



The Green Technology Energy Committee of Lincoln, MA recommends the adoption of the Massachusetts State Building Code 780 CMR Appendix 120.AA (otherwise known as the “Stretch Energy Code”).

The STRETCH CODE raises standards for energy efficiency in building construction. It is called the STRETCH CODE because it forms a bridge between current building code standards and those most likely to be universally adopted in 2012.

The STRETCH CODE is a *voluntary* part of the Massachusetts State Building Code.

The primary purpose of the STRETCH CODE is to create an effective and affordable methodology for achieving approximately 20% better energy efficiency for new residential and commercial building projects compared to current state building code requirements.

Its primary benefits to the Town of Lincoln, homeowners in particular:

- **Better Homes and Buildings:** Make new and renovated buildings, in particular houses, more energy efficient
- **Save Money:** Create higher performance buildings with substantially lower yearly energy costs while adding value as better built homes and buildings.
- **Increase Health:** Create healthier living environment in buildings that are appropriately ventilated, heated, and cooled
- **Protect Consumers:** Provide consumer protection through third party verification of construction methods, materials, and quality
- **Help the Local Economy:** Encourage job creation through green technology and practices, (making homes and buildings more energy efficient with greener materials and methods)
- **Protect the Environment and Increase National Security:** Reduce dependence on fossil fuels and the energy resources of other countries by reducing energy consumption
- **State Financial Incentives:** Assist in making Lincoln eligible for “Green Community” designation, allowing the Town to pursue up to 10 million dollars in Green Community grant money.
- **Lincoln Identity and Character:** Preserve and enhance Lincoln’s reputation as a forward thinking, sustainable, and responsible community.

Stretch Code Requirements:

Residential:

- New homes construction or additions fewer than 3,000 square feet must meet a HERS (Home energy rating) of 70. Over 3,000 square feet must meet a HERS of 65.
- Renovations over 600 square feet but below 2,000 square feet must meet a HERS of 85, over 2,000 square feet, 80.
- Renovation project fewer than 600 square feet and Historic properties, (officially listed) are exempt.

Commercial:

- Commercial project over 50,000 square feet must be 20% better than ASHRAE 90.1 energy provisions. Commercial alterations are exempt.

Stretch Code Methodology:

The STRETCH CODE will achieve increase in energy efficiency through encouraging the use of the following:

- Better windows
- Better building insulation
- Improvement in air and moisture infiltration control
- Better and more efficient heating, cooling and ventilation equipment
- Higher installation standards for insulation, weather stripping, and HVAC equipment, including ductwork
- Unbiased and objective third party verification

Commonly Asked Questions

1. Will it cost more?

- Initially, yes, but not in the long run.. The adoption of the STRETCH CODE will slightly increase design and construction costs. The additional costs will be primarily localized in the following:
 - Preconstruction planning and design as well as HERS rater review before building permitting.
 - Higher performance and quality building products such as windows, building insulation, and HVAC equipment.

2. If it costs more, what is the benefit, especially in this economy?

- The primary payback is in substantially lower life cycle costs assisted by federal, state and local (utility company) financial incentives. The payback is estimated as a period of several

years. On homes, in particular those of a size common in Lincoln, the long-term energy savings shall be substantial.

3. *Can we afford it?*

- Yes we can. The average new house in Lincoln is at least 6,000 square feet with a construction cost starting at \$1,200,000. The cost of energy upgrades is easily accommodated by simply making the home just a bit smaller or understanding and appreciating up front costs in relation to life cycle expenditure.

4. *Will this be a burden on the Town, in particular the Building Department?*

- No, the responsibility for meeting the code requirements and demonstrating compliance is on the builder / home owner / developer.

5. *What is a HERS rating?*

- A Home Energy Rating is an unbiased indication of a home's relative energy performance based on consistent inspection and evaluation procedures, operating assumptions, climate data, and calculation methods in accordance with the National Energy Rating Technical Standards in relation to all materials, components, and systems. A HERS rating of 100 represents the energy use of the HERS reference home standard as well as the current Massachusetts Building Code minimum energy efficiency requirement for new homes. A HERS rating of 65 represents a 35 % increase in energy efficiency. A HERS rating of 85 represents a 15% increase in energy efficiency.

6. *When would it go into effect?*

- Either on the next July or January 1st not less than six months after Town approval.

7. *Does it impact existing buildings not undergoing renovation?*

- No.

8. *Have other Towns adopted the Stretch Code?*

- Yes, Newton and Cambridge as well as 100 other towns that have committed to adopting it within a year.

9. *Why is this important?*

- Buildings represent approximately 40% of US carbon emissions and buildings last a long time.

10. *Why can't this remain voluntary?*

- Some individuals are more interested in short term profit than long term savings. Also, many individuals are not up to speed on this issue and the means to deal with it.

Resources: The tireless work, emails, and relevant file attachments of John Snell. Meeting minutes from the Towns of Acton, Lexington, and Newton on STRETCH CODE adoption.