

Targeting underserved communities in Massachusetts' 2022-2024 Energy Efficiency Plan

December 2021 – White Paper

Applied Economics Clinic

Prepared on behalf of the Green Justice Coalition

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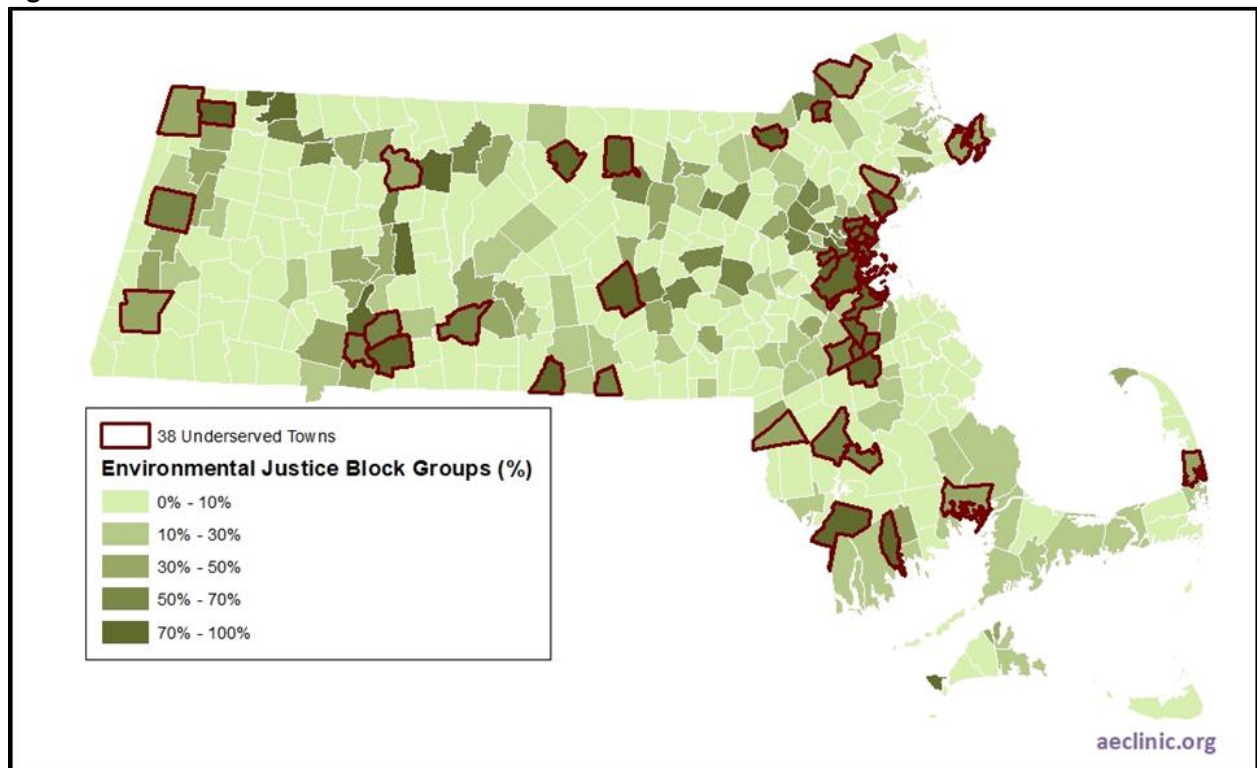
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Executive Summary

In an effort to ensure that energy efficiency program benefits are more equitably distributed in the future, Massachusetts efficiency program administrators have identified 38 underserved towns to target in their *2022-2024 Three-Year Plan* (see Figure ES-1). These 38 underserved towns represent 38 percent of the Commonwealth’s total population and 69 percent of all block groups (smaller communities or neighborhoods) across these 38 towns are classified as Environmental justice communities.

Figure ES-1. Underserved towns



The 38 towns identified for equity targeting, on average, have a lower median income, higher poverty rate, larger share of English isolated households, larger share of Black, Indigenous, and people of color (BIPOC) households, and larger share of renters than the rest of Massachusetts. The Commonwealth’s energy efficiency programming leads the nation by offering a variety of programs to encourage efficiency upgrades for any measure deemed cost-effective (that is, the measure costs less than the cost of the energy it saves). Nevertheless, historically, Massachusetts energy efficiency programs have been more accessible to affluent suburbs with single-family homes than to communities with high proportions of lower income households and renters. Program administrator’s new designation of “underserved communities” breaks new ground in targeting towns that have received the least energy efficiency programming in the past with targeted partnerships, increased investments, and higher benefits.

This Applied Economics Clinic (AEC) white paper serves as a companion to two other AEC white papers: the first provides recommendations for how to measure progress towards the goals of the Green Justice Coalition—building on the equity recommendations of the Energy Efficiency Advisory Council’s (EEAC) Equity Working Group (EWG) and Green Justice Coalition (GJC) for the *2022-2024 Three-Year Energy*

Efficiency Plan; the second provides examples from elsewhere in the United States of equity in energy efficiency programming.

This AEC white paper examines the towns identified as underserved by the *Residential Nonparticipant Market Characterization and Barriers Study* released by Massachusetts’ electric and gas program administrators in 2020¹ and the 38 towns newly identified for targeted equity investments by the Massachusetts energy efficiency program administrators, the EWG and the EEAC. We also identify an additional 18 towns as good candidates for inclusion in equity targeting in the future. Overall, underserved towns in Massachusetts share common attributes: low energy efficiency program participation rates, high shares of Environmental Justice areas, low median incomes, high poverty rates, large shares of BIPOC households, large shares of renter households, and large shares of non-English speaking households (see Table ES-1).

Table ES-1. Characteristics of underserved communities

		Underserved Towns		Remaining MA Towns	All MA Towns
		38 Underserved	Additional Underserved		
Number	Towns	38	18	295	351
Total	Population	2,685,679	473,457	3,870,781	7,029,917
	Share of MA Population	38%	7%	55%	100%
Combined 2013-2017	EE Participation Rate	23%	29%	27%	32%
Census Block Groups	EJ Share	69%	57%	13%	44%
Average	Median Income	\$61,197	\$94,383	\$103,915	\$81,215
	Poverty Rate	46%	30%	23%	32%
	Share Limited English	11%	5%	3%	6%
	Share BIPOC	51%	31%	20%	32%
	Share Renter	54%	48%	25%	38%

Note: Energy efficiency (EE) participation rates are weighted by gas and electric consumption to reflect average participation by town with respect to energy usage.

¹ Navigant, Illume, Cadeo. February 27, 2020. “Residential Nonparticipant Market Characterization and Barriers Study.” Prepared for The Electric and Gas Program Administrators Of Massachusetts Part of the Residential Evaluation Program Area. Available at: https://ma-eeac.org/wp-content/uploads/MA19R04-A-NP-Nonpart-MarketBarriersStudy_Final.pdf.

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About the Applied Economics Clinic

Based in Arlington, Massachusetts, the Applied Economics Clinic (AEC) is a mission-based non-profit consulting group that offers expert services in the areas of energy, environment, consumer protection, and equity from seasoned professionals while providing on-the-job training to the next generation of technical experts.

