

# **BUILDINGENERGY BOSTON**

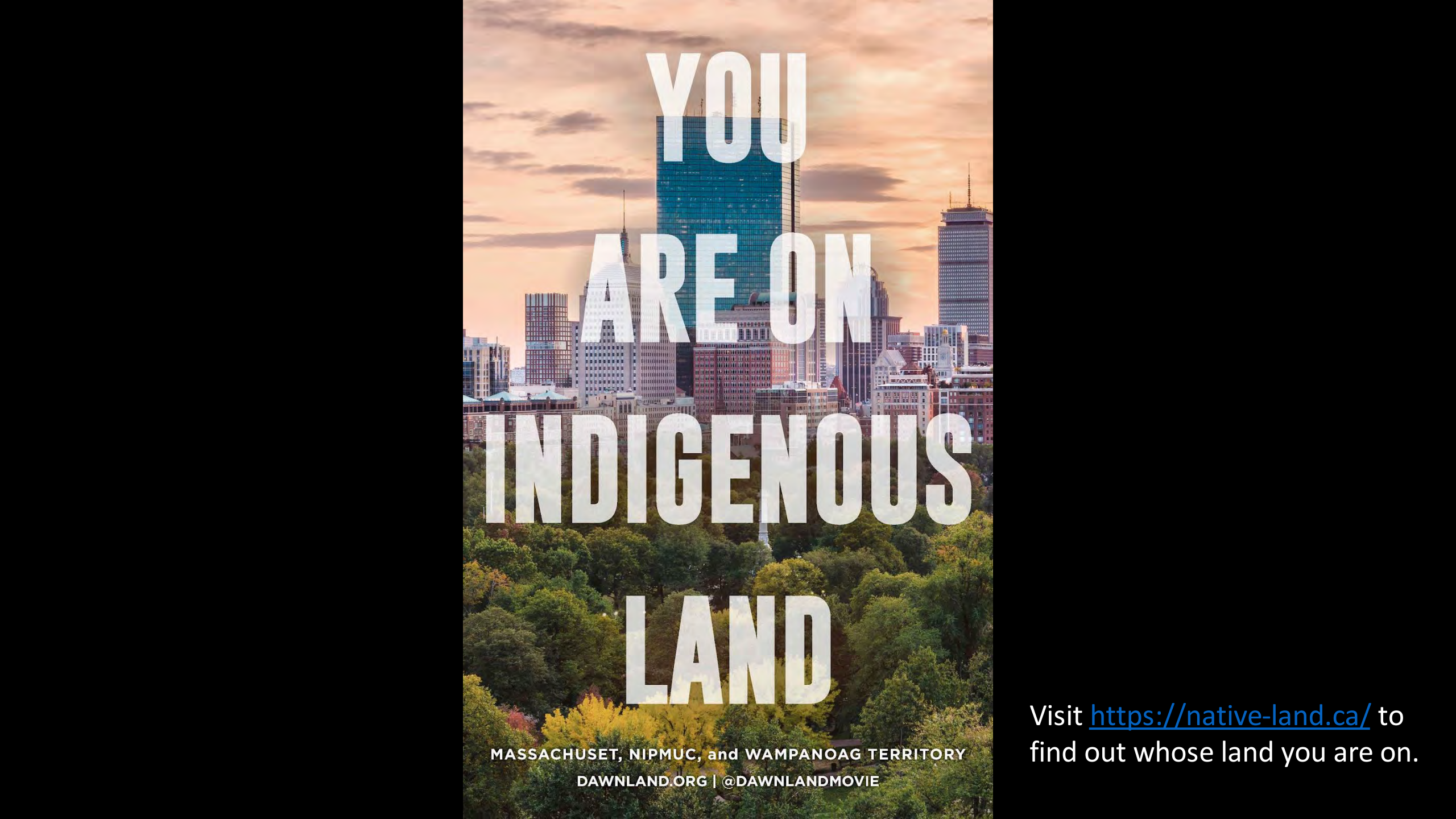
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## **Expanding Access to Clean Energy in Affordable Housing**

August 14, 2020 · 9:15 am

### **Presenters:**

Mary Wambui (Planning Office of Urban Affairs), Gabe Shapiro (All In Energy), & Emily Jones (LISC Boston)



YOU  
ARE ON  
INDIGENOUS  
LAND

MASSACHUSET, NIPMUC, and WAMPANOAG TERRITORY  
DAWNLAND.ORG | @DAWNLANDMOVIE

Visit <https://native-land.ca/> to  
find out whose land you are on.



Boston, MA

D8

D9

D10

Show Full

Show Scan

5. Clarifying Remarks

Negro heavily concentrated north of Ruggles St. on the west side of Washington. Jewish centered near Columbus Square. A large territory with some streets showing better experiences than the balance of the section.

