

CITY of **BOSTON**



Housing

Affordable Housing Retrofits in Boston

August 14, 2025

BOSTON HOUSING LANDSCAPE



Some of the highest housing costs in the country:

Median rent: \$3,000

Median sales price: \$765,000

Low vacancy:

3.7%

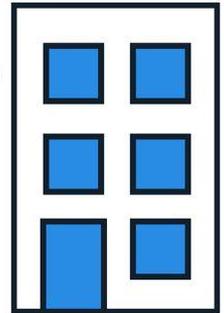
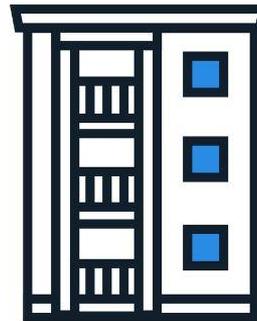
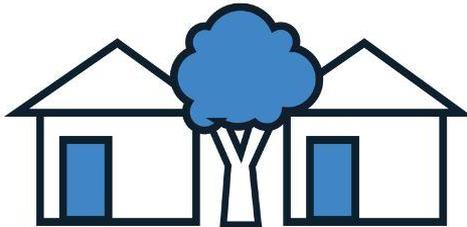
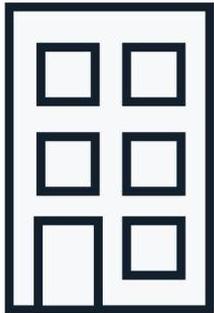
Rent Burden:

42% of Bostonians pay more than 30% of their income to rent

24% pay more than 50% of their income to rent

20%

of housing is income-restricted



Data Sources: ACS 2017-2021 Estimates, PUMS; The Warren Group, 2022; Rental Beast & MLS, 2022; MassCourts+ (1/1/23-9/1/23); 2018 Eviction data from MOH contract with provider; "Homes for Profit," MAPC

HISTORICALLY, Boston summers included...



(Baseline for 1977 - 2015)

But if emissions trends continue at the current rate...





WE HAVE VERY HIGH ENERGY COSTS



Boston area Electricity prices are

73%

above national average.

Boston area Natural Gas prices are

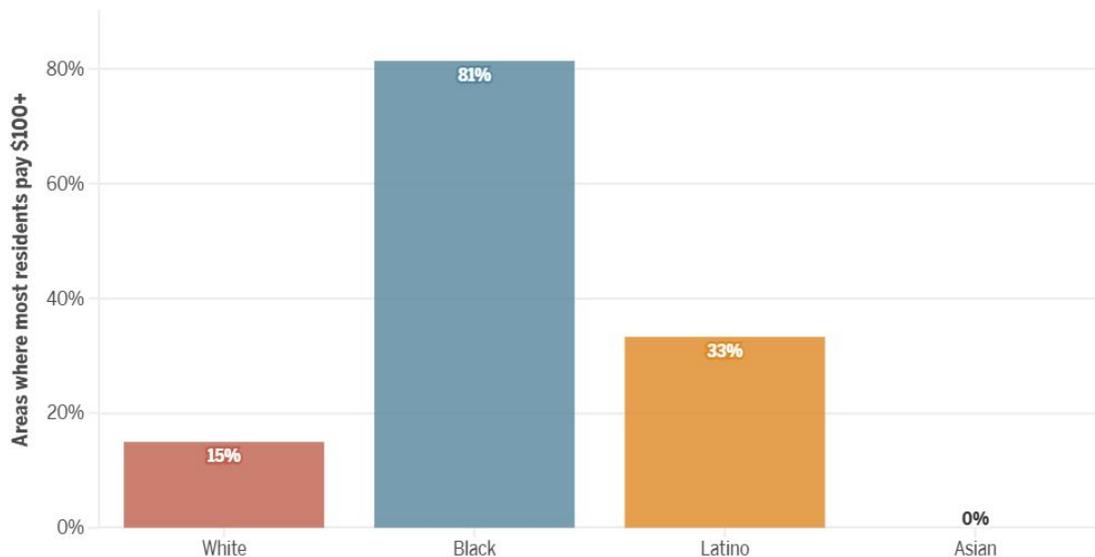
65%

above national average.

Higher Energy Burden by Race and Income

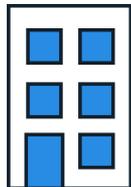
Gas bills in most Boston-area Black communities are more than \$100

A Boston Globe analysis found that more than 80 percent of predominantly Black areas in Suffolk County are places where most gas customers pay at least \$100 per month in gas bills. That is compared to only 15 percent of predominantly white areas and 33 percent of predominantly Latino areas.



