rates for both Hispanics and Asians have risen somewhat since 1994, the disparities with white rates are still substantial at 26.1 percentage points and 16.5 percentage points, respectively.<sup>35</sup>

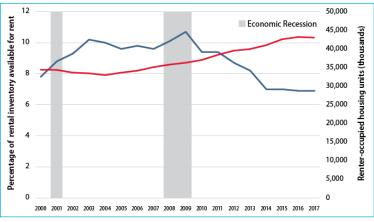


Figure 5. Rental vacancy rates and growth of renter households; Source: CAP calculations of data from U.S. Census Bureau, "Housing Vacancies and Homeownership (CPS/HVS)," available at <a href="https://www.census.gov/housing/hvs/data/histtabs.html">https://www.census.gov/housing/hvs/data/histtabs.html</a> (last accessed April 2018); The National Bureau of Economic Research, "US Business Cycle Expansions and Contractions," available at <a href="http://admin.nber.org/cycles/cyclesmain.html">http://admin.nber.org/cycles/cyclesmain.html</a> (last accessed April 2018).

<sup>32 &</sup>quot;Homes for All. A Program Providing Rental Supply Where Working Families Need it Most." By Michela Zonta. Center for American Progress. July 2018. https://www.americanprogress.org/issues/economy/reports/2018/07/24/452645/homes-for-all/33 Ibid.

<sup>34 &</sup>quot;The State of the Nation's Housing 2018." The Joint Center for Housing Studies of Harvard University. 2018. <a href="http://www.jchs.harvard.edu/sites/default/files/Harvard\_ICHS\_State\_of\_the\_Nations\_Housing\_2018.pdf">http://www.jchs.harvard.edu/sites/default/files/Harvard\_ICHS\_State\_of\_the\_Nations\_Housing\_2018.pdf</a>
35 Ibid.

**WHY?**: The Harvard study pointed to an overall trend of lack of supply of lower cost homes.<sup>36</sup> Part of this is due to more than 3.9 million single-family homes being converted to rentals between 2006-2016, and the low-level of single-family construction.<sup>37</sup> The study points out that both home values and rental rates have increased faster than incomes:

"The cost-burdened (defined as households spent more than 30 percent of their incomes on housing) share of renters doubled from 23.8 percent in the 1960s to 47.5 percent in 2016 as housing costs and household incomes steadily diverged, with the largest increases occurring in the 2000s. Adjusting for inflation, the median rent payment rose 61 percent between 1960 and 2016 while the median renter income grew only 5 percent. ... The pattern for homeowners is similar, with the median home value increasing 112 percent and the median owner income rising only 50 percent."<sup>38</sup>

In addition, the foreclosure crisis hit communities of color particularly hard. Findings from a study by the Institute on Assets and Social Policy are excerpted in full below:<sup>39</sup>

- ➡ Half the collective wealth of African-American families was stripped away during the Great Recession due to the dominant role of home equity in their wealth portfolios and the prevalence of predatory high-risk loans in communities of color.
- The Latino community lost an astounding 67 percent of its total wealth during the housing collapse.
- Since 2007, 10.9 million homes went into foreclosure. While the majority of the affected families are white, borrowers of color are more than twice as likely to lose their homes. These higher foreclosure rates reflect a disturbing reality: borrowers of color were consistently more likely to receive high-interest risky loan products, even after accounting for income and credit scores.

MAPPING DISPLACEMENT RISK: High rents, limited vacancies, and low homeownership rates are core contributors to gentrification and displacement. But displacement is complex and has a number of different variables.

In 2016 the City of Seattle's Office of Planning and Community Development published a report that used displacement risk

Figure 6. Homeownership Rate (percent); Source: JCHS taulations of US Census Bureau, Housing Vcancy Surveys

and access to opportunity to analyze impacts related to Seattle's Growth Strategy. The report created indices of vulnerability and displacement risk by overlaying a number of indicators on maps of the city. The result is a detailed spatial analysis of displacement risk that can be viewed in aggregate or by individual indicator.<sup>40</sup>

As the maps in Figure 7 highlight, displacement risk has a number of different factors and is primarily spatial. In order for cities to gain a strong understanding of which communities (or buildings) are in high-risk areas for gentrification and displacement, it is important to dedicate time and resources to gain a deeper understanding of how these dynamics are playing out in a given location. This information should be used by planners to proactively mitigate displacement and gentrification pressures in buildings and communities that are disproportionately at risk and requires careful consideration of who benefits and who is burdened by investments in building stock.

<sup>85
80
75
70
65
60
55
50
45
1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017</sup>Race/Ethnicity • Black • Hispanic • Asian/Other • White
Notes: Black, Whites, and Asians/Others are non-Hispanic. Hispanics maybe of any race

<sup>36</sup> Ibid. (p.4)

<sup>37</sup> Ibid. (p.4)

<sup>38</sup> http://www.jchs.harvard.edu/sites/default/files/Harvard\_JCHS\_State\_of\_the\_Nations\_Housing\_2018.pdf (p.4)

<sup>39 &</sup>quot;The Roots of the Widening Racial Wealth Gap: Explaining the Black-White Economic Divide," by Thomas Shapiro, Tatjana Meschede, and Sam Osoro. February 2013

<sup>40 &</sup>quot;Seattle 2035: Growth and Equity: Analyzing Impacts on Displacement and Opportunity Related to Seattle's Growth Strategy." Seattle Office of Planning and Community Development. May 2016. Available at: <a href="https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/SeattlesComprehensivePlan/FinalGrowthandEquityAnalysis.pdf">https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/SeattlesComprehensivePlan/FinalGrowthandEquityAnalysis.pdf</a>

