



Equitable Approaches to Building Performance Standards

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What is a Building Performance Standard?

A Building Performance Standard (BPS) establishes targets for buildings to reduce energy use, greenhouse gas (GHG) emissions, or other metrics over time.

Successful and equitable policies must include substantial investment in supportive programs for buildings, the local workforce, and historically underserved populations.

These targets are typically meant to:



Reduce
Building
Energy Use



Increase
Renewable
Energy



Electrify
Buildings

Supportive programs can include:

- Funding for upgrades in low-income housing
- Technical assistance for under-resourced building owners
- Workforce training and support
- High-road employer requirements

Why Create Policies for Existing Buildings?

- Buildings cause public health and safety hazards from air pollution, poor-quality construction, and maintenance deficiencies.
- Buildings contribute substantially to climate change, accounting for up to 70% of GHG emissions in some U.S. cities.
- The current pace of energy improvements in U.S. buildings is inadequate to reach climate goals. Roughly 2% of commercial buildings and less than 0.3% of multifamily buildings are upgraded annually.*



Building Performance Standards in U.S. Cities*

New York City, NY



Building Size: >25,000 sq. ft.
Building Types: Commercial and Multifamily
Metric: GHG emissions per sq. ft.; separate prescriptive measures for affordable housing
Compliance Timeline: Targets set every 5 years between 2025-2050

Washington, DC



Building Size: >10,000 sq. ft.
Building Types: Commercial and Multifamily
Metric: Options of site EUI per sq. ft., ENERGY STAR, prescriptive pathway, or alternative compliance pathways
Compliance Timeline: Targets set every 6 years beginning in 2021

Denver, CO



Building Size: >25,000 sq. ft.
Building Types: Commercial and Multifamily
Metric: Site EUI per sq. ft. plus addl. electrification requirements at time of appliance replacement
Compliance Timeline: Targets set every 3 years between 2023-2030

Boston, MA



Building Size: >20,000 sq. ft.
Building Types: Commercial and Multifamily
Metric: GHG emissions per sq. ft., plus alternative compliance pathways
Compliance Timeline: Targets set every 5 years between 2025-2050

St. Louis, MO



Building Size: >50,000 sq. ft.
Building Types: Commercial and Multifamily
Metric: Site EUI per sq. ft.
Compliance Timeline: Targets set every 5 years beginning in 2020

What Are the Equity Opportunities of a BPS?



High-road jobs and economic opportunities for historically marginalized populations



Reduced housing and energy costs, provided there are protections for low-income residents and tenants



Health, safety, comfort, and resiliency benefits that could be delivered to those who need them most

What Are Potential Equity Risks of a BPS?

- Housing/rental cost increases
 - Energy bill increases
 - Tenant harassment/displacement
 - Long-term gentrification and displacement
 - Pushing smaller landlords out of business
 - Lack of community trust and buy-in
- Lack of opportunities for minority- and women-owned contracting firms
 - Lack of opportunities for workers of color
 - Inability to create family-sustaining jobs
 - Benefits do not reach tenants or low-income communities

...and more

Spotlight: Housing and Affordability

At least 40% of renters are housing cost-burdened* in most metro areas across the U.S., and this share is rapidly increasing in many parts of the country.

