

Department of Energy Resources (DOER)  
100 Cambridge Street, Suite 1020  
Boston, MA 02114  
Attention: Nina Mascarenhas

August 8, 2022

Re: **Stretch Energy Code Comments**

Dear Commissioner Woodcock, Director McCarey, Mssrs. Finlayson and Ormond, et al:

My name is Mark Sandeen, I'm a Lexington Select Board member and previously Chair of the Sustainable Lexington Committee appointed by the Select Board.

Lexington's buildings are our #1 source of air pollution and greenhouse gas emissions, responsible for 66% of all emissions in Lexington.

In 2018, the Select Board adopted the Getting to Zero Emissions plan to transition all residential, commercial, and municipal buildings to 100% renewable energy by 2043.

In November 2021, Lexington's Town Manager, with the unanimous support of the Select Board, sent a letter to Secretary Theoharides asking for a true net zero stretch energy code.

***First, many thanks to DOER for your response to our requests for improvements to the Stretch Energy Code.***

- Thank you for incorporating hybrid electric heating requirements for laboratory and life science buildings in the Stretch Energy Code. A recently proposed 425,000 square foot lab/life science building in Lexington plans to comply with this standard, and will reduce onsite fossil fuel consumption 90% compared to a base code design. Just to emphasize how important these provisions are for meeting Lexington's and the state's overall emissions reductions targets, this one lab building is expected to use 940 times the energy of an average Massachusetts home. That's 11 years of new residential homes at Lexington's rate of new residential construction.
- I'd recommend raising the ventilation trigger for hybrid lab buildings from 0.5 cfm/sf. Typical life science buildings have ventilation requirements of about 2 cfm/sf. Recommend 1 cfm/sf for the hybrid lab ventilation trigger. This is about right for a building with a 60% office / 40% lab ratio.
- Thank you for including performance standards for major additions and renovations. Over 80% of the buildings expected to be in use in 2050 have already been built. I'd recommend that the project size criteria for retrofits be based only on square feet. The current proposal adds a project size criteria based on the cost of the addition. This only adds complexity, municipal staff workload, increases likelihood of disputes and lengthens approval times, while disproportionately affecting owners of lower cost homes.
- Thank you for requiring that new residential construction over a certain size, must be all-electric. I'd recommend that size threshold be lowered to 3,000 sf. This is almost double the average size home in Massachusetts.

- Thank you for defining solar energy requirements in watts per square feet, so that solar energy system requirements scale with the size of the project. I'd recommend that those solar requirements be increased so that the solar energy system production can provide at least 50% of the buildings' electricity usage. Consider changing the shading exemption 70% to 55%, because solar's cost effectiveness is improving rapidly.
- Solar generation R406.5.1 – Solar generation requirement of 4 kW should be increased. The average size of 33,500 residential solar projects qualified under the SMART program is 8.5 kW. To be clear – 31,000 projects out of 33,500 residential projects were larger than 4 kW. Plus it is easier to install solar on a new home versus an existing home.
- Regarding EV Charging - Section R404.4 gives an exception if parking spaces are not required – but many municipalities are reducing and/or eliminating parking minimums. This provision should give an exception only if the number of chargers is higher than the actual number of parking spots provided – (not required).
- Recommend taking another look at lighting efficiency standards. There have been dramatic improvements in LED lighting efficiency since the last Stretch Code changes. Typical commercially available lighting is about 50% more efficient than current proposed standards.
- Provide ***incentives to Green Communities*** to adopt the net zero stretch energy code.

Thank you for the opportunity to submit testimony on this incredibly important topic.

Mark Sandeen  
Lexington Select Board member