

ARTICLE 14

FOURTEENTH ARTICLE

Submitted by: Zero Emission Advisory Board (ZEAB)

To see if the Town will amend the Zoning By-law as follows:

**By amending Section 2.05, “E” Definitions, to add the following new paragraph (additions are underlined and deletions are strike-throughs):**

1. Energy-Saving Device: Any facility, equipment, apparatus or the like which makes use of non-fossil fuel sources for lighting, heating or cooling, or vehicular charging, or which reduces the use of other types of energy dependent on fossil fuel for generation. Conventional cooling systems powered by electricity or other fuel sources shall be excluded from this definition.

± 2. Erect: To construct or reconstruct or excavate, fill, drain, or conduct physical operations of any kind in preparation for or in pursuance of construction or reconstruction, or to move a building or structure upon a lot.

**By amending Article V to add the following new Section 5.75:**

**Sec. 5.75 Encroachments into Required Side and Rear Yard Setbacks:  
Energy-Saving Devices**

1. Location and Dimensions

a. Energy-Saving Devices are prohibited in the Front Yard as defined in Sec. 2.25.1 and on the elevation of a Building corresponding to a Front lot line, but may encroach into required Side Yard setbacks and required Rear Yard setbacks, provided that:

i. at least two feet or the distance specified by the manufacturer, whichever is greater, is maintained from the vertical plane of the side and rear lot lines and

ii. all requirements under this Section and under applicable laws and regulations otherwise are met.

b. Ground-mounted Energy-Saving Devices shall be located per manufacturer’s installation requirements and as close as possible to the building it serves to the satisfaction of the Building Commissioner or their designee.

2. Screening

- a. Roof-mounted Energy-Saving Devices, except for solar panels, shall be screened to a height that is equal to or greater than that of the mechanical equipment.
- b. The height of roof-mounted Energy-Saving Devices including supporting bases and associated screening shall not exceed 10 feet unless a Special Permit is granted by the Board of Appeals under Section 5.31.

3. Noise

- a. Energy-Saving Devices shall comply with the Town's Noise By-law.

4. Historic Buildings

- a. Buildings listed in or eligible for listing in the National Register of Historic Places shall comply with Article 5.3, the Town's Demolition Delay By-law. For parcels in the Harvard Street Main Street District that also are in the Brookline Village National Register District, Article XI also applies.
- b. Buildings located in Local Historic Districts shall comply with Article 5.6 and relevant Local Historic District Guidelines.

5. Exceptions

- a. Mechanical equipment and Energy-Saving Devices on buildings within the Harvard Street Main Street District are subject to Article XI Section 11-5.08.
- b. The Board of Appeals may issue a Special Permit pursuant to Sec. 5.43 to substitute a reduction of the minimum required setback set forth in Sec. 5.75.1.a.i. This provision is not applicable to the Harvard Street Main Street District.
- c. A Yard abutting an alley to the rear shall not be considered a Front Yard solely for the purposes of this Section.

6. Exemptions

- a. The location of backup generators and pool and spa heaters are subject to Sections 5.63 and 5.72, accessory structures in side and rear yards.
- b. Energy Storage Systems (ESS), as defined, regulated, and permitted under the National Fire Protection Association (NFPA) standards, may be located in required Side and Rear Yards pursuant to the setback requirements in Sections 5.63 and 5.72.
- c. Below-grade energy systems, such as ground-source or geothermal heat pump installations, are exempt from Section 5.75 and may fully encroach into required Yard setbacks, subject to compliance with applicable statutes and regulations including but not limited to:
  - i. M.G.L. c.131, sec. 40 and 310 CMR 10.00, Wetlands Protection;
  - ii. M.G. L. c.21, sec. 43, Discharge of Pollutants;
  - iii. 310 CMR 15.000, the State Environmental Code, Title 5;
  - iv. 780 CMR Massachusetts Building Code;
  - v. 248 CMR Massachusetts Uniform Plumbing Code;
  - vi. Brookline Floodplain By-laws;
  - vii. Brookline Conservation Commission Regulations; and
  - viii. Brookline Board of Health Regulations.
- d. Roof-mounted solar photovoltaic panels may encroach in required Yard setbacks, subject to compliance with NFPA standards and manufacturer's specifications.
- e. Ground solar photovoltaic panels are regulated under Table 4.07 Use 40D and Use 61 and Section 5.06.4.h, Renewable Energy Overlay District.

or act on anything relative thereto.