Loss of Low-Rent Housing Stock, 2011-2019**

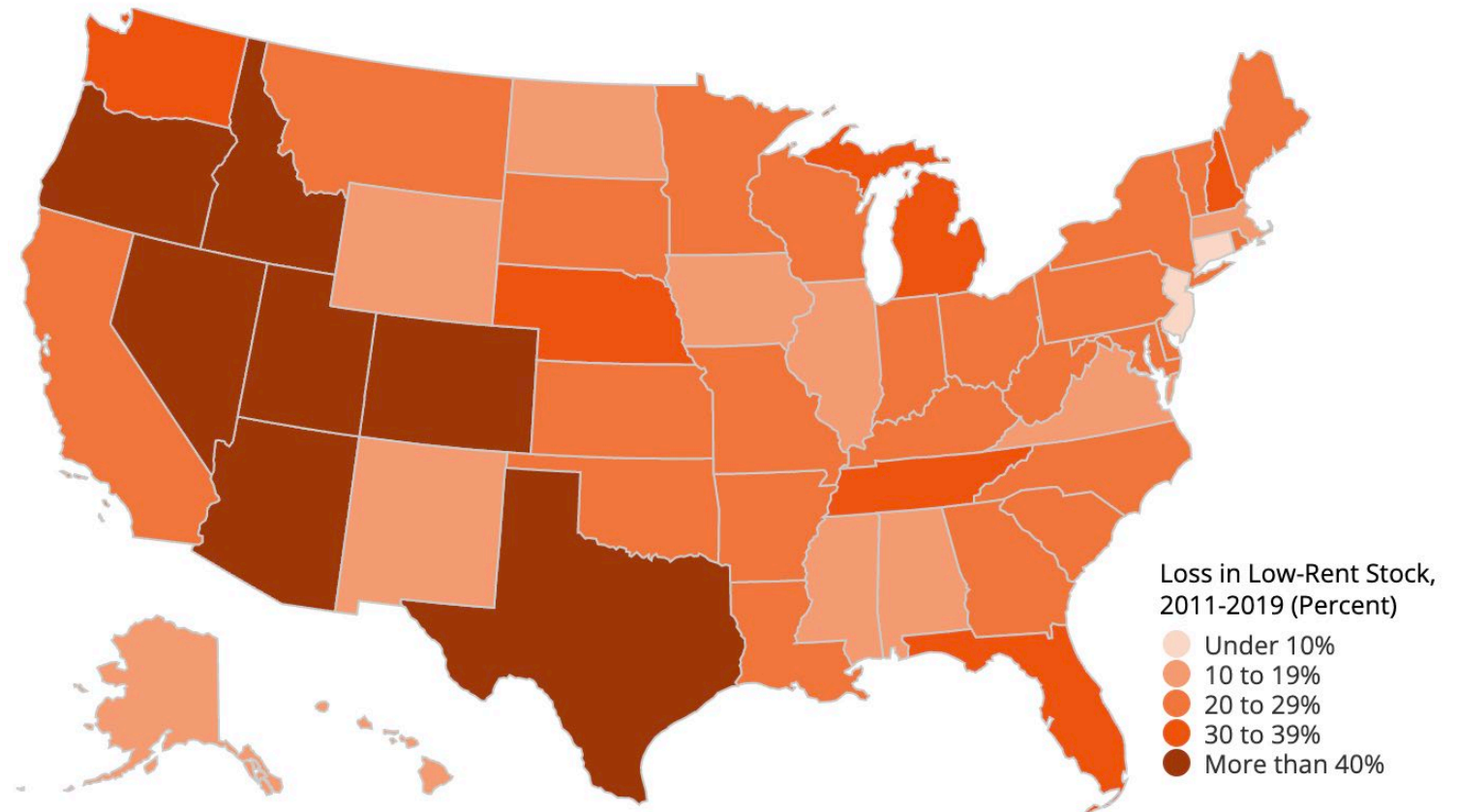


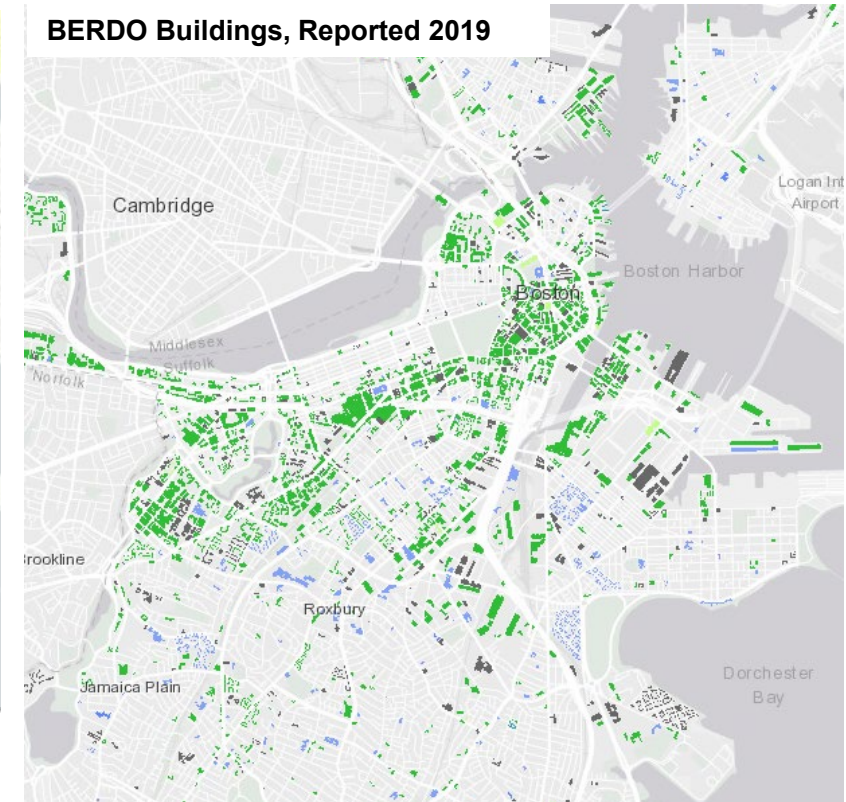
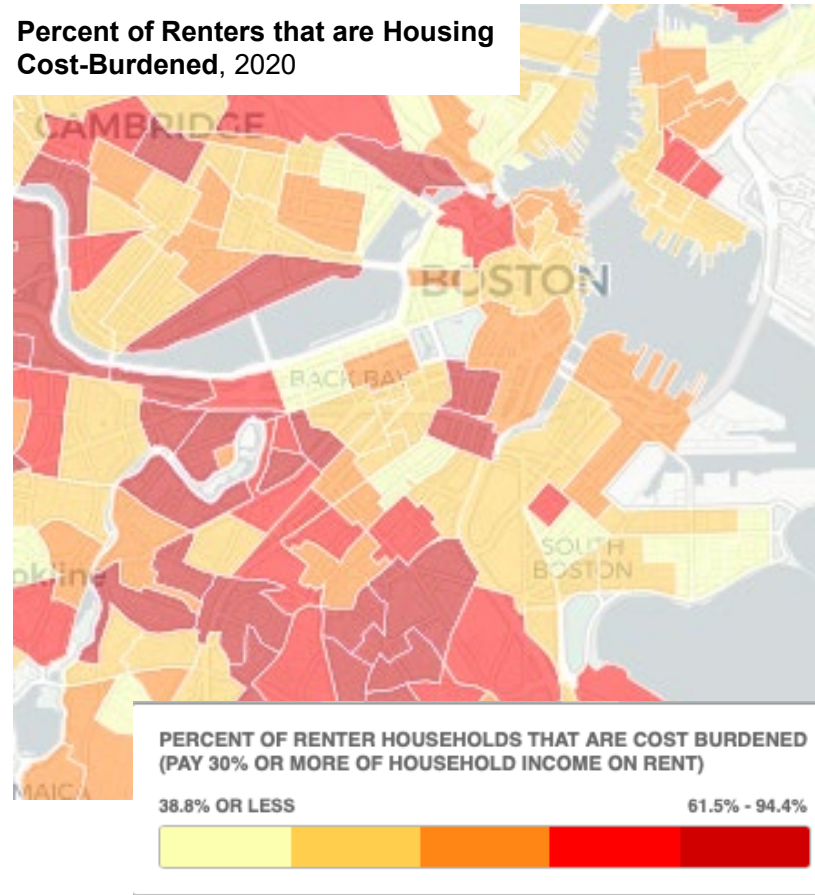
Image Source: Harvard University, Joint Center for Housing Studies

Spotlight: Housing and Affordability

Buildings subject to a BPS may be already be unaffordable to residents or may face threats to continued affordability.

