

## Birchwood Sustainable Development

March 17, 2022

I am the owner of a small development company that specializes in both new construction and retrofitting small residential buildings to a **very high level of energy performance**. Two of my projects have been in Cambridge – an EJ community. My first project was PH Certified, with a HERS score of -13 – in other words, net *positive* energy. So I speak from a very unique, but informed perspective of a developer / builder.

I appreciate very much this opportunity for me to share with you my perspective on how this straw proposal can be improved in its next draft.

I want to register my **support** for a game-changing stretch code. But from the start, it's a very large problem that this code does not create a path forward to what the Climate Roadmap Bill promised – **a net zero code**. We will likely have only one opportunity within the next two decades to create a true net zero code. So this opt-in stretch code needs to go further, deeper than it currently does and specifically define and outline a net zero code – complete with a requirement for renewable energy to offset each building's energy demand.

In addition, I want to register my support for the TEDI performance report that will be required from owners for schools, offices, labs and multi-families. You likely will hear from other owners and builders that this metric is too onerous, too expensive. This is their expression of fear of the unknown. If this code is to make any difference, we need it to require new, stretch metrics. TEDI is a strong solution that must not be weakened by pressure from the building lobby. A corollary metric – Passive House certification – originally caused fear in the minds of builders and owners. The MassCEC funded a pilot for eight Affordable Housing developments and the cost premium predictions are stunning. The price premium for Passive House certification is predicted to be only 0 – 3%. Once builders have been educated and have some experience in designing and building to PH standards, they find that their cost premium fears are overstated. I live in Newton and am active with Green Newton in working with developers. In the case of the large new construction Northland project, we convinced the developer to start with three PH multi-family buildings. His team found that the cost premium was minimal, and the building performance will be far higher. So even before

construction broke ground, this developer committed to building at least two more buildings to PH standards. Recently an RFP for the Newton Armory (both retrofit and new construction) development of Affordable Units was won by a developer/design team who has committed to PH certification, All-Electric, *and* a goal of net zero, with a very large solar rooftop installation. My point is that with education and experience, building much higher performing buildings can be achieved cost-effectively – either market-rate or Affordable. Please don't let inexperienced builders tell you otherwise.

However, in my comments I want to primarily address my concern that this straw proposal, as is, is a **failure** in providing any support to the EJ communities that the state has committed to as a priority. My words are harsh because they are meant to be.

I will focus my remarks on three main topics of concern:

**First and foremost**, the complete *silence* on renovations, despite the Commonwealth's stated goal of retrofitting 1 million buildings by 2030.

**Secondly**, without requiring all-electric buildings, the code is missing a huge opportunity to improve public health outcomes, especially in EJ communities.

**And thirdly**, in the case of a heating system retrofit, the code needs to *require the consideration of* air source heat pumps in order to reduce the utility burden to residents.

Firstly, the complete silence regarding renovations is at best disappointing, and at worst, disastrous. I very much understand the problem. Renovations are unique to each building. There is no good data on baselines or outcomes. There is no good data on cost per square foot. In short, there is no easy way to do the analysis that DOER did for the new construction segment. But in EJ communities, the proportion of buildings that need renovation FAR outweighs the amount of new construction that will happen. So, without addressing renovations, this code says we WON'T address the fundamental needs of EJ communities. Instead, the underlying truth is that the code will prioritize *wealthy communities* where the largest amount of new construction is happening. This is NOT the path forward. And I know it's not the intention of the authors who have worked so hard on this straw proposal.

My development company is in the middle of a Deep Energy Retrofit, and it's hard and expensive. We are struggling to provide the highest quality retrofit at a reasonable price. When I go to sell this renovated house, I will be at a price disadvantage to other developers who *slip and flip* – *slip* on new finishes and *flip* for profit. House buyers cannot see or evaluate air infiltration, filtered ventilation, or promised low energy bills. Who is going to help them understand the energy efficiency of a house that they are looking to purchase unless we regulate the process?

This new code presents a critical opportunity to educate builders, as well as force their hand. And if it costs more, so be it. The only way to encourage more builders to install more efficient, electric mechanicals and better air sealing is to require *all builders to incur the same costs*. Otherwise, this code will not create the change in builder behavior needed to retrofit 1 million homes. As an aside, the new programs offered by MassSave in the Three Year Plan such as All-Electric for new construction or gut rehabs provide an important – \$10k or \$25k – incentive. But these dollar amounts are not enough to motivate / transform the market. High quality renovations must be differentiated by meeting a **standard** set by the opt-in stretch code that can be explained to a homeowner or homebuyer as a tangible, higher level of achievement. HERS raters are becoming more ubiquitous and understood as professionals who can test for precise measurement of air infiltration. We need to promote the much wider use of these professionals. Many, many homeowners want – and are willing to pay for – a higher level of renovation that will lower the carbon emissions from their homes. But they have no idea what the measurement can assure them of achieving their goal of “doing their part” to reduce climate change. This stretch code presents the opportunity to provide education and use a HERS rating as a metric. Again, I encourage you to not let the very loud (but self-interested) realtor lobby tell you that HERS ratings are bad. There is now a line item on any MLS listing that has a HERS score as one of the optional data points. I look at MLS listings daily, and I've yet to find one where that HERS score is filled in. This needs to change!

The end goal is to *require* a HERS rating at the time of every house purchase – just like we protect buyers from unknown oil tank disasters with Title V. That legislation is a long way off. In the interim, what is this code going to do to require builders to be more transparent about the product they are building and selling? When the government started requiring food manufacturers to provide a list of

ingredients on packaged food, manufacturers cleaned up their act and removed toxic ingredients and fatty acids from their products. *Transparency creates change.*

The retrofit quandary is a tough to solve. But it's a crisis of enormous proportion. Much larger than that of new construction. So this code needs to say SOMETHING, ANYTHING about new requirements for renovations.

My second point – that new construction should be required to deliver **All-Electric** buildings is an imperative for many reasons. For EJ communities, the health benefits of removing on-site burning of fossil fuels is critical. EJ communities have higher incidents of asthma and other respiratory illness. These populations are experiencing more illness and shorter lifespans because of toxic pollutants in the air. This code needs to address this disparity. It needs to stand up for improved public health outcomes for residents of EJ communities.

Thirdly – the code needs to help ratepayers in EJ communities **reduce their utility burden**. The housing stock in these communities is in poor condition and leaky houses with antiquated heating systems are much more expensive to heat. Again, a requirement for new construction all-electric buildings is necessary. AND for renovations, contractors who are called in to replace failing heating systems should be required (with signed documentation) to present homeowners and landlords with the option to convert to all-electric, highly efficient heating and cooling. This type of signature by owners is required in all kinds of other disclosures about a building having lead paint, etc.

In summary, it would be an embarrassing, colossal failure to EJ communities to not address the needs I've outlined. The stated objective is to support EJ communities in tangible ways – both financially and in ways that improve public health. But right now, this draft fails in this very basic mission. I know our building codes can do better.

Again, thank you for the opportunity to provide input.

*Betsy Harper*

Owner, Birchwood Sustainable Development