

HOUSING WITH H.E.A.R.T.

a Study, a Vision, a Call to Action



At the Crossroads of Housing
& Climate Justice

More in depth information
on all topics is available
via this QR code:



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“Communities of color and low-income communities bear the brunt of the impacts of unhealthy, energy-inefficient, and disaster-vulnerable buildings. Yet, as one looks around the tables or worksites of the sustainable and regenerative building sector, there is little representation of the populations most impacted by our current proliferation of unsustainable, inefficient, sometimes unsafe, and often unhealthy building stock.

Whether it’s as policymakers, advocates, architects, project managers, contractors, or the construction workforce, **the most impacted communities are underrepresented in the design, construction, and occupancy of sustainable, regenerative, healthy buildings.**

Given the huge import of buildings in reducing the demand on energy production, plus the co-benefits that regenerative design has for building occupants and the community, not to mention the environment, all of this points to the fact that **this gap in access/uptake must drastically change and quickly to build a big tent and universalize sustainable, regenerative buildings.**

Our aim as the nation’s oldest and largest civil rights organization is to be a beacon of inspiration and transformation in centering equity in the sustainable building sector. In doing so, we can catalyze the building of a bigger, broader tent for the sustainable building movement, towards the betterment of the building users, the communities, the economy, and the planet.”

From Equity and Buildings: A Practical Framework for Local Government Decision Makers, Urban Sustainability Directors Network, June 2021

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JACQUI PATTERSON,
Senior Director for Environmental
and Climate Justice, NAACP



WHAT ARE GREENHOUSE GASES?

A greenhouse gas is any gas that traps heat in the earth's atmosphere, keeping the earth warm.

Human activity, such as burning fossil fuels like oil and gas has increased the concentration of GHGs in the earth's atmosphere, heating up the earth to dangerous levels.

A hotter earth creates more intense weather like extreme heat waves, devastating hurricanes and floods.

Climate Change Impacts on Worcester Residents

Fossil fuels like gas and oil release greenhouse gases (GHG) that speed up climate change.

One impact of climate change is more extreme heat, putting people at risk of heat stroke, heart and respiratory problems.

Low-income, densely populated neighborhoods with less tree cover get hotter than wealthier neighborhoods. People living in older homes without air conditioning or effective insulation have few options to escape oppressive heat.



RESIDENTIAL BUILDINGS ACCOUNT FOR 26% OF GHG EMISSIONS IN WORCESTER.

WORCESTER'S CLIMATE PLAN

By 2030

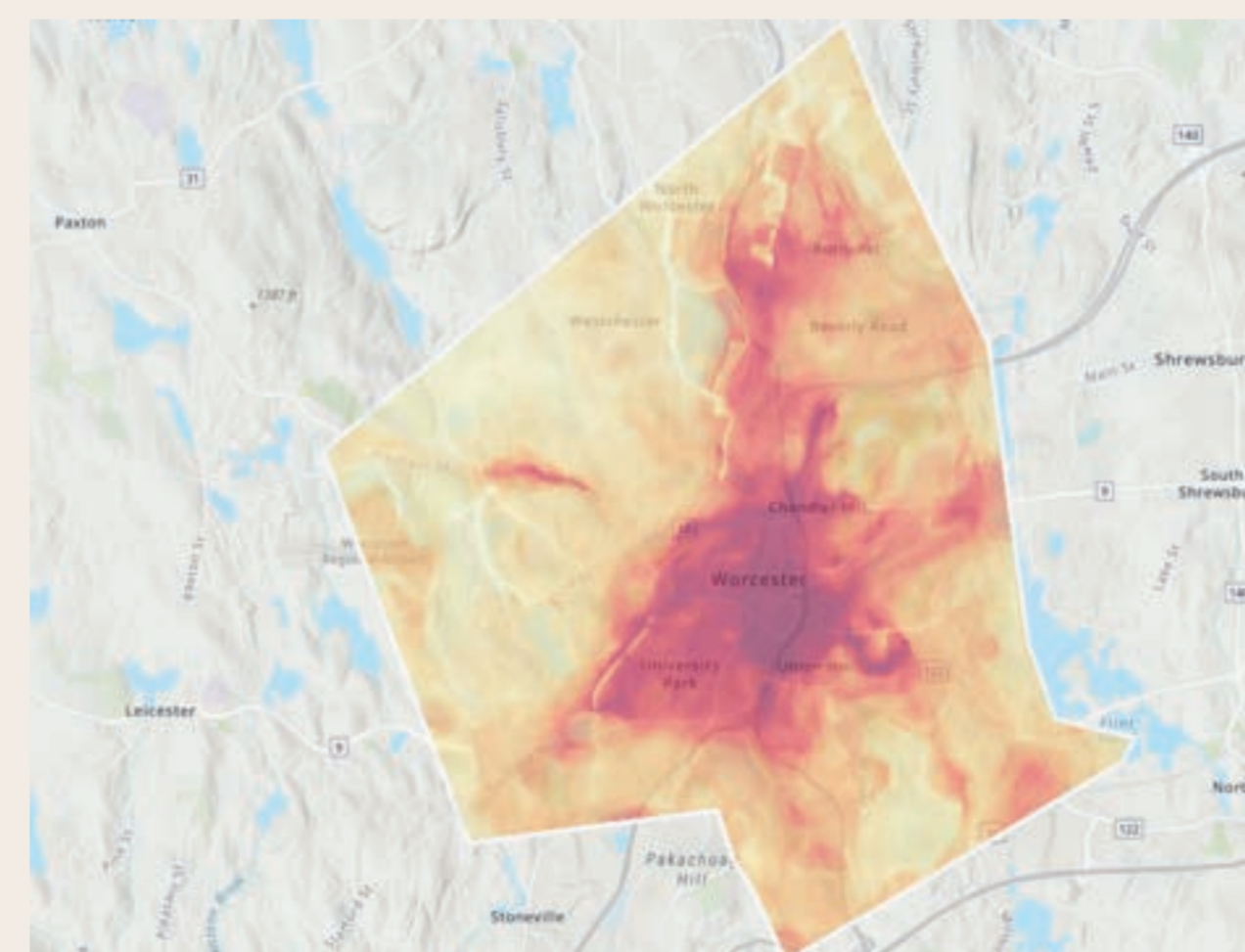
100% renewable energy for municipal facilities

