

ARTICLE 15

FIFTEENTH ARTICLE

Submitted by: Department of Planning and Community Development

To see if the Town will:

1) Vote to amend Article 5.9 to document votes previously taken by Town Meeting regarding adoption of the Specialized Energy Code and Stretch Code as well as to clarify incorporate state regulation references, as follows:

- a) Change the title of Article 5.9 from “Stretch Energy Code” to “Energy Codes”
- b) Amend 5.9 as follows, **with additions underlined and deletions in strikethrough**:

“Section 5.9.1 Stretch Energy Code and Municipal Opt-in Specialized Energy Code

- a) Purpose: The purpose of this by-law and related state regulations ~~780 CMR 120-AA-225~~ CMR 22 and 23 is to provide a more energy efficient alternative to the base energy code applicable to the relevant sections of the building code for both new construction and existing buildings.
- b) Authority: Through Town Meeting action, the Town of Brookline has adopted the Stretch Energy Code and Specialized Energy Code, and both are incorporated by reference into the Town of Brookline General By-Laws Article 5.9. These codes are enforceable by the Building Commissioner or their designated Building Inspector(s).
- c) Definitions:

Specialized Energy Code – Codified by the entirety of 225 CMR 22 and 23 including Appendices RC and CC, the Specialized Energy Code adds residential and commercial appendices to the Massachusetts Stretch Energy Code, based on amendments to the respective net-zero appendices of the International Energy Conservation Code (IECC) to incorporate the energy efficiency of the Stretch energy code and further reduce the climate impacts of buildings built to this code, with the goal of achieving net-zero greenhouse gas emissions from the buildings sector no later than 2050.

Stretch Energy Code - Codified by the combination of 225 CMR 22 and 231, not including Appendices RC and CC, the Stretch Energy Code is a comprehensive set of amendments to the International Energy Conservation

Code (IECC) seeking to achieve all lifecycle cost-effective energy efficiency in accordance with the Green Communities Act of 2008, as well as to reduce the climate impacts of buildings built to this code.

Section 5.9.2 Definitions

- a) ~~International Energy Conservation Code (IECC) 2009~~ — The International Energy Conservation Code (IECC) is a building code created by the International Code Council. It is a model code adopted by many state and municipal governments in the United States for the establishment of minimum design and construction requirements for energy efficiency. Commencing July 1, 2010, the baseline energy conservation requirements of the MA State Building Code will default to IECC 2009 and MA amendments.
- b) ~~Stretch Energy Code~~ — Codified by the Board of Building Regulations and Standards as 780 CMR Appendix 120 AA, the Stretch Energy Code is the International Energy Conservation Code (IECC) 2009 as may be amended from time to time.

Section 5.9.3 Applicability

~~This code applies to residential and commercial buildings. Buildings not included in this scope shall comply with 780 CMR 13, 34, 61, or 93, as applicable.~~

Section 5.9.4 Authority

~~The Town of Brookline hereby adopts 780 CMR 120 AA in order to ensure that construction within its boundaries is designed and built above the energy efficiency requirements of 780 CMR Appendix 120 AA and mandates adherence to said Appendix as may be amended from time to time.~~

Section 5.9.5 Stretch Code

~~The Stretch Code, as codified by the Board of Building Regulations and Standards as 780 CMR Appendix 120 AA, including any amendments or modifications, is herein incorporated by reference into the Town of Brookline General Bylaws, Article 5.9. The Stretch Code is enforceable by the Building Commissioner or their designated Building Inspector(s)."~~

2) Vote to amend Article 5.9 of the Town of Brookline General By-Laws by **adding** the following language for the purpose of restricting and prohibiting new building construction and major renovation projects that are not Fossil-Fuel Free, pursuant to the entirety of 225 CMR 24 Fossil Free Building Construction and Renovation Demonstration Project, which

latest version is on file with the Town Clerk. This amendment shall only take effect if approved by the Massachusetts Department of Energy Resources (MA DOER) as a Participating Community pursuant to 225 CMR 24.

“Section 5.9.2 Fossil Fuel-Free Demonstration

- a) Purpose: The purpose of this by-law and related state regulations 225 CMR 24, also referred to as the Fossil Fuel-Free Demonstration, is to restrict and prohibit new building construction and major renovation projects that are not fossil fuel-free.
- b) Authority: Through this Town Meeting action, the Town of Brookline will adopt the Fossil Fuel Free-Demonstration. Upon approval by the Department of Energy Resources (DOER) of the necessary changes to the Specialized Energy Code, amendments to the Specialized Energy Code are adopted as listed in Section 5.9.2 (f) below. These changes are enforceable by the Building Commissioner or their designated Building Inspector(s) and will go into effect for any project seeking a permit after the effective date.
- c) Applicability: This restriction applies to residential and commercial buildings that qualify as new construction or major renovation, as defined in 225 CMR 22 and 23. This restriction shall not apply to research laboratories for scientific or medical research, hospitals and medical offices regulated by the department of public health as a health care facility as defined in 225 CMR 24.
- d) Definition of Fossil Fuel-Free Demonstration: Codified by the entirety of 225 CMR 24, the Fossil Fuel-Free Demonstration.
- e) The effective date of this Section 5.9.2 is the latest of the following: (1) sixty days following approval by DOER of the necessary changes to the Specialized Energy Code and the Town’s status as a Participating Community; (2) the effective date established by M.G.L. c. 40, s. 32; and (3) January 1, 2024.
- f) Amendments to the Specialized Energy Code as part of the Fossil Fuel-Free Demonstration are as follows:
 - 1) Low-rise Residential Code (225 CMR 22 Appendix RC):
Sections RC102 and RC101 “Zero Energy Pathway” and “Mixed Fuel Pathway” shall not be permitted for use for new construction or major renovations.
 - 2) Commercial and All Other (225 CMR 23 Appendix CC)
Sections CC103 and CC105 “Zero Energy Pathway” and “Mixed-Fuel Pathway” shall not be permitted for new construction or major renovations, with the following

exceptions:

- (i) Research laboratories for scientific or medical research,
- (ii) Hospitals regulated by the department of public health as a health care facility,
- (iii) Medical offices regulated by the department of public health as a health care facility, and
- (iv) Multi-family buildings over 12,000 square feet with permit application filed prior to January 1, 2027 may utilize gas or propane for domestic water heating as the only combustion equipment.”