City's Climate Mitigation and Resilience Strategy for Existing Buildings

- ***Glide Path to Net Zero Emissions:*** Building Emission Reduction Ordinance (Large Buildings - 15 units+)
- ***City supported Energy Retrofits of Affordable Housing:*** Private and Public Affordable Housing
- ***Lowering the Energy Burden in Small Buildings:*** Boston Energy Saver (Small Building Focused)

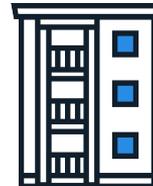
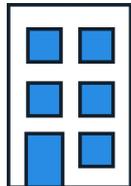


Privately Owned Affordable Housing Retrofits

- \$10M in ARPA Funds
- Max of \$50k per unit
- Reduction in Energy Usage of at least 40% to 50%
- 300 units funded

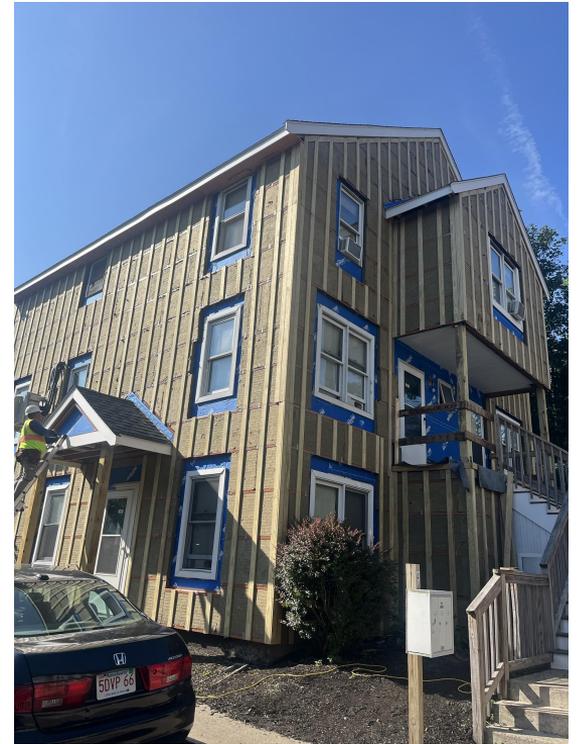
Scope:

- Enabling Work (electrical upgrades etc.)
- Building Envelope Improvements (insulation, air sealing, new windows)
- New electric mechanical systems (heat pumps for cooling)
- Improved ventilation with ERV system
- Solar (on some projects)



What we are learning

- Retrofits are expensive (need approaches to lower costs)
 - Hard cost ~\$200k+ per unit
 - Total cost ~ \$300k-\$400k per unit
- Need to find a predictable financing approach (no playbook like new construction)
- Some development teams adopt “zero over time” approach
- Be thoughtful about how scope will lead to tenant disruptions during construction
- Working to figure out how to align affordable housing preservation refinancing with retrofit scope



Boston Housing Authority - Retrofits

- Portfolio of 10,000 housing units (built 1930s - 1980s)
- Inefficient buildings that mostly lack central cooling systems
- Most cooling from window AC units provided by residents
- Reliance on inefficient window units in warming climate puts strain on grid and leads to outages



Boston Housing Authority - Retrofits

- 200-300 units have heat pumps but working on scaling to thousands
- Variety of approaches based on building typology and existing conditions
 - Window Heat Pumps - 100 units in 1 High Rise (low cost & quick installation)
 - Ductless Mini-splits
 - Networked Geothermal - 7 buildings, 129 units (super high efficiency)



Small Building Retrofits



WHAT IS BOSTON ENERGY SAVER?



A partnership between the City of Boston, Mass Save, our utilities Eversource and National Grid, and Boston Housing Authority with the goal of lowering energy costs through weatherization, energy efficiency, and decarbonization.

State mandated \$150M investment from Eversource and National Grid and \$300M in projected benefits.

OUR GOALS

Over the next three years, we aim to:

WEATHERIZE

10,000

**Housing units & small
businesses**



DEPLOY

\$150 million

**of Mass Save® Sponsor
incentives in Boston**

INSTALL

5,000

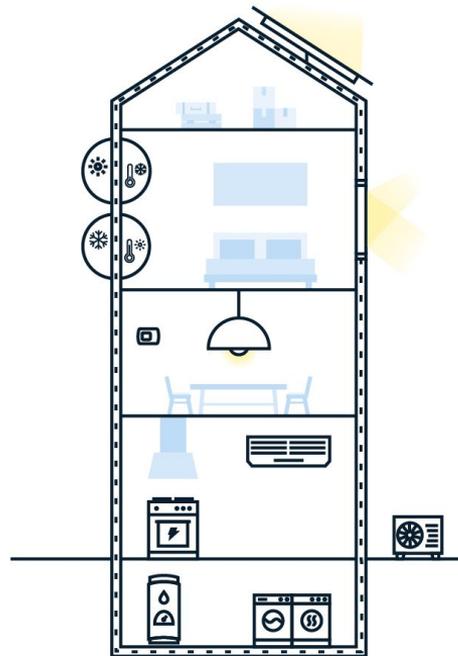
Heat pumps



DELIVER

\$300 million

in benefits to Bostonians



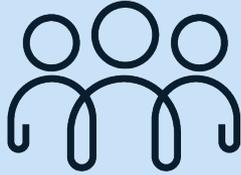
WHO WE ARE SERVING

All small buildings in Boston

With a particular focus on delivering for underserved communities, including:

- Renters
- Low- and moderate-income residents
- Households that speak languages other than English
- Small businesses
- **Delivered fuels & electric resistance**

CORE SERVICES



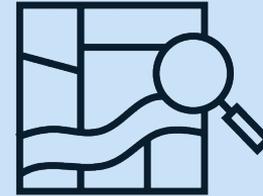
Help Desk: 1-on-1 assistance for residents and warm referrals



Financial Support: City and State Resources



Technical Assistance: Vendor vetting, quote review, financing and educational support

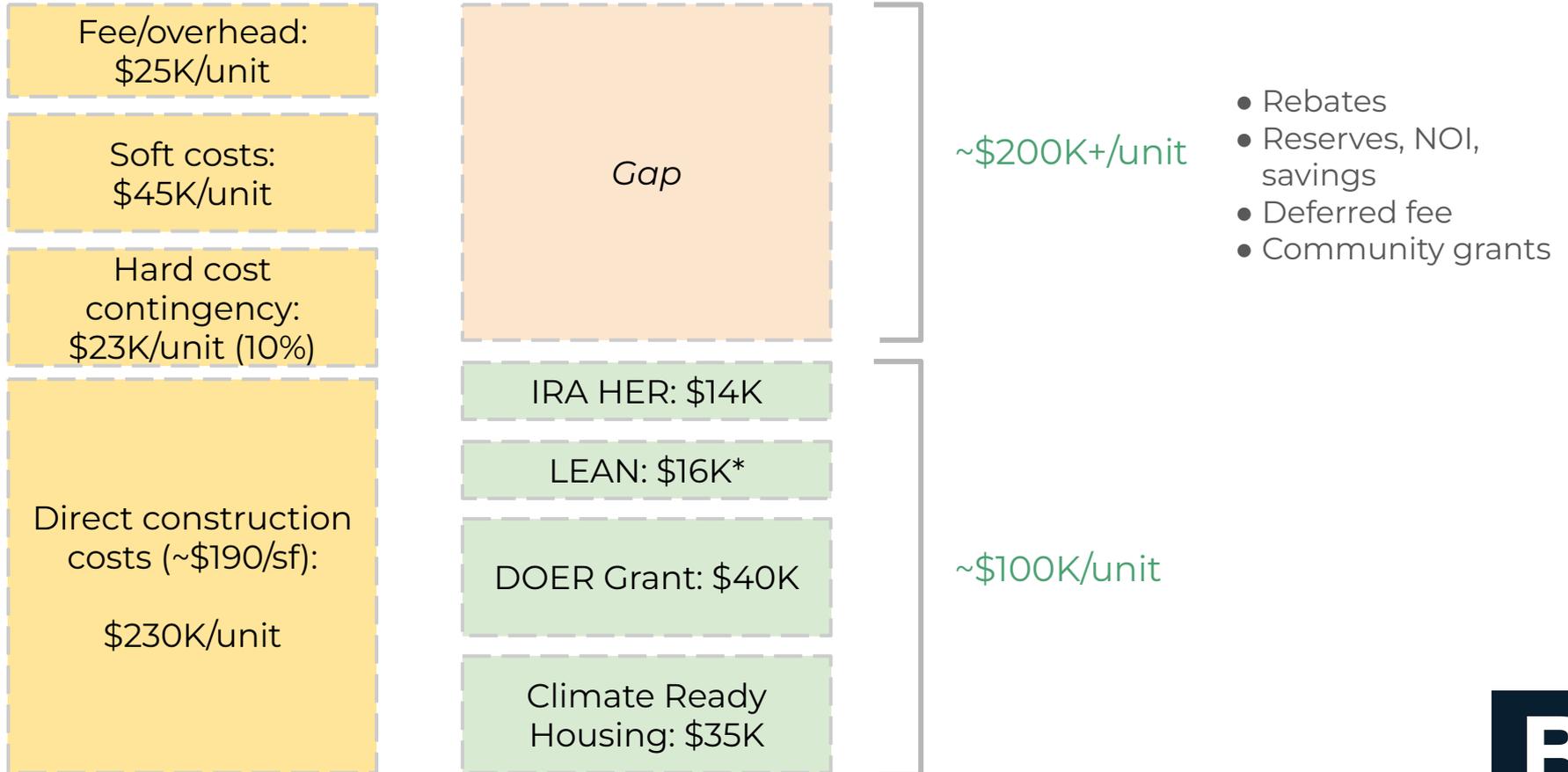


Marketing & Community Outreach: trainings, targeted campaigns, neighborhood events,

Appendix



Retrofit sources and uses (highly oversimplified & small sample size)



This is conservative and does not include any non-DER scope.

Hano Homes Deep Energy Retrofit Sources & Uses

