

# Town of Needham

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## Presentation to Selectboard on Green Communities Designation

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# Green Communities Requirements

## Criterion 1: As-of-Right Siting

- ❖ **Requirement:** As-of-Right Siting requires the allowed use without unreasonable regulation. Development may proceed without the need for a special permit, variance, amendment, or other discretionary approval. As-of-right development may be subject to non-discretionary site plan review to determine conformance with local zoning bylaws as well as state and federal law. Designated locations include:
  - ❑ *renewable or alternative energy generating facilities,*
  - ❑ *renewable or alternative energy research and development (R&D) facilities*
  - ❑ *renewable or alternative energy manufacturing facilities*
  
- ❖ **Town Compliance:** The Town’s Zoning Bylaws allow for As-of-Right siting as follows:

USE	Green Community Type	Industrial	Industrial 1	New England Business Center District	Mixed Use 128 District
Zoning Bylaw Reference		3.2.1	3.2.1	3.2.4	3.2.6
Laboratory or place where scientific experimental research is conducted not including genetic or biological research laboratory.	Research & Development	✓	✓		
Medical laboratory or laboratory engaged in scientific research and development, and experimental and testing activities including, but not limited to, the fields of biology, genetics, chemistry, electronics, engineering, geology, medicine and physics, which may include the development of mock-ups and prototypes.	Research & Development			✓	✓
Light non-nuisance manufacturing providing that all resulting cinders, dust, flashing, fumes, gases, odors, smoke, noise, vibration, refuse matter, vapor, and heat are effectively confined in a building or are disposed in a manner so as not to create a nuisance or hazard to safety or health	Manufacturing	✓	✓	✓	✓

# Green Communities Requirements

## *Criterion 2: Expedited Permitting*

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- ❖ **Requirement:** The Town must adopt an expedited application and permitting process under which as-of-right energy facilities (criterion #1) may be sited within the municipality and which shall not exceed one (1) year from the date of initial application to the date of final approval.
  
- ❖ **Town Compliance:** Site Plan Review is provided for in Section 7.4 of the Town's Zoning Bylaw.
  - ❑ *New Construction Projects sized up to 10,000 square feet of allowable permitted use are allowed by right and must apply for a Minor Project Site Plan Special Permit, which is similar to a typical Site Plan Review in other municipalities. Such projects require approval by the Zoning Board of Appeals with comments from the Planning Board.*
  - ❑ *New Construction Projects of allowable permitted use sized 10,000 or more square feet, or involve an increase in gross floor area of 5,000 square feet, or the creation of 25 or more new off-street parking spaces, must apply for a Major Project Site Plan Special Permit. Such projects require approval by the Planning Board.*
  - ❑ *Needham complies with the establish timeframe of up to five (5) months for the issuance of a Special Permit set forth in MGL Chapter 40A.*

# Green Communities Requirements

## *Criterion 3: Energy Reduction Plan ("ERP")*

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- ❖ **Requirement:** The Town is required to accomplish the following:
  - ❑ *Establish an Energy Use Baseline*
  - ❑ *Develop and implement a comprehensive program designed to reduce this baseline by 20% within the 5-year period following the Baseline Year*
  
- ❖ **Town Compliance:** The Town has developed an Energy Reduction Plan designed to achieve 20% energy savings reductions through the implementation of completed and planned capital energy efficiency and infrastructure upgrades.
  - ❑ *Calculated savings projected: 15%*
  - ❑ *Additional savings projected: 5%*