- For example, a significant number of large buildings subject to a BPS in Boston are also home to residents facing high rent burdens.

Distribution of Rent Burdens and Large Existing Buildings in Boston



First Image Source: Boston Displacement Mapping Project
Second Image Source: City of Boston BERDO database

Spotlight: Housing and Affordability

The potential rental housing impacts of a BPS could include:

- **Increased rents** if the building owner chooses to pass on the costs of upgrades to tenants.
- **New or higher utility costs** depending on specific upgrades and how owners choose to set up energy meters.
- **Displacement of tenants and/or unfair evictions** during the construction process.
- **Additional upward market pressure** on rents due to improved amenities.

Example Costs and Potential Rent Increase Retrofit to All-electric Building over 30 years (Northeast Climate)

	Total Installed Cost	Lifetime Bill Savings	Potential Rent Increase
Multifamily Building, High Energy User	\$4.8M	\$1.4M	\$50-\$250 per unit per month
Multifamily Building, Low Energy User	\$1.6M	No savings	

Depending on how a landlord decides to recoup the costs of a major building upgrade, **they may choose to increase the rent by anywhere from \$50 to \$250 per month.***

Steps for Developing an Equitable BPS

The following steps are based on BEI's work with cities on equitable BPS policies:

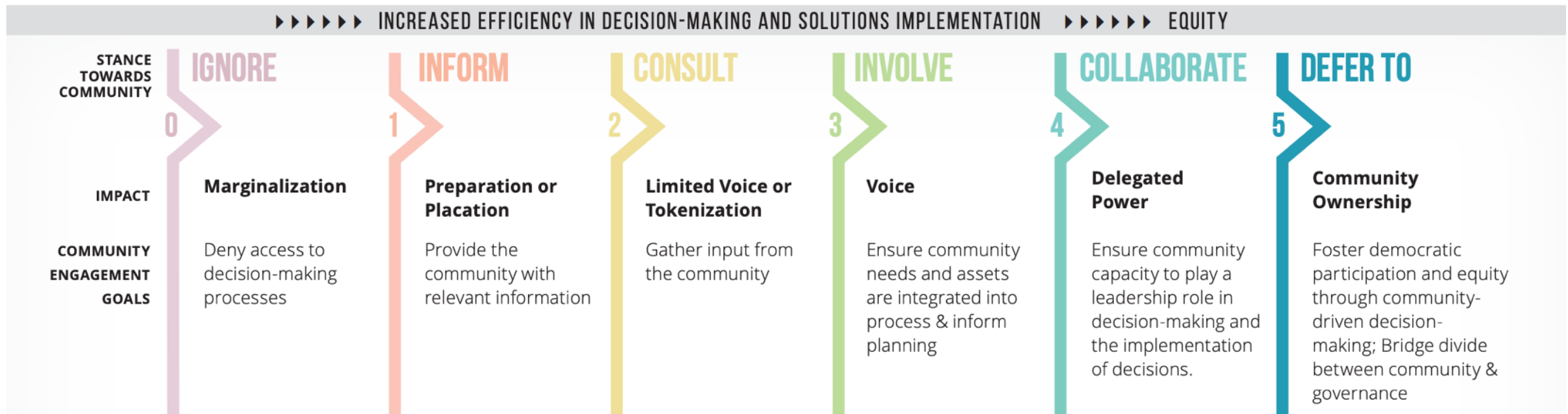
1. Engage in co-creation with communities, prioritizing those that have been historically marginalized and who are typically left out of the policymaking process.
2. Assess the benefits and burdens of the potential policy and work with community stakeholders to understand how these may intersect with existing needs and priorities.
3. Design and implement program and policy solutions that mitigate the burdens and maximize the benefits for historically marginalized communities.

Step 1: Co-creation with Communities

Community co-creation is a process of deep, iterative collaboration between government staff and leaders rooted in and accountable to historically marginalized communities.

The goal of community co-creation is to move from a position of ignoring or informing community stakeholders to a practice of involving, collaborating with, and eventually deferring to these stakeholders in the policy development process.

THE SPECTRUM OF COMMUNITY ENGAGEMENT TO OWNERSHIP



Why Community Co-creation?

Community co-creation processes take time, flexibility, and patience. The result will be more effective and equitable policies.

A community co-creation process will help policymakers:

- **Gain critical expertise** from historically marginalized communities or groups that government staff often do not have.
- **Design the policy more effectively** to ensure it works for under-served communities who have been harmed by past government policies.
- **Build political support** for policies by allowing stakeholders to help design the approach.
- **Address social and racial inequities** that persist in local communities.
- **Develop new relationships based on mutual trust, respect, and shared power** that contribute to productive, long-term collaboration between local government and marginalized communities.

Who Should be Prioritized?

Community co-creation processes are designed to include people who:

- Could be affected by the potential policy.
- Are already burdened with existing inequities.
- Have been historically excluded from policymaking processes.

Priority audiences for a BPS include:

- Tenants
- Low-income residents
- Labor stakeholders and workers
- Women- and minority-owned contracting firms
- Unemployed or under-employed people
- Historically redlined communities
- Small businesses
- Nonprofits and places of worship