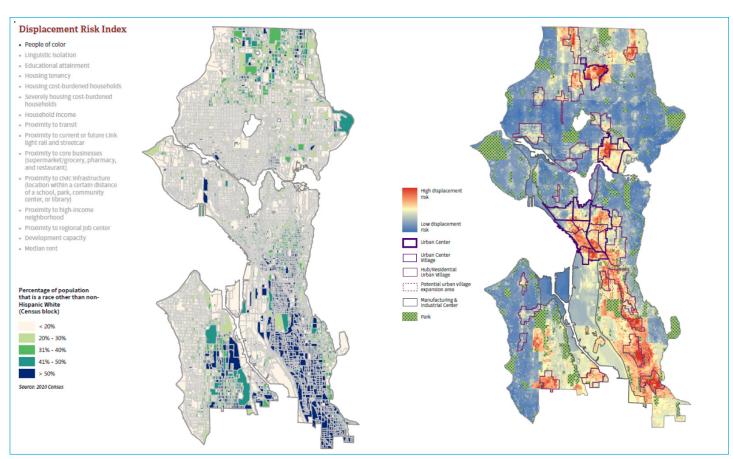


Figure 7. Displacement Risk Index

### 4. Substandard Housing and Exposure to Health Risks

**KEY TAKEAWAYS**: People of Color are more likely to live in substandard housing that increases their exposure to health risks like mold, lead, poor indoor air quality, and asthma triggers. Investments in reducing carbon emissions from a city's building stock should consider how to also mitigate these risks.

**SUBSTANDARD HOUSING**: A 2005 study using data from the American Housing Survey illustrates the breakdown of individuals living in moderately or severely substandard housing by race/ethnicity (See Figure 8).

The data shows that the percentage of non-Hispanic Blacks and Hispanics that reside in moderately substandard housing is 2-3 times higher than the percentage of whites who live in moderately substandard housing. The percentage of People of Color that live in severely substandard housing

disparities are tied to the conditions affecting poor, highly racially-segregated neighborhoods – substandard housing, environmental hazards, and a lack of financial resources.<sup>45</sup> Substandard housing on its own is often responsible for poor indoor air quality, mold, mildew, dust, and pests, which are all triggers for asthma attacks.

There are profound racial disparities in both the prevalence and impacts of asthma in the United States. African Americans, for example, not only have a higher prevalence of asthma than

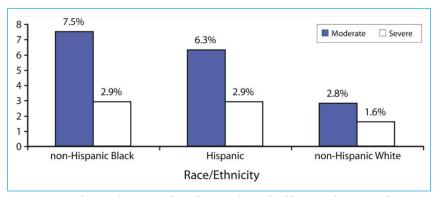


Figure 8. Prevalence of severe and moderate substandard housing by race and ethnicity <sup>41</sup> Source: American Housing Survey, 2005.

is nearly 2 times greater than the percentage of whites.42

EXPOSURE TO HEALTH RISKS: Populations in substandard housing are more likely to have environmental diseases and injuries.<sup>43</sup> In particular, low-income communities and communities of color across the country face disproportionately higher rates of asthma than other communities. These

whites; they also experience higher rates of asthma-associated morbidity and death.  $^{\rm 46}$ 

One source of indoor air pollution with a direct connection to household energy use and emissions is the substandard fossil fuel burning appliances that are more common in low-income homes. These appliances burn natural gas, propane, oil,

causal relationship between indoor exposure and the exacerbation of asthma); Action Against Asthma, supra note 1, at 8-9 (linking asthma exacerbations to indoor allergens such as pets and cockroaches, and outdoor pollutants such as ozone and diesel exhaust); Gary Evans & Elyse Kantrowitz, Socioeconomic Status and Health: The Potential Role of Environmental Risk Exposure, in *The Nation's Health* 93, 97 (Philip R. Lee & Carroll L. Estes eds., 2003) (linking asthma to presence of cockroaches and pollens, particularly in low-income communities).

46 "Asthma in African Americans: What can we do about the higher rates of disease?" Stacy K. Silvers, MD and David M. Lang MD. Cleveland Clinic Journal of Medicine. 2012 March;79(3):193-201. <a href="https://www.mdedge.com/ccjm/article/95718/pulmonology/asthma-african-americans-what-can-we-do-about-higher-rates-disease">https://www.mdedge.com/ccjm/article/95718/pulmonology/asthma-african-americans-what-can-we-do-about-higher-rates-disease</a>

<sup>41 &</sup>quot;Environmental health disparities in housing." *Am J Public Health*. 2011;101 Suppl 1 (Suppl 1):S115-22. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222490/figure/fig1/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222490/figure/fig1/</a>

<sup>42</sup> Ibid.

<sup>43</sup> Environmental health disparities in housing. Am J Public Health. 2011;101 Suppl 1(Suppl 1):S115-22.