AEC's non-profit status allows us to provide lower-cost services than most consultancies and when we receive foundation grants, AEC also offers services on a pro bono basis. AEC's clients are primarily public interest organizations—non-profits, government agencies, and green business associations—who work on issues related to AEC's areas of expertise. Our work products include expert testimony, analysis, modeling, policy briefs, and reports, on topics including energy and emissions forecasting, economic assessment of proposed infrastructure plans, and research on cutting-edge, flexible energy system resources.

Founded by Clinic Director and Senior Economist Elizabeth A. Stanton, PhD in 2017, AEC's talented researchers and analysts provide a unique service-minded consulting experience. Dr. Stanton has had two decades of professional experience as a political and environmental economist leading numerous studies on environmental regulation, alternatives to fossil fuel infrastructure, and local and upstream emissions analysis. AEC professional staff includes experts in electric, multi-sector and economic systems modeling, climate and emissions analysis, green technologies, and translating technical information for a general audience. AEC's staff are committed to addressing climate change and environmental injustice in all its forms through diligent, transparent, and comprehensible research and analysis.

Equity Objectives of Massachusetts' 2022-2024 Efficiency Plan

In the draft 2022-2024 *Three-Year Plan* released in April 2021, Massachusetts energy efficiency program administrators have committed to equity as a key priority, including strategies for more equal access to and participation in efficiency programming:

*"The [program administrators] have made equity one of the key strategic priorities of the 2022-2024 Plan. Equity, as used herein, is defined as the process of establishing more equal access to and participation in energy efficiency, particularly among those groups who have historically participated at lower rates, including renters/landlords, moderate-income customers, English-isolated families, and microbusinesses. Across all Sectors, the [program administrators] are working to increase participation among the above-referenced groups by researching and deploying the most effective strategies to engage these customers, including through increased collaboration with community partners, enhanced incentives, improved language access, and targeted messaging."*²

In 2020, Massachusetts' electric and gas program administrators released the *Residential Nonparticipant Market Characterization and Barriers Study*, which takes an important first step towards identifying which communities are least likely to be included in efficiency programs. The *Nonparticipant Study* assessed the relationship between efficiency program nonparticipants and the community characteristics that commonly point to barriers to participation.³ Also in 2020, Massachusetts Energy Efficiency Advisory Council (EEAC) convened the Equity Working Group (EWG) to collaborate with stakeholders and develop equity recommendations, with a particular focus on reaching "nonparticipant" or "underserved" customer groups identified in utilities' *Nonparticipant Study*.⁴ The EWG includes representatives from: the EEAC, the Department of Energy Resources, the Low-Income Energy Affordability Network (LEAN), the energy efficiency program administrators, environmental justice organizations, and the EEAC consultant

Massachusetts energy efficiency program administrators, the EWG and the EEAC worked collaboratively to develop a list of 38 underserved communities for targeted partnerships, increased investments, and increased benefits.

² Massachusetts Program Administrators. April 30, 2021. "Massachusetts Statewide Energy Efficiency Plan." MA EEAC. Available at: <https://ma-eeac.org/wp-content/uploads/Mass.-Statewide-Energy-Efficiency-Plan-Submitted-April-30-2021.pdf>. Page 15-16.

³ Navigant, Illume, Cadeo. February 27, 2020. "Residential Nonparticipant Market Characterization and Barriers Study." Prepared for The Electric and Gas Program Administrators Of Massachusetts Part of the Residential Evaluation Program Area. Available at: https://ma-eeac.org/wp-content/uploads/MA19R04-A-NP-Nonpart-MarketBarriersStudy_Final.pdf.

⁴ Navigant, Illume, Cadeo. February 27, 2020. "Residential Nonparticipant Market Characterization and Barriers Study." Prepared for The Electric and Gas Program Administrators Of Massachusetts Part of the Residential Evaluation Program Area. Available at: https://ma-eeac.org/wp-content/uploads/MA19R04-A-NP-Nonpart-MarketBarriersStudy_Final.pdf.

team.⁵ To guide the trajectory of the Three-Year Plan, the EWG has been working to identify inequities in the distribution of efficiency benefits and develop equity recommendations for the full EEAC to consider.

Massachusetts efficiency program administrators’ definition of equity and approach to equity improvements is intentional and enlightened—there is a reason that Massachusetts consistently ranks among the top energy efficient states in the nation. As part of their commitment to equity as a key strategic priority, Massachusetts energy efficiency program administrators are striving to make equity improvements in the *2022-2024 Three-Year Energy Efficiency Plan*. For example, Massachusetts energy efficiency program administrators, the EWG and the EEAC worked collaboratively to develop a list of 38 underserved communities for targeted partnerships, increased investments, and increased benefits (see Table 1).⁶

Table 1. Underserved communities to target in the 2022-2024 Three-Year Energy Efficiency Plan

Attleboro	Fitchburg	Lynn	Peabody	Taunton
Boston	Gardner	Malden	Pittsfield	Wareham
Brockton	Gloucester	Methuen	Quincy	Webster
Chelsea	Great Barrington	Montague	Randolph	West Springfield
Chicopee	Haverhill	New Bedford	Revere	Williams
Eastham	Holbrook	North Adams	Southbridge	Worcester
Everett	Lawrence	Northampton	Springfield	
Fall River	Lowell	Palmer	Stoughton	

Source: MA EEAC. October 26, 2021. “Overview of Final 2022-2024 EE Plan.” Available at: <https://ma-eeac.org/wp-content/uploads/FINAL-2022-2024-Updated-Plan-Presentation-10.26.pdf>. Slide 8.

Figure 1 maps these towns in the context of the share of census “block groups”⁷ designated as Environmental Justice (EJ) communities; statewide, the share of EJ block groups ranges from 0 percent in multiples towns including Carlisle and Wellesley up to 100 percent in multiple towns including Everett and Lawrence. Massachusetts defines EJ communities as having median household income less than 65 percent of statewide median (that is, about \$53,000 or less), 40 percent or greater share of racial/ethnic minorities, 25 percent or greater limited English households, **and/or** 25 percent or greater share of racial/ethnic minorities *and* median income less than 150 percent of statewide median (about \$122,000 or less).^{8,9}

⁵ MA EEAC Equity Working Group. July 13, 2021. “Equity Targets for 2022-2024 Three-Year Plan—Draft.”