Co-creation with Communities | Boston Example

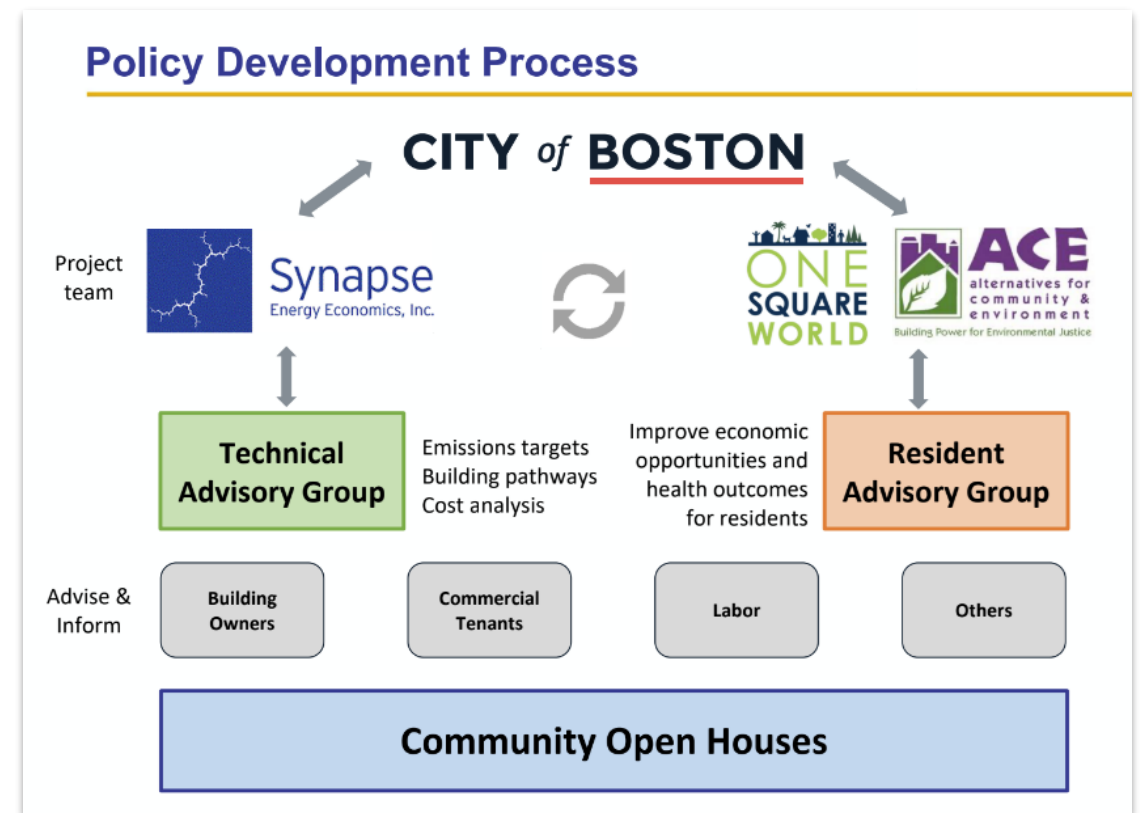
Boston invested in both technical stakeholder engagement and community co-creation to develop its BPS to ensure a robust policy structure and broad community support.

Technical Advisory Group Topics:

- Targets, typologies, and compliance pathways
- Economic analysis of costs and penalty options
- Other areas of concern, such as campuses, district systems, renewable energy credits (RECs), and offsets

Residential Advisory Group Topics:

- Benefits of electrification and building upgrades
- Community and tenant priorities and concerns
- Governance of an Equitable Emissions Investment Fund, including types of projects and criteria for funding
- Establishment of an Emissions Review Board that will be two-thirds community-appointed representatives



Step 2: Assess Benefits and Burdens

Work with stakeholders to assess the benefits and burdens of a BPS to identify intersections with community needs and priorities.

Questions to Answer with Community Stakeholders:

Stakeholders:

- Where does the BPS intersect with existing community priorities?
 - *Ex. Local jobs, air quality, housing costs*
- Where are the benefits of the BPS likely to go?
 - *Ex. HVAC contractors, high income residents*
- Who is likely to bear the burdens of the BPS?
 - *Ex. Low-income tenants, small property owners*

Best Practices for a Successful Process:

- Work deeply with community stakeholders to validate the assessment and findings
- Present technical discussions and considerations in an approachable way
- Acknowledge the harmful histories that have caused existing inequities
- Allow space for iteration, discussion, and debate

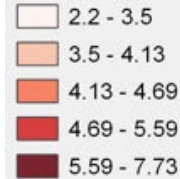
Assess Benefits and Burdens | San José Example

Example: In San José, a BPS would need to improve air quality in low-income communities in order to provide benefits to those who suffer the worst air pollution.