By 2035

100% renewable electricity citywide

By 2045

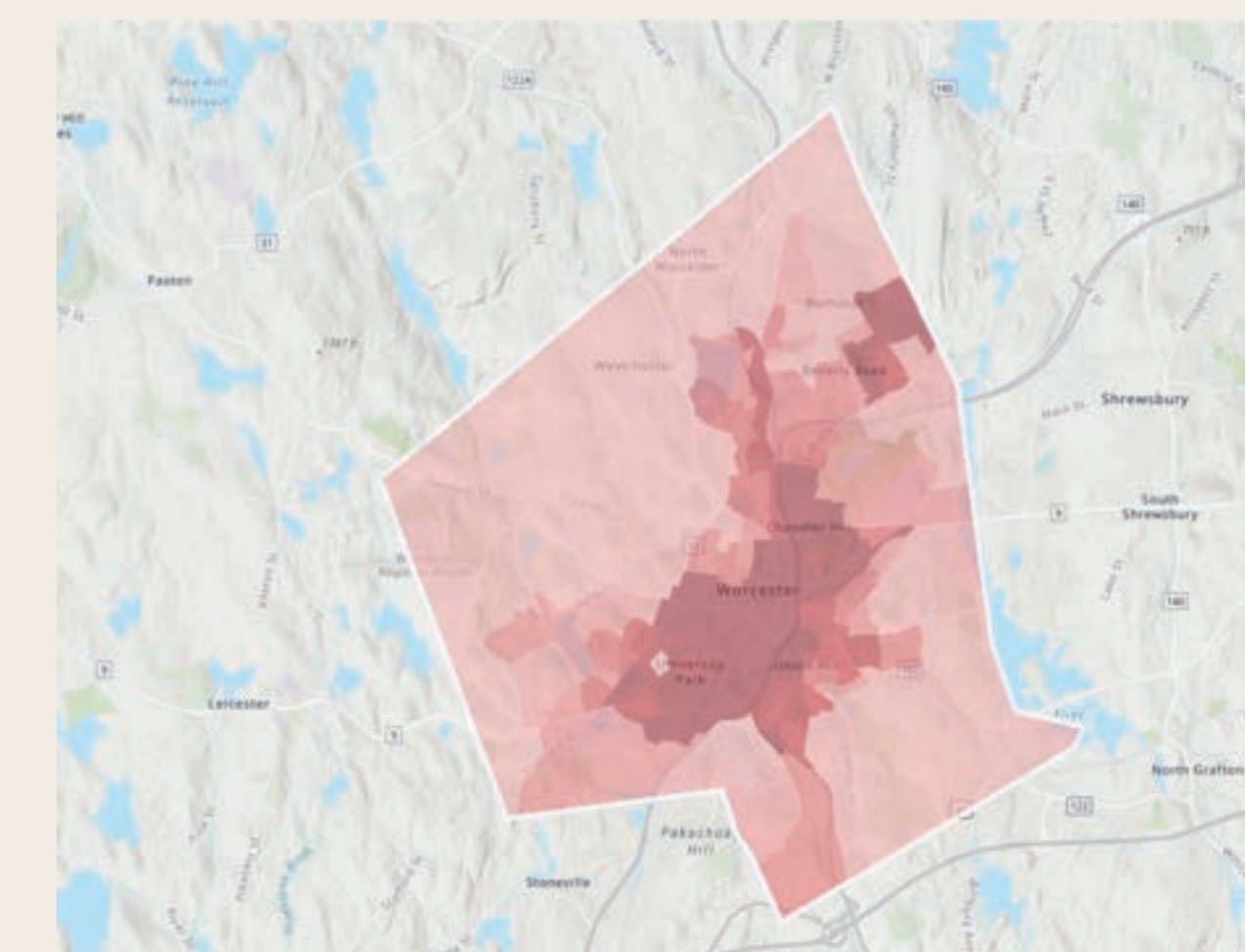
100% renewable energy in all sectors, including heating and transportation



The central area of Worcester is 14°F hotter than surrounding areas.



The west side of the city has much more tree cover and lower temperatures.



This is a heat vulnerability map of Worcester, where dark red areas experience the most extreme heat but have the least resources to escape the heat.