Or act on anything relative thereto.

PETITIONER’S ARTICLE DESCRIPTION

Brookline and nine other municipalities are prioritized to participate in the MA DOER Pilot. We are working with Town Counsel’s office and the Building Department to draft a Warrant Article for the upcoming Annual Town Meeting, and will have that for your review by Monday or Tuesday morning. That Warrant Article will be submitted by the Department of Planning & Community Development (DPCD). We would be asking Town Meeting to adopt a General By-Law amendment as part of the Pilot. Missing that window would negate the participation of Brookline in the Pilot as a prioritized community. We are asking the Select Board support of this Warrant Article.

This Pilot is a direct result of the Home Rule Petition from Brookline to the State for the ban on Fossil Fuel infrastructure in new construction. Several of the other nine municipalities selected for the Pilot based their own Home Rule Petitions on that Brookline model. The Pilot would allow Brookline to test eliminating petroleum combustion fuels (naturally occurring or synthetic) from HVAC, water heating, and backup generators within buildings newly constructed or undergoing significant renovation. The purpose of this Pilot is to establish a framework, requirements, data collection, and a mechanism for executing such a by-law for new construction and major renovations.

The key issues for this Warrant Article are as follows:

1. This is part of a Pilot for the State. An experiment. The duration of the Pilot will be short, essentially from July 2024 until September 2025.
2. The DOER regulations governing this Pilot are still in draft form and will not be finalized until later this Spring, hopefully before the Annual Town Meeting begins. We may need to return to Town Meeting this Fall to make some modifications.

3. The By-Law Amendment will also clean up the existing By-Law we have regarding Stretch Code, since some of the referenced regulations have changed numbering, and we also want to reference the Town's recent adoption of the Specialized Code.
4. The State has provided the draft regulations as well as a template for the Warrant Article and By-Law. It is the position of DPCD, Town Counsel's Office, and the Building Department that Brookline not make heavy modifications to these templates to ensure that Brookline remains in the Pilot program. However, we have removed the exemption for the use of Bio-Mass as a fuel source as suggested by the DOER's template by-law. Per the template¹, exemptions would be in place for:
 - a. research laboratories for scientific or medical research
 - b. hospitals regulated by the department of public health as a health care facility
 - c. medical offices regulated by the department of public health as a health care facility, and
 - d. domestic water heating for multi-family buildings over 12,000 square feet (until January 1, 2027).

Key Activities for MA DOER:

- A Pilot Municipality must provide a Letter of Intent by September 1, 2023
- All materials for the application, including a voted By-Law, must be in place by November 10, 2023 according to the draft regulations.

¹ <https://www.mass.gov/info-details/municipal-fossil-fuel-free-building-demonstration-program>

Brookline has a long history of being on the forefront of climate action and in this case a leader in the pursuit of the adoption of building codes that will have a significant impact on our community's carbon footprint. The precursors to this Article include Warrant Article 21 of the 2019 Special Town Meeting, which the Town first voted to adopt and then voted to send to the Commonwealth as a Home Rule Petition. To date, our by-law amendments on this issue have been struck down by the State through the office of the Attorney General. However, the pursuit of this needed action has invited debate and discussion resulting in visibility to the argument that the current building codes, even though they do somewhat consider carbon reduction and energy efficiency, are not sufficient to get us to our climate action goal of Net Zero by 2040.

Thanks to the efforts of the Town's climate action groups, Representative Tommy Vitolo, and other climate leading cities and towns, the State, through MA Department of Energy Resources (DOER), has created regulatory authority under St. 2022, c. 179, § 84 to permit ten Prioritized Communities to participate in a Pilot. Brookline, being a community that filed a Home Rule Petition on this issue, is one of those ten communities. The others are: Arlington, Lexington, Acton, Concord, Cambridge, Lincoln, Newton, West Tisbury, and Aquinnah. More information on this program is available at <https://www.mass.gov/info-details/municipal-fossil-fuel-free-building-demonstration-program>.

Purpose and Effect

What is before you are a prescribed set of parameters that MA DOER has drafted for adoption by each of the Prioritized Communities to allow for participation in the Pilot. This Pilot will allow Brookline and the other communities to test the parameters in real-time through the permitting of building projects. This will result in data from multiple municipalities over a wide spectrum of size, demographics, and landscapes that will inform the future building codes of the Commonwealth. According to DOER staff, currently the Pilot duration will be from local adoption through to 2025.

The Town Administrator and Building Commissioner support the passage of this warrant article with an effective date as presented. The Town fully understands the uncertainty accompanying the rollout out of this experiment: the state agencies are creating this as we are voting to adopt it. Education and clarification will be needed as this Demonstration Project is executed. This project builds on some of the changes that Brookline has already adopted, primarily the Stretch Energy Code and Specialized Energy Code. The staff time to track the permitting data required under the Demonstration Program will be better understood as communities move forward in partnership with DOER over the next several months. Although the Building Commissioner does not currently anticipate the need for additional staff to support this Demonstration Program such an expansion may need to be discussed further during budget processes.

Timing of this Warrant Article and DOER regulations related to Fossil Fuel-Free Demonstration

As described below and confirmed by DOER staff, the current draft DOER regulations require Brookline to adopt a bylaw prior to November 10, 2023 in order to remain a Prioritized Community and a participant in DOER's Fossil Fuel-Free Demonstration Project. DOER staff anticipate adopting final regulations by April or May 2023, prior to the Annual Town Meeting vote.