2. Inhabitants

e. Infiltration of foreign - negro

c. Foreign-born families 50%%; mixturepredominating

d. Negro yes%; 25%predominating

f. Relief families heavy

a. Occupation clerks - labor - relief

b. Estimated Annual Family Income \$600-\$1,500

1. Area Characteristics

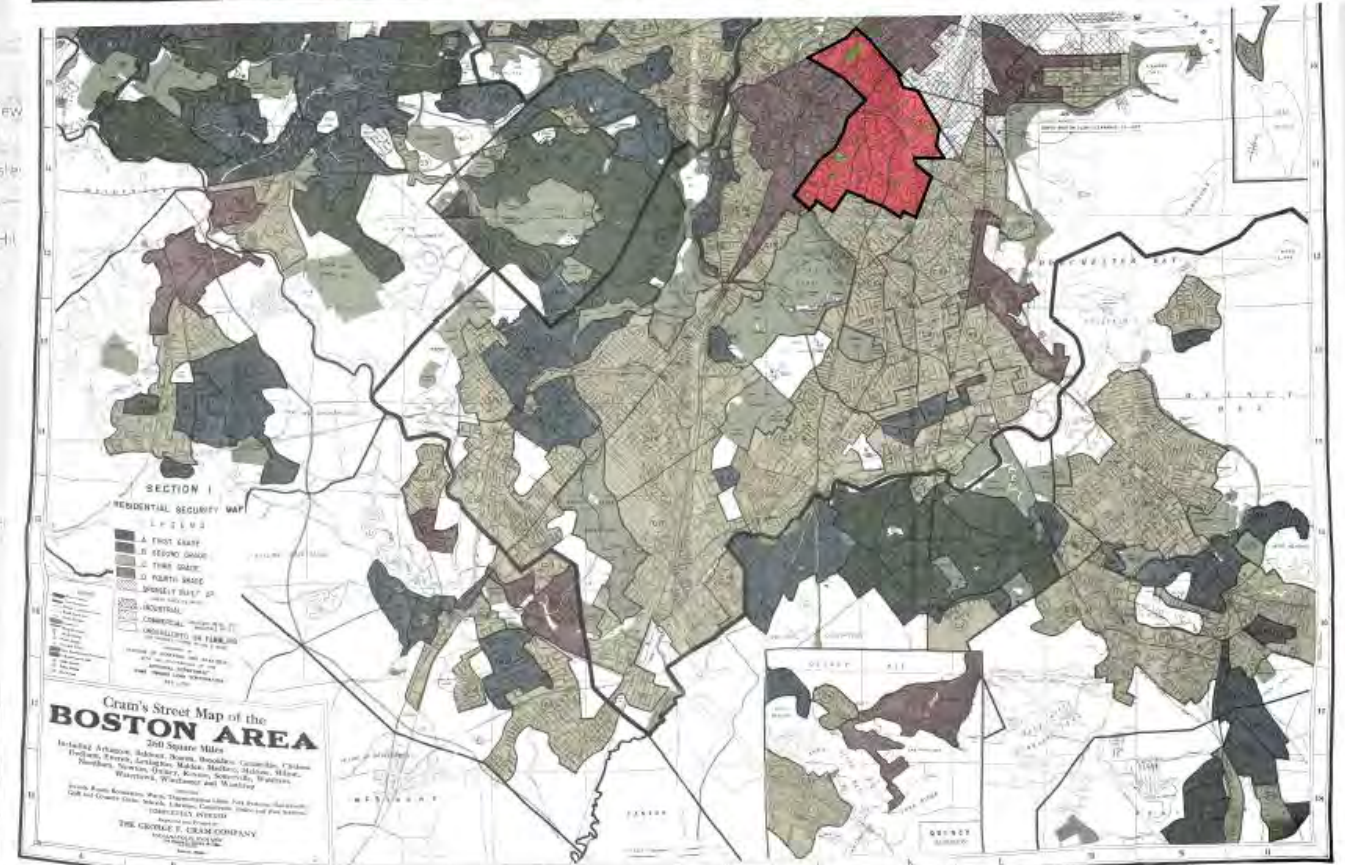
a. Description of Terrain level to hilly

b. Favorable Influences good transportation, schools, etc. close to central Boston employment area

c. Detrimental Influences congested. Heavy traffic. Large



Kendal Green  
New  
Wellesle  
Wellesley Hi  
Wellesley  
Char  
Dover

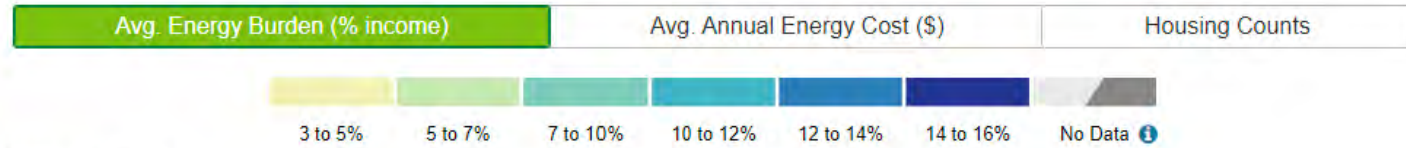


Norwood  
Fonkapoag  
North Randolph  
South Braintree

Medfield

# Low-Income Energy Affordability Data (LEAD) Tool

Avg. Energy Burden (% income) for Census Tracts in Massachusetts



United States > Massachusetts > Census Tracts

( View Counties View Cities )