Unequal Impacts of Climate Change

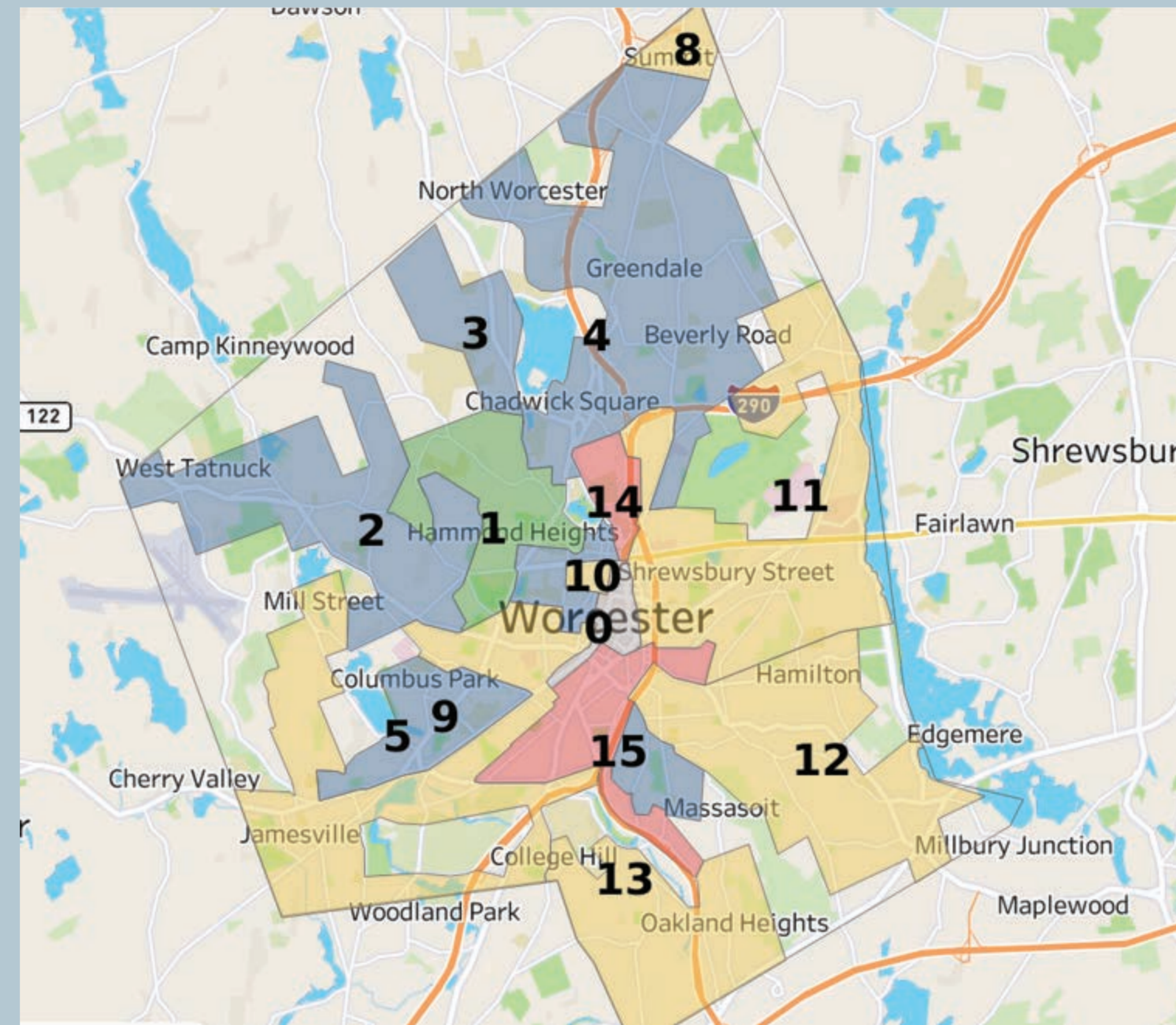
Black communities, communities of color and low-income communities experience inequities rooted in racist housing policies that “redlined” certain neighborhoods as “hazardous” for bank loans and mortgages.

Though redlining is no longer legal, de facto segregation persists. Formerly redlined neighborhoods still have lower rates of home ownership, higher rates of poverty, higher concentrations of non-White and linguistically isolated residents. Many buildings are in disrepair, expensive to heat and cool, and unsafe and unhealthy to live in.

Notice how the redlining map lines up with the heat island map on poster 2.



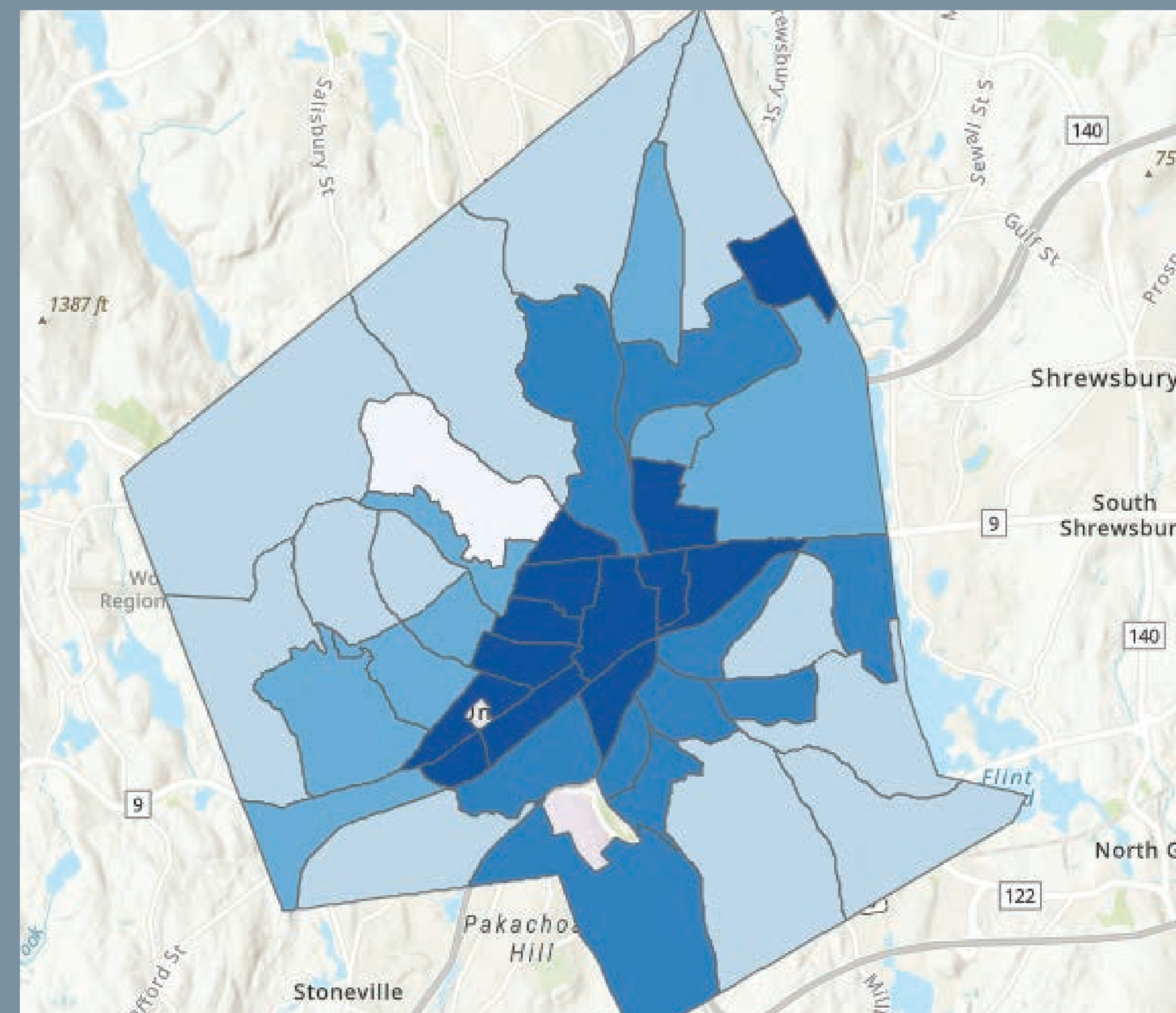
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1936 Worcester Redlining Map