<sup>44 &</sup>quot;The Asthma Crisis in Low-Income Communities of Color: Using the Law as a Tool for Promoting Public Health". Das, Alina. New York University Review of Law and Social Change. 2007 <a href="https://statici.squarespace.com/static/5373bo88e4bo2899e91e9392/t/53b44581e4boa4da2080fec8/1404323201683/Asthma+Crisis+in+Low-Income+Communities+of+Color.pdf">https://statici.squarespace.com/static/5373bo88e4bo2899e91e9392/t/53b44581e4boa4da2080fec8/1404323201683/Asthma+Crisis+in+Low-Income+Communities+of+Color.pdf</a>

<sup>45 &</sup>lt;u>Ibid</u> See Comm. on the Assess. of Asthma & Indoor Air, Inst. of Med., Clearing the Air: Asthma and Indoor Air Exposures 9 tbl.2 (2000) (showing

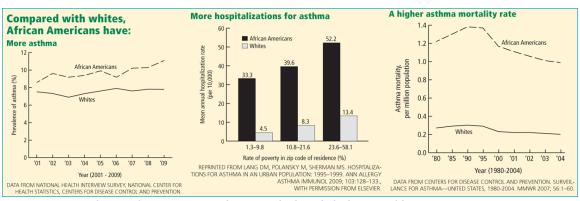


Figure 9. Source: Asthma in African Americans: What can we do about the higher rates of disease?47

kerosene, charcoal briquettes, or other fuels that produce carbon monoxide. Carbon monoxide is one of the most deadly indoor air pollutants. The EPA reports that unintentional carbon monoxide poisonings are responsible for about 500 deaths and 15,000 visits to emergency rooms annually, while Hispanics and African Americans have been found to be three to four times as more likely than whites to die of carbon monoxide poisoning.<sup>48</sup>

A 2017 report from the Urban Institute points to the consequences of these inequities and how they are compounded by other geographic risks facing low-income people and People of Color. "Old housing in old neighborhoods is often contaminated with lead, asbestos, mold, and other hazards, and, as the water crisis in Flint, Michigan, demonstrates, the infrastructure serving these homes is often poorly maintained and exposes residents to additional toxic harms. Newer housing, by contrast, offers (predominantly high-income) residents superior quality and reduces homebased health hazards. The divergences continue as low-income neighborhoods sit in less favorable locations than high-income neighborhoods, with greater exposure to floods, highway noise and pollution, and industrial or hazardous land uses."49 The equity metrics in the following sections focus on the broader environmental risks that are associated with the geographic location and disproportionately impact households and communities of color.

<sup>47</sup> Ibid.

<sup>48</sup> See the U.S. EPA's fact sheet on preventing carbon monoxide poisoning: https://www.epa.gov/sites/production/files/2015-08/documents/pcmp\_english\_100-f-09-001.pdf

<sup>49 &</sup>quot;A Building Block for inclusion Housing for Community-Level Diversity, Participation, and Cohesion". By Rolf Pendall, Urban Institute. September 2017. https://www.urban.org/sites/default/files/publication/93616/a-building-block-for-inclusion\_1.pdf

### 5. Geographic Location and Exposure to Environmental Risk

**KEY TAKEAWAYS**: The geographic location of communities of color often exposes People of Color to increased environmental risks like flooding and pollution. Policies and actions to invest in reducing carbon emissions from a city's building stock should consider how to also mitigate these risks.

#### DISPROPORTIONATE EXPOSURE TO POLLUTION AND

**TOXINS**: Geographic location, socioeconomic status, and race all affect an individual's exposure to environmental risk.<sup>50</sup> The disproportionate proximity and exposure to pollution, toxins, and other environmental hazards of communities of color has been well-documented in environmental justice literature.<sup>51</sup>

According to the 20 year update of the seminal report, "Toxic Waste and Race," 56% of the population near toxic waste sites are People of Color; and "race continues to be an independent predictor of where hazardous wastes are located, and it is a stronger predictor than income, education and other socioeconomic indicators." <sup>52</sup>

People of Color are similarly more exposed to transportation-related air pollution than white people. A recent study of annual average NO2 concentrations showed that in 2000 and 2010, disparities in NO2 concentrations were larger by race than by income. Estimated average NO2 concentrations remained 37% higher for People of Color than whites in 2010, and People of Color were 2.5 times more likely than whites to live in a block group with an average NO2 concentration above the World Health Organization's annual guideline.<sup>53</sup>

A national study of 215 U.S. Census tracts found that People of Color were more exposed than white people to airborne particulate matter, such as chlorine, aluminum, and elemental carbon.<sup>54</sup> This exposure is predominantly due to geographic

location. For example, New York City conducts sophisticated air quality surveys that show significant disparities in air quality-related health and mortality rates based on neighborhood income level. For example, asthma hospitalization rates from PM2.5 are five times higher for adults in the city's high-poverty [high People of Color] neighborhoods than in low-poverty neighborhoods.<sup>55</sup>

### **DISPROPORTIONATE EXPOSURE TO FLOOD RISK**: While there is much less research on racial disparities in exposure to

flood risk than in exposure to toxins, studies to date indicate that People of Color are often at greater risk of being affected by flooding.