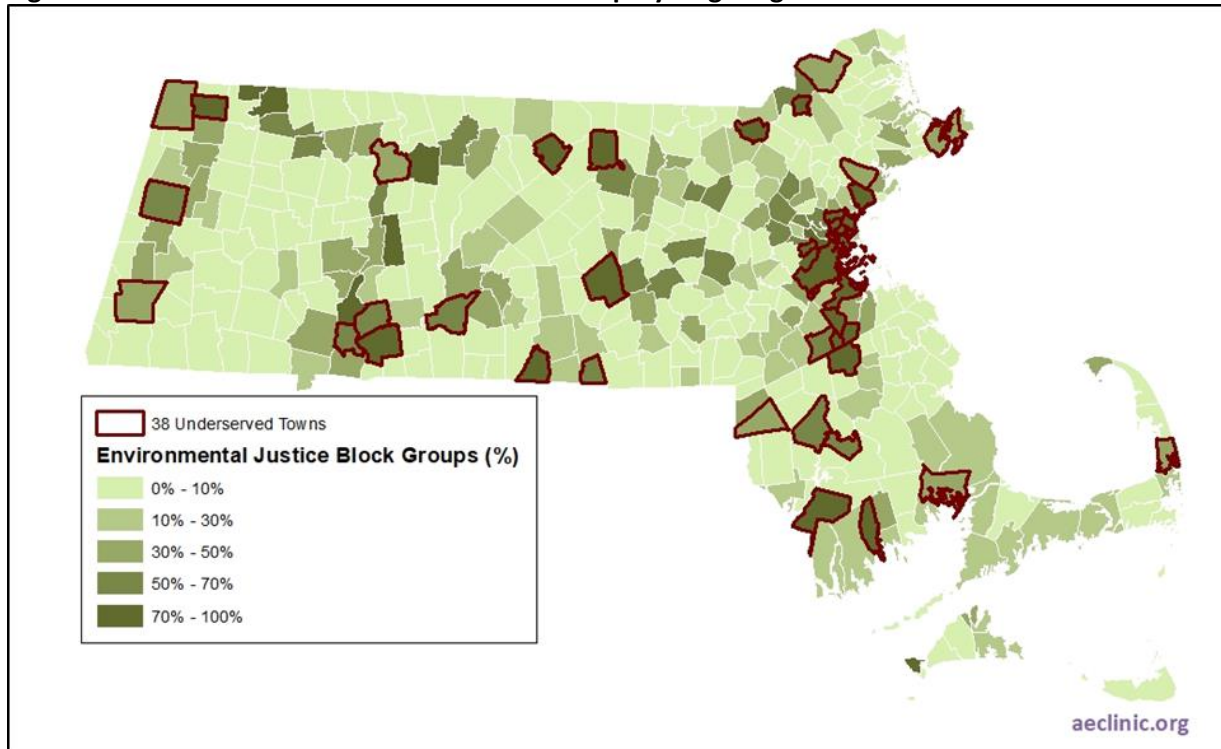
⁶ MA EEAC. October 26, 2021. “Overview of Final 2022-2024 EE Plan.” Available at: <https://ma-eeac.org/wp-content/uploads/FINAL-2022-2024-Updated-Plan-Presentation-10.26.pdf>. Slide 8.

⁷ “Block groups” are the smallest geographic area for which the Bureau of Census collects data. They each contain between approximately 600 and 3,000 people. See: <https://www.census.gov/programs-surveys/geography/about/glossary.html>.

⁸ MassGIS. 2021. 2020 Environmental Justice Populations. MassGIS. Available at: <https://www.mass.gov/info-details/massgis-data-2020-environmental-justice-populations>.

⁹ Mass.gov. 2021. “Environmental Justice Populations in Massachusetts.” Available at: <https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts>.

Figure 1. 38 “underserved” towns identified for equity targeting



Source: MassGIS. 2021. 2020 Environmental Justice Populations. MassGIS. Available at: <https://www.mass.gov/info-details/massgis-data-2020-environmental-justice-populations>.

This AEC white paper examines both the towns identified as underserved in the program administrators’ *Nonparticipant Study*¹⁰ and the 38 towns identified for targeted equity investments by the program administrators, the EWG and the EEAC. In addition, AEC has identified another 18 towns as good candidates for inclusion in equity targeting in the future. Overall, underserved towns in Massachusetts share common attributes: low participation rates, high shares of Environmental Justice areas, low median incomes, high poverty rates, large shares of Black, Indigenous, and people of color (BIPOC) households, large shares of renter households, and large shares of non-English speaking households.

Households that do not participate in energy efficiency programs are less likely to be aware of them, to understand them, to trust them, and to have the time or resources to prioritize them.

¹⁰ Navigant, Illume, Cadeo. February 27, 2020. “Residential Nonparticipant Market Characterization and Barriers Study.” Prepared for The Electric and Gas Program Administrators Of Massachusetts Part of the Residential Evaluation Program Area. Available at: https://ma-eeac.org/wp-content/uploads/MA19R04-A-NP-Nonpart-MarketBarriersStudy_Final.pdf.

Massachusetts' Energy Efficiency Nonparticipants

The “nonparticipant” or “underserved” customer groups identified in *the Nonparticipant Study*¹¹ include low- and moderate-income customers, renters, and English-isolated households (see Table 2). The study found lower participation rates among residents of mid-sized buildings (3-9 units) or mobile homes and households without a college degree. The study also found that households that do not participate in energy efficiency programs are less likely to be aware of them, to understand them, to trust them, and to have the time or resources to prioritize them.¹² Table 2 demonstrates that—in addition to nonparticipants being more likely to be low- and moderate-income households, renters, English-isolated, live in mid-sized buildings or mobile homes, and be without a college degree—nonparticipants are also more likely to have young children in the home, be unaware of income-eligible programs, and to participate in government assistance programs.

Table 2. Summary results of the 2020 *Nonparticipant Study*

	Participants	Non-Participants
Speak a language other than English	20%	25%
Renter	26%	34%
Moderate income	12%	14%
Low income	34%	39%
At least one child under 18 years	28%	29%
Single family home	61%	59%
2 unit building	11%	11%
3-9 unit building	11%	22%
10+ unit building	17%	5%
Mobile home or other	2%	3%
High school or less education	20%	29%
Unaware of Mass Save/income-eligible programs	15%	28%
Participate in an assistance program	30%	31%

Note: Peach shading indicates the higher percentage, green shading indicates the lower percentage, and grey shading indicates an equal percentage.

Source: Adapted from Navigant. February 2020. “Residential Nonparticipant Market Characterization and Barriers Study.” Prepared for MA EEAC and the Mass Save Program Administrators. Available at: <https://illumeadvising.com/files/Residential-Nonparticipant-Market-Characterization-and-Barriers-Study.pdf>.

¹¹ Ibid.

¹² Navigant. February 2020. “Residential Nonparticipant Market Characterization and Barriers Study.” Prepared for MA EEAC and the Mass Save Program Administrators. Available at: <https://illumeadvising.com/files/Residential-Nonparticipant-Market-Characterization-and-Barriers-Study.pdf>.

Background analysis for the *Nonparticipant Study* also includes a “Hot Spot Analysis” based on a composite index composed of five variables (percentage of households that are moderate income, renter-occupied, with a primary language other than English, that live in buildings of 5 or more units, and that live in structures built prior to 1940) that was compared to energy efficiency participation rates.¹³ AEC reviewed the correlation between these hot spot index scores (as well as the five individual variables that comprise this composite index) and energy efficiency participation rates (weighted by gas and electric energy consumption) (see Table 3 below).

While the very small sample size used in the hot spot analysis raises some technical concerns (in lay person’s terms: take these findings with a grain of salt), towns with higher composite hot spot index scores, more renters, more limited English households, more old buildings, and/or more multifamily buildings tend to have lower energy efficiency participation rates. The share of moderate-income households, however, does not appear to be related to program participation rates participation rates, though towns with a higher combined share of low and moderate-income households do tend to have lower participation rates. In Table 3, a negative correlation value means that as the value of the variable in question (for example, share of renter occupied homes) rises, participation in energy efficiency programs falls.