# Green Communities Requirements

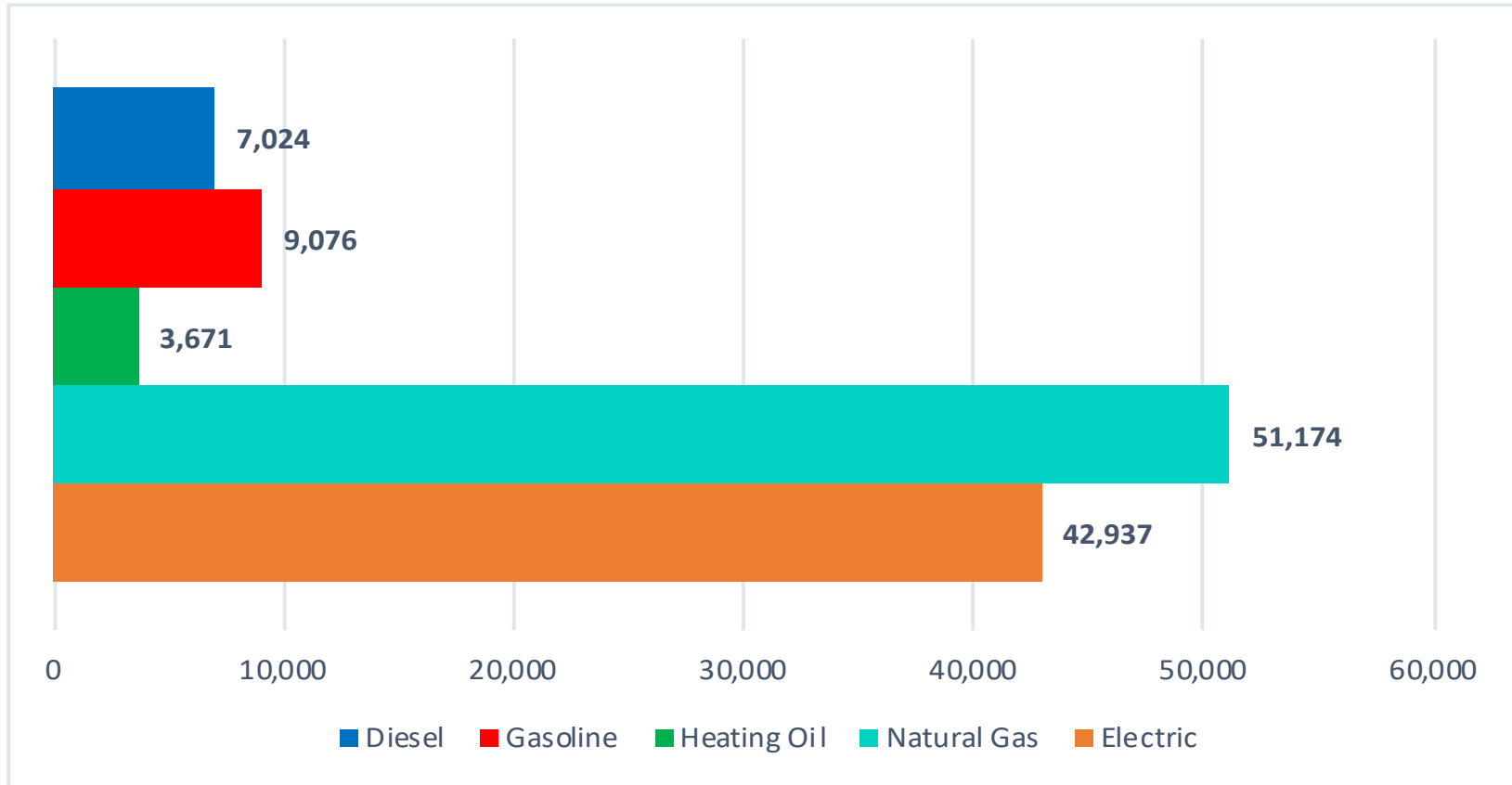
## Criterion 3: ERP Overview

- ❖ **Baseline Year - Fiscal Year 2018**
- ❖ **Projected Costs, Savings and Paybacks:**

ENERGY MEASURES	ESTIMATED MMBTU SAVINGS	ESTIMATED COST SAVINGS	ESTIMATED NET INSTALLED COST **	SIMPLE PAYBACK	PERCENT CONTRIBUTION OF BASELINE CONSUMPTION
Building Control	4,125	\$125,373	\$468,126	3.7	
Exterior Lighting	1,851	\$122,061	\$371,548	3.0	
Hot Water	56	\$990	\$75,049	75.8	
HVAC	2,623	\$85,095	\$940,693	11.1	
Interior Lighting	1,280	\$84,413	\$617,477	7.3	
Retrocommission	5,817	\$205,698	\$546,534	2.7	
Vehicles	663	\$17,931	\$15,000	0.8	
Weatherization	695	\$13,251	\$654,172	49.4	
Other-Water/Sewer	74	\$4,904	\$0	0.0	
<b>SUB-TOTAL</b>	<b>17,183</b>	<b>\$659,716</b>	<b>\$3,688,599</b>	<b>5.6</b>	

