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To: STRETCHCODE (ENE)
Subject: Comment for Public Hearing

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Dear DOER,

Thank you for the opportunity to ask questions about the stretch codes development. I'd like to have the following questions answered at the Metro Boston hearing, by email, or other means:

1 The climate policy next-gen roadmap act tasked DOER to define “net-zero building”. Unfortunately, this is ambiguous: the word “building” could refer to an edifice (structure), or to a process of creating an edifice (construction). Likewise, the definition on slide 23 of the straw proposal is ambiguous, unverifiable, and dependent on many factors unrelated to buildings. The net zero definition by the Massachusetts Net Zero Buildings Coalition clearly refers to individual buildings, which can be modeled and verified to be net zero. What does DOER think about this definition: “An energy-efficient, all-electric, low embodied carbon building that achieves carbon neutral building operations through the production and/or procurement of renewable energy”?

2 The DOER definition of net zero refers to “the Commonwealth’s net-zero emissions economy in 2050”, which means it depends on the emissions (and sequestration) from all the economy’s sectors, not just buildings. The straw proposal presentation contains projections of emissions for 2030 and 2035 (on slides 2 and 4, respectively), not 2050. Did DOER project emissions from buildings in 2050? If so, what amount?

3 Did DOER project adoption rates over time (e.g., communities per year, or total population of those communities per year) for the opt-in, stretch, and base codes? If so, please describe.

4 Did DOER project the percentage of all-electric vs fossil-fueled buildings being built over time (e.g., new buildings per year)? If so, please describe.

5 What does DOER expect to initiate use of the pre-wiring required by the opt-in code in fossil-fueled buildings? For example, market economics or legislated mandate?

6 Did DOER project the rate of converting fossil-fuel buildings to all-electric buildings, either using the pre-wiring required by the opt-in code or otherwise, over time? If so, please describe.

7 The straw proposal doesn’t mention carbon offsets. Wouldn’t requiring carbon offsets in fossil-fueled buildings help get to net zero? Can they be added to the next edition of the proposal?

8 There's an inequity between unshaded and shaded fossil-fueled buildings under the opt-in code: the former must install rooftop solar, while the latter is not so required. Can shaded fossil-fueled buildings be required to purchase the same amount of renewable energy as would be generated if they were unshaded?

9 Some sources say that Massachusetts does not have enough rooftop area to meet all its solar PV needs. Why not require rooftop solar on all-electric buildings, also?

10 The straw proposal doesn't mention solar PV over parking lots, garages, etc. Why not require solar over parking also?

11 Embodied carbon is addressed only in accommodation for curtain walls in office buildings, but the concept can be applied broadly. What does DOER think about adding more aspects of embodied carbon to this or future editions of the codes?

12 In past code cycles, the base code has tightened to include previous stretch code requirements. When does DOER think the opt-in requirements could or should be moved to the stretch code and base code?

13 The straw proposal only mentions new construction, not renovations. What does DOER think about adding renovations to this or future editions of the codes?

14 The straw proposal doesn't mention the social cost of carbon, which would affect comparative costs of using electricity vs fossil fuel. Synapse Energy Economics estimated, for MassSave, a cost of carbon of well over \$100/ton of CO₂. Did DOER consider a cost of carbon in its financial calculations and comparisons of cost-effectiveness? If not, what does DOER think of doing so?

Thank you.

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