Overall, more renters, more large apartment buildings and older buildings are good indicators of the degree to which a community has been underserved by energy efficiency programs. For example, Chelsea and Lawrence have had low participation in energy efficiency programs together with a high share of renters, EJ areas, BIPOC households, and limited English-speaking households, a low median income, and high poverty rates. Sudbury and Sutton, on the other hand, have had high participation in efficiency programs together with a low share of renters, EJ areas, BIPOC households, and limited English-speaking households, a high median income, and low poverty rates.

Overall, more renters, more large apartment buildings and older buildings are good indicators of the degree to which a community has been underserved by energy efficiency programs.

Figure 2 below shows the correlation between energy efficiency participation rates (weighted by energy consumption) and the *Nonparticipant Study*’s hot spot index for every town in Massachusetts. The 38 towns identified as underserved by the program administrators, EWG, and EEAC are highlighted in red. Towns with the highest participation rates appear towards the top of the “scatterplot” chart, while towns with the lowest participation rates appear towards the bottom.

Towns with the lowest hot spot index scores appear to the left-hand side of the chart, while towns with the highest hot spot scores appear to the right-hand side. The 38 communities identified for equity targeting tend to have lower participation rates and higher hot spot scores (meaning they have higher percentages of households that are moderate income, rent, have a primary language other than English, are 5 or more units, and are built prior to 1940). Note that Boston stands out as an outlier: a large city

¹³ DNV GL. February 6, 2020. “Residential Nonparticipant Customer Profile Study.” Prepared for Massachusetts Program Administrators and Energy Efficiency Advisory Council (EEAC) Consultants. MA19X06-B-RESNONPART. Available at: https://ma-eeac.org/wp-content/uploads/MA19X06-B-RESNONPART_Report_FINAL_v20200228.pdf.

Table 3. Correlation between energy efficiency participation rates and *Nonparticipant Study* hotspots

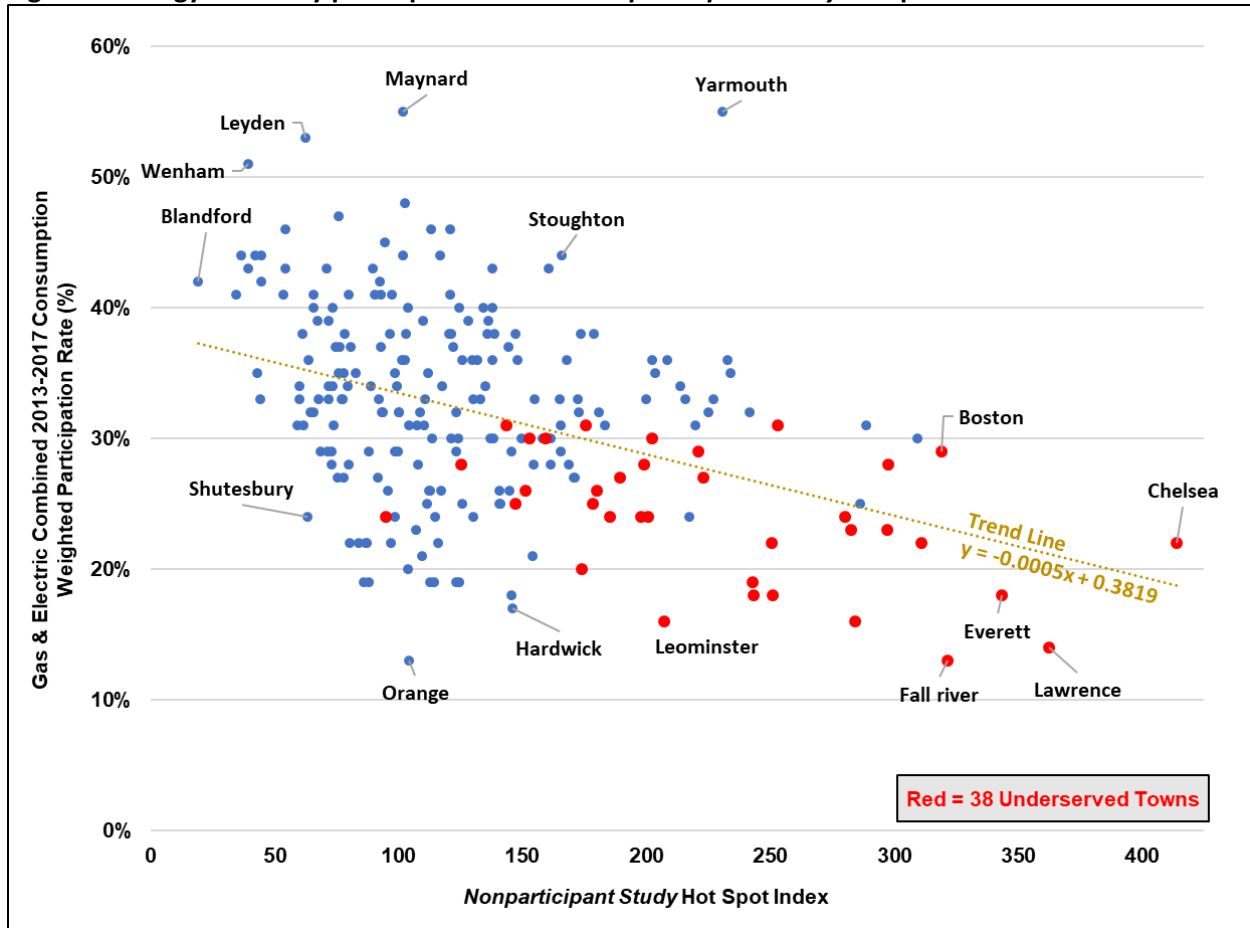
Variable	Degree of Correlation
Moderate Income	0.00
Renter Occupied	-0.04
Limited English	-0.02
5+ Units in Building	-0.09
Building constructed prior to 1940	-0.05
Hotspot Index	-0.05
Low-to-Moderate Income	-0.01

Note: The measure used for participation rate was the gas and electric combined 2013-2017 consumption weighted participation rate.

Sources: 1) DNV GL. 2020. Final report. Residential Nonparticipant Customer Profile Study. DNV GL. Available at: https://ma-eeac.org/wp-content/uploads/MA19X06-B-RESNONPART_Report_FINAL_v20200228.pdf. pp.89-98; 2) U.S. Census Bureau, American Community Survey (ACS), 2019 5-Year Estimates. Median household income (in 2019 dollars), 2015-2019. Available at: <https://www.census.gov/quickfacts/fact/table/MA/INC110219#INC110219>; 3) ACS. 2019 5-Year Estimate Tables. Income in the past 12 months (in 2019 inflation-adjusted dollars). TableID: S1901. Available at: <https://data.census.gov/cedsci/table?t=Income%20%28Households,%20Families,%20Individuals%29&q=0400000US25%240600000&tid=ACSST5Y2019.S1901&hidePreview=true>; 4) ACS. 2019 5-Year Estimates. Physical Housing characteristics for Occupied Housing Units. TableID: S2504. Available at: <https://data.census.gov/cedsci/table?t=Housing%3AHousing%20Units%3AHousing%20Value%20and%20Purchase%20Price%3AOwner%2FRenter%20%28Householder%29%20Characteristics%3AOwner%2FRenter%20%28Tenure%29&q=0400000US25%241500000,25%241600000&tid=ACSST5Y2019.S2504&hidePreview=true>; 5) ACS. 2019 5-Year Estimates. Language spoken at home. TableID: S1601. Available at: <https://data.census.gov/cedsci/table?q=&text=s1601&q=0400000US25%240600000&tid=ACSST5Y2019.S1601>.

with a high hot spot score and a high participation rate. This atypical finding can be attributed—at least in part—to a separate, well-funded,¹⁴ city-wide program—Renew Boston—launched by former Mayor Menino in 2009 that focused on energy efficiency measures like weatherization.¹⁵

Figure 2. Energy efficiency participation versus *Nonparticipant Study* hotspots



Sources: Same sources as Table 3 above.

