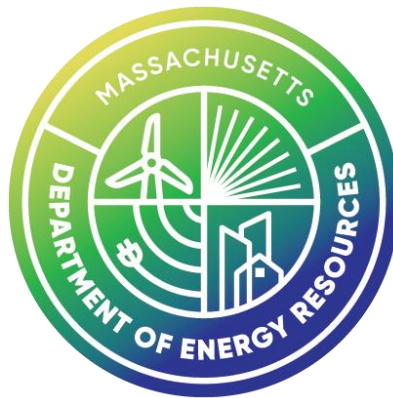


Municipal Fossil Fuel-Free Demonstration Program Report



Massachusetts Department of Energy Resources

September 2025

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Introduction

An [Act Driving Clean Energy and Offshore Wind](#) (St. 2022, c. 179, § 84) requires the Massachusetts Department of Energy Resources (DOER) to establish a demonstration project where ten cities and towns adopt and amend general or zoning ordinances or by-laws that require new building construction or major renovation projects to be fossil fuel-free, and enforce restrictions and prohibitions on new building construction and major renovation projects that are not fossil fuel-free, including through the withholding or conditioning of building permits.

This report summarizes the demonstration project to date, including the selection of the Participating Communities and Comparable Municipalities as a comparison group for the Demonstration Project, and an analysis of the net reduction in emissions.

Description of Demonstration Project and List of Participating Communities

The Climate Act of 2022 (St. 2022, c. 179, § 84) created the Municipal Fossil Fuel-Free Demonstration Program (Demonstration Project), allowing for: “[n]ot more than 10 cities or towns as approved by [DOER] pursuant to [225 CMR 24.00](#) . . . [to] adopt and amend general or zoning ordinances or by-laws that require new building construction or major renovation projects to be fossil fuel-free, and enforce restrictions and prohibitions on new building construction and major renovation projects that are not fossil fuel-free, including through the withholding or conditioning of building permits.” 225 CMR 24.02.

The law required DOER to prioritize the applications of municipalities that submitted home rule petitions to the legislature requesting the ability to implement fossil fuel-free by-laws and ordinances prior to the passage of the law. DOER defined the following 10 communities as “Prioritized Communities”¹ under 225 CMR 24.03(1), as they submitted their home rule petitions with the general court in the following order:

Order Filed	Town	Filing Date
1	Arlington	4/22/2021
2	Lexington	5/05/2021
3	Brookline	6/01/2021

¹ 225 CMR 24.00 grants “Prioritized Communities” first priority to participate in the Demonstration Project.

4	Acton	8/27/2021
5	Concord	9/01/2021
6	Cambridge	4/06/2022
7	Lincoln	4/19/2022
8	Newton	4/20/2022
9	West Tisbury	6/14/2022
10	Aquinnah	6/14/2022

Application and Approval Process for the Prioritized Communities

DOER received complete [applications from nine of the Prioritized Communities](#): Acton, Aquinnah, Arlington, Brookline, Cambridge, Concord, Lexington, Lincoln, and Newton by the September 1, 2023 deadline established by 225 CMR 24.00. The tenth, [West Tisbury](#), withdrew due to its inability to meet the required housing eligibility thresholds under the law.²

DOER reviewed the materials submitted: final or draft by-laws/ordinances, home rule petitions, implementation plans, and housing eligibility threshold documentation.

Acton, Aquinnah, Brookline, Cambridge, Concord, Lexington, and Lincoln met the required “housing eligibility thresholds” under the law and regulations and were issued [Program Acceptance Letters](#) on December 22, 2023. Arlington and Newton received Conditional Approval letters on December 22, 2023 but had until February 11, 2024 to demonstrate they met one of the three thresholds. A conditionally approved community may not implement a fossil fuel-free by-law or ordinance until it meets one of the “housing eligibility thresholds” and receives “Participating Community” status from DOER.

On February 12, 2024, the Executive Office of Housing and Livable Communities (EOHLC) determined that Arlington’s multifamily zoning by-law was in compliance with Section 3A of M.G.L. c. 40A (Section 3A), satisfying the housing production eligibility threshold detailed in 225 CMR 24.05(2)(c). DOER issued a [Program Acceptance Letter](#) to Arlington on February 21, 2024.