A 2015 study looked at the environmental justice consequences of flood risk in Miami, Florida and found that neighborhoods with "non-Hispanic Blacks, Hispanics, and Hispanic subgroups of Colombians and Puerto Ricans are exposed to inland flood risks in areas without water-related amenities, while Mexicans are inequitably exposed to coastal flood risks." Numerous studies of the impacts of flooding in New Orleans after Hurricane Katrina also point to the race as a factor in vulnerability and in depths of impact or after effects. S

Another study looked at the cost of flood-related damage to residences in the U.S. and found that while high-income households were most likely to be located in high-flood-risk areas (because of a desire to live near water-related amenities),

<sup>50</sup> Environmental Conditions. Social Determinants of Health. Healthy People 2020. US Department of Health and Human Services.2018. <a href="https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/environmental">https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/environmental</a>

<sup>51</sup> See: "Annotated Bibliography for Environmental Justice Research 2016-2018" U.S. Environmental Protection Agency. 2018. <a href="https://www.epa.gov/healthresearch/annotated-bibliography-environmental-justice-research-2016-2018">https://www.epa.gov/healthresearch/annotated-bibliography-environmental-justice-research-2016-2018</a>

<sup>52 &</sup>quot;Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years." D Bullard, Robert & Mohai, Paul & Saha, Robin & Wright, Beverly. (2008). Environmental Law. 38.

<sup>53 &</sup>quot;Changes in Transportation-Related Air Pollution Exposures by Race-Ethnicity and Socioeconomic Status: Outdoor Nitrogen Dioxide in the United States in 2000 and 2010"

Lara P. Clark , Dylan B. Millet , and Julian D. Marshall. *Environmental Health Perspectives*. Published:14 September 2017. CID: 097012 <a href="https://doi.org/10.1289/EHP959">https://doi.org/10.1289/EHP959</a>

<sup>54 &</sup>quot;Environmental inequality in exposures to airborne particulate matter

components in the United States." Bell ML, Ebisu K. Environ Health Perspectives. 2012;120(12):1699.

<sup>55</sup> See NYC's study, Air Pollution and the Health of New Yorkers: The Impact of Fine Particles and Ozone, pages 15-33: <a href="https://www1.nyc.gov/assets/doh/downloads/pdf/eode/eode-air-quality-impact.pdf">https://www1.nyc.gov/assets/doh/downloads/pdf/eode/eode-air-quality-impact.pdf</a>

<sup>56 &</sup>quot;Exposure to Flood Hazards in Miami and Houston: Are Hispanic Immigrants at Greater Risk than Other Social Groups?" Alejandra Maldonado, Timothy W. Collins,\* Sara E. Grineski, and Jayajit Chakraborty. Int J Environ Res Public Health. 2016 Aug; 13(8): 775. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4997461/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4997461/</a>

<sup>57 &</sup>quot;Katrina and Vulnerability: The Geography of Stress." Andrew Curtis, Jacqueline Warren Mills, Michael Leitner. *Journal of Health Care for the Poor and Underserved*. Johns Hopkins University Press. Volume 18, Number 2, May 2007 <a href="http://muse.jhu.edu/article/214400">http://muse.jhu.edu/article/214400</a>

<sup>58 &</sup>quot;Remembering Katrina: Wide racial divide over government's response." Carol Dopherty. August 27, 2015. Pew Research Center. <a href="http://www.pewresearch.org/fact-tank/2015/08/27/remembering-katrina-wide-racial-divide-over-governments-response/">http://www.pewresearch.org/fact-tank/2015/08/27/remembering-katrina-wide-racial-divide-over-governments-response/</a>

low-income households live in higher flood-risk areas than middle-income households in order to find affordable housing.<sup>59</sup>

This illustration from the Upper Manhattan Climate Action Manual presents a striking example of this relationship between affordable housing and flood risk (See Figure 10).<sup>60</sup> Note the location of affordable housing (NYC Housing Authority Developments) in the flood risk zones.

These relationships between geographic location, race, and flood-risk will continue to present challenges. Recent studies using finer grained data analysis indicate that flood risk has been markedly underestimated across much of the United States. 62 And, sea level rise associated with climate change will continue to exacerbate flood risk in the coming years.

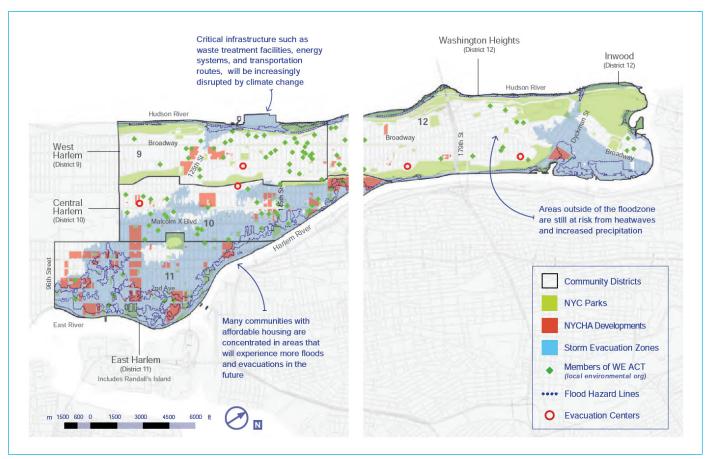


Figure 10. Upper Manhattan Map; Source: The Upper Manhattan Climate Action Manual<sup>61</sup>

<sup>59 &</sup>quot;Inequities in Flood Management Protection Outcomes." Camilo Sarmiento and Ted E. Miller. May 2006. Selected Paper, American Agricultural Economic Association Meetings Long Beach 2006.

<sup>60 &</sup>quot;Upper Manhattan Climate Action Manual". Created and published by Aurash Khawarzad. 2018 <a href="http://www.adaptationclearinghouse.org/resources/upper-manhattan-climate-action-manual.html">http://www.adaptationclearinghouse.org/resources/upper-manhattan-climate-action-manual.html</a>

<sup>61</sup> Ibid.