- Zone 1 Best
- Zone 2-7 Still Desirable
- Zone 8-13 Definitely Declining
- Zone 14-15 Hazardous

Source: Home Owners Loan Corporation



2020 Worcester Rent Report Map

Renter-occupied Rate

- >80%
- 60-80%
- 40-60%
- 20-40%
- <20%

H.E.A.R.T. Partnership

The Worcester branch of the NAACP Environmental and Climate Justice Committee launched the Worcester Healthy Equitable Affordable Retrofits and Training (H.E.A.R.T.) Partnership, with funding from the MA Clean Energy Center EmPower Program and RMI.



GOAL

Improve the health, safety, and comfort of residents and advance Worcester's climate goals by making buildings healthier, more energy efficient and using electricity instead of fossil fuels for heating and cooking.

CONCERNS

Permanent affordability, affordable utility bills, access to the economic opportunities created by transitioning away from fossil fuels.

VALUES

Equitable outcomes require equitable process (the most affected community members participate in policy-making, planning and implementing projects). This is an ongoing challenge.

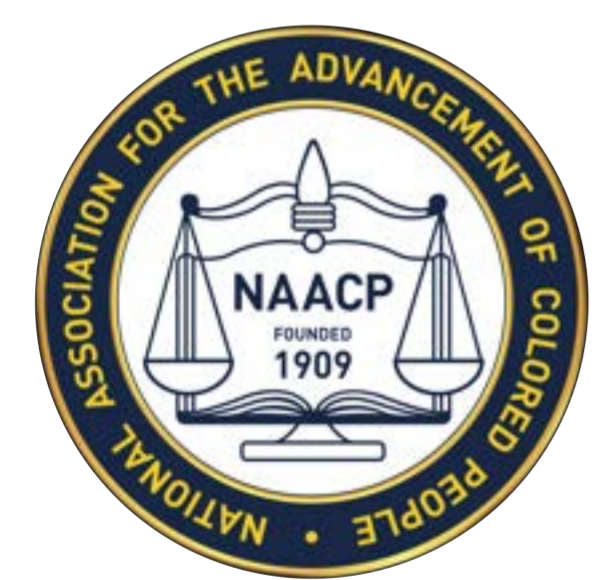




Image: Pvmoutside / Wikimedia Commons

Worcester's Historic Triple Deckers

Worcester has between 4,000–5,000 triple deckers, most are more than 100 years old.

The H.E.A.R.T. Partnership studied six of them to better understand the challenges and opportunities to repair, weatherize, and electrify triple deckers.

The triple deckers in the study, owned by a Community Development Corporation, were in relatively good condition. Many triple deckers are not.

Energy efficiency investments have not been reaching the people who need them most. This is why we must center housing and climate action on those most affected. This is how.



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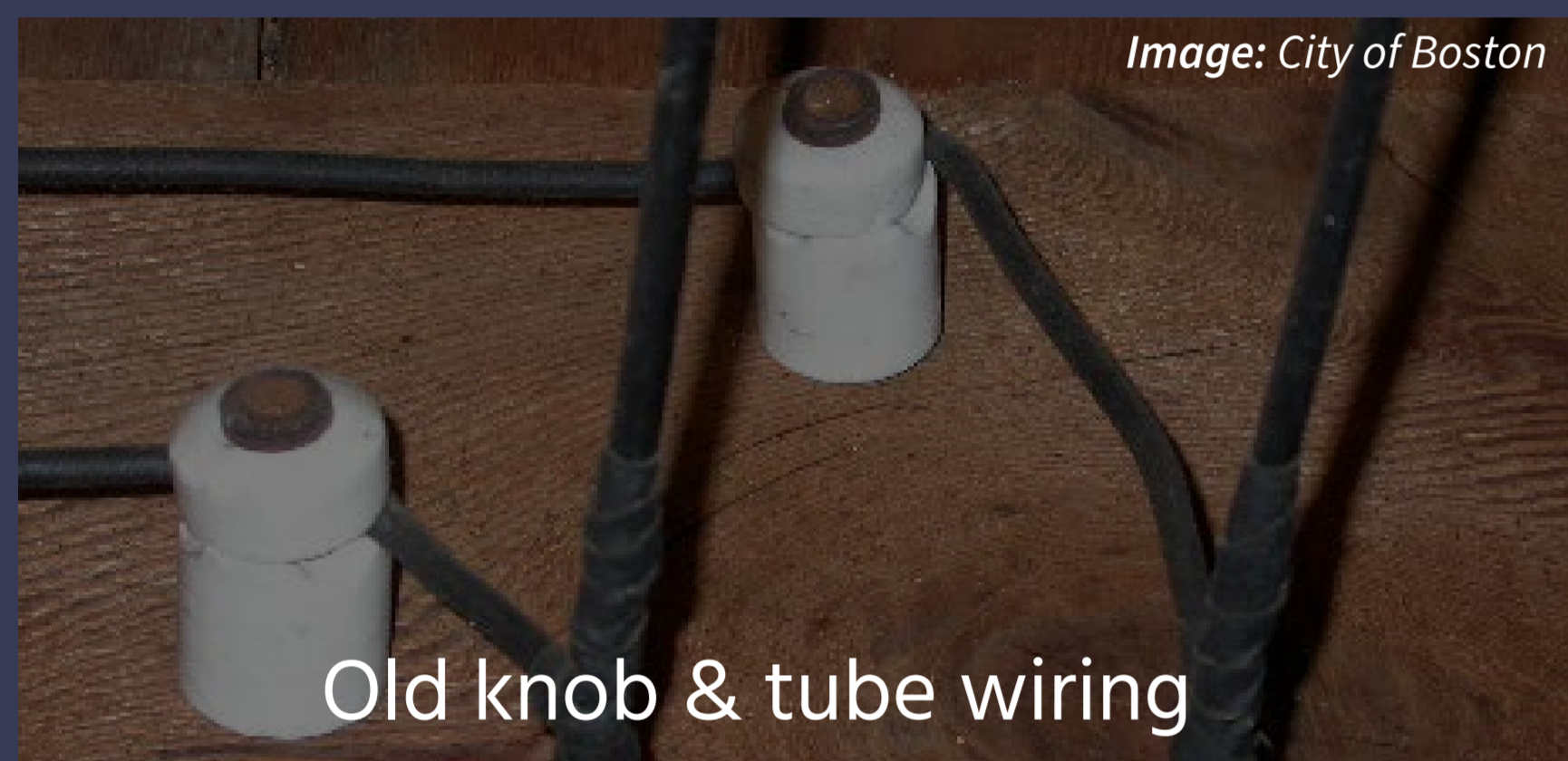
Phase 1 >>> Fix Barriers to Weatherization



