

TOWN OF BROOKLINE ADVISORY COMMITTEE
LAND USE, ZONING AND SUSTAINABILITY SUBCOMMITTEE

**Article 15: Fossil Fuel Free Demonstration Project
Public Hearing (virtual) April 4, 2023**

Attendees: Subcommittee members David Pollak (chair), Patty Correa, Anita Johnson, Linda Olson Pelke, Lee Selwyn; Director of Sustainability Tom Barasso; Associate Town Counsel Jonathan Simpson; ZEAB Chair Wendy Stahl; Members of the public Lisa Cunningham, Jesse Gray, David Mendels, Diana Sokal, Deane Coady, Inge Damm-Luhr, John Harris, Lynn Shyevitch, Edward Dumas, Wadner Oge.

Recommendation: Favorable Action by a vote of 4-0 with one abstention (Pehlke).

The recording of the April 4, 2023 Subcommittee Public Hearing can be viewed here:
https://brooklinema.zoomgov.com/rec/share/cr_u1WgMTgvnq54fhdXSa0v7re1e3nTBOebFD2vG6I0uX7MfTQBJRQ4XvDFb79fW.CEYmoOfAGCUTqPkf

Executive Summary:	Article 15 has two parts: Part 1 amends Article 5.9 of the General Bylaw so that it is consistent with Town Meetings adoption of the Specialized Energy Code on January 10, 2023. Part 2 amends Article 5.9 to enable Brookline’s participation in the Massachusetts Department of Energy Resources (DOER) ten community Fossil Free (FFF) Building Construction and Renovation Demonstration Project.
Voting Yes will...	Allow Brookline to participate in the FFF Demonstration Project.
Voting No will...	Prevent Brookline from participating in the FFF Demonstration Project, with the likelihood that its place will be taken by another community.
Financial impact	There are reporting requirements that will need to be fulfilled by the Building Department.
Legal implications	Article 15 conforms to all of DOER’s recommendations as to form and process, so legal issues are not anticipated.

Introduction

Article 15 will amend General Bylaw 5.9 to ban the use of fossil fuels in most new construction and major renovation projects in Brookline. It is very similar to a bylaw change that was passed by Town Meeting in November, 2019 by a 211-3-6 vote but that was subsequently ruled unlawful by the Attorney General. Brookline’s 2019 action arguably set in motion efforts by other communities and the legislature that have led to the creation of this ten-community Demonstration Project.

Brookline Town Meeting voted to “opt in” to the Stretch Energy Code in 2010, and then opted in to the Specialized Energy Code on January 10, 2023. Those codes, now promulgated by DOER as 225 CMR 22.00 (one- and two-family) and 225 CMR 23.00 (commercial including multi-family), are extensions of the “Base Energy Code” that set higher standards for performance and encourage the movement away from fossil fuel use. Both allow fossil fuel use in new construction and major renovation projects under either a “Zero Energy Pathway” or a “Mixed Fuel Pathway”, with both of those pathways requiring a range of additional measures compared with the “All-Electric Pathway”.

Article 15 will add “Section 5.9.2 Fossil Fuel-Free Demonstration” to the General Bylaws, including 225 CMR 24.00. This further modifies the Specialized Energy Code requirements that were adopted in January, eliminating the Zero Energy and Mixed Fuel Pathways for new construction and major renovation projects (as defined under 225 CMR 22.00 and 23.00), with several exceptions including:

- Research laboratories for scientific or medical research, hospitals and medical offices are exempted;
- 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.

Presentation

Director of Sustainability Tom Barrasso presented to the Subcommittee with slides that can be found here: <https://www.brooklinema.gov/DocumentCenter/View/40764/WA-15-FossilFreePILOTSBTownMeetingOverViewPresentation>

Director Barrasso’s presentation covered a range of topics including:

- Legislative history;
- The Commonwealth’s 2050 and Brookline’s 2040 climate action goals;
- An energy code overview;
- The ten-community Demonstration Project and its goal of gathering, analyzing and publishing data on the effectiveness of these measures starting in September of 2025.
- Data from DOER (as of February, 2022) documenting capital and operating costs for electric versus gas fueled Stretch Code compliant new buildings across twelve different building types. That DOER presentation can be found here: <https://www.mass.gov/doc/summary-of-stretch-code-study-energy-efficiency-analysis-feb-2022/download>

Questions

Q. We only have draft regulations, published by DOER in December, 2022. When will the final regulations be published, and how might they change?

The subcommittee heard anecdotal reports based on multiple conversations between DOER and others (such as representatives from Lexington). The suggestion was that the regulations are in the process of being finalized, or have been finalized and are being reviewed, and that changes are expected to be along the lines of clarifications, there shouldn’t be surprises.

Q. What are the reporting requirements that the Town will have to meet, and how much additional work will this reporting be for the Building Department?

The Building Department will be required to report annually, “*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.*” The subcommittee was told that each municipality will be able to deliver its report using forms and software that it already has, and won’t be required to move data into new software or different formats.