Avg. Energy Burden (% income) for Massachusetts: 8%

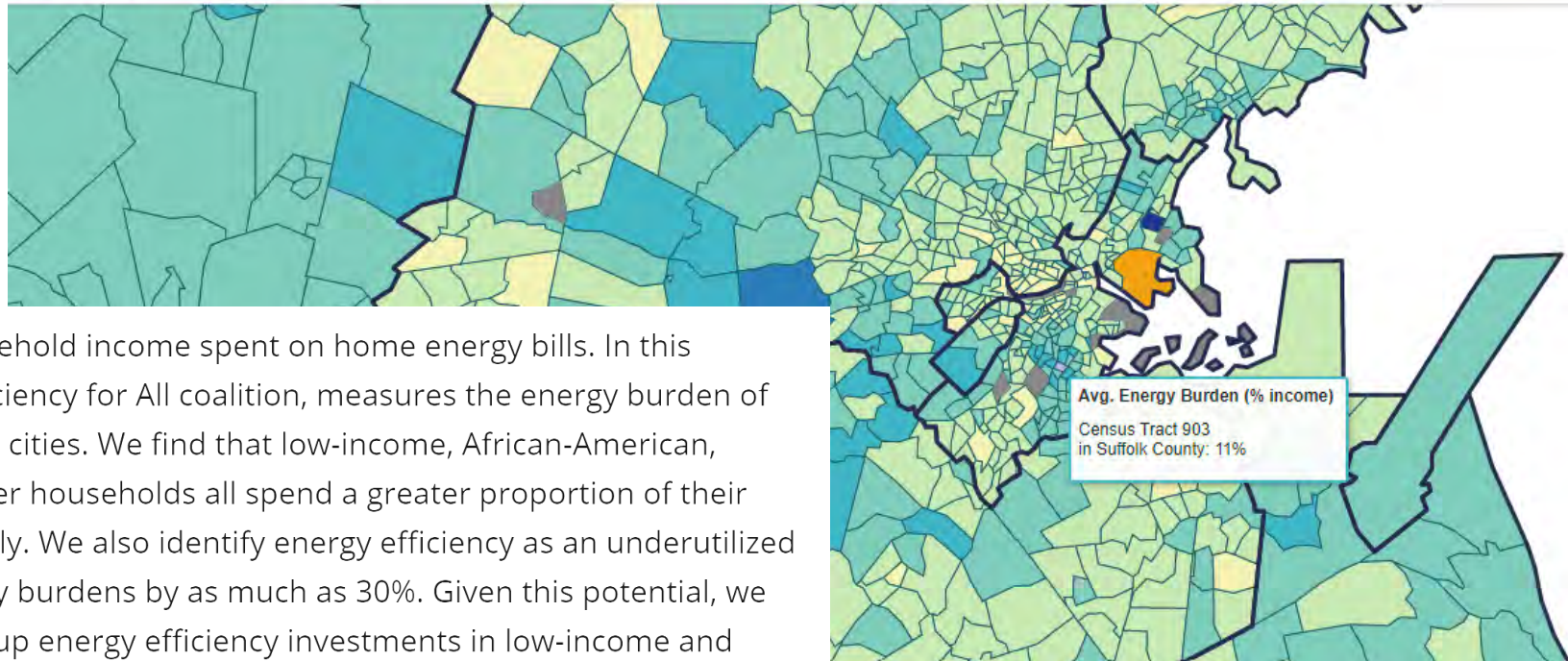
## Census Tract 9813 in Suffolk County

compare tract

compare all tracts in Suffolk County

compare Suffolk County

Avg. Energy Burden (% income): 4%

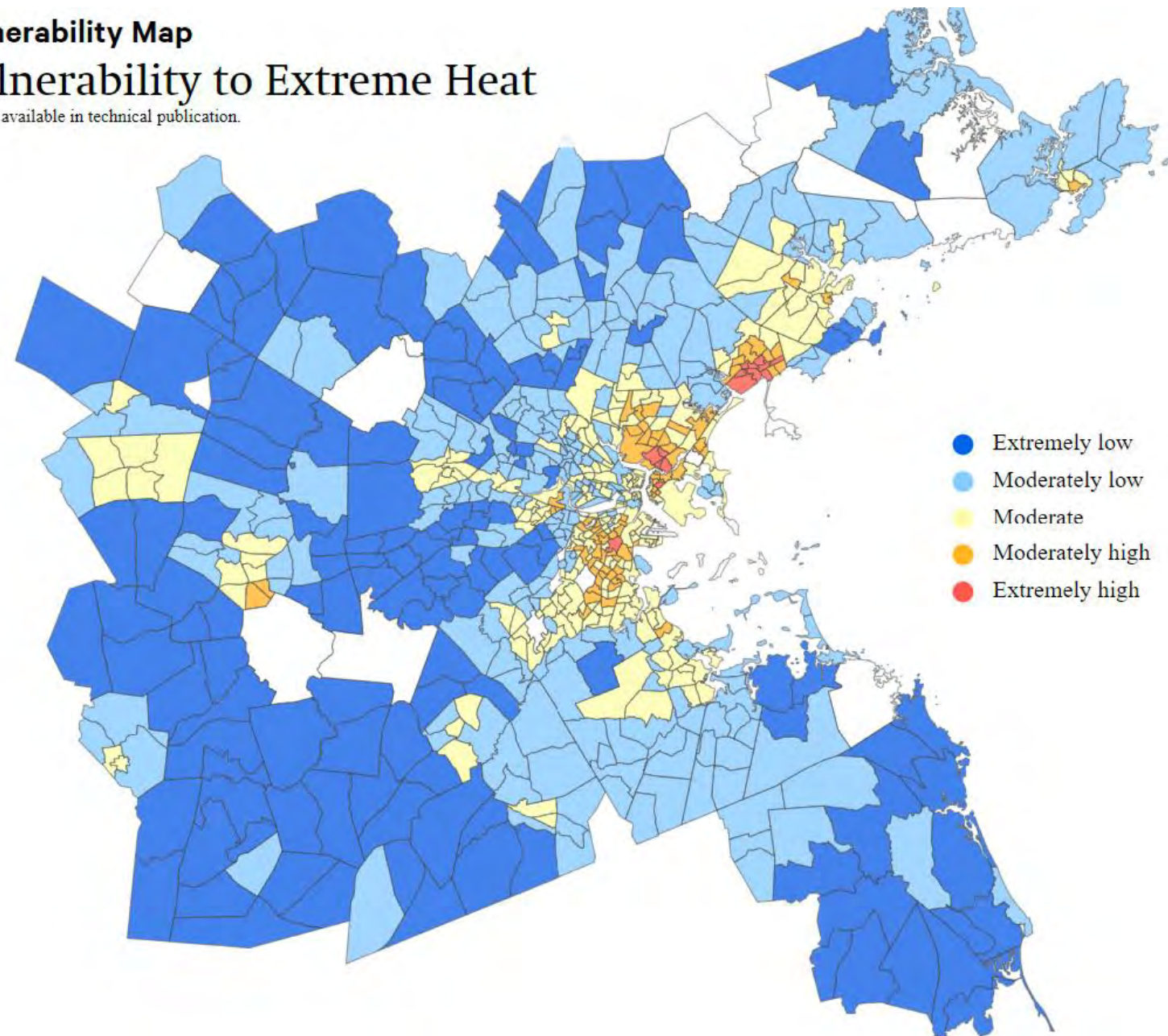


Energy burden is the percentage of household income spent on home energy bills. In this report, ACEEE, along with the Energy Efficiency for All coalition, measures the energy burden of households in 48 of the largest American cities. We find that low-income, African-American, Latino, low-income multifamily, and renter households all spend a greater proportion of their income on utilities than the average family. We also identify energy efficiency as an underutilized strategy that can help reduce high energy burdens by as much as 30%. Given this potential, we describe policies and programs to ramp up energy efficiency investments in low-income and underserved communities.

# Vulnerability Map

## Vulnerability to Extreme Heat

Sources available in technical publication.