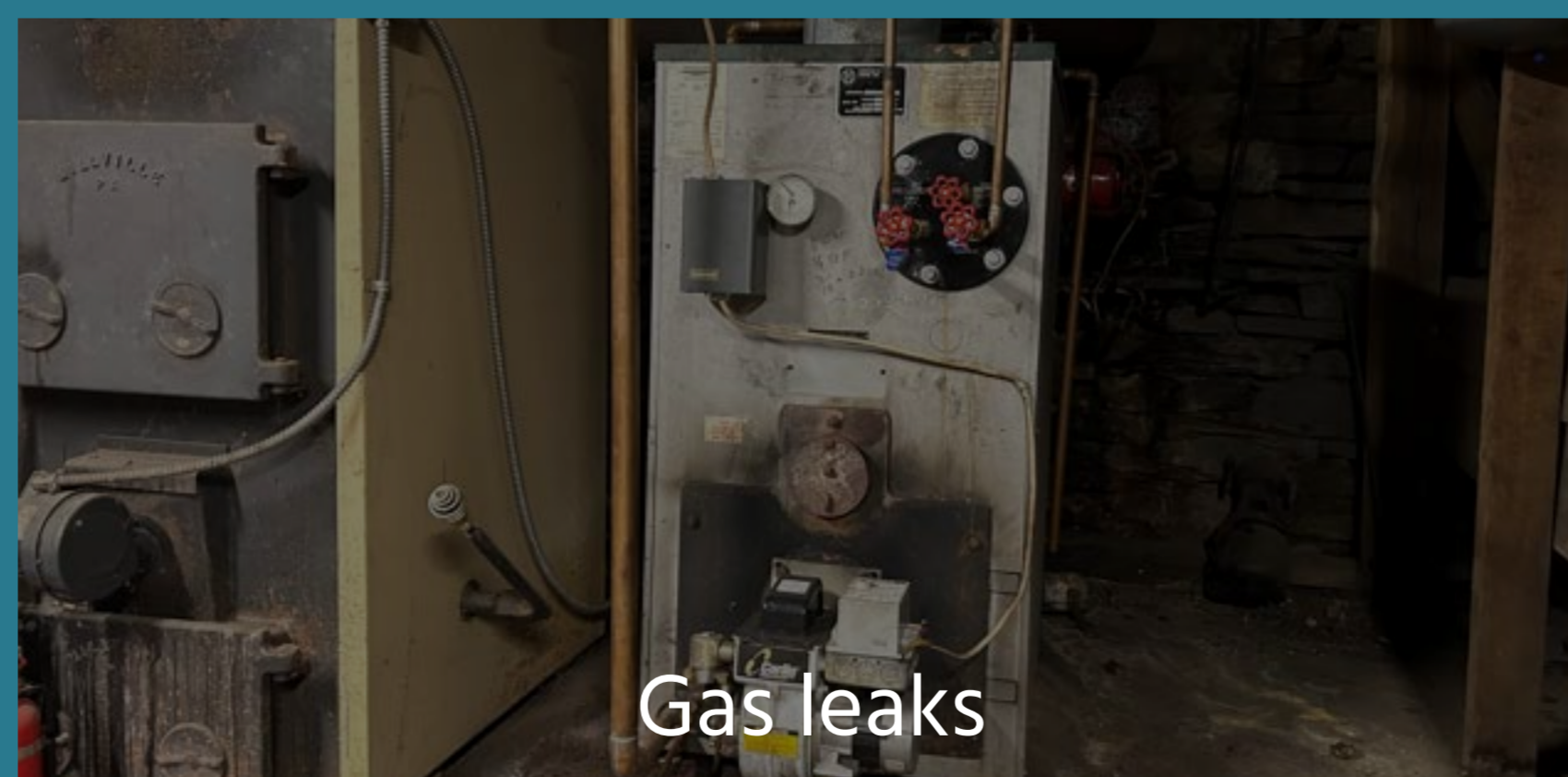
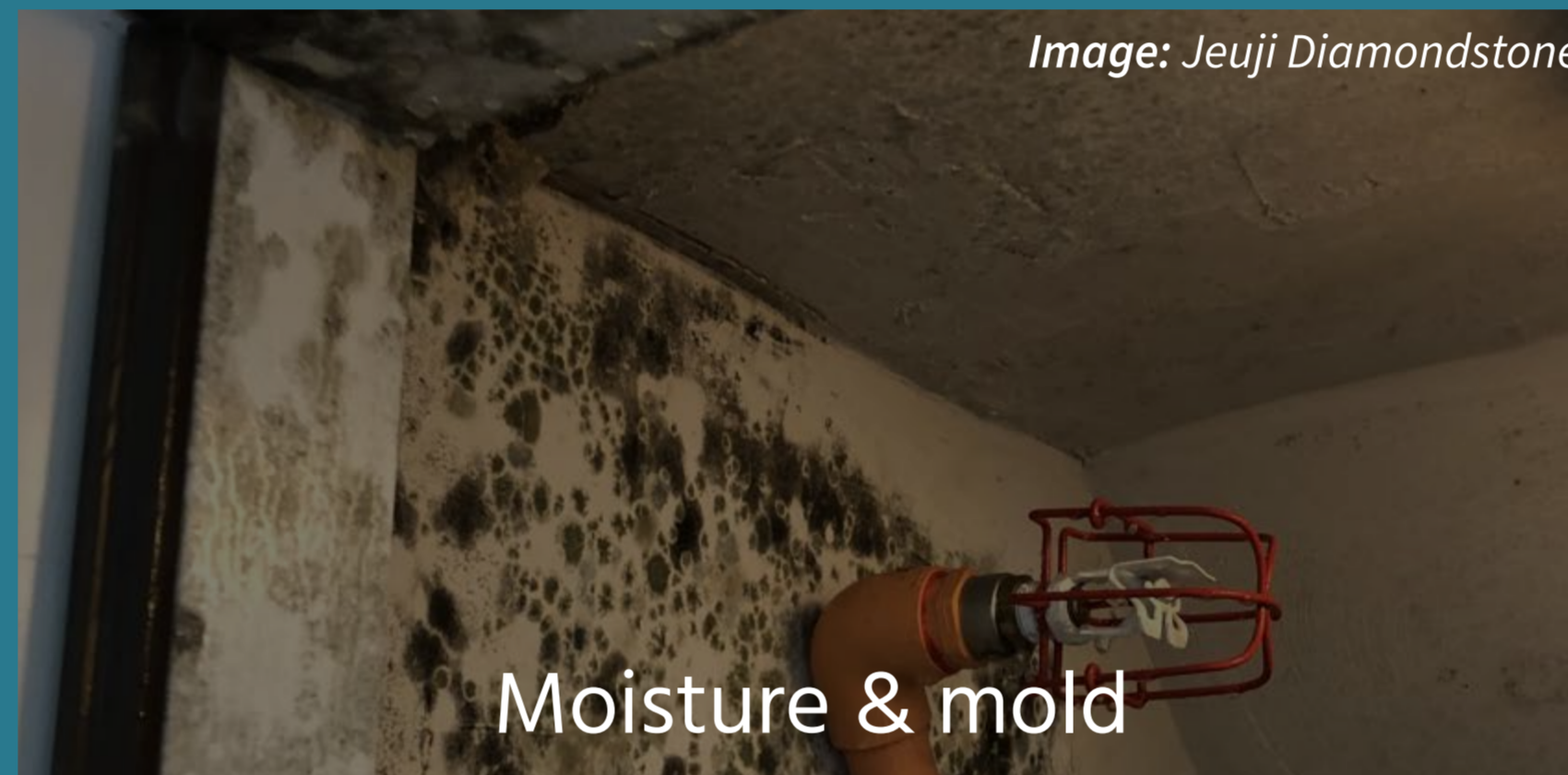
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These common triple decker problems need to be resolved before they are made weathertight:

Fire Hazards



Health Hazards



Phase 2 >>> Make Triple Deckers Weathertight



Seal holes & leaks in:

- Plumbing, wires, & other penetrations
- Windows & doors
- Attic
- Basement perimeter

Insulate the building envelope:

- Drill-and-fill insulation in wall cavity
- Loose fill insulation in attic
- Batt insulation in basement

Upgrade building envelope:

- Add insulation to building exterior when replacing siding
- If windows are very drafty, consider double-pane windows, less expensive window inserts, or insulating film.

Increasing energy efficiency in buildings is a key strategy to reduce fossil fuel pollution. Weather tight, well-insulated homes and energy-efficient appliances also save families money on monthly utilities. (Look for Energy Star label.)



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Phase 3 >>> Electrify! Transition Off Fossil Fuels



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A. Install Heat Pumps

These electric appliances are highly efficient at heating AND cooling. No gas leaks! Healthy indoor air!

**Triple deckers were not designed for heat pumps. See some engineering and architectural suggestions for heat pump energy systems in triple deckers.*

B. Install Hot Water Heat Pump

Heat pump water heaters are 3x more efficient than conventional water heating systems.

C. Ditch Your Gas Stove

Gas stoves release harmful pollution into our homes that is especially dangerous for children. Removing gas appliances from the home greatly improves indoor air quality. Induction stoves or plug-in induction hot plates provide the most efficient, safest way to cook.

D. Soak Up the Sun & Save on Your Electricity Bill

Install rooftop solar if possible when replacing roof; or join a community solar farm.

**Know how to spot a scam. Many door to door solar sales people represent for-profit companies that will overcharge you. Make sure you join a solar farm offered by a mission based company, organization or co-op.*



