

CITY OF SOMERVILLE
ORDINANCE NO. 2023-
IN CITY COUNCIL: _____, 2023

WHEREAS, Climate change is in part caused by humans' combustion of fossil fuels.

WHEREAS, The findings of Climate Change Vulnerability Assessments (2017, 2023) indicate Somerville is expected to experience the impacts of climate change through increased heat and precipitation and coastal flooding, which may impact life and property in Somerville.

WHEREAS, The Consumption-based Emissions Inventory (2023) found “(b)urning natural gas in homes contributes to carbon dioxide emissions and to local indoor and outdoor air pollution” that can “increase the risk of asthma in children and exacerbate asthmatic symptoms in adults.”

WHEREAS, The findings of the Community Wide Greenhouse Gas Inventory (2014, 2016, 2018, 2020) demonstrate the built environment is the largest contributor to greenhouse gas emissions.

WHEREAS, The findings of the Somerville Carbon Neutral Pathway Assessment (2017) defines carbon neutrality and analyzes the technological transformations necessary to achieve this emissions reduction target through the implementation of policies and programs.

WHEREAS, Strategic community climate action planning through the Somerville Climate Forward (2018) action plan sets a goal for Somerville to be net-zero carbon neutral by 2050. Somerville Climate Forward identifies ensuring “buildings and homes are built and retrofitted to be net-zero carbon, healthy, resilient, and affordable” as a priority action necessary to reduce Somerville’s contribution to climate change and adapt to its impacts. And, “(i)n order to meet Somerville’s carbon reduction goals, all new buildings must be designed and built to produce virtually no (greenhouse gas) emissions.”

WHEREAS, The Somerville City Council adopted the SomerVision comprehensive plan for 2010-2030, which among other things affirmed core values to “(b)uild a sustainable future through strong environmental leadership,” and included specific goals to “(p)reserve and expand an integrated, balanced mix of safe, affordable, and environmentally sound rental and homeownership units,” to “(m)itigate displacement of low- and moderate-income residents...”

WHEREAS, The City Council affirmed the Green New Deal Resolution (2019), recognizing that, while Somerville “has made some progress towards reducing its dependence on fossil fuels, that progress is insufficient to make the necessary changes to shift Somerville’s economy to be more equitable and ecologically sustainable. And, “(t)he Somerville City Council envisions a future where Somerville residents can live healthy, prosperous lives, free of toxic chemicals and fossil fuels, and the social and ecological well-being of all people is prioritized over the profits of private corporations.”

WHEREAS, Net-zero emissions building construction is an established, achievable standard, demonstrated through proposed and constructed buildings in Somerville utilizing a combination of Phius, ILFI, LEED, or other energy efficient building design, including but not limited to renewable thermal technologies (e.g., heat

pumps), building electrification (no on-site combustion of fossil fuels), on-site renewable energy (e.g., solar PV and/or solar thermal) systems, and offsite renewable energy purchases. ***THEREFORE, BE IT***

ORDAINED by the City Council, in session assembled, that Chapter 6 of the code of ordinances of the City of Somerville is amended as follows by inserting the following Article VII:

Article VII. – Fossil Fuel Free Construction

Sec. 6-91. – Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates otherwise:

Conditioned Floor Area: As defined in the most recently Massachusetts adopted International Energy Conservation Code (IECC) edition with applicable Massachusetts amendments.

Fossil fuel free means an entire building or entire unit, and common area as applicable, 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.

Fossil Fuel-Free Demonstration. Codified by the entirety of 225 CMR 24.00, the Fossil Fuel Free Demonstration.

Historic Buildings: As defined in the most recently Massachusetts adopted International Existing Building Code (IEBC) edition with applicable Massachusetts amendments.

Major Renovation. As defined in 225 C.M.R. 24.00.

Residential Building: As defined in the most recently Massachusetts adopted IECC edition with applicable Massachusetts amendments.

Specialized Energy Code. Codified by the entirety of 225 CMR 22.00 and 23.00 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 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.

Sec. 6-92 – Purpose

The purpose of 225 CMR 24.00, 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.

Sec. 6-93 – Applicability

This restriction applies to residential and non-residential buildings that qualify as new construction or major renovation, as defined in 225 CMR 24.00. 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 24.00

Sec. 6-94 – Fossil Fuel-Free Demonstration

The Fossil Fuel-Free Demonstration, as codified by the entirety of 225 CMR 24.00, is herein incorporated by reference into the City of Somerville General Ordinances, Chapter 6, with an effective date as set forth in Section 6-97.

With adoption of the Fossil Fuel-Free Demonstration, and upon approval by the Department of Energy Resources (DOER), the following amendments to the Specialized Energy Code are adopted. This ordinance is enforceable by the Director of the Inspectional Services Department or Designee and shall go into effect for any project seeking a permit after the effective date.