<https://climate-vulnerability.mapc.org/>

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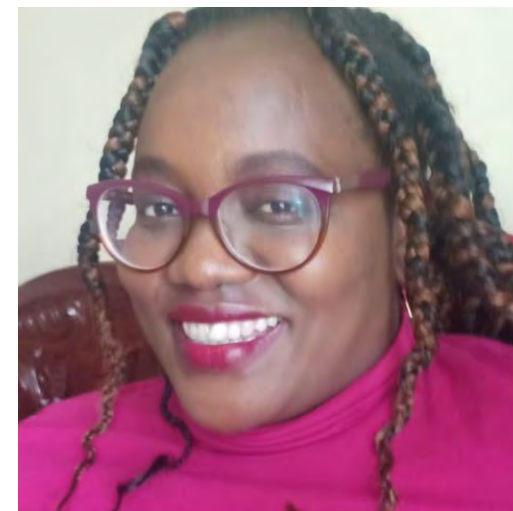
**Mary Wambui, Planning Office for Urban Affairs**

# MILAGRO HERNANDEZ (Energy Customer Profile)

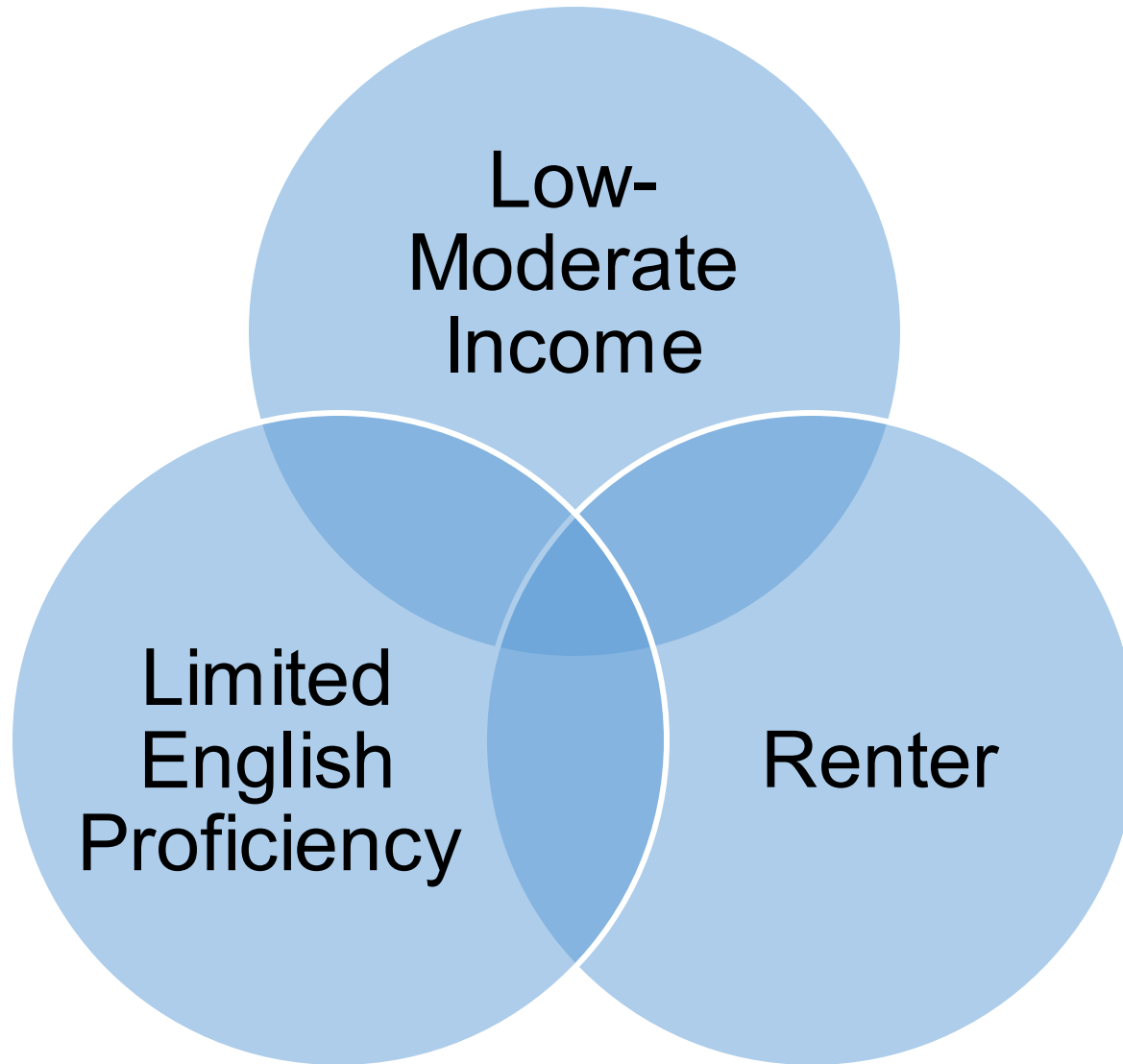
Planning Office *for* Urban Affairs

ARCHDIOCESE OF BOSTON

- She is 38 years old
- A single mom with four young children
- She speaks primarily Spanish
- She lives in Lawrence
- She is a renter in non -subsidized housing- 3 story building with 30 units
- She earns 65K a year
- She pays for all her utilities
- She has never benefited from MassSave though she pays into the system
- Her landlord has not made any energy improvements in the building







Milagro fits the customer profile of the type of resident that the nonparticipant study revealed needs an increase in services and participation in the MassSave program.