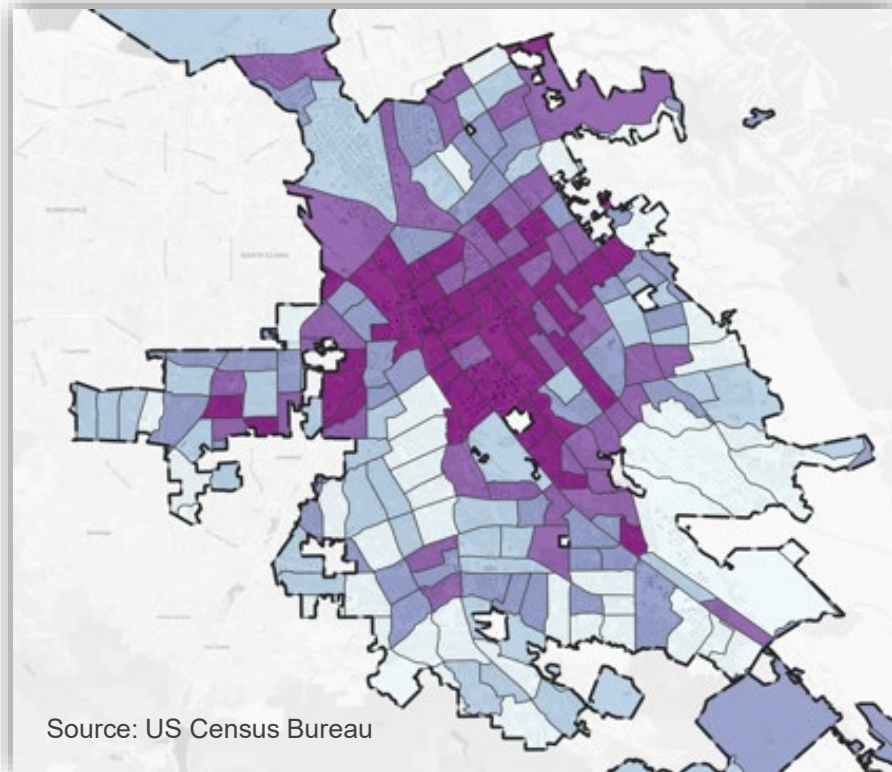
For Comparison: Low-income Distribution

Exposure to Air Pollution by Census Tract

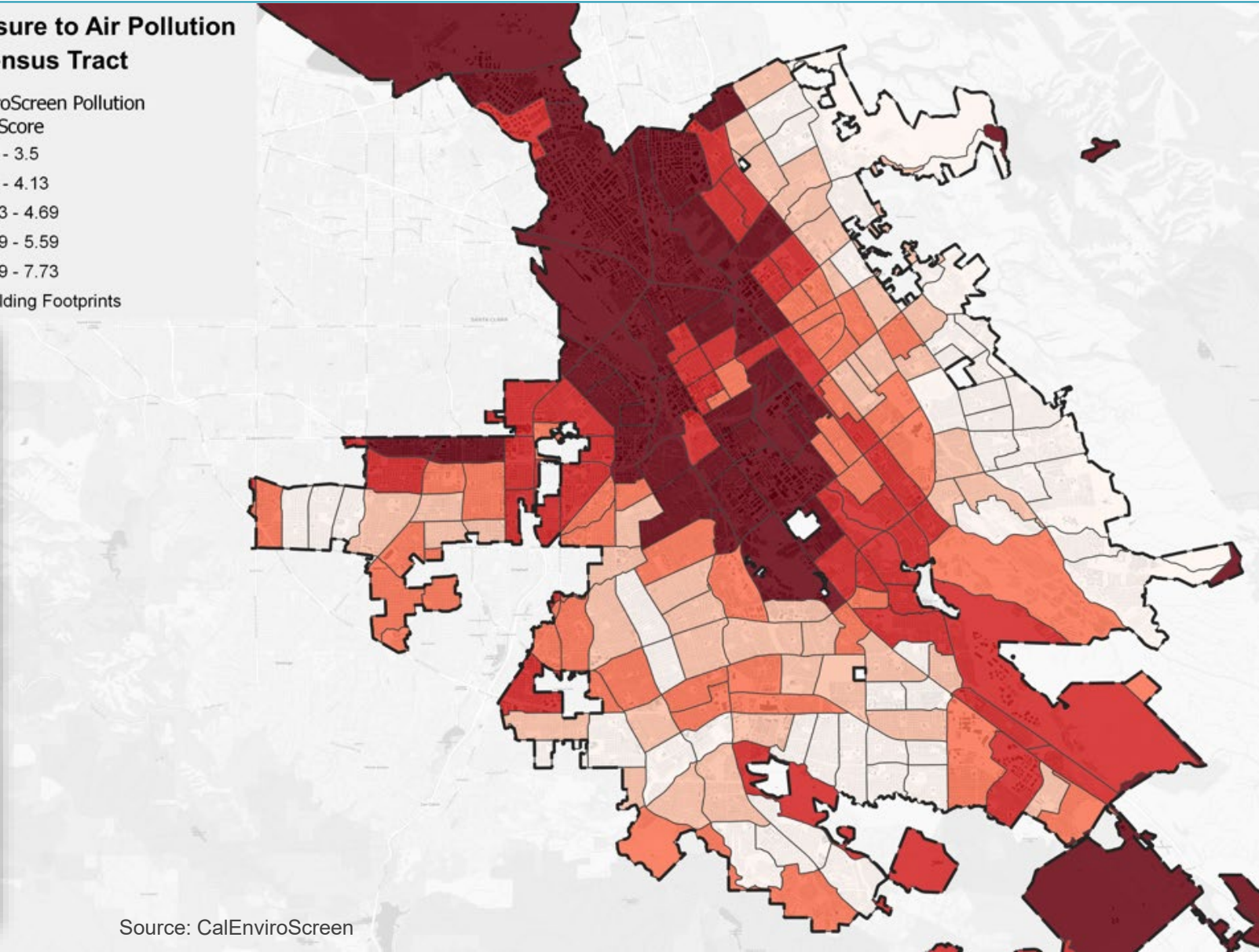
CalEnviroScreen Pollution Burden Score



■ Building Footprints



Source: US Census Bureau



Source: CalEnviroScreen

Assess Benefits and Burdens | Berkeley Example

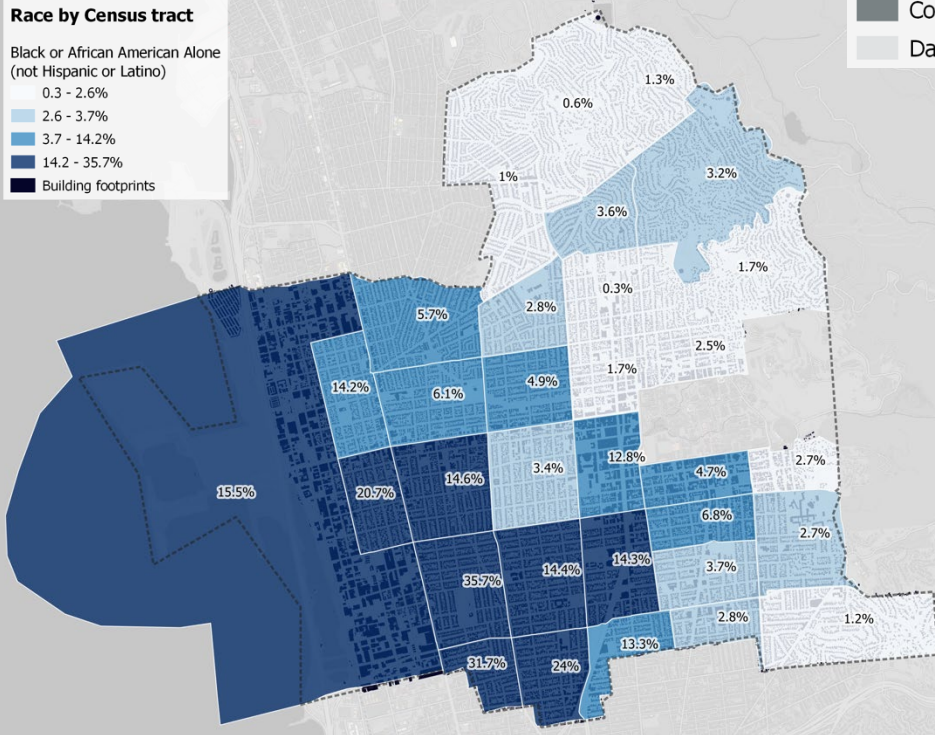
Example: In Berkeley, a BPS must avoid exacerbating ongoing gentrification and displacement, which is disproportionately impacting African Americans.