<sup>62</sup> See: "New Study Shows Flood Risks Across the U.S. are Underestimated (in a Big Way)" Cara Byington. February 28, 2018. https://blog.nature.org/science/2018/02/28/new-study-shows-flood-risks-across-the-u-s-are-underestimated-in-a-big-way/

### 6. Urban Heat Island Effects

**KEY TAKEAWAYS**: People of Color and other vulnerable populations face disproportionate risks of death and other impacts of extreme heat. These risks are largely associated with the characteristics of their neighborhoods (as well as access to air conditioning). Efforts to reduce carbon emissions from the built environment can incorporate strategies to reduce these risks.

#### **DEADLY HEAT RISK FOR PEOPLE OF COLOR: Heat-**

related deaths top the list of weather-related deaths in the U.S. And the problem will likely get worse.<sup>63</sup> Climate change will dramatically increase temperatures in cities across the U.S. in the coming years.<sup>64</sup>

People of Color are particularly vulnerable to the dangers of extreme heat events due to the characteristics of their homes and neighborhoods. A study by National Institute of Health (NIH), The Racial/Ethnic Distribution of Heat Risk – Related Land Cover in Relation to Residential Segregation, found that People of Color are more likely to live in neighborhoods with dangerous combinations of heat risk-related land cover (i.e. high impervious surfaces and low urban tree canopy) that contribute to the often deadly Urban Heat Island Effects.<sup>66</sup>

These effects are related to racial segregation within cities. The likelihood of living in dangerous conditions increased with

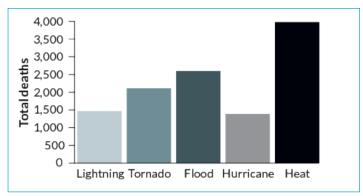


Figure 11. U.S. weather-related deaths 1986-2016; Source: T. Tibbets, Science News. National Weather Service <sup>65</sup>

increasing degrees of metropolitan segregation. Adjusting the analysis to take into account home ownership and poverty did not substantially change these results.<sup>68</sup>

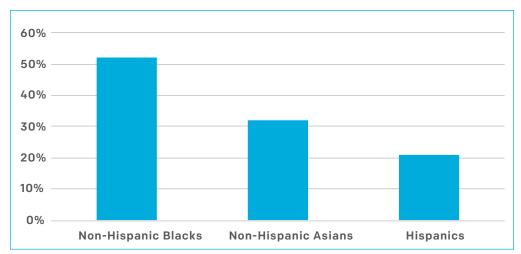


Figure 12. More likely than Non-Hispanic Whites to live in areas with heat risk-related land cover; Source: The Racial/Ethnic Distribution of Heat Risk-Related Land Cover in Relation to Residential Segregation<sup>67</sup>

<sup>63</sup> Ready.gov Website: https://www.ready.gov/heat

<sup>64</sup> See for example: https://www.nytimes.com/interactive/2018/08/30/climate/how-much-hotter-is-your-hometown.html

<sup>65 &</sup>quot;Are We Ready for the Deadly Heat Waves of the Future" by Aimee Cunningham. Science News. April 2018. <a href="https://www.sciencenews.org/article/are-we-ready-deadly-heat-waves-future">https://www.sciencenews.org/article/are-we-ready-deadly-heat-waves-future</a>

<sup>66 &</sup>quot;The Racial/Ethnic Distribution of Heat Risk-Related Land Cover in Relation to Residential Segregation" Bill M. Jesdale, Rachel Morello-Frosch, Lara Cushing. Environ Health Perspect. 2013 Jul; 121(7): 811-817. Published online 2013 May 14. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3701995/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3701995/</a> 67 Ibid

<sup>68</sup> Ibid

### MAPPING URBAN HEAT RISK: A 2015 study titled

"Landscapes of thermal inequity: disproportionate exposure to urban heat in the three largest US cities" found that the "percentages of Non-Hispanic Black and Hispanic residents are consistently and positively associated with the UHRI [Urban Heat Risk Index], suggesting that tracts with higher proportions of these racial/ethnic groups are exposed to higher levels of biophysical risk." <sup>69</sup>

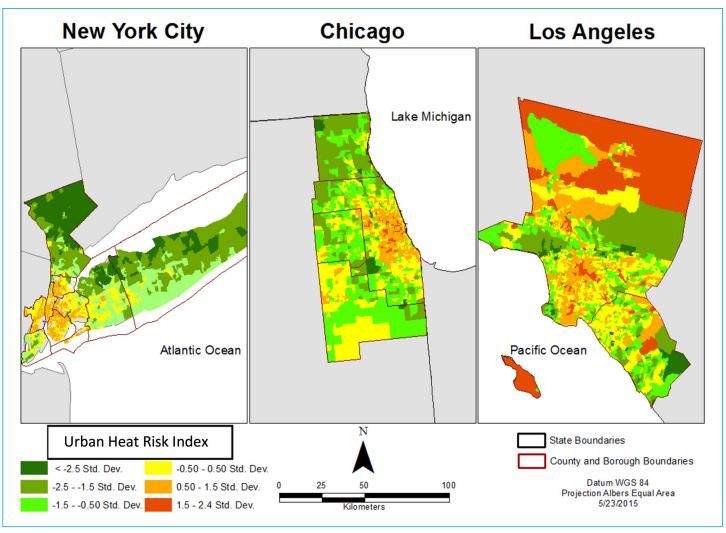


Figure 13. Urban Heat Risk; Source: Mitchell and Chakraborty (2015)70

<sup>69 &</sup>quot;Landscapes of thermal inequity: disproportionate exposure to urban heat in the three largest US cities." Bruce C Mitchell and Jayajit Chakraborty. Published 5 November 2015 • © 2015 IOP Publishing Ltd. Environmental Research Letters, Volume 10, Number 11. Available at: <a href="http://iopscience.iop.org/article/10.1088/1748-9326/10/11/115005/meta">http://iopscience.iop.org/article/10.1088/1748-9326/10/11/115005/meta</a> 70 Ibid.