# An example of inequalities in implementation of the Columbia Gas program after the gas explosions

## Home Energy Assessments and Weatherization Non-Low Income through October 2019

Town	Home Energy Assessments	Jobs Completed	Market Rate Heating Accounts	Participation Rate (jobs completed as % of HEAs)	Participation Rate (jobs completed as % of customers)
Andover	1,205	997	7,629	87%	13%
North Andover	915	608	5,269	66%	12%
<b>Lawrence</b>	<b>926</b>	<b>480</b>	<b>12,271</b>	<b>51%</b>	<b>4%</b>

Share of Town/Neighborhood Population (%)

Town / Neighborhood	Electric Utility	Gas Utility	Median Income	Renters	Born Outside of United States	Speaks English "Less Than Very Well"	White, non-hispanic	Black, non-hispanic	Hispanic	Asian	American and Alaska Native	Other race / ethnicity
Andover	National Grid	Columbia, National Grid	\$134,627	20%	16%	5%	79%	2%	3%	13%	0%	3%
North Andover	National Grid	Columbia, National Grid	\$102,008	27%	12%	4%	84%	2%	6%	6%	0%	2%
<b>Lawrence</b>	<b>National Grid</b>	<b>Columbia</b>	<b>\$36,754</b>	<b>72%</b>	<b>39%</b>	<b>37%</b>	<b>17%</b>	<b>3%</b>	<b>77%</b>	<b>3%</b>	<b>0%</b>	<b>1%</b>

# NAACP's Environmental and Climate Justice Program objectives

- 1) reduce harmful emissions, particularly greenhouse gases-... includes a focus on corporate responsibility and accountability.
- 2) Advance energy efficiency and clean energy -...to ensure that communities of color are accessing revenue generation opportunities in the new energy economy, while providing safer, more sustainable mechanisms for managing energy needs for our communities and beyond.
- 3) Improve community resilience: Ensures that communities are equipped to engage in climate action planning that integrates policies and practices on advancing food justice, advocating for transportation equity and upholding civil and human rights in emergency management.

# Solutions | What you can do | What am I working on

- Acknowledge that structural racism is part and parcel of the foundation of clean energy programs
- Participate in State Energy Policy /Attend public meetings that have to do with Clean Energy in the State. (public listening sessions for the next energy efficiency plan)
- Market the MassSave and other clean energy programs to others across the commonwealth
- Work-force development- Set goals that increase equitable access to employment and training for residents, people of color and women in clean energy sector
- Personally, I am serving as a councilor at the EEAC and am a co-chair of the equity working group my email is [mary@poua.org](mailto:mary@poua.org) and I welcome suggestions that will expand access of clean energy in affordable housing.

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## **Expanding Access to Clean Energy in Affordable Housing**

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**Presenter:**

**Gabe Shapiro, All In Energy**



# — ALL IN — **ENERGY**

Gabe Shapiro

Co-Founder & Co-Executive Director



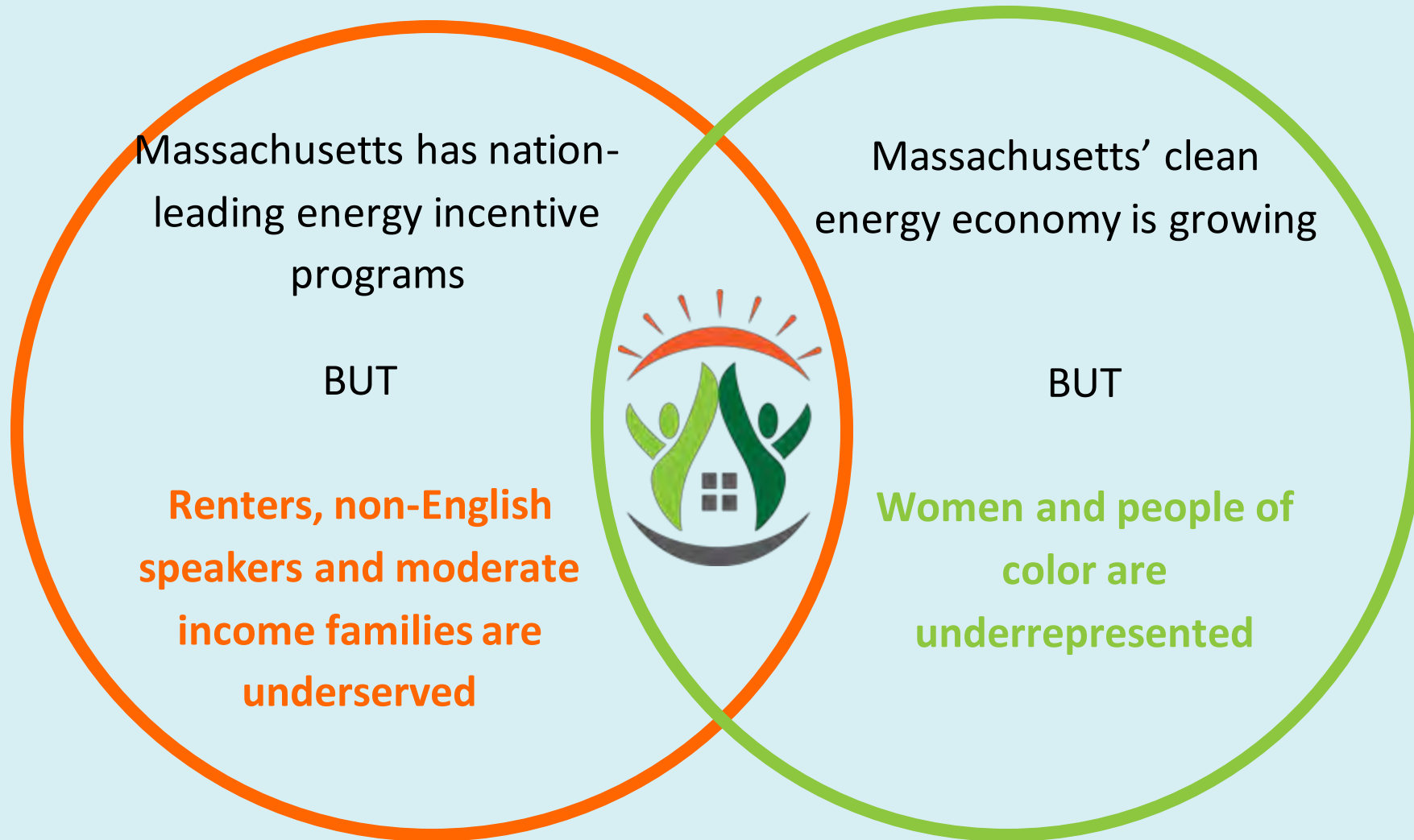
# Mission

Accelerate an inclusive clean energy economy





# All In Energy works at the nexus of two challenges



# Our approach

We bring energy efficiency and renewable energy to underserved communities



We bring diverse talent to careers in the clean energy industry

# Challenges for underserved groups (renters, non-english speakers, low-to-moderate income)

Awareness: Mass marketing, targeted marketing are insufficient

Trust: The messenger is as important as the message

Access: One size does not fit all

Time: Barrier to action must be very low

# How we do community outreach



We hire diverse staff and partner with community organizations and cities



We work with a network of energy efficiency and clean energy companies



We execute co-branded outreach campaigns to engage residents face-to-face and through local communications channels