Characteristics of Massachusetts' Energy Efficiency Nonparticipants

The 38 underserved towns identified for equity targeting by the energy efficiency program administrators, EWG, and EEAC have program participation rates ranging from 13 to 31 percent. EJ

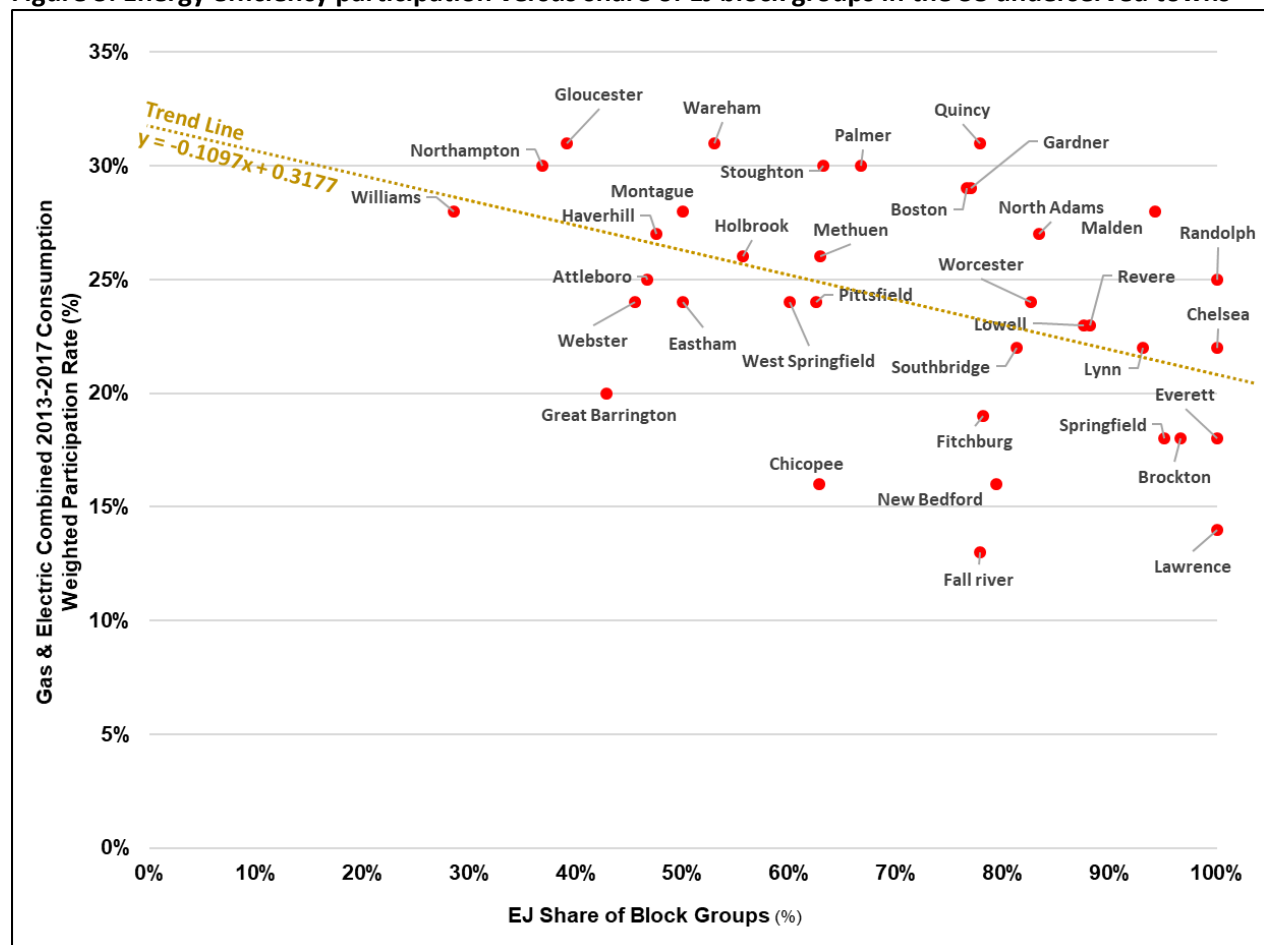
¹⁴ City of Boston. 2013. "Renew Boston Strategic Plan." Available at: https://www.cityofboston.gov/images_documents/RenewBoston-STRATEGIC-PLAN_2013_%20Updated_tcm3-37035.pdf.

¹⁵ City of Boston. 2017. "History of Renew Boston." Available at: <https://www.boston.gov/departments/environment/history-renew-boston>.

communities account for 46 percent of all “block groups” in the Commonwealth and 69 percent of all block groups in the 38 underserved towns.¹⁶

Among the 38 towns designated as underserved, the highest shares of EJ block groups are associated with the lowest participation rate in energy efficiency programs (see Figure 3). Massachusetts towns composed entirely of EJ areas include: Aquinnah, Chelsea, Everett, Lawrence, Monroe, Randolph, Rowe, and Wendell.

Figure 3. Energy efficiency participation versus share of EJ block groups in the 38 underserved towns



Sources: 1) DNV GL. 2020. 2) MassGIS. 2021.

Identifying these 38 towns for equity targeting will help give Massachusetts’ 2022-2024 Three-Year Plan the best chance for improving equity in energy efficiency program design and delivery. Targeting these 38 communities with dedicated budgets for community partnerships to increase participation in energy

¹⁶ EJ block groups (2,316) were taken from: MassGIS. 2021. 2020 Environmental Justice Populations. MassGIS. Available at: <https://www.mass.gov/info-details/massgis-data-2020-environmental-justice-populations>. We assumed that all towns not included in the MassGIS dataset had zero EJ block groups. Total block groups in Massachusetts (4,985) were taken from: U.S. Census Bureau. October 8, 2021. “Massachusetts.” Available at: <https://www.census.gov/geographies/reference-files/2010/geo/state-local-geo-guides-2010/massachusetts.html>.

efficiency programs will help to ensure that the benefits of energy efficiency programming in the Commonwealth are more justly distributed.