The City of Minneapolis conducted a similar study on the relationship between social vulnerability and urban heat risk. The report, *Places at Risk: Minneapolis Climate Change Vulnerability* 

Assessment, presents a series of maps that show the spatial relationships between vulnerability and heat risk.<sup>71</sup>

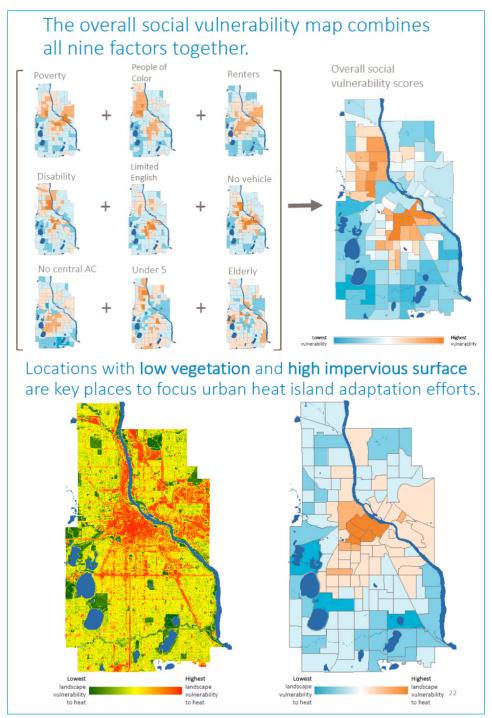


Figure 14. Source: Places at Risk: Minneapolis Climate Change Vulnerability Assessment, City of Minneapolis<sup>72</sup>

71 "Places at Risk: Minneapolis Climate Change Vulnerability Assessment" City of Minneapolis. Prepared for Minneapolis Sustainability Office & Health Department By Laurelyn Sandkamp, Karina Martin, Cameran J. Bailey. Humphrey School of Public Affairs, University of Minnesota. May 2016. Available at: <a href="http://www.ci.minneapolis.mn.us/sustainability/climate-prep/vulnerability-assessment">http://www.ci.minneapolis.mn.us/sustainability/climate-prep/vulnerability-assessment</a>

72 Ibid.

WHY?: Social and economic disparities, language barriers, living conditions, and occupational exposure are among the factors contributing to elevated heat-risk for People of Color in the United States. The National Institutes of Health study referenced above noted that "[i]t is quite possible that the main effect of segregation on the distribution of land cover experienced by racial minority groups is mediated through the phenomenon of concentrating minority groups into densely populated neighborhoods." Numerous other studies indicate that segregation concentrates People of Color into neighborhoods, especially in larger cities that are denser with fewer trees and a larger amount of impervious surfaces.

BUILDING COOLING (AIR CONDITIONING): A study from the Program for Environmental And Regional Equity (PERE) at University of Southern California titled "The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap" notes the importance of air conditioning to mitigating the dangers of extreme heat:

"Lack of access to air conditioning is linked to the disproportionate risk of heat-related illness and death among the urban elderly in the United States – particularly those who are low-income and of color (Kovats and Hajat 2008; Semenza et al. 1996). Overall, low-income families and People of Color are less likely to have access to air conditioning (English et al. 2007)."<sup>76</sup>

As cities design strategies to reduce carbon emissions from the built environment, they will be challenged to factor in increasing demand for cooling (air conditioning or other) and the equity impacts of access to cooling.

76 The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap. By Rachel Morello Frosch, Manuel Pastor, Jim Sadd, and Seth Shonkoff. May 2009. Available at: https://dornsife.usc.edu/pere/climategap/

<sup>73</sup> Alana Hansen, Linda Bi, Arthur Saniotis & Monika Nitschke (2013) Vulnerability to extreme heat and climate change: is ethnicity a factor?, Global Health Action, 6:1, DOI: 10.3402/gha.v6io.21364

<sup>74 (</sup>Iceland et al. 2002; Lichter 1985; Massey and Denton 1989)

<sup>75 (</sup>Iverson and Cook 2000; Pozzi and Small 2001)

### 7. Community Engagement

**KEY TAKEAWAYS**: Engaging with affected communities early on in a city's process produces better results in planning and policy making. Allocating resources to support meaningful engagement of communities is necessary for plans and policies to reflect the unique perspectives, priorities and expertise of affected people.

In order for jurisdictions to develop roadmaps and policies that effectively advance the twin goals of increased racial equity and reduced carbon emission, early community engagement will need to be prioritized and resourced. Lived experienced, advocacy, organizing, participatory action research and models of culturally-relevant community-driven planning need to be valued and prioritized as much, if not more, than traditional forms of energy and building sector expertise.