# Green Communities Requirements

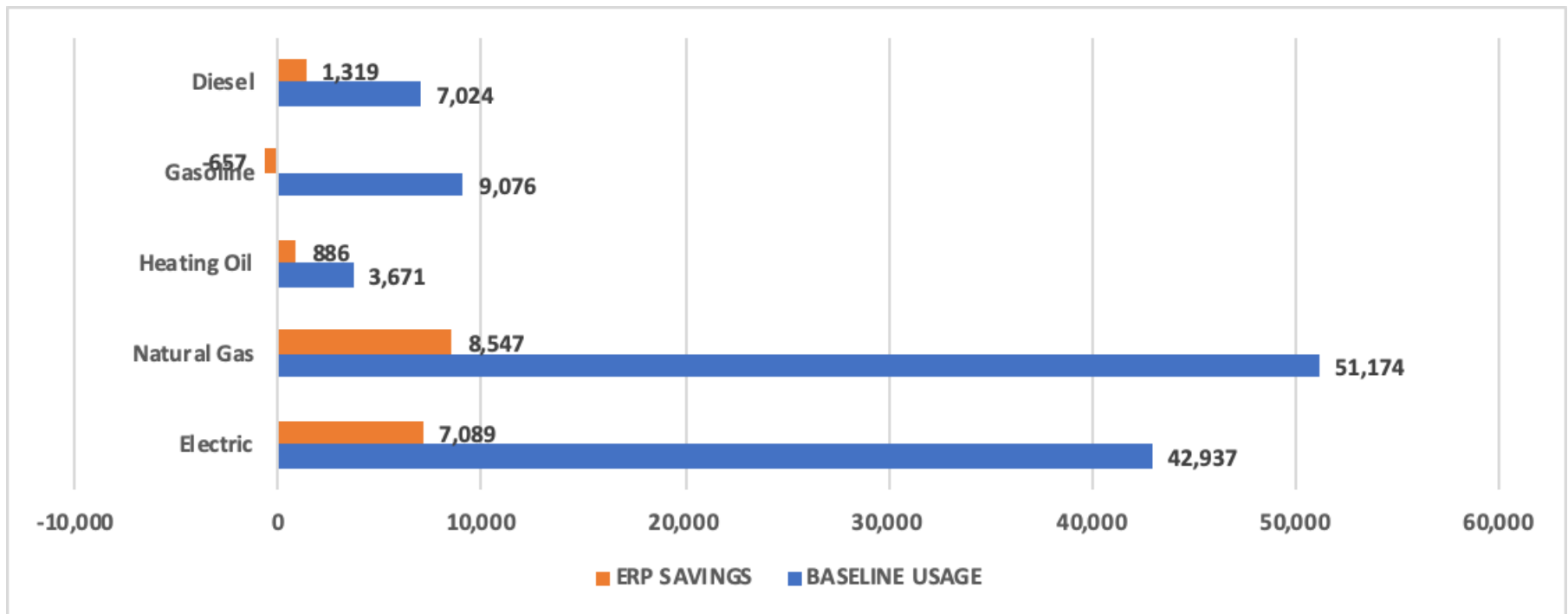
## Criterion 3: Baseline (in MMBTUs)