We help residents access and benefit from programs and products that save money and energy

# Our Programs

2018: Dorchester

2019: Cambridge

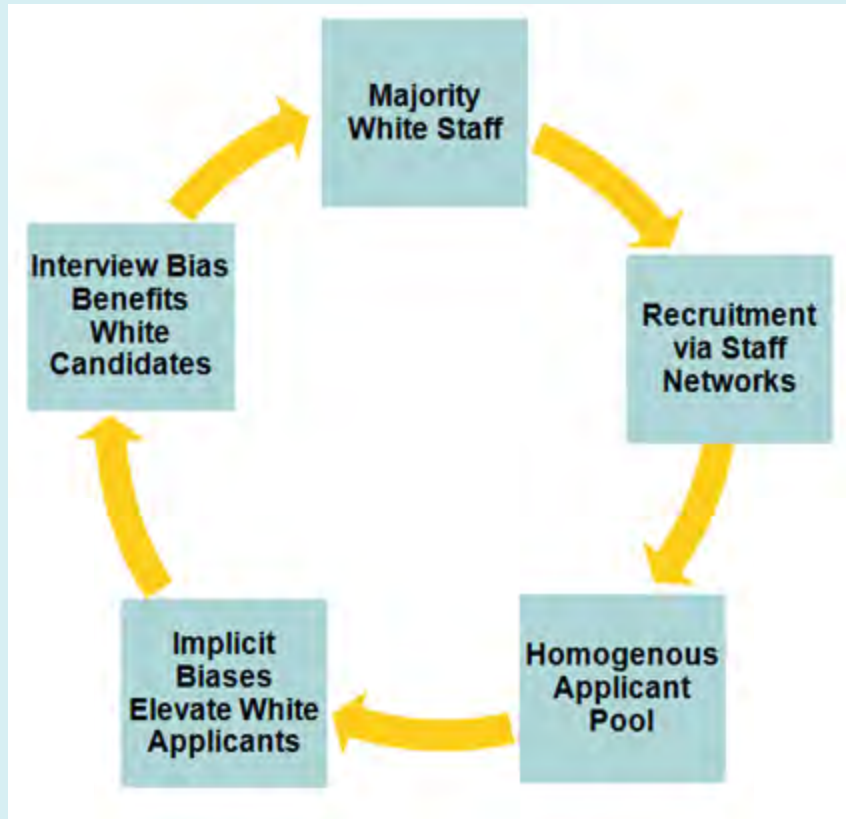


2020: Lawrence

2020: Methuen



# Workforce development barriers



In-circle hiring

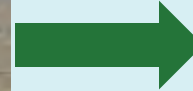


Lack of exposure to careers & lack of mentorship



Most training programs focused on entry-level installation jobs

# We prepare our staff for careers



By doing outreach,  
our team learns  
how to talk to  
customers

We then introduce them to  
careers in the industry

This prepares our  
staff for their next  
role in the clean  
energy industry

When our staff join  
other companies,  
they diversify the  
industry and help to  
serve our  
communities better

# Our Team

We work with partners, community colleges, and field team to find talent

59% People of Color, 52% women, 57% multilingual

## Current Staff/Interns



## Past Paid Interns





# We launch clean energy careers



**BLUEWAVE**



**MASSPIRG**



**NuWatt Energy**



# Barriers to access to energy programs for underserved populations and how we seek to overcome them



# Barriers: Renters

## Renters

- Pay into Mass Save monthly, but don't know they can use it
- Tenant/Landlord incentives for action are misaligned
- Little incentive to serve renters (lower insulation probability)

# Renters: Cambridge

## Innovations:



Rental Property  
Energy Advisor



Canvassing Team



Landlord letter with  
100% incentive

## Results:

**Pre-COVID: 191  
Renters Served  
in 6 months**

**COVID era: 90+  
renters signed  
up through  
landlords**

# Barriers: Spanish Speakers

## Spanish speakers

- Most outreach is in English
- Full process not in Spanish (e.g. Spanish language contracts)
- Negative experiences lead to distrust, disenfranchisement

# Spanish Speakers: Lawrence & Methuen

Innovations (in progress):



**Hiring:  
Bilingual  
Communications  
Manager**



Spanish Speaking  
Outreach/Customer  
Service Team

Spanish-speaking  
auditor + we are  
translating rest of  
process

City channels +  
Spanish-language  
channels

## Barriers: Low-to-Moderate Income

### Low-to-moderate income families

- Access to, or desire to take on, loans
- More likely to be behind on utility bills, so immediate savings less meaningful
- Lack time to learn about, enroll in energy programs

# Expanding Access for Low Income Residents



Community  
Surveys to  
understand needs



Low Income  
Community Solar  
offering



Community  
Outreach Partners



Lots of  
learning!



# Key takeaways

- 1) Experience program from perspective of underserved customer to find the gaps and creative solutions
- 1) Local insight and partnerships are ESSENTIAL to success
- 1) Diverse, multilingual staff at all levels and functions are needed
- 2) Mentoring, promoting & empowering diverse talent to be influencers in industry is critical

**We would love to partner with your community  
to bring energy-saving benefits to underserved  
groups**



# Contact for more information

**Gabe Shapiro**

**Co-Founder & Co-Executive Director**

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allinenergy.org



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**Presenter:**

**Emily Jones, LISC Boston**

# Expanding Clean Energy Access

NESEA BuildingEnergy Boston  
Conference 2020

LISC



# Table of Contents

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- Who is LISC?
- Why Clean Energy Access?
- Addressing Three Barriers for Affordable Housing Residents
- The Future – And How YOU Can Help

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Together with residents and partners, LISC forges resilient and inclusive communities of opportunity across America—great places to live, work, visit, do business and raise families.

