

Specialized Energy Code

Presentation to City Council
Mayor Katjana Ballantyne
Office of Sustainability & Environment
January 26, 2023



Agenda

- Summary of Somerville building energy decisions
- Comparing Massachusetts energy codes
- Existing building exemptions from updated Stretch and new Specialized Energy Codes
- Stretch Energy Code Update: Changes going into effect July 1, regardless of Specialized Code adoption
- What's in the Specialized Energy Code?
- Specialized Energy Code benefits
- Sample of incentives and financing options
- How will this work for Somerville?

Summary of Somerville building energy decisions

June 2011:
Adopted the
Stretch Energy
Code

2022: Approved a
Home Rule Petition
to participate in the
Fossil Fuel Free
Building Pilot
Program

December 2019:
Adopted updated
Zoning Ordinance

Comparing Massachusetts Energy Codes

Base Code (IECC 2021)

- New construction in towns & cities not a green community
- **52 communities**

Expected from BBRS:
July 2023
Residential/Commercial

Stretch Code (2023 update)

New construction,
additions, alteration

300 communities

Residential : Jan 2023
Commercial: July 2023

Specialized Code ("Net-Zero")

- New Construction in towns & cities that vote to opt-in to this code
- **Proposed effective date for Residential/Commercial: July 1, 2023**
Watertown, Brookline, and Cambridge have opted in

Existing building exemptions from the updated Stretch Energy Code and new Specialized Energy Code

- Historic buildings with approval
- Level 1 Alterations (removal/replacement/covering of existing materials/equipment/elements/fixtures)
- Level 2 Alterations ($\leq 50\%$ renovated/reconfigured)
- Residential Additions $< 1,000$ square feet (sf)
- Commercial Additions $< 20,000$ sf

Stretch Energy Code Updates: Changes going into effect July 1, regardless of Specialized Code adoption



Key Changes to Commercial Stretch Code

Current Stretch Code

Site energy reduction

10% reduction

Buildings over 100,000-sf
No add'tns, alt'ns

Replaced with

New Stretch Code

Heating and cooling
demand reduction

up to 90% reductions

all building sizes
Includes add'tns, alt'ns



Stretch Energy Code Updates: Changes going into effect July 1, regardless of Specialized Code adoption

- Enhanced for energy efficiency standards
- Electric Vehicle Supply Equipment requirements (1 space/home, multifamily parking lots prewire 20% spaces)
- Requires solar readiness 5+ stories
- Requirements for new construction residential*
- Requirements for new construction commercial*
- Residential: Level 3 Alterations (50%+ renovated and reconfigured; Additions 2x the size of the conditioned floor area or >1,000 sf)
- Commercial: Additions > 20,000 sf; Alterations (including walls)
- Change of use/occupancy

*Exceptions: Specialized code has additional requirements for certain building types

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What's in the Specialized Energy Code?

- Builds on Stretch Energy Code with limited exceptions
 - Applies to new construction for low-rise residential and commercial
 - Choose 1 of 3 pathways to compliance:
 1. Zero Energy pathway
 2. All-Electric pathway
 3. Mixed-fuel pathway
- New 1-2 unit homes >4,000 sf must use Zero Energy or All-Electric pathways
 - Multifamily buildings <12,000 sf total conditioned floor area may follow commercial or residential code
 - Multifamily >12,000 sf follows commercial code

What's in the Specialized Energy Code?

- Definition of net zero building
- Definition of zero energy building
- Enhanced for energy efficiency standards
- All buildings required to equip 20% of spaces with wiring for electric vehicle charging or one space per home in 1-2 unit home
- Pre-wiring for electrification required in Mixed-Fuel pathway
- Solar PV required for Mixed-Fuel pathway
- High ventilation buildings (labs):
 - Must install wiring sufficient for all-electric
 - Have a path to meet All-Electric requirements

Specialized Energy Code benefits

Support citywide goals and planning towards net zero, all-electric buildings by 2050.

- A necessary and important step to reduce greenhouse gas emissions from the #1 emissions-producing sector in Somerville.
- Adopt now and impact new construction through 2050.
- More rigorous than current local standards.
- Will put Somerville in a better position to electrify by
 - disincentivizing the installation of new fossil-fueled systems,
 - facilitating installation of electrification infrastructure, and
 - encouraging all-electric builds and projects.
- Support construction of cleaner, more energy efficient, resilient buildings.
- Important step towards Fossil Fuel Free Pilot Program.
- May create access to more funding opportunities.

Sample of incentives and financing resources

- Alternative Energy Credits
- Business tax credits
- Energy efficiency tax credits/rebates
- Eversource electric vehicle supply equipment incentives
- Federal Inflation Reduction Act 45L and 179D tax credits
- Fuel Assistance
- Housing Rehab Program
- Heating System Replacement Program
- Mass Housing Loans
- Mass Save
- Massachusetts Clean Energy Center
- SMART program
- Solar tax credits
- And more...

How will this work for Somerville?

- Cross-departmental effort
- Managing consultant services
 - Evaluate development trends, policy and staff impact
 - Analysis will help determine how to effectively implement and streamline the program
 - Creation of easy-to-use public outreach tools
- Promote financial assistance tools
- Outreach planned Spring/Summer 2023 and beyond

Thank you

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Discussion

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