Racial equity is the end goal we're seeking in our communities, but it is also about building out a different process for how we do our work; one that allows for authentic partnership with those most impacted by institutional and structural racism. Having communities of color both inform and identify the solutions and strategies that cities are considering is a critical component of roadmap development. This form of co-creation can help build trust toward more sustained

relationships that will lead to stronger strategies and set cities up for greater success in the long run, in part by identifying potential unintended consequences earlier on in the process. Accountability should also be an ongoing topic of conversation between cities and community partners. Once cities engage and develop partnerships, what is the process for implementing feedback on a routine basis and how will the city communicate this information back to residents and those that have been engaged throughout the process?

**ENGAGEMENT METRICS**: Compared to other types of equity metrics, like the ones above that focus on disparities in risks and outcomes, there is little formal documentation of quantitative metrics for engaging impacted communities in planning and policy making. This equity tool presents some suggestions for community engagement metrics and presents a few examples of good practice.

- Early Engagement How early in the planning or policy-making process are impacted communities engaged in the effort to define problems, identify root causes, and craft solutions? In general, early engagement leads to better relationships, more diverse contributions, and outcomes that incorporate the priorities and expertise of impacted communities.
- ⇒ **Percent of Project Budget for Engagement** What percentage of the overall planning or project budget is dedicated to engaging impacted communities? Meaningful and effective engagement of impacted populations needs to be planned for and resourced appropriately. What are local precedents for projects that did a good job of engaging impacted communities? What are leading practices for engagement and what kinds of investment to do they require?
- ➡ Demographics of the Engaged Do the people the city is engaging (or planning to engage) represent impacted communities, such as low-income communities of color? Without deliberate effort, typical engagement practices can engage members of the public, but miss the people that are most impacted by the project or policy under consideration. Who, exactly, is the city engaging with? What is the proportion of impacted communities?

**EXAMPLES OF GOOD PRACTICE**: The following are short examples of good community engagement practice for the type of planning and policymaking work that Zero Cities team will be involved in.

**Providence Equity in Sustainability Initiative** - A

collaborative initiative by the City of Providence and frontline, communities of color of Providence to bring a racial equity lens to the City's sustainability agenda.<sup>77</sup>

**The Minneapolis 2040 Plan** – This comprehensive plan shapes how the City of Minneapolis will grow and change in the coming years. The plan incorporated recognition of historic obstacles to engaging impacted communities and described how this plan addressed those obstacles.<sup>78</sup> The section on planning process starts with a discussion of civic engagement:

"Historically, People of Color and indigenous communities (POCI), renters, and people from low-income backgrounds have been underrepresented in civic processes. This can be attributed to many factors including lack of free time and commitments to work, education, and family. One of the main causes for lower representation of POCI in these processes is the structure in which traditional civic engagement has been conducted, and the disenfranchisement of communities that continue to create obstacles and barriers for people to engage. Throughout the Minneapolis 2040 process civic engagement has been designed and conducted in a way to create equitable and innovative ways to engage populations that have been historically underrepresented in civic life. Such efforts includes dedicating time to building new relationships in order to create a more inclusive and equitable planning process to join communities that have already been at the table."79

#### Portland's 2015 Climate Action Plan Update - This

important plan update for the City of Portland, Oregon put equity in the center of its climate action strategies by engaging directly with impacted communities throughout. A 2016 case study by the City documents the engagement strategies and the planning frameworks that made Portland's plan a national example for how to incorporate racial equity into long-terms

77 City of Providence website: http://www.providenceri.gov/sustainability/

plans to mitigate climate change.81

<sup>78</sup> Minneapolis 2040 Website: <a href="https://minneapolis2040.com/planning-process/79">https://minneapolis2040.com/planning-process/79</a> Ibid.

<sup>80 &</sup>quot;Climate Action through Equity: The integration of equity in the Portland/Multnomah County 2015 Climate Action Plan." Desiree Williams-Rajee and Taren Evans. City of Portland. Multnomah County. 2016. <a href="https://www.portlandoregon.gov/bps/article/583501">https://www.portlandoregon.gov/bps/article/583501</a>

### **How to Use Equity Metrics**

The sample metrics on the preceding pages shine a light on some of the areas of intersection between building stock, carbon reductions, and racial equity. These sample metrics, as they are, can be quite useful in the early development of strategies for your Zero Cities roadmaps and policy solutions. The latter part of this section of the tool provides some guidance on how to use these sample metrics, in dialogues between city staff and community leaders, to evaluate the potential of proposed roadmap strategies or policy solutions to advance the twin goals of racial equity and carbon reduction.

Exploring the sample metrics in conversations among city staff and community leaders will help establish partnerships and gain alignment on concepts, priorities, and broad goals. This is a first step toward developing more refined city-specific metrics that you will use to assess baseline conditions, establish benchmarks, develop detailed and specific strategies, and track the impact of your strategies over time.<sup>81</sup>

### **Start with Community Partnerships**

The Zero Cities Project national team is providing each participating city with suggestions and support for identifying community partners to work together with city staff on the development of your roadmap or policy solutions. Establishing these partnerships as early as possible in the process is essential to achieving the outcomes the Zero Cities Project is committed to producing.

This Equity Assessment Tool should be the basis for some of the early conversations between city staff and community leaders. Reviewing the sample metrics together and using the guiding questions below, city-community partners will begin to build shared language and mutual understanding that will become the foundation for developing more refined, city-specific metrics, for assessing equity baselines and targets, and for creating the strategies to hit the targets.

## Work Together to Identify Appropriate City-Specific Metrics

City staff and community leaders should gather in person

, ....

to review the sample equity metrics on the preceding pages. Use the following guiding questions to explore different perspectives and priorities within the group.