Benefits of Weatherization and Electrification



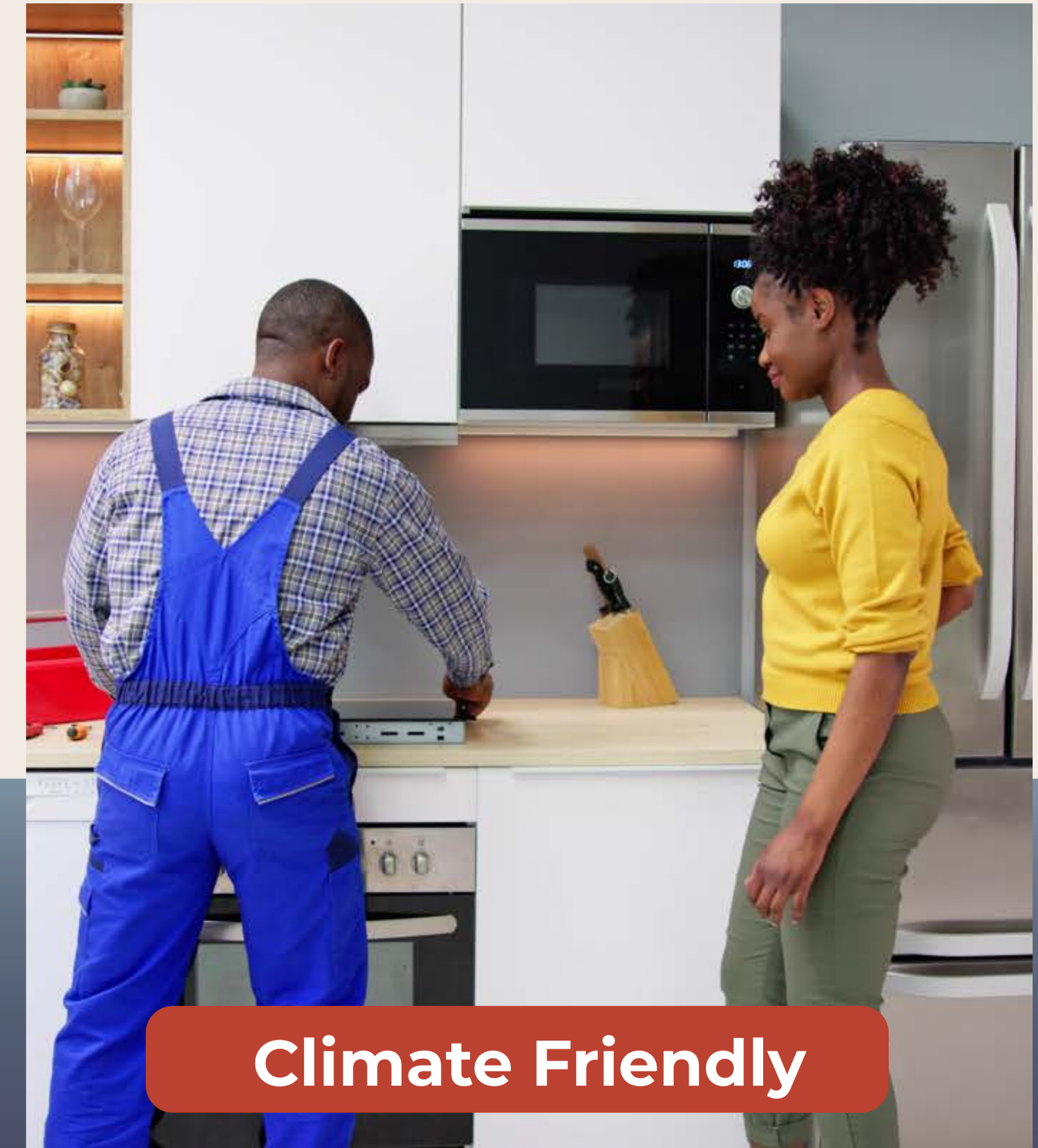
**Cleaner Air,
Healthier Home**

Gas stoves release hazardous pollutants into our homes and are a significant contributor to childhood asthma. Removing gas-burning appliances removes a key trigger of asthma symptoms, respiratory and cardiovascular disease in our homes.



Safer Home

Modern electrical wiring reduces fire hazards. Insulation and heat pump air conditioning provides refuge from extreme heat.



Climate Friendly

Removing gas appliances from homes supports Worcester climate goals by reducing greenhouse gases, the primary cause of climate change.



Access to Technical Assistance & Funding

Current programs available to low and middle income communities don't provide comprehensive services, lack sufficient funding, and pose barriers to access.

Policymakers are working toward solutions.

For instance, energy efficiency programs did not provide funding to address barriers to weatherization until MassSave recently expanded its energy efficiency services to replace knob and tube wiring and asbestos insulation.

More needs to be done to integrate fragmented programs and assist both property owners and renters in accessing support for building upgrades, including health and safety needs and transitioning off fossil fuels.

Check the QR code for more information on what is available now.



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Repairing and Upgrading Buildings Will Create Economic Opportunities

A just energy transition will increase access to good-quality clean energy jobs for local residents who most need the work: members of non-White, low income, and linguistically isolated communities. We also need to bring more women into the building trades.

Massachusetts must train more than 38,000 clean energy workers by 2030 in order to meet its climate goals.

To meet the need, we must expand our workforce. This is a huge opportunity to address inequities in the labor market.

State and local government, industry leaders, training sites and schools must work together to **expand the clean-energy workforce and increase its diversity, ensuring that the energy transition is a just transition.**