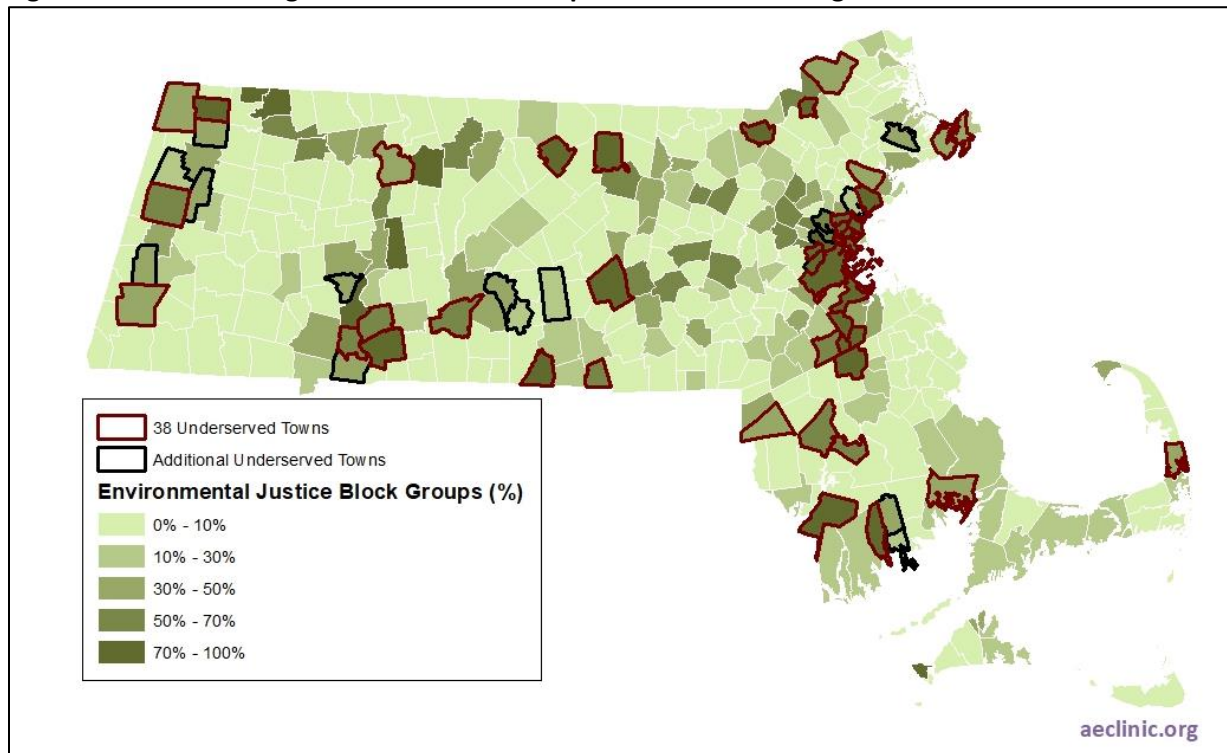
Among the 38 towns designated as underserved, the highest shares of EJ block groups are associated with the lowest participation rate in energy efficiency programs.

Looking towards the future, AEC’s review of energy efficiency program participation rates and share of EJ block groups found additional towns whose low participation rates and high shares of EJ communities may make them good candidates to also receive targeted investments in efficiency programming. There are another 18 towns in Massachusetts that have the combined characteristics of 31 percent or lower energy efficiency program participation (the maximum participation rate in the 38-town underserved group) and 29 percent or higher EJ block group share (the minimum share of EJ areas in the underserved group) (see Table 4 and Figure 4.

Table 4. AEC additional candidates for underserved town classification

Acushnet	Cambridge	Medford
Adams	Dalton	Saugus
Agawam	Easthampton	Somerville
Avon	Fairhaven	Spencer
Brookfield	Hamilton	Stockbridge
Brookline	Lanesborough	West Brookfield

Figure 4. 38 towns designated as underserved plus 18 towns meeting similar thresholds



The 38 designated underserved towns stand out as vulnerable to existing inequities (due to factors like high shares of low income or limited English households or high shares of people of color), and our additional 18 candidate towns have a number of similar characteristics. Table 5 compares demographics for:

- the 38 towns identified for equity targeting by the program administrators, EWG, and EEAC,
- the additional 18 towns that have both a maximum participation rate of 31 percent and a minimum share of EJ block groups of 29 percent,
- the 295 remaining Massachusetts towns that do not meet those qualifications, and, for reference, and, for comparison,
- all Massachusetts towns.

Table 5. Characteristics of towns designated as underserved for equity targeting, additional towns that meet underserved thresholds, remaining Massachusetts towns, and all Massachusetts towns

		Underserved Towns		Remaining MA Towns	All MA Towns
		38 Underserved	Additional Underserved		
Number	Towns	38	18	295	351
Total	Population	2,685,679	473,457	3,870,781	7,029,917
	Share of MA Population	38%	7%	55%	100%
Combined 2013-2017	EE Participation Rate	23%	29%	27%	32%
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Average	Median Income	\$61,197	\$94,383	\$103,915	\$81,215
	Poverty Rate	46%	30%	23%	32%
	Share Limited English	11%	5%	3%	6%
	Share BIPOC	51%	31%	20%	32%
	Share Renter	54%	48%	25%	38%

Sources: Same sources as Table 3 above.

The 38 towns identified for equity targeting in efficiency programs by the program administrators, EWG, and EEAC constitute 38 percent of the Commonwealth’s total population, 69 percent of all block groups in the 38 underserved towns are EJ communities, and—on average—these towns have a lower median income, higher poverty rate, larger share of English isolated households, larger share of BIPOC households, and larger share of renters than the rest of Massachusetts.

The additional 18 towns that we flag as candidates for inclusion in equity targeting in the future meet the same energy efficiency program participation rate and EJ area thresholds as the 38-town groups

and, when compared to the remaining towns in Massachusetts, have a higher share of EJ areas, lower median income, higher poverty rate, larger share of English isolated households, larger share of Black, Indigenous, and BIPOC households, and larger share of renters. This additional group of underserved towns (combined with the 38 towns that have already been designated as underserved) includes every town in Massachusetts with:

- 29 percent or more block groups designated as EJ areas;
- 8 percent or more BIPOC households;
- Lower than \$128,000 median income;
- 9 percent or more renter households; and
- 19 percent or greater poverty rate.

Designating more towns for equity targeting efforts would have the effect of making energy efficiency program participation and benefits more accessible to a wider set of communities than it has been in the past: Historically, energy efficiency programs have been most accessible to affluent suburbs with single-family homes.

Figure 5 through Figure 8 below provide a visual tour of demographics and indicators of vulnerability in the 38-town underserved group (in red outlines) and the additional 18-town group (in black outlines). Some towns are vulnerable across all indicators—that is, they have a high share of EJ areas, a high share of BIPOC households, a low median income, a high share of renter households, a high poverty rate, a large share of limited-English speaking households, and/or a low participation rate in energy efficiency programs. Chelsea and Lawrence are good examples of vulnerability across indicators. Other towns are highly vulnerable in a few areas but not others. For example, Randolph has a high share of EJ areas and BIPOC households, but median income and poverty rates are consistent with the statewide averages and the share of renter households is lower than the statewide average. Finally, some towns are privileged across all indicators—for example, Sherborn and Sudbury have a low share of EJ areas, BIPOC households, renter households, and limited-English speaking households, a high median income, low poverty rate, and high participation rate in efficiency programs.

Designating more towns for equity targeting efforts would have the effect of making energy efficiency program participation and benefits more accessible to a wider set of communities than it has been in the past: Historically, energy efficiency programs have been most accessible to affluent suburbs with single-family homes.