² As a condition for participating in the Demonstration Project, the law requires municipalities to meet certain eligibility thresholds related to housing production. These thresholds are also detailed at 225 CMR 24.05(2).

On June 21, 2024, Newton submitted a letter to DOER indicating that on May 28, 2024, EOHLC confirmed that as of February 11, 2024, Newton's Subsidized Housing Inventory (SHI) exceeded the 10% housing affordability threshold under 225 CMR 24.05(2)(a). The letter stated that the delay in this confirmation was due to the late submission of paperwork to EOHLC for two of the properties on the SHI list. The letter also included Newton's final fossil fuel-free ordinance, adopted by the City Council and signed by the Mayor on June 21, 2024. DOER issued a [Program Acceptance Letter](#) to the city on July 12, 2024.

Following the determination of Newton's compliance with the housing affordability thresholds, the selection of the community to take the place of West Tisbury commenced.

Process for Selecting Substitute Communities

In accordance with 225 CMR 24.04 and 225 CMR 24.05, municipalities could submit an application to participate as a "Substitute Community" by November 10, 2023, in the event that one or more Prioritized Community did not participate in the Demonstration Project. West Tisbury's decision not to participate in the Demonstration Project created the opportunity for one Substitute Community.

On November 9, 2023, Northampton submitted its Substitute Community application. The application included the required materials under 225 CMR 24.04 and 225 CMR 24.05, including a draft fossil fuel-free ordinance and materials sufficient to demonstrate Northampton's compliance with the housing eligibility threshold detailed in 225 CMR 24.05(2)(a).

On November 10, 2023, Somerville submitted its Substitute Community application. The application included the required materials under 225 CMR 24.04 and 225 CMR 24.05, including a draft fossil fuel-free ordinance and the status of its efforts to meet the housing production eligibility threshold detailed in 225 CMR 24.05(2). On December 28, 2023, Somerville updated the DOER that it had a locally approved multifamily zoning ordinance under review with EOHLC that would satisfy the housing eligibility threshold detailed in 225 CMR 24.05(2)(c). On October 1, 2024, EOHLC approved Somerville's multifamily zoning ordinance, satisfying the housing production eligibility threshold detailed in 225 CMR 24.05(2)(c).

On July 24, 2024, representatives from both cities met separately with DOER to present additional details on their application and answer questions. Once EOHLC

approved Somerville’s multifamily zoning ordinance, DOER finalized deliberations regarding a Substitute Community.

In addition to ensuring that Substitute Communities met the requirements set forth in 225 CMR 24.04 and 225 CMR 24.05, DOER considered the following factors when evaluating applications and selecting Substitute Communities for participation in the Demonstration Project in accordance with 225 CMR 24.06(3)

- Contribution to the overall Demonstration Project, including diversity of Participating Communities which includes but is not limited to Gateway Cities, environmental justice communities, diversity of demographics, diversity of size, scale of building development, and type of housing development
- Ability to meet reporting requirements and effectively monitor and ensure code compliance and implementation
- Consistency of proposed by-law or ordinance to the model rule provided by DOER
- A preference for cities and towns that meet the compliance guidelines implementing section 3A of chapter 40A of the General Laws through an approved zoning ordinance or, in the case of a town that must seek by-law approval from the Attorney General (AGO) pursuant to G.L. c.40 § 32, an AGO-approved by-law that provides for at least 1 district of reasonable size in which multifamily housing is permitted as right, or, if not applicable, a similar commitment to multifamily housing production as determined by DOER, in consultation with EOHLC
- Localized electric grid investments needed to support the Demonstration Project as determined through consultation between DOER and electric distribution companies³
- Demonstrated support from community members and municipal leaders

Both cities met the regulatory requirements and demonstrated community support. Given the potential electric grid constraints in Somerville that posed a possible obstacle to the analysis of the Demonstration Project’s impact, and Northampton’s participation to provide insight into potential impacts of fossil fuel-free new construction in a different region of the Commonwealth from the other communities

³ In August of 2024, DOER met with Eversource and National Grid to discuss the potential electric grid investments needed to support Northampton and Somerville’s participation in the Demonstration Project.

and the involvement of another electric distribution company,⁴ DOER [selected Northampton](#) as the final Participating Community. Both cities were [notified on October 29, 2024](#).