# Why Clean Energy Access?

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# Barriers to Access

- 
1. Knowledge
  2. Coordination
  3. Money



# #1: Knowledge

## Benchmarking

Green Asset Management Plans

Comprehensive Energy Audits

Forums/Workshops/Peer Groups

Performance Targets		Color Key																	
Heating Energy Intensity (BTU/SF/HDD)	5	Green		Green = at or below the target															
Total Gas Use (kBTU/SF) - sum of last 12 months	40	White		White = above the target and below 110% of the target															
Common Area Electricity (kWh/Common Area SF) - sum of last 12 mos	1.2	Yellow		Yellow = above 110% of the target and below 120% of the target															
Water Use (Gallons / Bedroom / Day) - 12 month average	50	Red		Red = above 120% of the target															

Development	Address	Heating Energy Intensity (BTU/SF/HDD)	Total Gas Use (kBTU/SF)	Electric Use (KWh/Common Area SF)	Water Use (Gal/BR/Day)	Most Recent Energy Audit (year)	Most Recent CNA (year)	Next Rehab / Refi (year)	Utility Efficiency Program Status	Utility Program Priority	Smoke Free? (Y/N)	IPM? (Y/N)	Green Cleaning? (Y/N)	Low VOC used? (Y/N)	Notes	Last Updated
Shady Acres	123 Main Street	7.67	45.4	0.9	49.2	2007	2013	2020	Work Completed	Heating boilers	Y	Y	Y	N		7/1/2018
Shady Acres	125 Main Street	4.63	43.6	2.1	55.0	2007	2013	2020	Applied	Common area lighting	Y	Y	Y	N		7/1/2018
Shady Acres	127 Main Street	7.46	47.2	1.1	96.3	2007	2013	2020	Work In-progress	Heating boilers and water use	Y	Y	Y	N		7/1/2018
Huntington Glen	456 State Ave	5.25	48.3	1.3	56.0	2016	2014	2022	Not Applied	DHW	N	Y	Y	N		1/31/2018
Huntington Glen	458 State Ave	6.36	62.4	1.4	72.0	2016	2014	2022	Not Applied	All systems	N	Y	Y	N		1/31/2018



The Green Engineer leading 50 affordable housing professionals in LISC's Fall 2018 LEED Green Associate Training (Photo Credit: LISC Boston).



Building scientists Neil Donnelly and Emma Van Lieshout assess a building (Photo Credit: New Ecology).



# #2: Coordination

Mass Save LEAN Coordination  
Kickoff Design Meetings  
Solar + Storage Partnership

**AFFORDABLE HOUSING REFINANCING ENERGY EFFICIENCY ROADMAP**

**1. ARE YOU ELIGIBLE?**

- Energy efficiency programs are sponsored by Mass Save and LEAN.
- New construction or gut rehab = New Construction Program eligible.

**2. IDENTIFY MEASURES**

- Eligible measures may include: Insulation, sealing of air leaks, heating and hot water systems, refrigerators, interior and exterior LED lighting, and other cost-effective energy efficiency upgrades. A Capital Needs Assessment will identify replacement needs for eligible measures. Programs may be able to pay for an earlier install.

**3. START EARLY**

- Energy assessments are provided at no cost. WegoWise benchmarking enrollment is offered for Low Income Multi-Family projects. Program-eligible measures reduce reserve contributions, increase NOI, and allow underwriting of prospective energy savings. Finance agencies count energy efficiency incentives as an additional source of funds—commitment letters are available.

**4. SELECT VENDORS**

- Program vendors perform all cost-effective work, OR by pre-arrangement, Low Income Multi-Family projects may use their own architect, engineer and contractor.

START

FINISH

Sponsored by:

**VISIT**  
LEANMultiFamily.org

**CALL**  
617-348-6425

mass save  
Savings through energy efficiency

Low Income Energy Affordability Network  
LEAN



Allston Brighton Community Development Corporation's Green Retrofit Project with Cliff Geissler and Dariela Maga (Photo Credit: Dariela Maga).

# #3: Money

## Passive House Design Challenge

## Mass Save Passive House Incentives

## QAP Bonus Points

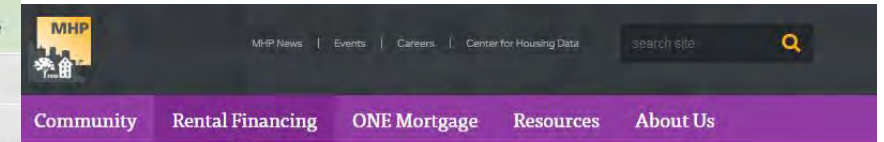
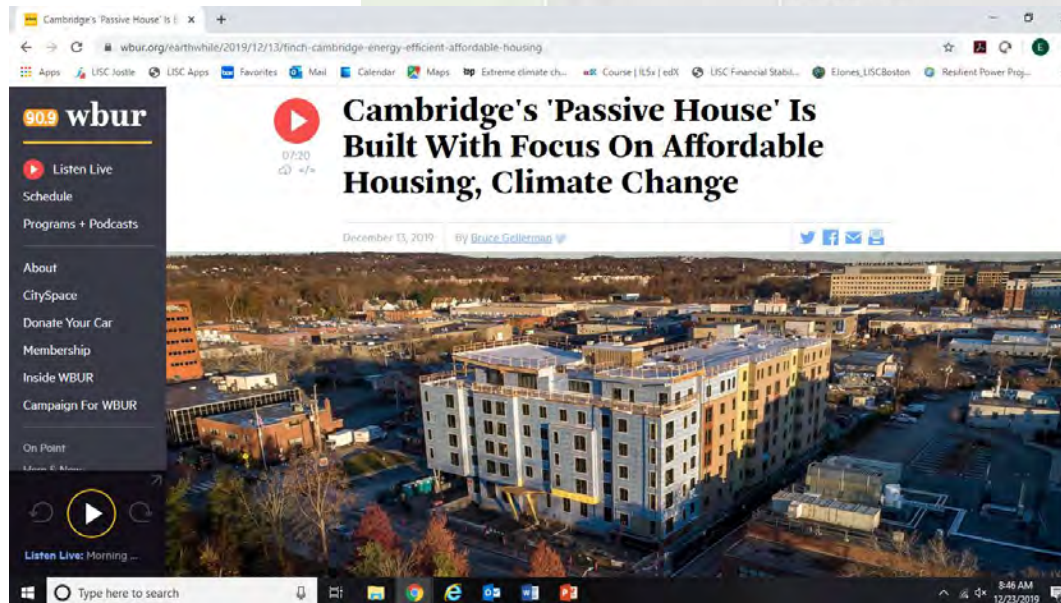
## Preferential Financing