### **Guiding Questions (for each metric)**

- What is our initial perception of how our city experiences this issue? Is this happening here? What do we know now about how residents of our city are experiencing this? What are the differences in experience across race, gender, class, ability, etc.?
- 2. What data currently exists related to this metric? Should we invest time and resources in fleshing out a local version to use in our Zero Cities work? How would it be helpful in assessing current racial equity conditions, establishing goals, and tracking the impact of our work together?
- 3. How might we refine this metric for our specific circumstance? Are there other ways of looking at the data on this issue that would be helpful to our efforts?
- 4. Who might have good local information on this? What groups are tracking or working on this? What reports or resources might already exist? Based on this initial conversation, what voices might be missing that could deepen our understanding?

#### Guiding Questions (for the whole set of metrics)

- What, if anything, might be missing from this set of metrics?
   Are there other racial equity issues that are important to our city that intersect with efforts to reduce carbon emissions from buildings?
- If we had to prioritize these metrics in rank order of the most critically important to include in our Zero Cities work to the least critically important to include, what would that rank ordering be?
  - a. Consider doing this as a group exercise in which individual team members do their own ranking and then compare or combine, or use voting with dots or ways to explore individual perspectives and how much consensus you have as a group.
- 3. What are the opportunities to engage those most impacted?
- 4. How can you use stories or other qualitative data to fill in data gaps?

81 The Zero Cities Project team is providing city-specific data supplements to each participating city to assist in developing local metrics.

### Work Together to Use the Sample Metrics to Assess Potential Strategies

Use the sample metrics in this document to begin to assess how potential roadmap or strategies might address the twin goals of racial equity and carbon reduction. The process of conducting a simple assessment in conversation with members of your city-community Zero Cities team will provide a number of benefits.

Practicing applying the assessment will help the team align around key concepts, terms, and priorities. The results of a simple assessment will inform the development of appropriate city-specific metrics. Beginning to evaluate potential roadmap or policy strategies from the perspective of advancing the twin goals will provide important insights about how those strategies will need to be adapted and fleshed out.

For each potential or proposed roadmap strategy, use the tool and the guiding questions on the next page to assess how it could contribute to advancing the twin goals of racial equity and carbon reduction.

#### The x-y Axis Tool

This simple x-y axis allows you to think about the relationship between racial equity and carbon reductions for each potential strategy. You can recreate this x-y axis on individual worksheets, on a large table top, with tape on the floor of a room, or on a drawing board.

*Positive numbers* = *positive contributions* to the goal, i.e. strategies that either improve racial equity or lead to carbon reductions.

For each potential or proposed roadmap strategy, use the tool and the guiding questions below to assess how it could contribute to advancing the twin goals of racial equity and carbon reduction.

*Negative numbers* = *decreased progress* toward the goal, i.e. strategies that exacerbate inequities or produce more carbon emissions.

The number scale represents how big the impact of the strategy might be on the goal in qualitative terms.

- 1 = small impact
- 2 = medium impact
- 3 = large impact

If for example, your group determines that a potential strategy is likely to have big positive impact on the goal of reducing carbon emissions (+3) and a small positive impact on advancing racial equity (+1), place a marker for that strategy in the appropriate place on the x-y axis tool.

Work through some easy examples as a group to make sure everyone understands how to use the tool. Then go through each of the sample metrics and discuss the guiding questions.

### **Assessing Potential Strategies against each Metric**

As a group, choose a potential strategy to evaluate. Then go through each of the sample metrics and discuss the guiding questions below.

### How will this potential strategy impact our goal of reducing carbon emissions from buildings?

- a. Will it have a positive or negative impact on that goal?
- b. How big of an impact is this strategy likely to have on that goal? (1= small, 2= medium, 3= large)

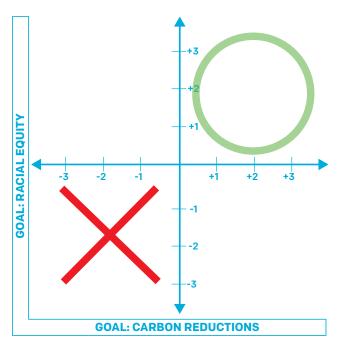


Figure 14. x-y Axis Tool

### 2. How will this potential strategy impact this particular Equity Metric?

- a. Will it have a positive or negative impact on the goal of reducing disparities and advancing racial equity?
- b. How big of an impact is this strategy likely to have on that goal? (1= small, 2= medium, 3= large)
- 3. What modifications could we make to the strategy to have a larger positive impact on the racial equity metric? Are there strategies that should be added to address potential unintended consequences?

### 4. What implications does this conversation have for the city-specific equity metrics we want to develop?

a. Would refining the city-specific metric help to measure the things we want to have an impact on?

# Conclusion and Next Steps

The metrics identified in this report reflect the most prominent and well-documented points of intersection between racial equity, carbon emissions, and the built environment. However, they are not exhaustive or definitive, and local priorities may point to different or additional metrics. Asking questions around the sample metrics in this document can help assess how potential roadmap strategies or other policy solutions might address the twin goals of racial equity and carbon reduction, while uncovering opportunities to broaden program or policy benefits that might otherwise be missed.

The metrics described in this report are punctuated with examples from across the nation. The next step of the Zero Cities project is to examine local data as it relates to these or other locally identified metrics. As Zero Cities participants move through their individual roadmap and policy development processes, the Zero Cities project team will help bring local data sources and metrics into planning processes.