#### PETITIONER'S ARTICLE DESCRIPTION

The Zero Emissions Advisory Board (ZEAB) brings this zoning article to reduce barriers to climate action. This article will allow for easier installation of Energy Saving Devices such as heat pumps and EV chargers in Brookline's densest neighborhoods.

#### **Climate Background:**

The Commonwealth of Massachusetts has mandated achieving [net zero greenhouse gas emissions by 2050](#), and in [WA 37 of the May 2021 Annual Town Meeting](#), Brookline committed to an even earlier date of 2040. Three sectors account for the vast majority of our emissions: electricity, transportation and buildings. Thanks to our successful

[Brookline Green Electricity](#) program, 100% renewable electricity is now the default option for the majority of our residents (check [here](#) to see if you are enrolled). In order to address the remaining emissions from our vehicles and our buildings, the State's [2050 Decarbonization Roadmap](#) identifies electrification (ie. transitioning vehicles and buildings off fossil fuels) as the most economically and technologically feasible approach to meeting the climate crisis.

### **ZEAB is reducing barriers to climate action**

While it is fairly straightforward (albeit not yet universally feasible) to transition our cars off gasoline, transitioning our home mechanical systems off gas and oil is more complicated. This year, ZEAB has been working on ways to make that process easier for Brookline residents.

For example, in coordination with [Brookline Mothers Out Front](#) and [Climate Action Brookline](#), ZEAB has launched an educational campaign called [Electrify Brookline](#). The goal of this campaign is to demystify the process of reducing our emissions and at the same time making our homes healthier and more comfortable. A series of How-To guides are on the town's [Electrify Brookline webpage](#).

In coordination with Electrify Brookline, we have secured a grant through Mass Save to develop an outreach program specifically for the 52% of Brookline residents who are renters and the 24% of Brookline residents who face economic insecurity. By learning about [energy-saving solutions](#) and receiving [Mass Save benefits](#), renters' utility costs can decrease, the comfort of their homes can increase, and their homes will become more climate-friendly. In order to share information about these benefits with targeted renters, we will work with organizations that serve these communities, provide language translation services as needed, and provide incentives for renters to participate in our program.

And most importantly for this Town Meeting, we are proposing this article, which will simplify the process for installing Energy Saving Devices in our densest neighborhoods.

### **The existing process**

One of the most common practices for transitioning off fossil fuels for heating is to install a heat pump. The most common type of heat pump is an [air source heat pump](#) which consists of both interior and exterior equipment.

Brookline's current zoning regulations do not allow for the installation of any mechanical equipment or structure within 6 ft of the side or rear lot lines, except by Special Permit. In many of Brookline's neighborhoods, housing is so dense that there is not more than 6 ft between the home and the lot line. In these situations, if someone wants to install a heat pump, they must apply for a Special Permit and bring their case to the Planning Board and the Zoning Board of Appeals (ZBA).

This process can take months and add significant costs associated with hiring counsel to guide a homeowner through the process. Furthermore, many homeowners in Brookline's dense neighborhoods are hesitant to even consider installing heat pumps under the false assumption they will not be approved.

Brookline's ZBA has approved many if not all such requests in recent memory, begging the question of the need for such a time consuming and expensive detour in the permitting process.

### **Proposed changes**

ZEAB has worked closely with Town staff in the Planning and Building Departments to develop a practical plan to reduce this unnecessary barrier through a change to our zoning bylaw.

It starts by defining Energy Saving Devices, to distinguish them from other mechanical systems. This definition includes items such as EV chargers and condensers for air source heat pumps, but not traditional air conditioning condensers.

Then Energy Saving Devices are allowed to be installed by-right (no need for a Special Permit) in both side and rear yards (including yards abutting alleys), as long as they meet a series of basic requirements such as screening for rooftop installations and compliance with the existing noise bylaw and historic regulations.

### **Exceptions and Exemptions**

- The two feet that devices are required to be set back from the property line can be reduced, if necessary, via Special Permit.
  - All properties within the Harvard St Main Street District will follow the requirements listed in section XI of the zoning bylaw, and not the new provisions. Section XI similarly allows for installation of mechanical systems up to two feet from the property line.
  - Backup generators and pool and spa heaters, even if they were to qualify as Energy Saving Devices, are excluded.
  - Battery storage systems, while qualifying as Energy Saving Devices, are also excluded from the new provisions because of special requirements in the fire safety code.
  - Ground source (geothermal) heat pump systems may be installed all the way up to the property line since they are completely buried.
  - Ground mounted solar panels must comply with existing regulations and are not affected by this bylaw.
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SELECT BOARD'S RECOMMENDATION

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ADVISORY COMMITTEE'S RECOMMENDATION

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