For Comparison: African American Population

Race by Census tract

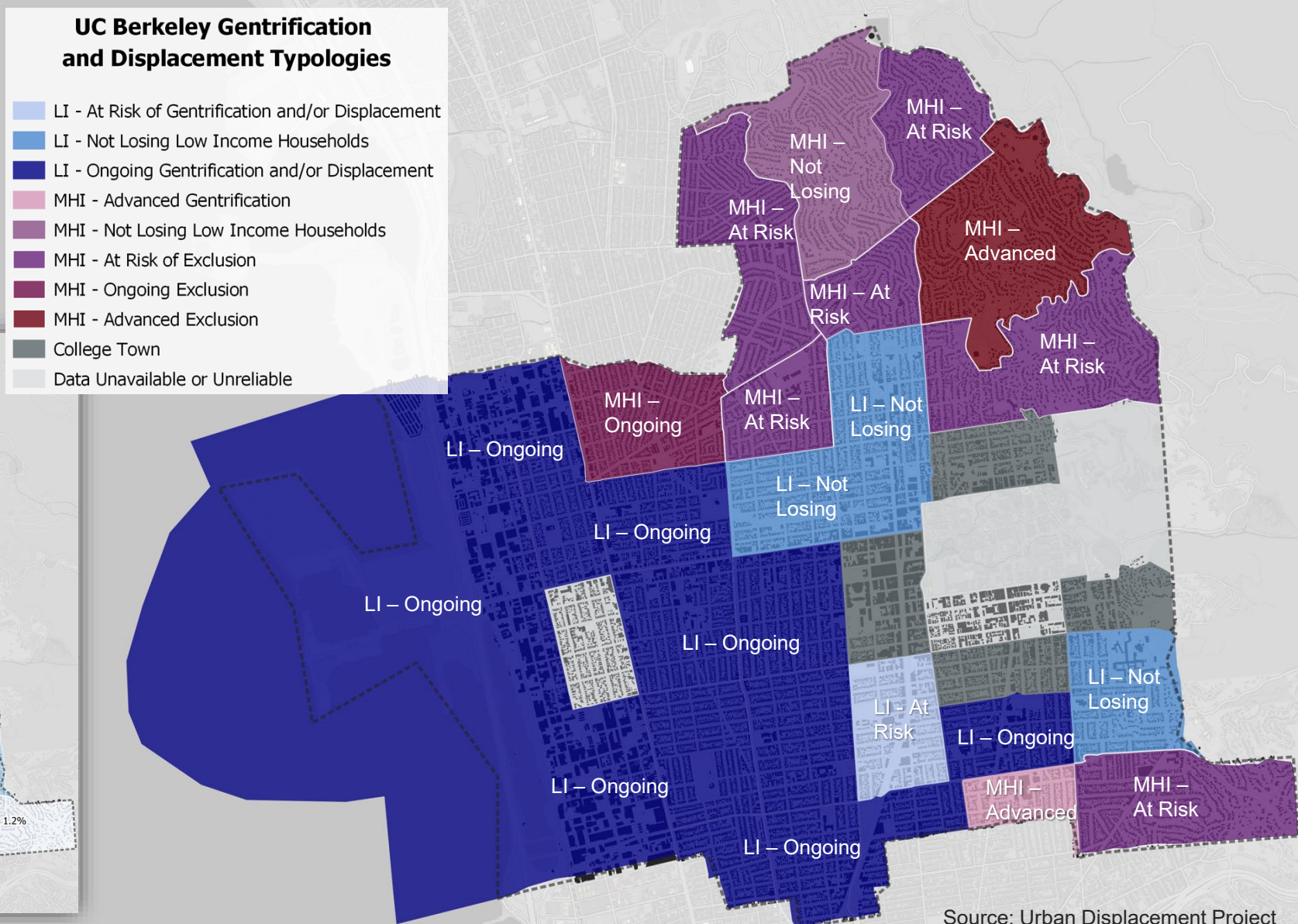
Black or African American Alone (not Hispanic or Latino)

- 0.3 - 2.6%
- 2.6 - 3.7%
- 3.7 - 14.2%
- 14.2 - 35.7%
- Building footprints



UC Berkeley Gentrification and Displacement Typologies

- LI - At Risk of Gentrification and/or Displacement
- LI - Not Losing Low Income Households
- LI - Ongoing Gentrification and/or Displacement
- MHI - Advanced Gentrification
- MHI - Not Losing Low Income Households
- MHI - At Risk of Exclusion
- MHI - Ongoing Exclusion
- MHI - Advanced Exclusion
- College Town
- Data Unavailable or Unreliable



Step 3: Design & Implement Equitable Solutions

Based on a shared understanding of the potential benefits and burdens of a BPS, work with community stakeholders to identify equitable solutions.