Process for Selecting Comparable Communities

To enable future comparative analysis, DOER designated the following Comparable Municipalities, selected for demographic, geographic, and development similarities with Participating Communities:

- Amherst
- Bedford
- Carlisle
- Medford
- Watertown
- West Tisbury

These municipalities were notified of data reporting obligations under **225 CMR 24.07(4)**, and coordination is underway to establish standardized methods for data submission.

Fossil Fuel-Free Project Data Collection Process – Year 1

In 2023, the US Department of Energy awarded DOER a Resilient and Effective Codes Implementation (RECI) grant that included funding to contract with the Northeast Energy Efficiency Partnership (NEEP) and Clearly Energy to assist with building permit data collection and analysis.

NEEP and Clearly Energy developed the Home Energy Labeling Information eXchange (HELIX), a cloud-based, open-source data platform that includes information about a home based on its energy efficient and renewable energy attributes. The Participating and Comparable Communities accessed HELIX and uploaded information related to new construction or major renovation permits issued

⁴ Eversource provides electric service to eight of the nine other Participating Communities, and Somerville. Concord MLP provides electric service to Concord. National Grid provides electric service to Northampton.

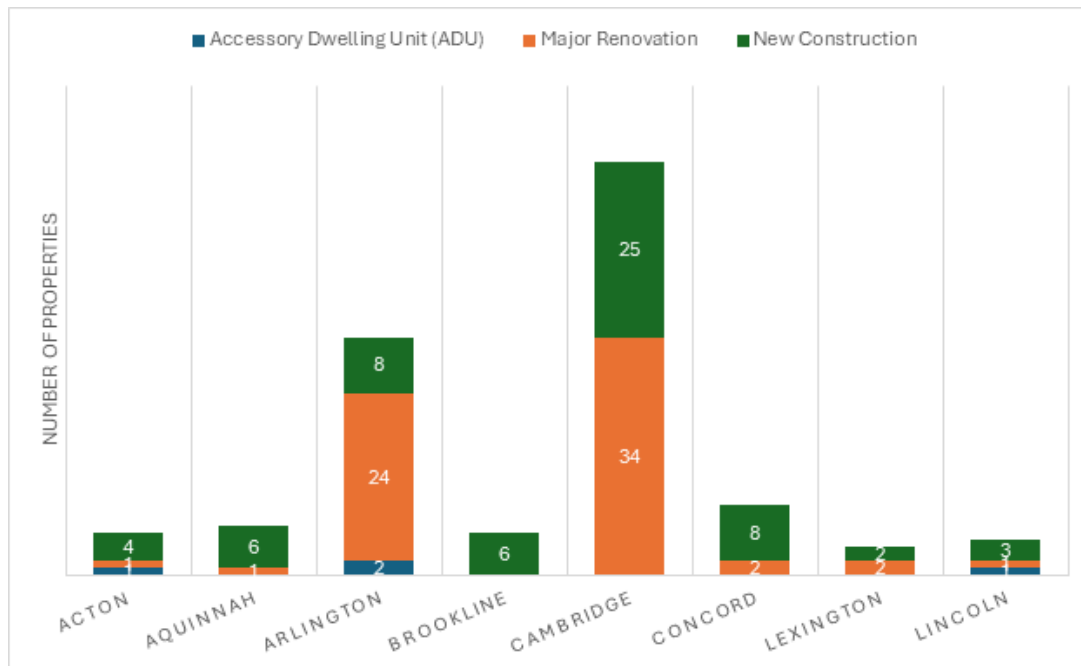
that were subject to their Fossil Fuel-Free by-laws and ordinances during calendar year 2024.

Municipality	By-law/Ordinance Effective Date
Aquinnah	1/1/2024
Lexington	6/22/24; amendment 1/1/25
Lincoln	6/22/2024
Newton	1/1/2025
Cambridge	3/22/2024
Brookline	2/22/2024
Acton	3/22/2024
Arlington	5/21/2024
Concord	3/22/2024
Northampton	1/27/2025

One hundred sixty-nine (169) projects were permitted during calendar year 2024 with 20 completed. Concord issued one waiver from its ordinance. The figures below display the number of permitted projects by building type across Participating (Figure 1) and Comparable (Figure 2) Communities. All pilot communities with ordinances in effect in 2024 reported their permitted projects to DOER while two of the six control communities reported their permitted projects as of September 2025. With the exception of Arlington and Cambridge, most permitted projects under the fossil fuel-free ordinances are new constructions (50.89% across all communities, 63.16% across pilot communities). Of the completed projects (figure 3), the median Home Energy Rating System (HERS) scores are 43 and 47 for pilot and control communities respectively.