Figure 5. Energy efficiency program participation in Massachusetts towns

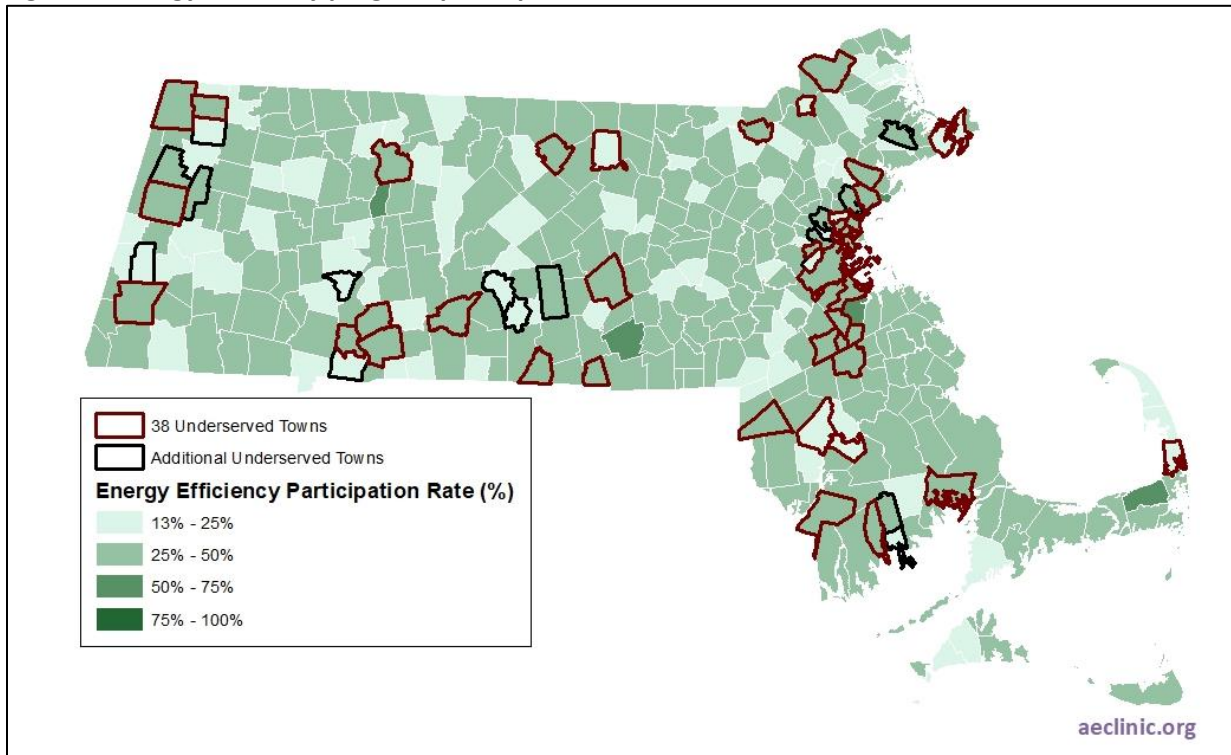


Figure 6. Share of renter-occupied households in Massachusetts towns

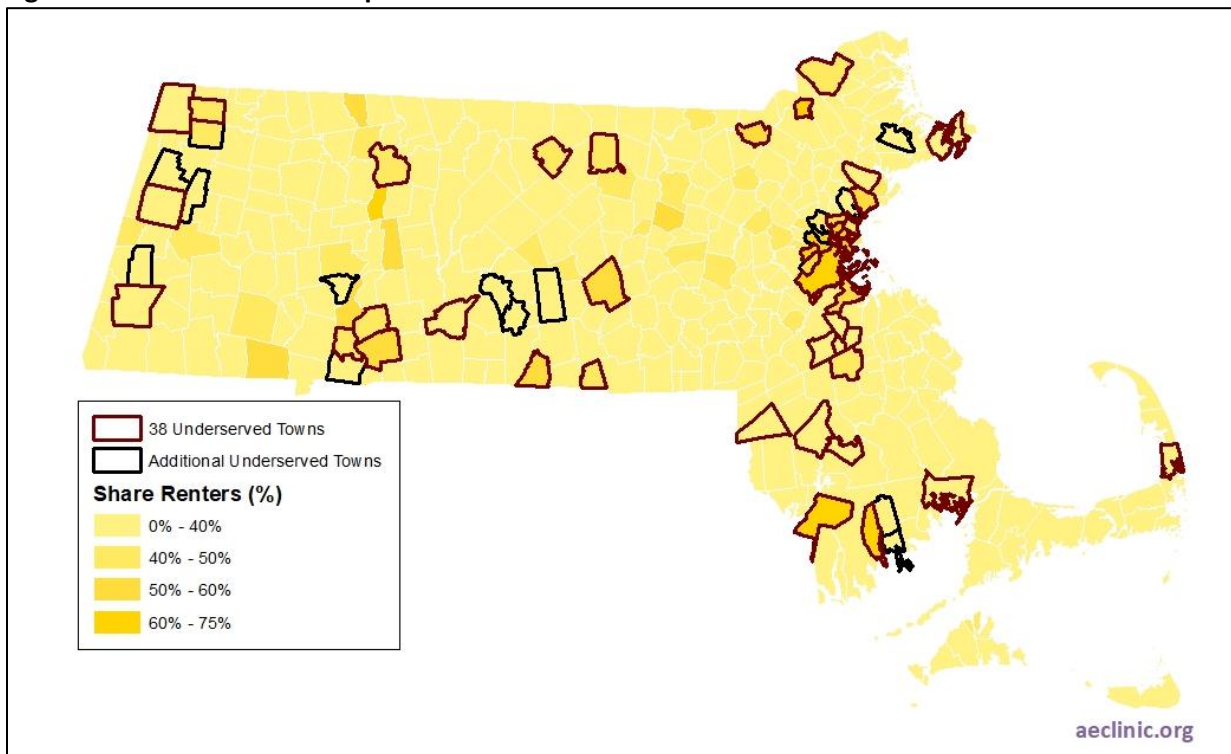


Figure 7. Median income in Massachusetts towns

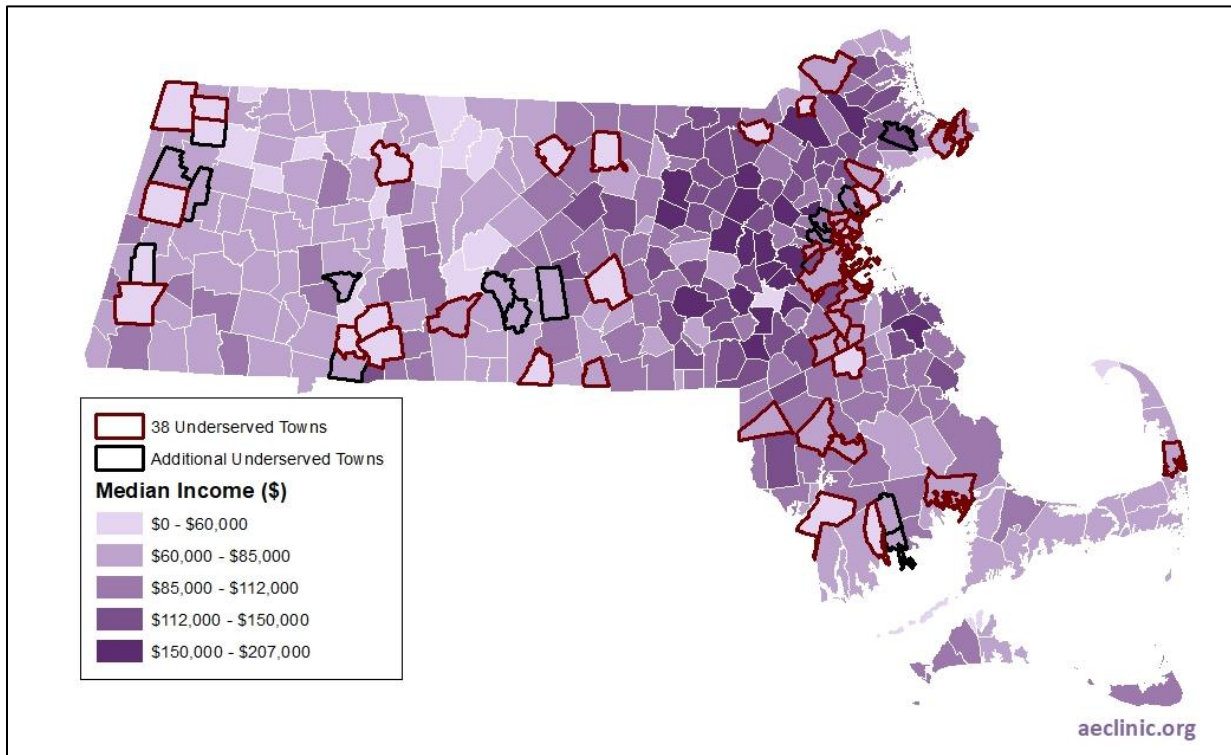
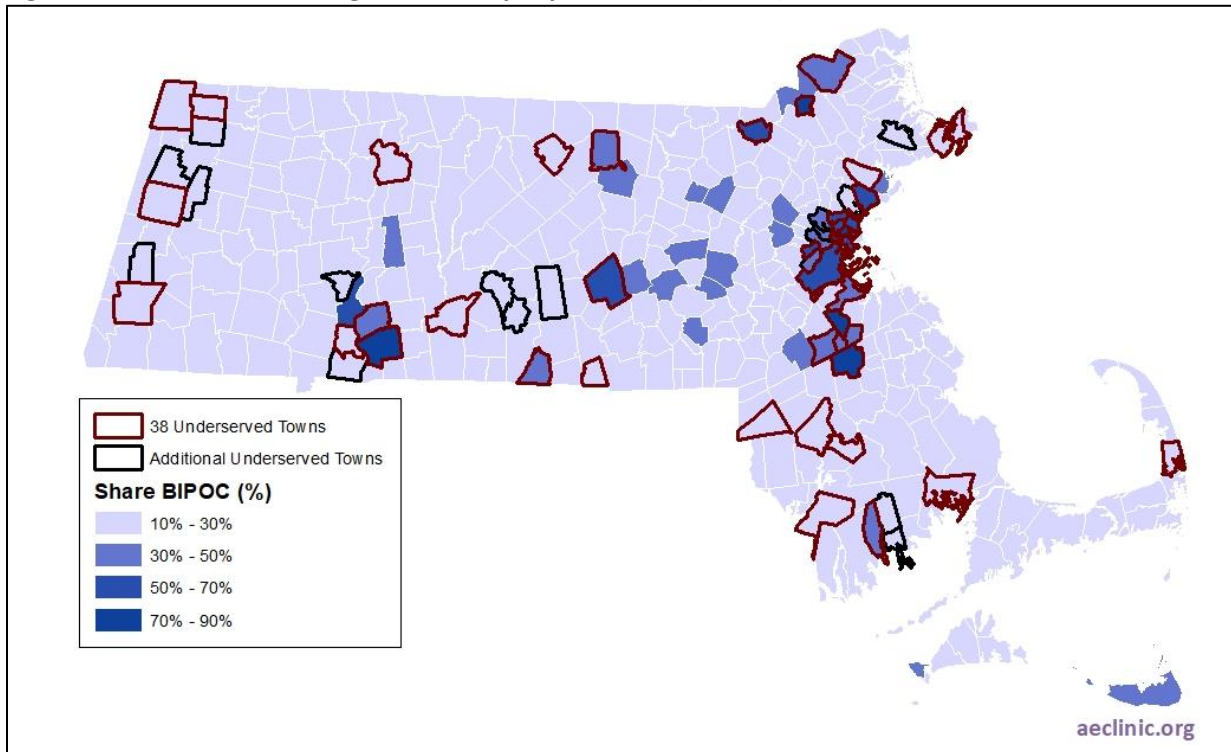


Figure 8. Share of Black, Indigenous, and people of color (BIPOC) in Massachusetts towns



Conclusions, Lessons Learned, and Next Steps

Working collaboratively, Massachusetts energy efficiency program administrators, the EWG and the EEAC have designated 38 underserved towns for targeted partnerships, increased investments, and increased benefits. This forward-thinking action sets the stage for giving the Massachusetts' *2022-2024 Three-Year Plan* the best chance for improving equity in energy efficiency program design and delivery and will help the benefits of efficiency programs in the Commonwealth achieve a more just distribution.

Being transparent about the progress of these underserved towns is essential both to demonstrating the impacts of these efforts and to building public trust.

This AEC white paper finds that:

- The 38 towns identified for equity targeting by the program administrators, EWG, and EEAC represent many of the most vulnerable and underserved populations in Massachusetts.
- An additional 18 towns that meet the same participation rate and EJ area thresholds may also be good candidates for receiving equity targeting efforts;
- Remaining towns in Massachusetts (that is, that do not meet the same participation rate and EJ area thresholds) are characterized by lower than average shares of EJ areas, limited English households, BIPOC households, renter-occupied households, and households in poverty and higher than average household median incomes.

