

MassSave 2022-2024 Plan Comments – Passive House

Michael Duclos – 6/30/21

Thank you for the opportunity to offer my comments as an individual on the tremendous amount of work that has gone into the MassSave 2022-2024 Plan.

I am writing as a Certified Passive House Consultant who has worked on Passive House projects certified by both PHIUS and PHI, and on single and multifamily certified projects.

I wish to express my strong support for continuing the existing PH incentive program.

I wish to express my strong support for continuing and expanding the existing PH training program by providing partial tuition reimbursements for students taking qualified courses at technical institutes, community colleges, and for online courses such as those accredited by AIA and RESNET.

I believe in the need to support training so much, I am volunteering my time to create and present courses to train HERS Raters in the particulars of Passive House Ventilation, and Air Sealing.

I believe we need to continue and expand Passive House related programs to fulfill the legally mandated requirements of the Global Warming Solutions Act and related legislation, notably the 2021 Climate Act (was Senate S.9) mandating a 50% GHG Reduction by 2030.

Dr. Feist, a physicist, created the Passive House building standard to save the world from climate change thirty years ago. It works amazingly well. We need to deploy it at scale.

I've been designing PH projects since 2009, and while single family projects present cost challenges, we do have the example of the first PH certified in RI for very little above the cost of a code built house as an example 'it can be done.'

For multifamily projects, we have multiple examples from Tim McDonald in PA, as well as the data he has collected indicating multifamily PH can have a first cost in the range of +2.5% to -2% compared with conventional construction, while delivering Passive House Energy, Indoor Air Quality (think about those with allergies and/or asthma) and Comfort. Why settle for less ?

I was a member of the team that designed and helped realize the first certified multifamily Passive House in New Hampshire, Gilford Village Knowles Phase III, which was realized at a cost of \$180/sf in the cold climate of Laconia, NH. I installed and commissioned energy and environmental monitoring equipment that continues to quantify the value of Passive House technology to this day. This building uses about 11% of the site energy of the adjacent sister building having the same floor plan built to conventional building code.

Passive House works, is not expensive to construct, and can even cost less than conventional construction for multifamily projects.

The current three year Plan is a promising start with thousands of units participating in the required Passive House Feasibility Study. But it takes time to design, finance, construct, occupy and measure real energy use and Indoor Air Quality to complete the 'cycle of learning.' This means the final results will not be available for 12-36 months.

I believe the next three year plan should continue the existing incentives based on the performance of other Passive House projects, and because of the requirements of the Interim 2030 Clean Energy and Climate Plan, which will be made even more aggressive by the new 2021 Climate Law. Realistically there is little choice, if we are to comply with Mass law.

One useful addition would be to require the release of project data, since without real data we know little about the actual performance of the building. This seems a reasonable ask for the incentive money.

The new Plan should include an incentive for electric Domestic Hot Water for multifamily buildings, since a nascent multifamily DHW technology needs some assistance in making it more marketable, and we badly need a 100% electric multifamily building paradigm to achieve the 2030 CECP goals.

I would like to thank the EEAC for the decision to provide Passive House incentives and training for the current three year program, and to encourage it continue, and be enhanced as I've described above.

As a founder of Passive House Mass. I've been encouraged by the adoption of Passive House technology over the last decade, and look forward to its' widespread adoption, as it is clearly ready for prime time, and is badly needed to meet our climate goals in Mass.

Please don't hesitate to contact me if you have any questions.

Best Regards,

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