Steps to Equitable Workforce Development



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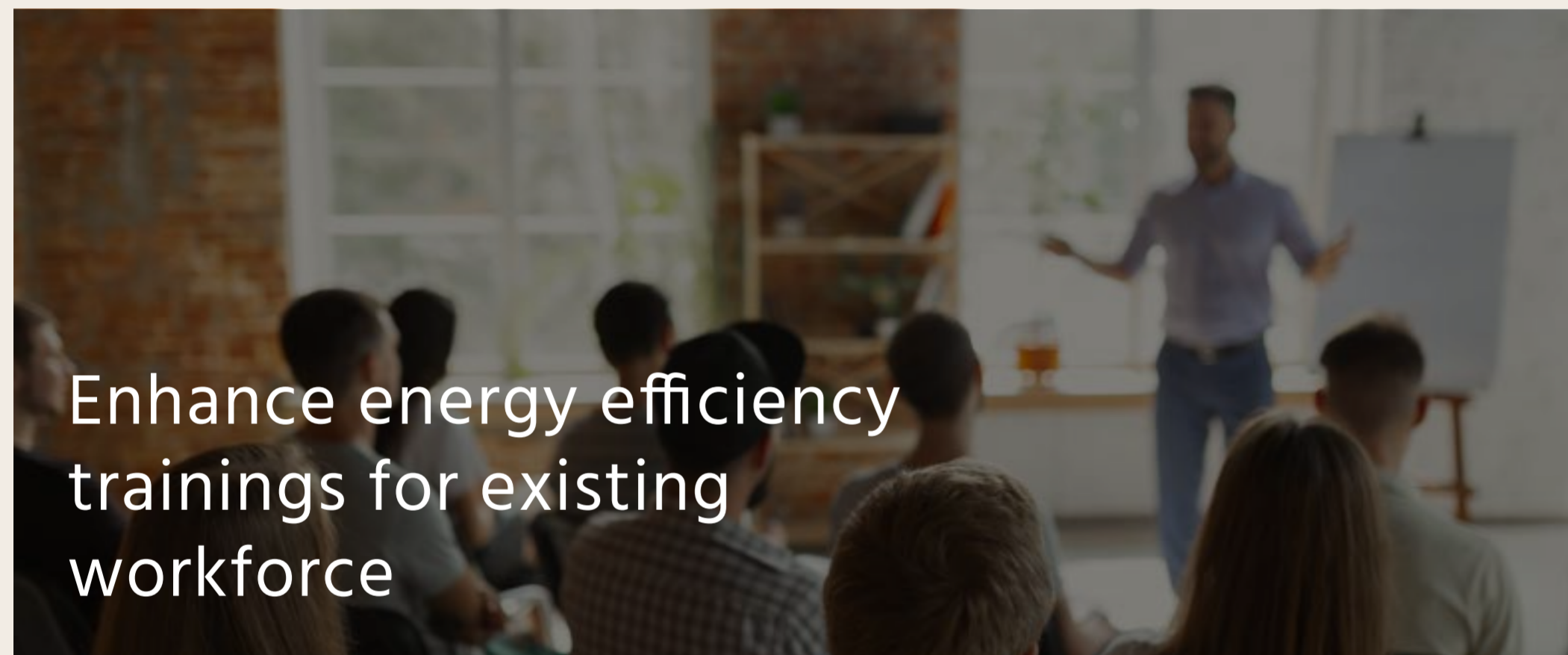
Expand access to the Green Jobs Academy



Build job pipelines with community colleges, vocational and technical schools & nonprofits



Expose students to green career opportunities and field experience



Enhance energy efficiency trainings for existing workforce



Leverage Youth Works summer jobs program



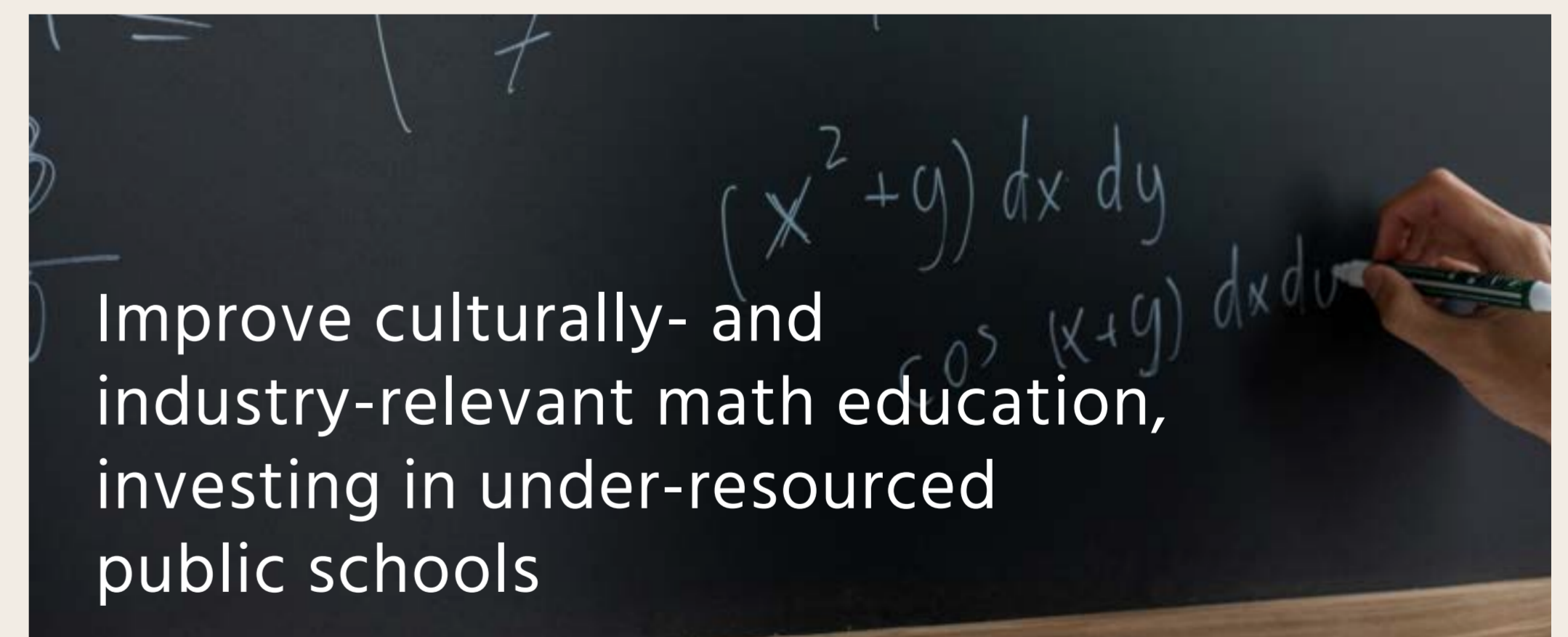
Leverage government subsidies for on-the-job trainings



Integrate energy efficiency, HVAC, electrical and plumbing programs for green whole-home construction



Ensure energy transition jobs pay family-sustaining wages and have comprehensive benefits and career ladders



Improve culturally- and industry-relevant math education, investing in under-resourced public schools

Here are some groups that could be agents of change to make this future a reality





Our homes can hurt or help our health and how we experience the effects of climate change.

The Inflation Reduction Act and the Next-Generation Roadmap for Massachusetts Climate Policy, together provide huge opportunities to help hasten building upgrades, including electrification.

The NAACP Environmental and Climate Justice Committee is committed to working with community partners to further this work.

A huge shout-out to Climate Nexus staff and partners who made this poster display possible. Heartfelt thanks to the translation team members who provided Spanish translation for the poster text, including much hard-to-translate terminology.



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