Two types of information are listed:

“(a) For each applicant for a building permit, the applicant’s name, street address, building usage type, square footage, and estimated construction cost.”

This (a) appears to be Building Permit data and nothing more.

“(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.”

This (b) appears to be a requirement to essentially forward submissions that are otherwise required under the Stretch Code.

Based on the above, the annual reporting requirements are an added burden, but do not appear to be difficult to comply with or requiring additional training or investments beyond the time it will take to gather and assemble the report materials. The significant burden of number crunching, analysis and reporting is placed on the utility companies serving the ten participating communities, and then on DOER.

Q. How will the Major Renovation criteria (Level 3 Alteration which generally translates as significant change to more than 50% of floor area) be applied to multi-unit residential buildings, and in particular condominium buildings?

This question is inherent to the Building Department’s application of the updates to the Stretch Code that are coming into effect this year (one- and two-family as of January 1 and commercial as of July 1). The Stretch Code applies new maximum HERS ratings to Major Alterations. The Demonstration Project eliminates the Zero Energy and Mixed Fuel pathways for Major Alterations.

A reasonable presumption is that projects that fall under that Stretch Code requirements will similarly fall under the Demonstration Project requirements.

In the discussions during the December and January consideration of the Specialized Energy Code, we heard that the 50% criteria would be applied on a “building” basis, and not to individual condominium units. Common area square footage would count toward the denominator.

Building Commissioner Dan Bennett is expected to attend the April 11 AC meeting and may be able to provide further clarification of this question.

Q. How has Brookline met the “housing eligibility threshold”? The subcommittee heard from Kara Brewton in a different meeting that while Brookline’s Subsidized Housing Inventory (SHI) is above 10%, that could dip below 10% later this calendar year in a not unusual circumstance relating to the nature of the planning and permitting process for new projects.

The housing eligibility threshold can be met in any one of three ways: meeting the 10% threshold as of December 21, 2020, meeting the requirements of the MBTA CA, or having a valid Housing Production Plan that has been certified by DHCD. Brookline qualifies under the first of these criteria.

Q. The DOER capital and operating cost analyses presented in the February 2022 study show lower costs for electric buildings across the board, and footnote “Energy costs are based on 22 cents/kWh, \$1.53/therm, and \$3.09/gal propane.” Do these rates include “delivery” charges?

Inquiries subsequent to the subcommittee meeting were unable to ascertain a direct answer to the question, but it is reasonable to assume that the rates for each fuel are comparably calculated.

Q. How will we “green the grid”, and how will we have enough green electricity to meet the increased demand from electrification of buildings, transportation, and other energy uses?

Rep Tommy Vitolo addressed this question in the debate on the Specialized Energy Code in November, noting among other things that the Commonwealth has committed to increasing the Commonwealth’s green energy supply by 3% per year for five years, and that we must simultaneously reduce demand for fossil fuels while “greening” the supply in order to meet our climate commitments.

The Petitioner’s Supplemental Information FAQ includes a link to an article on a US DOE report: https://pv-magazine-usa.com/2023/03/16/clean-electricity-to-reach-as-high-as-90-by-2030/?utm_source=Energy+News+Network+daily+email+digests&utm_campaign=2cffd56690-EMAIL_CAMPAIGN_2020_05_11_11_42_COPY_01&utm_medium=email&utm_term=0_724b1f01f5-2cffd56690-89304872 that includes the following statement:

“The analysis found that clean electricity as a percentage of total generation could increase to over 80% in 2030 under mid-case assumptions. The low-case and high-case projections place clean energy’s share of electricity generation between 71% to 90%. This is substantially greater than the 41% share emissions-free electricity achieved in 2022.”

As to capacity, the subcommittee was told that New England is currently operating about 20% below the all-time system electric peak demand of 2006, and that the rate of electrification of the region's building stock is anticipated to be approximately 0.5% per year.

Public Comment

Lisa Cunningham spoke to the urgency of the climate crisis, and to the many communities that either moving forward on participation in the Demonstration Project or waiting in the wings to take the place of any community that drops out or isn't able to qualify.

Wendy Stahl conveyed her excitement that the state has made an official program to allow us to move forward on this pathway that we have repeatedly voted to implement over the last few years.

Diana Sokal noted that in her understanding (as an architect), renovation projects only require replacement of building systems that are changed as part of the renovation. In her words "if your building has a big old gas boiler that's serving multiple units, there's nothing in the renovation that's going to require you to change that unless you do go ahead and change that system."

Discussion

Linda Pehlke noted her reservations about how the new requirements will be applied to renovations, and that the Specialized Energy Code is already pushing hard toward electrification, expressing her preference that we see how it goes with those changes and learn from the Demonstration Project while not necessarily participating in it.

Patty Correa noted that the Advisory Committee has a responsibility to implement what Town Meeting has overwhelmingly voted for and envisioned multiple times over a number of years, that this goes beyond what AC members might decide on an individual basis. She noted that she had posed some legal questions to Town Counsel and is satisfied by the written responses.

Recommendation: Favorable Action by a vote of 4-0 with one abstention (Pehlke).