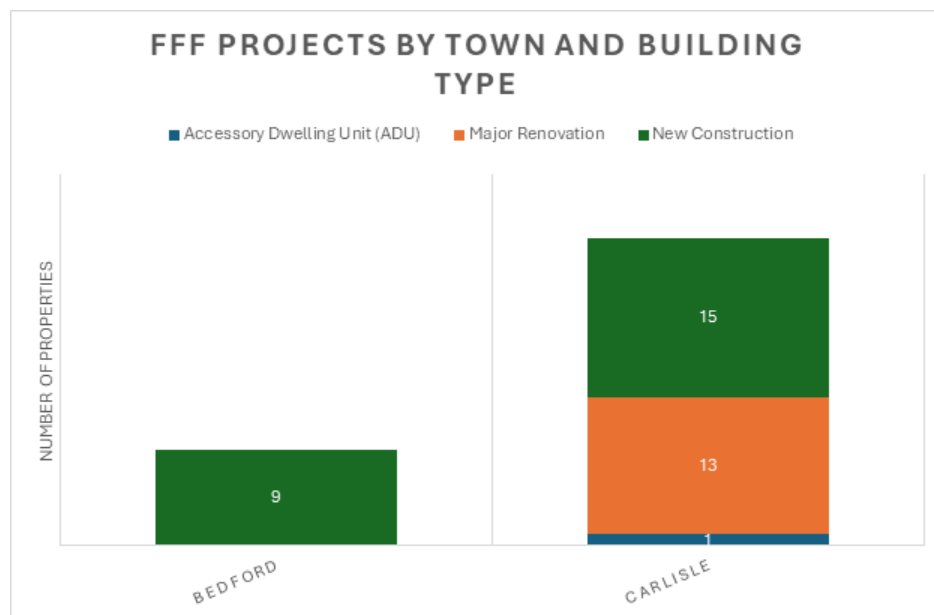
A Home Energy Rating System (HERS) score is a standardized measurement of a home's energy efficiency, with lower scores indicating greater energy efficiency. The HERS Index is the industry standard, developed by RESNET, and is used to assess and compare the energy performance of homes. A lower HERS score means a home is more energy efficient. The Massachusetts Stretch Energy Code mandates that new homes achieve a HERS score of 42 or less (for fossil fuel homes) or 45 or less (for all-electric homes), while maximum HERS scores for major renovation projects can range from 65 to 75.