Draft MA DOER 225 CMR 24.00 (as of February 27, 2023)

225 CMR 24.00 – Municipal Fossil Fuel Free Building Construction and Renovation Demonstration Project

Sections:

24.01 : Purpose and

Application 24.02:

Definitions

24.03 : Prioritized Communities

24.04 : Application Materials and Review

Process 24.05: Eligibility Criteria

24.06 : Substitute Communities

24.07 : Reporting and Assessment of Results

24.08 : Specialized Municipal Opt-in Energy Code and Model Rule

24.09: Severability

24.01 Purpose and Application

The purpose of 225 CMR 24.00 is to establish the framework, requirements, and timeline for cities and towns to participate in the Department's Municipal Fossil Fuel Free Building Construction and Renovation Demonstration Project as authorized by St. 2022,

c. 179, § 84.

24.02 Definitions

Comparable Municipalities. Municipalities designated by the Department for data collection and reporting purposes that share similar relevant characteristics to Participating Communities.

Demonstration Project. Not more than 10 cities or towns as approved by the Department pursuant to 225 CMR 24.00 that may, notwithstanding chapter 40A of the General Laws, section 13 of chapter 142 of the General Laws and chapter 164 of the General Laws or any other general or special law to the contrary, 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

DHCD. The Massachusetts Department of Housing and Community Development, as established by M.G.L. c. 23B.

Department. The Massachusetts Department of Energy Resources, as established by

M.G.L. c. 25A.

Fossil Fuel-free. As defined by a city or town to include, but not be limited to, an entire building or entire condominium unit that does not, in support of its operation after construction, utilize coal, oil, natural gas, other fuel hydrocarbons, including synthetic equivalents, or other fossil fuels.

Hospitals or Medical Offices. A facility licensed or approved by the Department of Public Health to provide health care, including clinics licensed as health care facilities and facilities that provide substance use disorder treatment services, including outpatient withdrawal management, opioid treatment programs, office-based opioid treatment programs, acute treatment services (inpatient detoxification), and clinical stabilization services.

Local Approval. By a majority vote of the: (i) city council with the approval of the mayor in the case of a city with a mayor elected to serve as the chief executive officer of the city; (ii) city council in every other city; (iii) annual town meeting or a special town meeting called for that purpose in the case of a municipality with a town meeting form of government; or (iv) town council in the case of a municipality with a town council form of government.

Major Renovation. A level 3 alteration as defined in 225 CMR 22.00 and 23.00.

Participating Community. A city or town approved by the Department for participation in the Demonstration Project.

Prioritized Community. A city or town with a home rule petition filed with the general court prior to August 11, 2022 and listed in 225 CMR 24.03(1); provided, however, that a city or town that submits a letter of withdrawal pursuant to 225 CMR 24.03(3) or is deemed withdrawn pursuant to 225 CMR 24.03(4) shall not be a Prioritized Community.

Process load. Energy demand in commercial or industrial buildings that is not covered by the Massachusetts building energy code.

Research laboratories for scientific or medical research. A building where a laboratory procedure or research activity occurs, where the building has an average ventilation at full occupancy greater than 0.5 cfm/sf. Such buildings shall provide the ventilation design documentation described Section C103.2 of 225 CMR 23.00 at the time of building permitting.

Substitute Community. A city or town that applies to the Department for participation in the Demonstration Project that did not file a home rule petition prior to August 11, 2022.

24.03 Prioritized Communities

<u>Prioritized Communities</u> . As established by St. 2022, c. 179, § 84, the Department will prioritize the following 10 Prioritized Communities, being the first 10 communities to have filed 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
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 (No longer participating, a new town will be selected by the State.)	6/14/2022
10	Aquinnah	6/14/2022

- (1) Letter of Intent. In order to inform the Department and potential Substitute Communities about participation in the Demonstration Program, Prioritized Communities must confirm their participation by submitting a letter of intent to the Department not later than September 1, 2023.
 - (a) This letter must be:
 1. signed by an authorized representative of the city or town, and
 2. affirm the city or town’s intention to participate in the Demonstration Project.
 - (b) Prioritized Communities that submit a letter of intent will maintain their Prioritized Community status until February 11, 2024. The Department will publicly post letters of intent to its website.

- (2) Letter of Withdrawal. Any Prioritized Community that will not apply to participate in the Demonstration Project must submit a letter of withdrawal to the Department not later than September 1, 2023.
 - (a) This letter must be:

1. signed by an authorized representative of the city or town, and
2. affirm the city or town's intention not to participate in the Demonstration Project.

(3) Default. Any Prioritized Community that does not submit either a letter of intent or letter of withdrawal by September 1, 2023 will be deemed withdrawn and shall no longer be a Prioritized Community.

24.04 Application Materials and Review Process

- (1) Application Materials. Applications must be submitted in a manner and form to be determined by the Department, and shall include all of the following information:
 - (a) Copy of home rule petition and date submitted.
 1. Home rule petitions filed by Prioritized Communities do not need to be updated or resubmitted to the general court to be eligible for participation.
 - (b) Copy of proposed bylaw or other ordinance for participation in the Demonstration Project. If the city or town proposes a bylaw or ordinance that is not the model bylaw or the Department's Fossil-Free Code, the application must include an explanation of differences and provide the applicant's rationale for any differences.
 - (c) An implementation plan, including:
 1. Timeline and effective dates of bylaw or other ordinance provisions or requirements;
 2. A demonstrated commitment to collaborate with the Department on data collection, reporting, and outreach/training;
 3. Description of the current process within each city and town for storing building permit data and certificates of occupancy;
 4. Description of how the local bylaw will affect the use of fossil fuels for commercial and industrial Process Load in buildings subject to the bylaw or ordinance, including but not limited to, restaurants, dry cleaners, and manufacturing uses;
 5. Description of exemption or waiver process from any requirements, if any, to be included in the bylaw or ordinance.
 - (d) Documentation sufficient to demonstrate that the applicant has achieved at least one of the three housing production eligibility thresholds set forth in 24.05(1)(c).
 - (e) Proof of Local Approval.
- (2) Additional Materials for Substitute Communities. In addition to the above

components, an application from a Substitute Community must include a description of the actions it has taken or will take after the adoption of the proposed bylaw, to encourage the production of multi-family housing. This description should include, but is not limited to:

- (a) The community's progress toward creation of a multi-family zoning district compliant with Sec. 3A of G.L. Ch. 40A, if applicable.
 - (b) Initiatives taken by the community to support the preservation and production of housing units, including multi-family housing.
 - (c) Substitute Communities may submit letters of support from community leaders and/or community members.
- (3) Review Process. The Department will review applications from Prioritized Communities on a rolling basis and will issue approvals in the order in which cities and towns have submitted home rule petitions to the general court.