# Green Communities Requirements

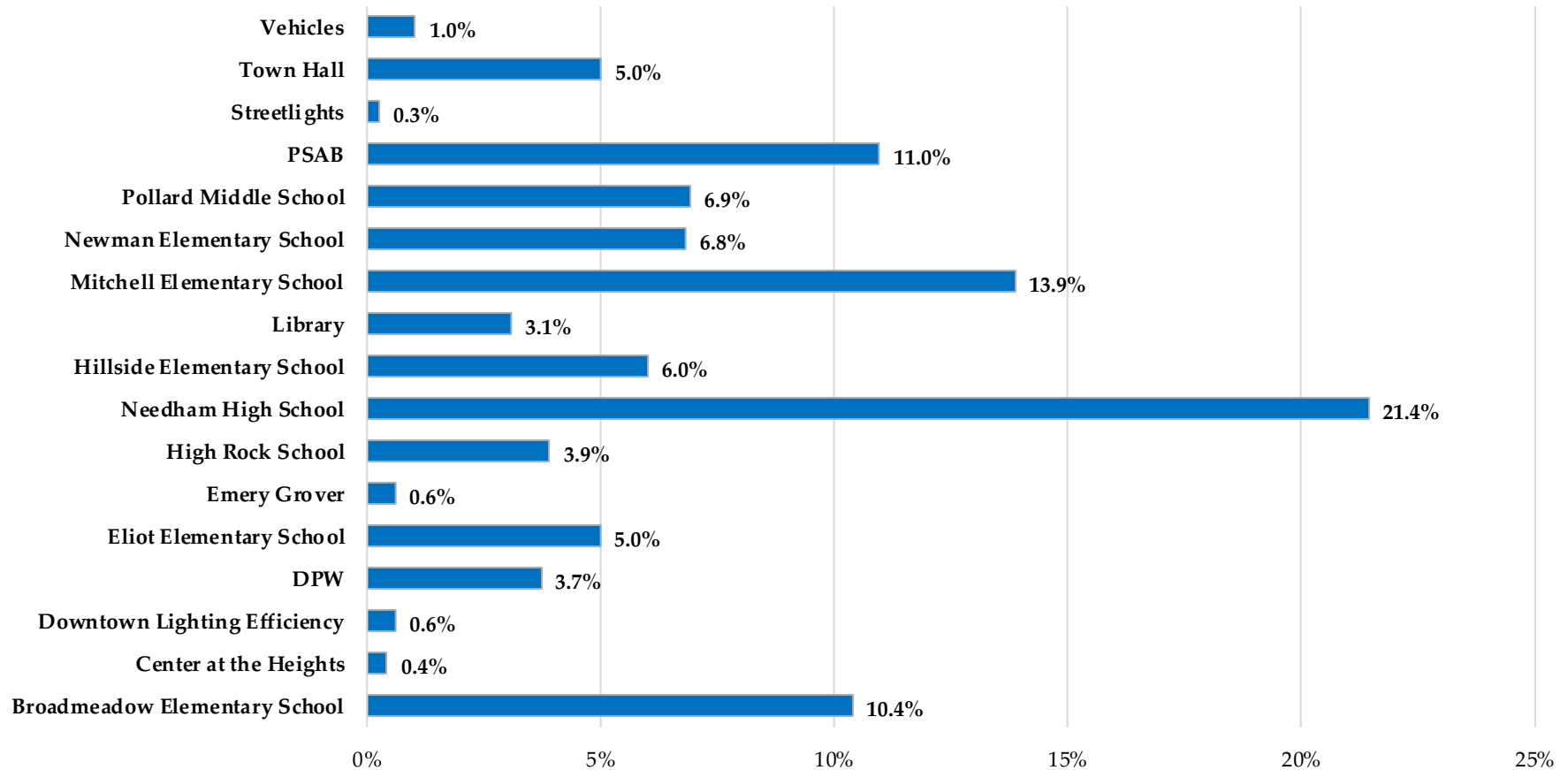
## Criterion 3: Baseline versus ERP Savings

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# Green Communities Requirements