Figure 1: Participating Communities Projects by Town and Building Type⁵



**All Participating Communities for calendar year 2024 reported

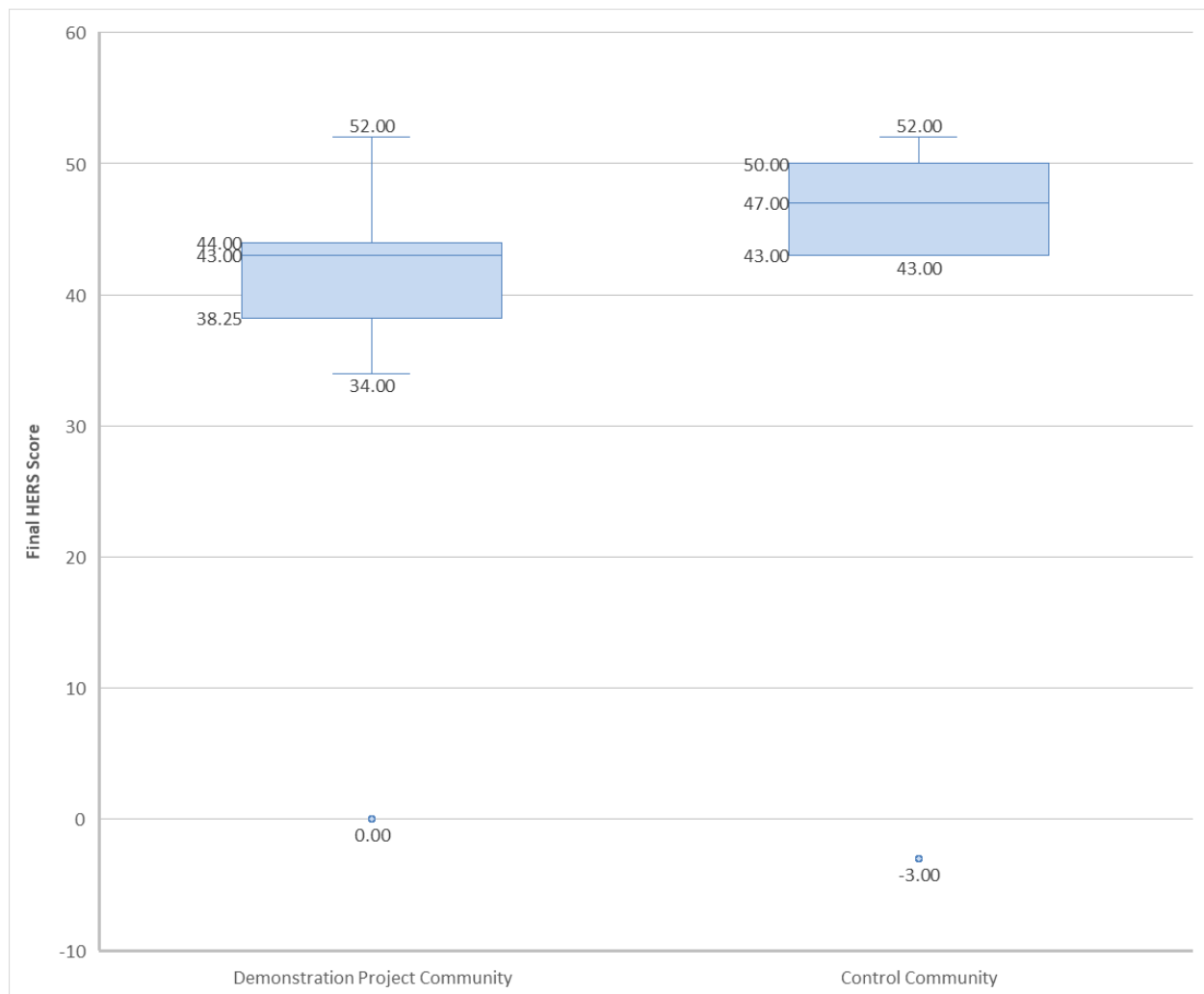
Figure 2: Comparable Communities Projects by Town and Building Type⁶



⁵ Newton and Northampton's ordinances were in not effect in 2024,

⁶ Four of the Comparable Communities are having difficulties pulling together the required building permit information. DOER and NEEP are actively working with them to resolve these issues.

Figure 3: Completed Projects across Participating and Comparable Communities



Once the data input by the communities is complete, NEEP and ClearlyEnergy will engage with local utilities to develop a process for collecting actual energy usage data for all communities participating in the Demonstration Project.

Analysis of Net Reduction in Emissions

Pursuant to the statute, DOER will conduct an analysis of net emissions reductions:

1. For each newly constructed building or Major Renovation project subject to the Demonstration Project within participating municipalities.
2. For corresponding projects in the designated Comparable Communities not participating in the Demonstration Project.

At present, DOER has not received any energy usage data. DOER expects to receive energy data from utilities by September 30, 2025, which will be incorporated in future reports.

Analysis of Impacts on Housing Production

The following impacts are under review:

- Housing production, including any observed changes attributable to the Demonstration Project
- Housing affordability metrics, including utility operating costs (electricity and heating)
- Affordability outcomes for low- and moderate-income households, including electric bills, heating bills, and other operating costs

For the calendar year 2024, the reported cost of construction per square foot in pilot communities was inconsistent. The town of Acton does not record gross floor area in its permitting process, and not all projects had a reported or finalized gross floor area at the time of permitting. The information is being discussed with the view of making such calculations more accessible in future years of reporting. Data related to electricity costs and housing affordability are not yet available.

Recommendation

DOER will continue to collect and report on data under the Municipal Fossil Fuel-Free Demonstration Program. Despite some of the by-laws and ordinances being in effect for less than a full year, participating communities have submitted initial data for new construction and major renovation activities in 2024. Continuing the Demonstration Project will enable DOER to conduct a comprehensive evaluation of its impact and potential policy implications.