

12/8/20

To: Mass EEAC

From Hank Keating, AIA, President, Passive House Massachusetts

EEAC Three-Year Plan 2022-2024 Testimony

RE: New Passive House Incentive Program for 1-4 residential units

The current Three- Year Plan includes a very succesful Passive House Incentive Program (PHIP) for multifamily projects with 5 or more units. Over 75 multifamily projects including 5400+/- units have enrolled in the program and are in various stages of planning and development. We understand that not all projects will proceed with passive house after completing the required Feasibility Study, but if only 50% do the program will be a tremendous success. We believe that many of those projects that do not proceed with passive house will nevertheless produce substantially more energy efficient projects than they would have before completing the Feasibility Study. We also know that the PHIP, along with its accompanying training programs, is truly getting the word out to municipalities, environmental advocates, designers, developers, and contractors that passive house is starting to go mainstream and they should seriously consider it. We think that it is time for Mass Save to develop a similar Passive House Incentive Plan for smaller residential projects from 1 to 4 units (PHIP 1-4).

Data collected by the UMass Donahue Institute indicates that in 2019, 6,292 or 36% of the residential construction permits issued state-wide where for single family homes with another 1000+/- units of 2, 3,and 4 unit multifamily projects. Combined, over 42% of residential permits fall into the 1-4 unit category. This is a significant segment of our built environment every year and should not be omitted from Passive House Incentive Programs.

Such a program could be structured very similarly to the existing PHIP, but the incentive values must be increased to reflect the smaller construction budgets and additional challenges of small passive house geometries. The good news is that the PHIUS+ 2021 Standards will, for the first time, include a prescriptive path for single family homes, duplexes and townhouses that does not require the time and expense of modeling.

We would suggest the following incentive structure for these 1 – 4 unit buildings

Feasibility Study 100% reimbursement up to	\$2500
Modeling, if required	\$2000 + \$500 per additional unit up to \$3500
Pre-certification per unit	\$500
Certification reimbursement per unit	\$7500

So, by way of example, a single family home following the prescriptive path without modeling would qualify for a maximum total of \$10,500. With modeling it would be \$12,500. At the other end of the spectrum, a 4 unit building would qualify for a total of \$38,000.

These incentives are expensive, but we think that they are proportionally correct and of the order of magnitude necessary to incentivize developers, contractors and home owners to pursue passive house buildings. The goal of the PHIP 1-4 would be to get a thousand or more units involved in finding cost effective ways to complete these small scale passive house projects during the next Three-Year Plan. This would develop the base of experience and knowledge that will be needed to convince the market that such small scale passive house residential buildings are not too difficult/ expensive to achieve. In addition, hundreds of these units should be occupied by the end of the Three-Year Plan in 2024 and the residents will experience the benefits of living in a passive house – comfort, health, great IAQ, resiliency, durability and much lower energy costs.

Clearly, the cost-effectiveness calculations that the EEAC and Mass Save have typically used in the past to justify a program will not work for this PHIP 1-4 program. It is time for the EEAC and Mass Save to adopt the language currently being considered in S-2500, An Act Setting the Next-Generation Climate Policy -

“...provided however that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse emissions reductions.”

Without this critical shift in perspective from saving money while saving energy to reducing carbon emissions, the State will never be able to meet its goals to mitigate the disastrous effects of climate change. Under separate cover we have submitted specific recommendations regarding these cost-effectiveness calculations.

As with our comments previously submitted regarding the existing PHIP, the one suggestion we have is to revise the enrollment requirements to include the applicant’s release of project data. The entire industry needs the data to evaluate the program. Why can’t the applicants, in exchange for the incentive funding, be required to be transparent and provide a basic project description, the results of their Feasibility Study, the basis of their decision to proceed or not with a passive house project, projected cost premiums if any, suggestions to improve the program if any, etc. Ideally, applicants would be encouraged to communicate with each other, to learn from each other’s experiences. We understand that the Mass Save Program has some over-arching privacy rules regarding applicant’s information. We would agree that single family home owners contracting directly for their own home should be exempt from any new transparency requirements but the majority of the applicants will be developers and contractors building “on spec”. These rules should not deprive the public, the rate payers, from getting transparent information regarding these PHIP 1-4 projects. We doubt that very many developers / contractors would hesitate to release project data in exchange for the incentive funding.

We applaud the EEAC’s decision three years ago to create the tremendously successful PHIP for the current Three-Year Plan and we strongly encourage the development of a complementary Passive House Incentive Plan for 1 to 4 unit residential projects for the next Three-Year Plan.