Examples of Equitable Solutions:

- **Funding for upgrades**, particularly in low-income and under-resourced buildings
- **Technical assistance for building owners** to support policy compliance
- **Workforce and contractor support** to build the local workforce and improve job quality
- **Alternate compliance options**, such as deadline extensions and alternative or individualized compliance pathways for special building types
- **Co-creation of additional policies or programs** that may be necessary

Equitable Solutions | Funding for Upgrades

Example: Denver Climate Protection Fund

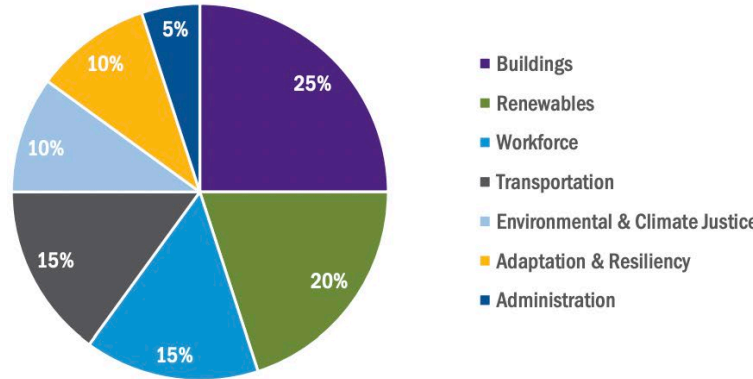
Denver voters enacted a sales tax in 2020 to generate \$40-50 million annually for a new Climate Protection Fund (CPF).

- A significant portion will go toward the building electrification incentive program to support compliance with the Energize Denver Ordinance.
- Denver is also committed to ongoing stakeholder engagement to continue identifying solutions to be funded by the CPF.

CPF Revenue Projection



Five-Year Estimated Expenditures by Allowable Use (% of Total)



“...broad, frequent, and impactful education about new solutions must go hand-in-hand with implementation.”

— Participant in the Climate Action Task Force public engagement process

Equitable Solutions | Technical Assistance



More information at: www.accelerator.nyc

Example: NYC Accelerator

New York City launched the NYC Accelerator to provide free technical assistance services to help building owners comply with New York City's Building Emissions Law. The NYC Accelerator is funded at roughly \$10M per year for the first three years of operation.



Financial & Technical Assistance

Plan, finance, and complete building energy efficiency and renewable energy projects



Connect with Contractors

Find experienced and qualified contractors in your area



Understanding Local Laws

Assist building owners and operators to meet LL97 targets and other NYC laws



Access Incentives

Find incentive awards from local utilities and New York State to help you save costs



Trainings

Join an online training to improve your skills or learn something new



Build High Performance

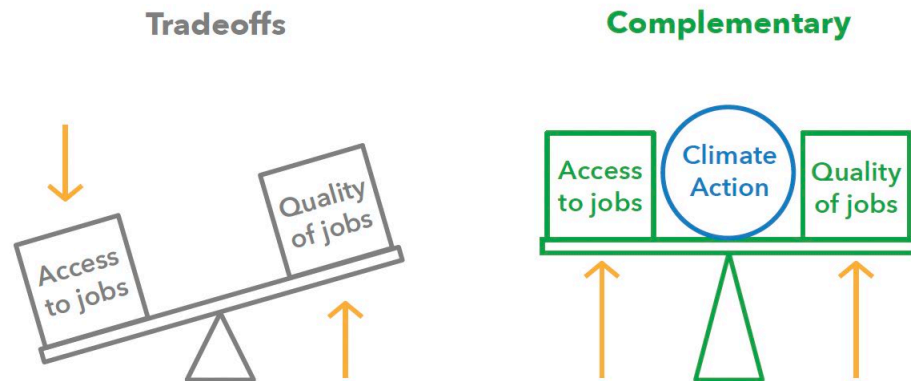
Prepare for the future by building your next project to a High Performance standard

Equitable Solutions | Workforce & Contractor Support

The goals for providing workforce and contractor support alongside a BPS can include:

- Ensuring there is a skilled workforce to meet the increased demand for building upgrades
- Improving the quality of new jobs created, including family-supporting wages and benefits
- Promoting more equitable access to new jobs and business opportunities for priority populations

With proactive government policy, there does not need to be a tradeoff between access to jobs and quality of jobs:



Example: Portland Workforce & Contractor Investments

The City of Portland has committed to investing more than \$10 million over three years for equitable workforce and contractor development to support its future BPS.

Portland's commitment includes:

- Building a network of community partners, training providers, businesses, and unions.
- Career coaching, support, training scholarships, job placement, and retention services for priority populations.
- Community-based pre-apprenticeship training programs.
- Pathways for low-income people of color and women to move into careers in skilled construction trades.
- Upskilling, training, and credentialing for existing unionized building workers.
- Culturally-specific, customized business development support, training, and advanced credentialing for minority contractors.

Equitable Solutions | Compliance Options

Example: Boston's policy structure includes built-in flexibility to accommodate multiple building types.

- **Separate targets are set for 13 building typologies**, with decreasing GHG emissions intensity targets every 5 years.
- **Buildings can apply to follow an alternative "Individual Compliance Schedule,"** with targets based on a percentage reduction from a baseline (50% by 2030 and 100% by 2050) to allow buildings to take action when it will be most cost effective.
- **For under-resourced buildings, there is an option to provide individually proposed "Hardship Compliance Plans,"** which must be approved by an Emissions Review Board made up of two-thirds community representatives.
- **There is an additional option to pay an "Alternative Compliance Payment"** of \$234/ton CO₂e/year over the compliance target that will help fund an Equitable Emissions Investment Fund that will provide funding for under-resourced buildings.