- (a) The Department will provide feedback on completeness of application materials and notify applicant if any requirements are not met, or if any clarifications are needed for approval.
- (b) Prioritized Communities may update and re-submit applications through November 10, 2023 based on Department feedback.
- (c) November 10, 2023 is the final deadline to submit a complete application.
- (d) February 11, 2024 is the final deadline to meet all eligibility requirements listed in 225 CMR 24.05. After such date the application of any Prioritized Community shall expire and be deemed void.

24.05 Eligibility Requirements

- (1) Requirements. All Prioritized and Substitute Communities must meet each of the following three requirements prior to submissions of application to the Department:
- (a) Home Rule Petition filed with the general court on the subject matter of these regulations;
 - (b) Local Approval received on the subject matter of these regulations; and
 - (c) The municipality has achieved one of the following housing eligibility thresholds:
 - 1. The municipality has met the 10 per cent housing affordability threshold set under chapter 40B of the General Laws as of December 21, 2020 or in a subsequent update from DHCD; or
 - 2. The municipality has been granted safe harbor status through a valid Housing Production Plan that DHCD has certified in accordance with 760 CMR 56.03(4); or

3. The municipality has an approved a zoning ordinance or by-law that provides for at least 1 district of reasonable size in which multi-family housing is permitted as of right; provided, that such multi-family housing shall be without age restrictions and shall be suitable for families with children, as evidenced by a determination of district compliance issued by the department of housing and community development pursuant to its guidelines implementing section 3A of chapter 40A of the General Laws.

24.06 Substitute Communities

- (1) Application Submission. Substitute Communities may submit applications starting on the effective date of these regulations.
 - (a) The Department will not review applications from Substitute Communities until:
 1. Receipt of a Letter of Withdrawal from one or more Prioritized Communities forfeiting their prioritized status, or
 2. Default by a Prioritized Community as established in 225 CMR 24.03(4).
 - (b) The Department will notify and work with applicants to update applications if missing information or for which clarifications are required.
 - (c) Substitute Communities must meet all requirements set forth in 225 CMR 24.04 and 225 CMR 24.05 prior to submitting applications to the Department.
- (2) Timeline of Review. Substitute Communities applications will be considered if less than 10 of the Prioritized Communities participate in the Demonstration Project. The Department will not issue approvals for any Substitute Communities before March 1, 2024.
- (3) Selection Criteria. In addition to ensuring that Substitute Communities meet the requirements set forth in 225 CMR 24.04 and 225 CMR 24.05, the Department will consider the following factors when evaluating applications and selecting Substitute Communities for participation up to a total of 10 Participating Communities and may consider such additional factors as the Department deems appropriate.
 - (a) Contribution to the overall Demonstration Project, including diversity of Participating Communities, such as gateway cities,

environmental justice communities, diversity of demographics, diversity of size, scale of building development, and type of housing development;

- (b) Ability to meet Department reporting requirements and effectively monitor and ensure code compliance and implementation;
- (c) Consistency of proposed bylaw or ordinance to the model bylaw provided by the Department;
- (d) 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 bylaw that provides for at least 1 district of reasonable size in which multi-family housing is permitted as right, or, if not applicable, a similar commitment to multi-family housing production as determined by the Department, in consultation with the Executive Office of Housing and Economic Development;
- (e) Localized electric grid investments needed to support the Demonstration Project as determined through consultation between the Department and electric distribution companies;
- (f) Demonstrated support from community members and municipal leaders.

- (4) Selection. The Department will issue a determination letter upon approval of any application of a Substitute Community documenting its selection and the basis therefor. The Department will publish determination letters on its website.

24.07 Reporting and Assessment of Results

- (1) Department Reporting. Not later than September 30, 2025, and every 2 years thereafter, the Department shall compile a report to be filed with the Senate and House Committees on Ways and Means, the Joint Committee on Housing, and the Joint Committee on Telecommunications, Utilities and Energy. The report shall include, but not be limited to, the following components:
 - (a) Description of Demonstration Project and list of participating communities;
 - (b) Description of the Department's process for selecting Comparable Municipalities as a comparison group for the Demonstration Project;

- (c) An analysis of the net reduction in emissions:
 - 1. for each newly constructed building or Major Renovation project subject to the Demonstration Project in each municipality participating in the Demonstration Project; and
 - 2. for each comparable newly constructed building or Major Renovation project in a number of Comparable Municipalities, as selected by the Department, not participating in the Demonstration Project.
- (d) An analysis of impacts on: housing production, if any; housing affordability, if any, including electric bills, heating bills and other operating costs; housing affordability for persons of low and moderate income, if any, including electric bills, heating bills and other operating costs;
- (e) Recommendations for the continuation or termination of the Demonstration Project.

(2) Reporting Requirements for Participating Communities. Annually, not later than June 30th, Participating Communities shall submit the following data, in an accessible format as established by the Department, to the appropriate electric and gas distribution companies, or other designees as determined by the Department:

- (a) For each applicant for a building permit, the applicant's name, street address, building usage type, square footage, and estimated construction cost.
- (b) Electronic copies of any third-party energy reporting on new construction and Major Renovation projects that illustrate the expected energy use for each major end use. These include but are not limited to relevant sections of: final Home Energy Reporting System rating reports; Passive house certification reports; building energy modeling reports used to demonstrate commercial energy code compliance through ASHRAE 90.1 or Thermal Energy Demand Intensity (TEDI) building code compliance pathway.
- (c) Timely and accurate data reporting is required to perform analysis and assessment of impacts of the Demonstration Project.