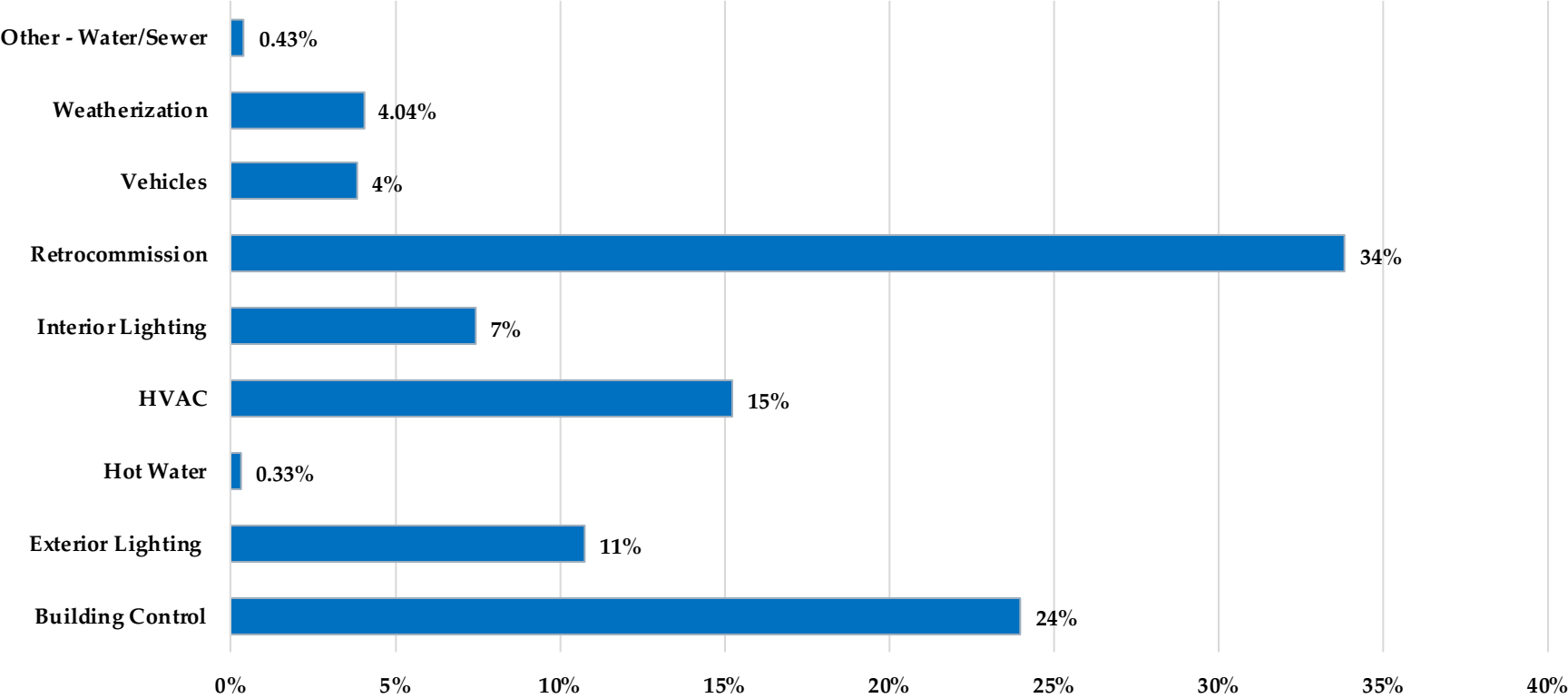
## Criterion 3: ERP Savings by Location





# Green Communities Requirements

## Criterion 3: ERP Status by Measure Type



# Green Communities Requirements

## *Criterion 3: ERP Savings – Achievement Status*

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	<b>MMBTU Savings</b>	<b>% Contribution of MMBTU Savings</b>	<b>MMBTU Cost Savings</b>	<b>% Contribution of Cost Savings</b>	<b>Net Installation Cost</b>	<b>% Contribution of Net Installation Cost</b>
<b>Completed</b>	3,548	21%	\$187,042	28%	\$653,682	18%
<b>Active</b>	3,914	23%	\$124,738	19%	\$493,626	13%
<b>Planned</b>	9,721	57%	\$347,936	53%	\$2,541,291	69%
<b>TOTAL</b>	17,183	100%	\$659,716	100%	\$3,688,599	100%

# Green Communities Requirements

## *Criterion 4: Fuel-Efficient Vehicles*

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- ❖ **Requirement**: The Town is required to purchase only fuel-efficient vehicles for municipal and school use whenever such vehicles are commercially available and practicable.
  
- ❖ **Town Compliance**: The Town and School Department will consider adopting a fuel-efficient vehicle policy consistent with the requirements of the Green Communities Program.

# Green Communities Requirements

## *Criterion 5: Stretch Code Adoption*

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- ❖ **Requirement:** The Town must require all new residential construction over 3,000 square feet and all new commercial and industrial real estate construction to minimize, to the extent feasible, the life-cycle cost of the facility by utilizing energy efficiency, water conservation and other renewable or alternative energy technologies.
- ❖ **Town Compliance:** On May 13, 2019, at its Annual Town Meeting, under Article 49, Needham Town Meeting Members voted to amend its General By-Laws by adding the Stretch Energy Code for the purpose of regulating the design and construction of buildings for the effective use of energy, pursuant to Appendix 115.AAA of the Massachusetts Building Code, 780 CMR, the “Energy Stretch Code”, including future additions, amendments, or modifications thereto.