**Passive House Incentives**  
Take Energy Efficiency to a New Level

Cliffberry North, Boston, Massachusetts' first certified multi-family Passive House, developed by Harvard Street Developers and designed by ODP Architects. © Trace Hill - massbuildings.com

**Passive House Incentive Structure for Multi-Family Mid- and High-Rise**

Incentive Timing	Activity	Incentive Amount	Max. Incentive
Pre-Construction	Feasibility Study	100% Feasibility costs	\$5,000
	Energy Modeling	75% of Energy Modeling costs	\$20,000
	Pre-Certification	\$500/unit	N/A
Certification	\$2,500/unit		
Post-Construction	Net Performance Bonus	\$0.75/kWh	N/A
		\$7.50/therm	



## Green and Healthy Housing Programs

MHP's Green and Healthy Housing Programs is a new initiative designed to encourage more affordable housing property owners to realize the benefits of going green and healthy.

The new MHP programs provide permanent first mortgage financing for both new and existing affordable housing developments using any of MHP's capital sources including bank financing, Fannie Mae, or FHA Risk Sharing. MHP underwrites and services all of its loans regardless of the capital source.

MHP's three Green and Healthy Housing Programs are:

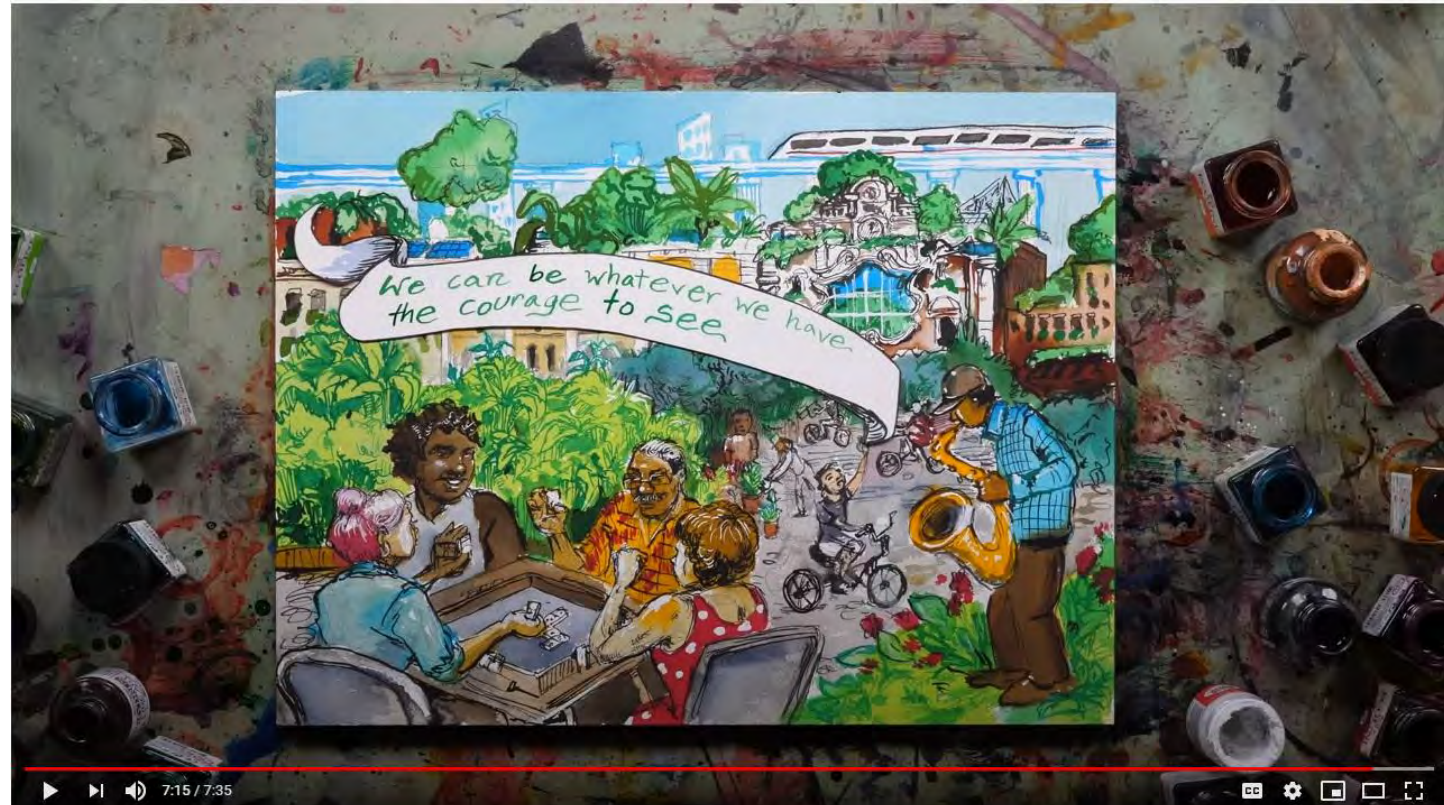
- **Green Building Certification Financing (GBC)** – Designed for new and existing multifamily projects, GBC offers reduced interest rates, reimbursement for commissioning costs up to \$15,000, and free energy performance benchmarking services for the first two years after the closing of the loan.\* [Term sheet](#)
- **Green Retrofit Financing (GRF)** – GRF offers increased loan proceeds, free energy audits, reduced interest rates, and free benchmarking services for the refinancing and rehabilitation of multifamily projects that invest in property improvements that reduce



## MHP's new Green and Healthy Housing Programs Overview (Credit: MHP).

# The Future – And How You Can Help

## Equitable Green New Deal



A Message From the Future With Alexandria Ocasio-Cortez

“We can be whatever we have the courage to see.”  
– A Message From the Future With Alexandria Ocasio-Cortez

# Thank You!

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