(2) Reporting Requirements for Electric and Gas Utilities. Each year beginning in 2024, not later than September 30th, all electric and gas distribution companies serving customers in Participating Communities, or the Comparable

Municipalities shall, in an accessible and standardized format approved by the Department, report the following data:

- (a) Monthly kWh and therm usage, monthly electric costs, broken down by cost category, and monthly gas costs, broken down by cost category.
- (b) The information above shall be submitted by account, with an associated anonymized account identifier to track information over time. Each account shall be submitted with an associated rate class, and street address, and be linked to a permit number provided through 225 CMR 24.07(2).

- (5) Comparable Municipalities. The Department will identify and designate Comparable Municipalities in a manner to be determined by the Department. Comparable Municipalities shall report data as set forth in 225 CMR 24.07(2). The Department will coordinate with Comparable Municipalities on the method and process of data collection and reporting.

24.08 Specialized Municipal Opt-in Energy Code and Model Rule

- (1) Recommended Process. The Department has published a model rule and other guidance in order to assist Participating Communities in achieving the objectives of the Demonstration Project. The Department recommends that cities or towns seeking to participate in the Demonstration Project:
 - (a) Adopt the Specialized Municipal Opt-in Energy Code, as established in 225 CMR 22.00 and 225 CMR 23.00, and
 - (b) Adopt through Local Approval the model rule published by the Department.
- (2) Model Rule. The model rule published by the Department ensures appropriate integration with the Massachusetts Specialized Municipal Opt-in Energy Code. If a Participating Community determines that adoption of a local by-law or ordinance that differs from the model rule published by the Department is necessary, the Participating Community shall provide information as described in 225 CMR 24.04(1)(b) in its application.

- (a) Deviations from the model rule provided by the Department must include exemptions from fossil fuel free requirements for Research Laboratories for Scientific or Medical Research, or for Hospitals or Medical Offices.

24.09 Severability

If any provision of 225 CMR 24.00 is declared invalid, such invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.

REGULATORY AUTHORITY St.

2022, c. 179, § 84.

SCHOOL COMMITTEE STATEMENT

On April 27, 2023, the School Committee voted (5-0-1) to recommend passage of WA15. Voting in favor were Mr. Pearlman (Chair), Dr. Liu (Vice Chair), Ms. Charlupski, Dr. Ehrenberg, and Ms. Federspiel. Voting to abstain was Ms. Nobrega.

The School Committee supports fossil fuel free construction due to the better health outcomes and improved air quality that it creates for Brookline's residents. New school buildings in Brookline are already being built fossil fuel free. WA15 is also expected to reduce costs to build and live in Brookline, and protect the town from costly retrofits. All of these benefits from WA15 will make Brookline healthier and more sustainable for all residents, including our youth.

ZERO EMISSIONS ADVISORY BOARD REPORT

The Zero Emissions Advisory Board (ZEAB) held a public hearing on WA 15 on March 29th, 2023.

After the public hearing, the members of the Board voted 4-0 to recommend Favorable Action on WA 15 to Town Meeting.

Wendy Stahl, chair–Yes

Jesse Gray–Yes

Kathleen Scanlon–Yes

Werner Lohe–Yes

Background

In 2019 Brookline passed WA 21 requiring all new construction and substantial renovations to be all-electric and fossil fuel free. However, the Attorney General's Office (AGO) did not approve our Bylaw because it conflicted with State laws. Subsequently, in 2020, Brookline passed a Home Rule Petition requesting authority from the State Legislature to be able to enforce this Bylaw. Brookline also passed two zoning Bylaws in 2021 asking for the same authority through different legal mechanisms.

All four of these Warrant Articles addressing fossil fuel free construction passed in Town Meeting with near unanimous votes and yet Brookline has been unable to enforce Fossil Fuel Free construction due to conflicts with State law.

In response to growing demand from multiple communities throughout the State, in 2022 our State legislature developed a [Demonstration Project](#) through the Department of Energy Resources (DOER) to allow **10 communities to enact requirements that building construction be Fossil Fuel Free.**

The project is currently limited to the first 10 municipalities who filed Home Rule Petitions with the legislature. These communities are Arlington, Lexington, Brookline, Acton, Concord, Lincoln, Cambridge, Newton, West Tisbury, and Aquinnah. Four additional communities - Boston, Somerville, Salem, and Northampton - have also passed Home Rule Petitions and are currently on a waitlist to get into this project.

WA 15 will allow us to enter the 10 Community Fossil Fuel Free Demonstration Project.

In order to participate in the Demonstration Project, DOER has determined that all of the 10 selected communities have to pass new Bylaws, since our prior ones were disallowed by the AGO for conflicting with State law. Our new Bylaw will not be disallowed by the AGO because State law changed with the creation of this Demonstration Project.

Three of the ten prioritized communities have already passed similar WAs in their 2023 Spring Town Meetings: Lincoln, Lexington and Acton. Aquinnah is also lined up to pass a similar WA for its Spring Town Meeting.

WA 15 follows DOER's "Model Rule"

DOER has proposed a recommended Bylaw for us to adopt called the Model Rule. Warrant Article 15 uses the proposed language from DOER with one exception: eliminating a proposed exemption for biomass heating.

WA 15 is very close to what Brookline has passed previously.

Compared to our previous Fossil Fuel Free Warrant Articles, WA 15 accomplishes the same goal, but in a simpler manner.

WA 15 simply alters the existing Specialized Code (which Brookline adopted in January 2023) by eliminating the pathways that allow fossil fuels, leaving the remaining all-electric pathway.

The major difference compared to Brookline's prior Fossil Fuel Free Warrant Articles is that WA 15 (and the proposed Model Rule) does not provide an exemption for gas cooking.

Amendments.