- a. Low-rise Residential Code (225 CMR 22 Appendix RC)
 - i. Sections RC102 and RC101 “Zero Energy Pathway” and “Mixed Fuel Pathway” shall not be permitted for use for new construction, with the following exceptions:
 - 1. Emergency and standby power systems, as defined as level 1 and level 2 systems in the NFPA 110 (2022) Section 4.4,
 - 2. Heating and hot water supplied to a building through a district energy system or central utility plant,
 - 3. Freestanding outdoor heating and cooking appliances that are not connected to the building’s natural gas or propane infrastructure and are used to facilitate outdoor dining.
- b. Commercial and All Other (225 CMR 23 Appendix CC)
 - i. Sections CC103 and CC105 “Zero Energy Pathway” and “Mixed-Fuel Pathway” shall not be permitted for new construction, with the following exceptions:
 - 1. Research laboratories and facilities for research and development, scientific or medical research, whether in a singular or mixed-use structure,
 - 2. Hospitals regulated by the department of public health as a health care facility, whether in a singular or mixed-use structure,
 - 3. Medical offices regulated by the department of public health as a health care facility, whether in a singular or mixed-use structure,
 - 4. Multifamily 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,
 - 5. Emergency and standby power systems, as defined as level 1 and level 2 systems in the NFPA 110 (2022) Section 4.4,
 - 6. Autobody shops,
 - 7. Onsite vehicle fueling connections,
 - 8. Equipment in critical use facilities for medical care and intensive research that meet the definitions of Critical Operations Data Systems and Critical Operations Power Systems as defined by the Massachusetts Electrical Code,
 - 9. Heating and hot water supplied to a building through a district energy system or central utility plant,
 - 10. Commercial cooking equipment used in a restaurant or cafeteria in a building that has applied for a building permit prior to January 1, 2035, provided that the electrical panel has sufficient capacity for the later installation of fully electric food preparation equipment,
 - 11. Freestanding outdoor heating and cooking appliances that are not connected to the building’s natural gas or propane infrastructure and are used to facilitate outdoor dining.
 - c. Equipment or appliances used for space heating, service water heating, cooking, clothes drying, and/or lighting that can utilize coal, oil, natural gas, other fuel hydrocarbons, including synthetic equivalents, or other fossil fuels may not be installed as part of any residential or non-residential Major Renovation, with the exception of a.i.1 through a.i.3 and b.i.1 through b.i.11 above. All Major Renovations associated with a.i.1 through a.i.3 and b.i.1 through b.i.11 must follow applicable Stretch and Specialized Energy Code requirements as applicable.

Sec. 6-95. Waivers.

- a. The Director of the Office of Sustainability Environment or Designee shall periodically review and rule on applications for waivers to the Fossil Fuel Free Demonstration.

- b. The Director of the Office of Sustainability Environment or Designee shall determine and publicly release guidance for applying for a waiver. A waiver may be granted for the following:
 - i. Any equipment, appliance, or building system for which sufficient utility electric service cannot or is not projected to be reasonably available and there is no alternative fossil fuel-free technology or system reasonably available by the time of building occupancy, provided that the applicant must furnish a letter signed by a licensed electrician, design professional, or a utility, describing service limitations.
 - ii. Within a multifamily building in which less than 50% of the total housing units are undergoing a Major Renovation, a unit that shares a heating system with another housing unit that is not undergoing a Major Renovation, as demonstrated by the applicant.
 - iii. Historic buildings, as demonstrated by the applicant.
 - iv. Manufacturing process loads if the process load cannot physically or reasonably be converted to a fossil fuel-free process, as demonstrated by the applicant.

Sec. 6-96. Reports.

- a. Planning Review Board, Building Permit, and Certificate of Occupancy applications must include 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.
- b. Biannually, the Director of the Office of Sustainability and Environment or Designee, shall review exceptions. Findings of applicability shall be issued to the City Council.

Sec. 6-97. – Effective date.

This ordinance shall take effect on January 1, 2025 or 180 days after acceptance into the Fossil Fuel Free Demonstration Project, whichever is sooner, or upon approval of any Home Rule Petition authorizing the City of Somerville to establish a net zero emissions standard for new constructed buildings and Major Renovation projects.

Sec. 6-98. – Conflicting provisions.

Where there are conflicting provisions, the provision securing the greater degree of public safety, health, or general welfare, shall be applied in that order.

Sec. 6-99. – Severability.

The provisions of this article are severable, and if any part of this article should be held invalid by a court of competent jurisdiction, such invalidity shall not affect the remainder of the article and the remainder of the article shall stay in full force and effect.