Example Compliance Pathway:
Emissions Reduction Targets

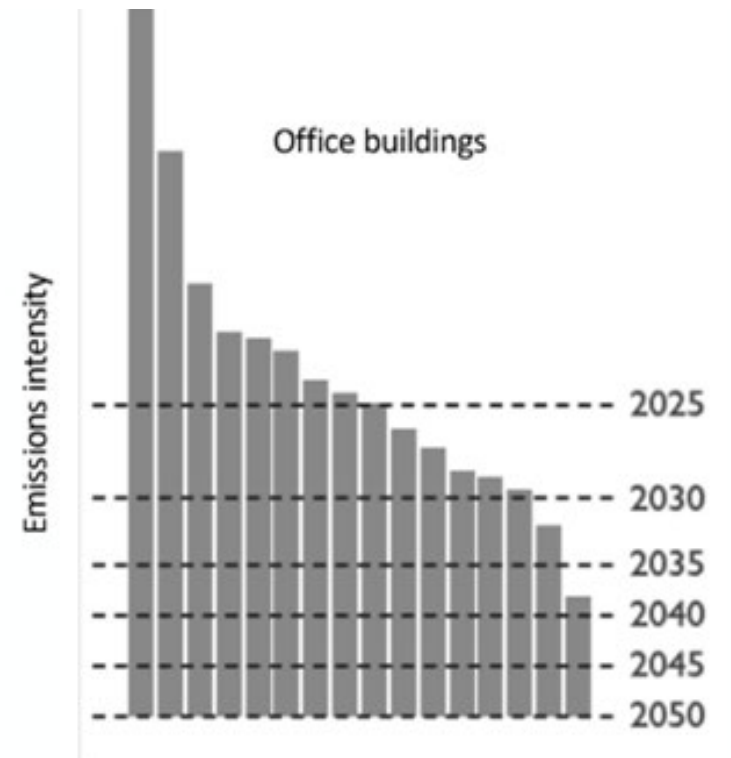


Image Source: City of Boston, BERDO 2.0 Technical Advisory Group Analysis, prepared by Synapse Consulting

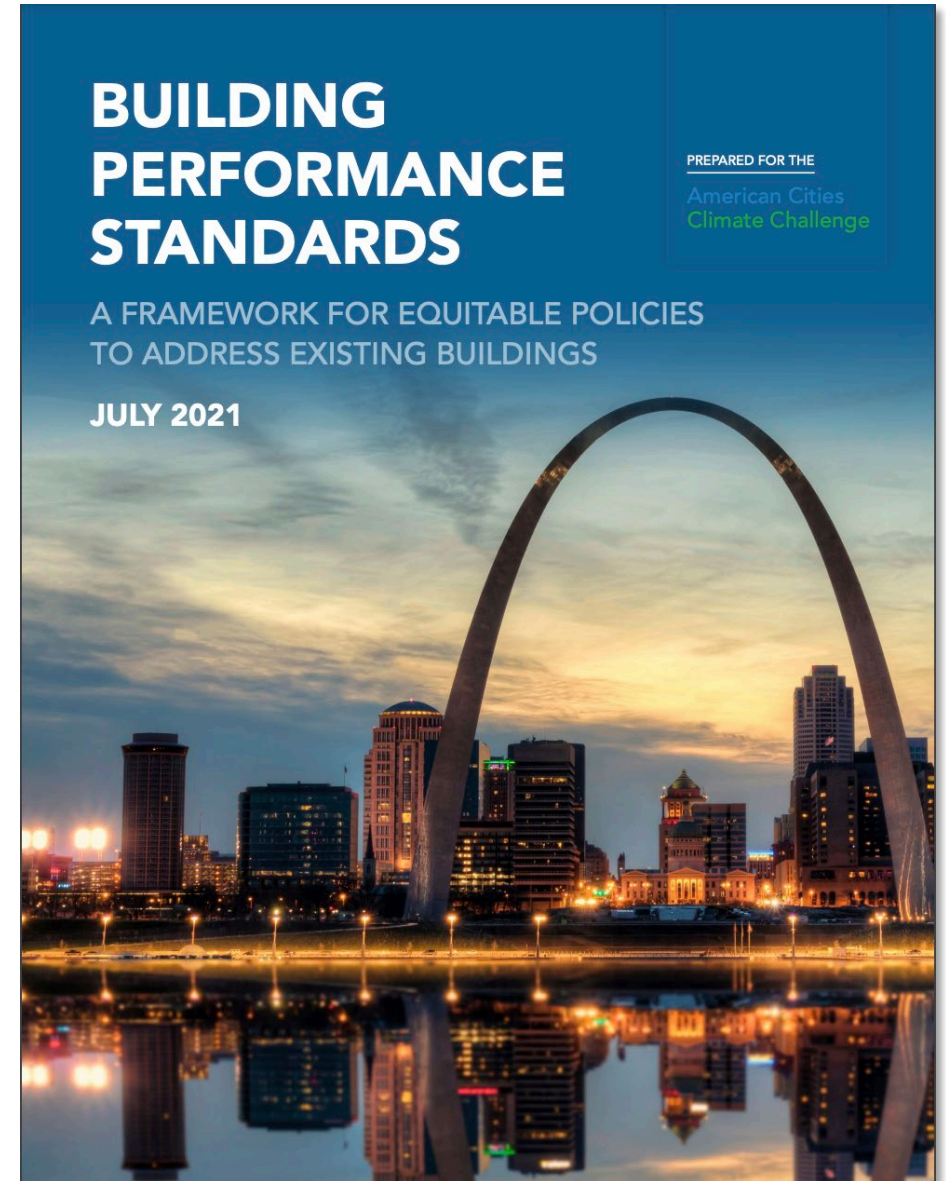
For more information on developing equitable building performance standards:

American Cities Climate Challenge

Framework on Building Performance Standards

Download at:

<https://www.usdn.org/projects/building-performance-standards.html>



The background of the image shows a bright, sunny day in a city park. In the foreground, a paved path winds through a green lawn where several people are exercising: a man in a dark shirt is jogging, a woman in a bright green shirt is running, a man in a dark shirt is riding a bicycle, and another man in a red shirt is also riding a bicycle. In the background, several modern skyscrapers with glass facades rise against a clear blue sky with a few wispy clouds. The sun is visible in the top left corner, creating a lens flare effect.

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