After bringing WA 15 to ZEAB and later to the Advisory Committee, the Planning Department worked with the Building Commissioner and Town Counsel to make amendments that bring it closer in line with Brookline's previous Fossil Fuel Free Warrant Articles, while still closely following DOER's Model Rule.

Most notably, the amendments ensure that an entire building, not an individual unit within a building, has to undergo >50% renovation for this WA to take effect. The amendment also provides a waiver and appeals process.

WA 15 will improve health outcomes and health equity.

Poor air quality from burning fossil fuels in our buildings is associated with [higher rates](#) of disease and death throughout the Commonwealth. As advocates for safer indoor air quality in public housing in the Bronx recently noted, "[Everyone deserves to live in a healthy home.](#)"

Gas appliances are associated with an increased [risk of asthma development](#) in children. In Massachusetts, **1 in 8 children have an asthma diagnosis**. Gas stoves are attributable to about [15% of childhood asthma](#) in the Commonwealth, equal to having a smoker in the home. Gas appliances release [high levels](#) of nitrogen dioxide, carbon monoxide, methane, formaldehyde and benzene, producing indoor air quality that is not allowed outdoors under the Clean Air Act.

WA 15 will reduce costs to build and live in Brookline, and will protect our town from costly retrofits.

According to [DOER's own data](#), all-electric buildings have the lowest building costs as well as operational costs across all project types when compared with gas. The costs in the chart below are compared to the costs under the Base code. It is clear

that all-electric is less expensive than building with gas.

Building type	Incremental cost to build			Incremental cost to operate		
	Electric	Gas	Electricity edge	Electric	Gas	Electricity edge
Large 1-family	-\$20,062	+\$3,183	\$23,245	-\$548	-\$302	\$246
Small 1-family	-\$28,597	+\$7,907	\$36,504	-\$1,053	+\$496	\$1,549
Townhouse	-\$11,938	+\$802	\$12,740	-\$335	+\$21	\$356
6-family	-\$15,690	+\$2,277	\$17,967	-\$683	-\$14	\$669

From <https://www.mass.gov/doc/summary-of-stretch-code-study-energy-efficiency-analysis-feb-2022/download>
 Summary pages 13-14, detail pages 16-32

Additional studies confirm DOERs data that construction and operational costs of efficient [all-electric homes](#) are already similar to or lower than their fossil fuel counterparts. All-electric building technology is also mainstream and well-established for [commercial construction](#).

Brookline’s Housing Authority and seven permitted 40Bs are already going all-electric without being required to do so because it is cost effective, even though there is not yet a legal requirement to do so.

Continuing to allow the installation of new fossil fuel infrastructure results in future displacement as well as far greater costs, since buildings must be retrofitted at some point down the line in order to achieve the goals of Massachusetts’ [Clean Energy and Climate Plan](#).

In short, it is fiscally irresponsible to be installing new gas infrastructure when the State has a legally binding target to eliminate fossil fuels from half of our buildings by 2030.

WA 15 will help us meet our climate goals.

The State has a legally binding obligation to reduce emissions 50% by 2030 and to be 100% net zero by 2050. Brookline has committed to net-zero by 2040.

It is impossible to meet our climate mandates without widespread building electrification. See [Massachusetts 2050 Decarbonization Roadmap](#) (pages 44-54). The [Commission on Clean Heat](#) came to the same conclusion, as did the [Carbon Free Boston](#) report.

WA 15 will not overburden the electric grid.

The proposed fossil fuel free (FFF) demonstration project, WA-15, affects only *new and major construction*, comprising about 0.5% of building emissions per year, and has virtually no impact on the State grid.

If adopted by the first 10 communities, which comprise less than 6% of the State's population, the effect on the grid would be 0.03% per year - in other words,

negligible. If also adopted by the four waitlist communities (including Boston at 10% of the State's population, Somerville, Salem, and Northampton), the gross population affected jumps to 17%, resulting in 0.085% added burden on the grid. If adopted by the entire State, as we hope will happen soon, the impact will be 0.5%. Even this figure isn't accurate, however, because some of that added electrification is inevitable, as new and major construction ADDS electrical burden *regardless of heating type*.

In addition, heat pumps are far more efficient than traditional HVAC - two to five times more efficient - and the new building code standards also produce much more efficient buildings.

Lastly, building electrification is REQUIRED and MANDATED by the State in order to meet our climate targets, far above and beyond the new construction covered in this Warrant Article, as we need to reduce our carbon emissions by 50% in the next seven years in order to keep below 2 degrees Centigrade warming.

Other Electrical Facts:

- **Modern electric heat is efficient and cost-effective.** Newly electrified heating systems employ heat pump technology, which is 2 to 5 times more efficient than gas boilers and furnaces and is used all over the world, including [over 30 million square feet](#) of net-zero construction already built in Massachusetts.
- **Fossil fuel backup heat is unnecessary.** Heat pumps operate efficiently down to [-15 degrees F](#) and have been [proven by MassCEC](#) not to need fossil fuel backup systems.
- **Electrification reduces input energy needs.** The efficiency gain alone due to switching from fossil fuel to electric vehicles and all-electric appliances almost cuts in half the amount of raw energy needed to fuel the economy.
- **Electricity is increasingly carbon-free.** Brookline's default electricity ([Brookline Green](#)) is 90% renewable today, and will be 100% in 2024. Furthermore, non-carbon-emitting energy sources currently serve over 50% of New England's overall electricity needs, and this is mandated to increase every year.
- **The grid is getting cleaner every year.** Beginning in 2024, the proportion of load served by renewables in Massachusetts will increase by 3% per year, and that is likely to accelerate quite a bit with legislation proposed to meet our state's greenhouse gas (GHG) emission objectives. The first large-scale offshore wind farm in North America is expected to be injecting power into New England's grid