Historically, more affluent suburbs with single-family homes have accessed and benefited from the Commonwealth's energy efficiency programming at higher rates while communities with high proportions of lower income households and renters have lagged behind. Massachusetts' *2022-2024 Three-Year Plan* presents an important opportunity to level the playing field by targeting programs to the 38 underserved towns identified for equity targeting by the program administrators, EWG, and EEAC. Being transparent about the progress of these underserved towns is essential both to demonstrating the impacts of these efforts and to building public trust.

In particular, the Commonwealth will benefit from transparency regarding the ways in which program administrators focus efforts to serve historically underserved communities and Environmental Justice communities within the 38 underserved towns and report on those efforts separately. Clarity regarding how the approach to reaching historically underserved populations will be tailored is essential: All 38 underserved towns will require targeted efforts to reach renters in buildings with more than 3 units and program administrators should be clear about the ways in which they plan to serve underserved populations and transparently report on their progress. For example: Quincy has a high percentage of Environmental Justice communities and English-language isolated households—program administrators should be clear about the ways in which they plan to target those communities with language access improvements and transparently report on their progress towards greater participant in energy efficiency benefits. These kinds of efforts will improve access to efficiency programs, make their benefits more equitable, enhance transparency, and help ensure that the most historically marginalized Commonwealth residents are consciously prioritized rather than inadvertently left behind.