

ARTICLE 23. Adopt Specialized Stretch Energy Code

Mr. Hubbard-Nelson moves that the Town take affirmative action on Article 23 as printed in the handout.

Motivation

ARTICLE 23: Specialized Stretch Code

Concord's climate goals (similar to Massachusetts-wide):

- >45% GHG emissions reduction by 2030, and >80% by 2050
- Building emissions around 60% of Concord total

New buildings should be very energy efficient and make use of CMLP's emission-free electricity

- Improvements in building science and HVAC technology make this achievable and cost effective

Background

- Concord adopted the Stretch Energy code in 2010
 - Requires higher energy efficiency than the Base building code
 - Stretch Code used in 300 of 351 Massachusetts communities
- In 2022 MA Department of Energy Resources (DOER) revised and strengthened Stretch Code significantly to support MA climate goals
- The updated Stretch Code is automatic. Adopting the opt-in Specialized provisions on next slide are what is being voted on
- Stretch code update improves energy efficiency for residential and commercial buildings, and allows **all-electric** or **mixed-fuels** (fossil-fuel) options with higher efficiency (lower “HERS rating”) required for mixed-fuels

Specialized provisions

ARTICLE 23: Specialized Stretch Code

Opt-in provisions (“Specialized Stretch Code”) - additional requirements:

- 1. New buildings wired for “electrification ready”** if they use mixed-fuels for residential, commercial and multi-family
- 2. Zero energy option** for mixed-fuels using solar PV or other renewables (to offset fossil fuel use)
- 3. Passive House design** or Zero energy option (on-site solar) required for:
 - Single-family > 4,000 sq ft (if “mixed fuels” option used)
 - Multi-family >12,000 sq ft

Relation to Fossil-free pilot

- Concord voted at January Special Town Meeting to join the Massachusetts 10-community pilot for fossil-free construction
 - Assuming Concord included in pilot program, the **mixed-fuels** and **zero energy** options would be **disallowed**
 - If so, Specialized Stretch code is identical to Stretch code in nearly all cases
 - **If article fails?** Concord would likely be unable to participate in fossil free pilot

MA “overlay” building energy codes

ARTICLE 23: Specialized Stretch Code

Article 23



Opt-in
Specialized
Code

- IECC 2021
- + MA Amendments
- + Stretch code amendments
- + Specialized appendices



Updated Stretch
Code

- IECC 2021
- + MA Amendments
- + Stretch code
amendments



Updated Base Code

- IECC 2021
- + MA Amendments

Why pass Article 23?

- The Specialized Stretch code supports Concord's climate goals
- Article 23 reaffirms our commitment to the Massachusetts fossil-free pilot program
- Additional requirements to improve efficiency and make buildings electrification-ready will save considerable expense in future building retrofits

Additional information:

1. **Renovations?** No, the Specialized stretch code provisions apply to new construction only.
2. **Affordable housing?** Yes, the Specialized stretch code applies to affordable housing
3. **Cost?** Additional cost beyond the Stretch code are low
 - Energy savings over time lower life-cycle costs

ARTICLE 23. Adopt Specialized Stretch Energy Code

Mr. Hubbard-Nelson moves that the Town take affirmative action on Article 23 as printed in the handout.