- by December 2023. And remember Brookline's electricity is already 90% renewable through our Community Choice Aggregation program.
- **Carbon emissions-free energy could make up as much of 90% of total U.S. electricity generation by 2030** according to a [US DOE report](#) analyzing recent policy changes.
 - **The grid has ample supply to accommodate the State's electrification plans.** New England is currently operating about 20% below the all-time system electric peak demand of 2006. According to the Director of Transmission System Planning at Eversource ([see slides 47-54](#)), the grid has ample supply to accommodate the State's electrification plans. Additionally, according to their forecasts, minimal infrastructure beyond what has already been planned will be needed by 2035.
 - **Resource adequacy planned to double by 2050.** Planning by the regional electric grid operator, ISO New England, envisions doubling the region's current 25 gigawatt (GW) capacity to 50 GW by 2050.
 - **Additional supply already in the queue.** Of the 25 GW of additional supply needed regionally, 10 GW will be here by 2035. *That is the business as usual scenario, and it involves very little change to our current transmission grid.*
 - **The cost of renewable energy has been consistently and dramatically dropping for several decades.** Fossil fuel prices are unstable and are projected to continue to increase, leaving people vulnerable to unpredictable energy bills.
 - **Gas delivery charges will continue to rise.** In terms of gas delivery costs, the costs of our [GSEP program](#) are now estimated to reach at least \$40 billion dollars. These increased delivery costs have already begun to hit ratepayers, and will accelerate the inevitable transition of our gas system to a stranded asset. We have one of the oldest and leakiest gas pipe infrastructure in the country, leaking methane ([25-80 times more potent than carbon](#)) at a prodigious rate, and causing poor air quality and associated poor health outcomes. We need a plan to transition off this dirty system.
 - **Utility rate impact.** Again, this project applies only to new construction and major renovations—a relatively small number of buildings—so it would not impact utility rates, even if it were enacted state-wide. New and major construction constitutes only 0.25-0.5% of annual construction activity in Brookline.

PLANNING BOARD RECOMMENDATION

Purpose of the Article

The passage of this Town General By-Law will allow Brookline to participate in a demonstration project to allow the exclusion of fossil fuels in building systems in the Town. Brookline would be one of ten municipalities designated by the Commonwealth through the MA Dept. of Energy Resources (MADOER) to participate in it. New construction and major renovations will be affected. This would be a direct continuation of the current Specialized and Opt-In Specialized Codes, which were adopted by Town Meeting in 2023. Under these building codes, fossil fuels are still permitted but with the goal of reaching Net Zero Emissions by 2050. This proposed demonstration project bylaw will allow Brookline to accelerate the elimination of fossil fuel upon adoption. The project will be governed by regulations being published by MADOER. These regulations are currently in draft form.

Overview

The Demonstration Project under the Commonwealth is a direct outgrowth of the efforts of Brookline to develop effective Climate Policy to provide mechanisms in the Town to mitigate greenhouse gas emissions, the cause of the Earth's climate crisis. Since Brookline became a MA Green Community in 2010, the Town has been taking steps to become more energy efficient and less reliant on fossil fuels used in combustion for building heating and appliances. Adopting more energy efficient and environmentally driven building codes is part of that process. In 2023, the Commonwealth revised the Stretch Code, and in January 2023, Brookline Town Meeting voted to adopt the new MA Building Specialized Opt-In Stretch Code. The new code goes into effect on July 1, 2023. The MA DOER Demonstration Project will take the participating communities even further by allowing the cities and towns to adopt and amend general or zoning by-laws to eliminate the use of fossil fuels. The Specialized Stretch Code will require new building construction or major renovation projects (where over 50% of the building area being renovated is affected) to be fossil fuel free. This will mean no use of Coal, Oil, Natural Gas, or other Hydrocarbons (Synthetic or Fossil) for building systems. There is, however, an exemption for Medical and Laboratory Facilities.

Planning Board and ZBLC Comments

Because the goal of this warrant article is to adhere to State guidance as much as possible and not jeopardize the Town's participation in the project, both the Planning Board and Zoning By-Law Committee are supportive of it. The warrant article and bylaw is needed now because the majority of the greenhouse gasses generated in Brookline come from building generated systems for heat and hot water use. By participating in this project, Brookline will play an important role in crafting future climate and building code polices in the Commonwealth.

At its hearing on April 12th, the Planning Board saw a PowerPoint presentation by Brookline's Sustainability Director Thomas Barrasso on this warrant article. At the end of

the presentation, and after public comment and discussion by the two Boards, votes were taken in support of the warrant article.

The Planning Board voted (5-0) to recommend Favorable Action on Article XV, as submitted.

The roll call vote went as follows: Zarrillo – aye, Brue – aye, Chipimo– aye, Hamlin – aye, and Hines – aye. (Heikin was not present.)

SELECT BOARD’S RECOMMENDATION

Warrant Article 15 is a General By-Law warrant article. It continues the theme of energy efficiency and the transition to electrification to aid with climate change mitigation and the Town’s climate action goals, in very much the same way as previous votes by Town Meeting regarding the Stretch Code and Specialized Energy Code. This warrant article allows Brookline to participate in a State of MA Demonstration Project through MA DOER that will allow a bylaw to eliminate multiple fuel pathways through restrictions in certain circumstances for buildings to be fossil fuel-free.

Transportation and buildings are the primary causes of emissions in the Town, and it is necessary to take steps to curb these emissions if Brookline is to meet its Net Zero goal of 2040. Stronger regulatory measures are needed now. Therefore, the Select Board supports this warrant article.

The Select Board voted FAVORABLE ACTION on the following motion:

MOVED: to amend Article 5.9 to document votes previously taken by Town Meeting regarding adoption of the Specialized Energy Code and Stretch Code as well as to clarify incorporate state regulation references, as follows:

- c) Change the title of Article 5.9 from “Stretch Energy Code” to “Energy Codes”
- d) Amend 5.9 as follows, **with additions underlined and deletions in strikeout**:

“Section 5.9.1 Stretch Energy Code and Municipal Opt-in Specialized Energy Code

d) Purpose: The purpose of this by-law and related state regulations 780-CMR 120-AA-225 CMR 22 and 23 is to provide a more energy efficient alternative to the base energy code applicable to the relevant sections of the building code for both new construction and existing buildings.

e) Authority: Through Town Meeting action, the Town of Brookline has adopted the Stretch Energy Code and Specialized Energy Code, and both are

incorporated by reference into the Town of Brookline General By-Laws Article 5.9. These codes are enforceable by the Building Commissioner or their designated Building Inspector(s).

f) Definitions:

Specialized Energy Code – Codified by the entirety of 225 CMR 22 and 23 including Appendices RC and CC, the Specialized Energy Code adds residential and commercial appendices to the Massachusetts Stretch Energy Code, based on amendments to the respective net-zero appendices of the International Energy Conservation Code (IECC) to incorporate the energy efficiency of the Stretch energy code and further reduce the climate impacts of buildings built to this code, with the goal of achieving net-zero greenhouse gas emissions from the buildings sector no later than 2050.

Stretch Energy Code - Codified by the combination of 225 CMR 22 and 231, not including Appendices RC and CC, the Stretch Energy Code is a comprehensive set of amendments to the International Energy Conservation Code (IECC) seeking to achieve all lifecycle cost-effective energy efficiency in accordance with the Green Communities Act of 2008, as well as to reduce the climate impacts of buildings built to this code.

Section 5.9.2 Definitions

- a) ~~International Energy Conservation Code (IECC) 2009~~ — The International Energy Conservation Code (IECC) is a building code created by the International Code Council. It is a model code adopted by many state and municipal governments in the United States for the establishment of minimum design and construction requirements for energy efficiency. Commencing July 1, 2010, the baseline energy conservation requirements of the MA State Building Code will default to IECC 2009 and MA amendments.
- b) ~~Stretch Energy Code~~ — Codified by the Board of Building Regulations and Standards as 780 CMR Appendix 120 AA, the Stretch Energy Code is the International Energy Conservation Code (IECC) 2009 as may be amended from time to time.

Section 5.9.3 Applicability

~~This code applies to residential and commercial buildings. Buildings not included in this scope shall comply with 780 CMR 13, 34, 61, or 93, as applicable.~~

Section 5.9.4 Authority

~~The Town of Brookline hereby adopts 780 CMR 120 AA in order to ensure that construction within its boundaries is designed and built above the energy efficiency requirements of 780 CMR Appendix 120 AA and mandates adherence to said Appendix as may be amended from time to time.~~

Section 5.9.5 Stretch Code

~~The Stretch Code, as codified by the Board of Building Regulations and Standards as 780 CMR Appendix 120 AA, including any amendments or modifications, is herein incorporated by reference into the Town of Brookline General Bylaws, Article 5.9. The Stretch Code is enforceable by the Building Commissioner or their designated Building Inspector(s)."~~

2) Vote to amend Article 5.9 of the Town of Brookline General By-Laws by **adding** the following language for the purpose of restricting and prohibiting new building construction and major renovation projects that are not Fossil-Fuel Free, pursuant to the entirety of 225 CMR 24 Fossil Free Building Construction and Renovation Demonstration Project, which latest version is on file with the Town Clerk. This amendment shall only take effect if approved by the Massachusetts Department of Energy Resources (MA DOER) as a Participating Community pursuant to 225 CMR 24.

“Section 5.9.2 Fossil Fuel-Free Demonstration

- g) Purpose: The purpose of this by-law and related state regulations 225 CMR 24, also referred to as the Fossil Fuel-Free Demonstration, is to restrict and prohibit new building construction and major renovation projects that are not fossil fuel-free.
- h) Authority: Through this Town Meeting action, the Town of Brookline will adopt the Fossil Fuel Free-Demonstration. Upon approval by the Department of Energy Resources (DOER) of the necessary changes to the Specialized Energy Code, amendments to the Specialized Energy Code are adopted as listed in Section 5.9.2 (f) below. These changes are enforceable by the Building Commissioner or their designated Building Inspector(s) and will go into effect for any project seeking a permit after the effective date.
- i) Applicability: This restriction applies to residential and commercial buildings that qualify as new construction or major renovation, as defined in 225 CMR 22 and 23. This restriction shall not apply to research laboratories for scientific or medical research, hospitals and medical offices regulated by the department of public health as a health care facility as defined in 225 CMR 24.

- j) Definition of Fossil Fuel-Free Demonstration: Codified by the entirety of 225 CMR 24, the Fossil Fuel-Free Demonstration.
- k) The effective date of this Section 5.9.2 is the latest of the following: (1) sixty days following approval by DOER of the necessary changes to the Specialized Energy Code and the Town’s status as a Participating Community; (2) the effective date established by M.G.L. c. 40, s. 32; and (3) January 1, 2024.
- l) Amendments to the Specialized Energy Code as part of the Fossil Fuel-Free Demonstration are as follows:
 - 3) Low-rise Residential Code (225 CMR 22 Appendix RC):
Sections RC102 and RC101 “Zero Energy Pathway” and “Mixed Fuel Pathway” shall not be permitted for use for new construction or major renovations.
 - 4) Commercial and All Other (225 CMR 23 Appendix CC)
Sections CC103 and CC105 “Zero Energy Pathway” and “Mixed-Fuel Pathway” shall not be permitted for new construction or major renovations, with the following exceptions:
 - (v) Research laboratories for scientific or medical research,
 - (vi) Hospitals regulated by the department of public health as a health care facility,
 - (vii) Medical offices regulated by the department of public health as a health care facility, and
 - (viii) Multi-family buildings over 12,000 square feet with permit application filed prior to January 1, 2027 may utilize gas or propane for domestic water heating as the only combustion equipment.”

ROLL CALL VOTE:

Aye:

Greene
Aschkenasy
VanScoyoc
Sandman

May 23, 2023 Annual Town Meeting

15-28

ADVISORY COMMITTEE'S RECOMMENDATION

A report and recommendation on this article will be included in the supplement.

XXX