

Testimony on SB 1023, The Better Buildings Act of 2024
Senate Committee on Education, Energy and the Environment
March 4th, 2024
Position: Support

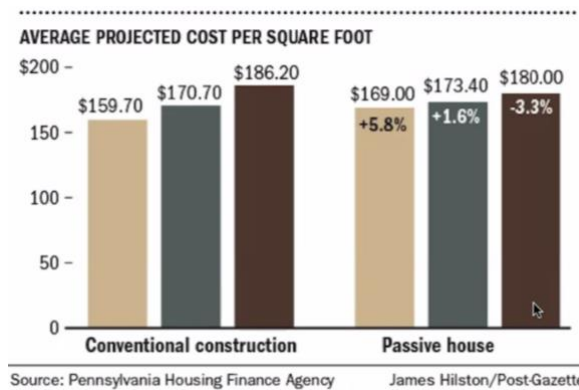
Testimony in Support of Senate Bill 1023

Dear Chairman Feldman and members of the committee;

I am the founder and principal of Passive to Positive, a Maryland based energy consulting firm. We have extensive experience performing energy modeling and design consulting for buildings in Washington DC, Maryland, Pennsylvania, Massachusetts and New Hampshire, ranging from single family homes to large apartment buildings.

Since 2009, we have helped design dozens of highly efficient buildings that meet Passive House and net-zero energy standards. The Passive House standard is roughly twice as ambitious as what has been articulated in SB 1023. All of our projects have been all electric and most have been affordable housing projects. We know from direct experience over 14 years that the standards for building energy performance in **SB 1023 are perfectly reasonable and achievable now.**

Several years ago, the Pennsylvania Housing Finance Agency offered 10 **voluntary bonus points** for meeting Passive House in the Qualified Allocation Plan (QAP) scorecard for **Low Income Housing Tax Credit applications. No financial incentive was offered.** Within a few short years, hundreds of affordable Passive House units had been constructed. The first year, the incremental cost to achieve this remarkable level of performance was 5.8% in the first year, but each year the cost fell. The second year, the incremental cost was only 1.6%. **By the third year, Passive House projects actually cost 3.3% less to build than conventional construction.** This is largely due to the fact that builders and designers get better at doing their jobs in the face of such challenges, and are actually able to optimize buildings to target wasteful spending that is inherent in conventional construction.



Please bear in mind that **cost reduction was achieved while building structures with EUI's of less than one half of those articulated in SB 1023.**

Five fundamental strategies deliver enhanced energy performance, 1) improving air tightness 2) increased insulation 3) higher performance windows and doors 4) avoiding significant thermal bridges, and 5) balanced energy recovery ventilation. If these things are done, efficient heat pumps deliver the remaining heating and cooling demand with a very small energy demand, making the home truly zero energy ready.

We have utilized cold-climate heat pumps since the 2009, and have never had a problem with a client not being able to maintain comfort under, even extreme winter conditions of Garrett County in the depth of winter.

Affordability of high-performance homes is better than conventional homes. Even if conventional homes can be constructed for a marginally lower first cost, high performance homes deliver cost savings on energy bills that last for the life of the home and deliver **a satisfying ROI**. Green appraisals by the American Appraisal Institute capture the value of green features for the purposes of lending and resale, and banks increasingly offer better terms for sustainable buildings and the lower operational cost of high-performance buildings. **National affordable housing developers come to us to make their buildings more efficient specifically because it yields better financial outcomes for residents whom they serve.**

Currently, buildings are disproportionately responsible for between 44 and 48% of carbon emission. In order to avoid the worst impacts of catastrophic climate change, aggressive reductions of operational carbon emissions in buildings are essential. The good news is that all of the technologies we require already exist and are feasible for widespread adoption. Any member of this committee would **be welcome at any of our projects to see first-hand that better buildings are built now** in our region, how they perform, and to meet the builders that build them.

Improving building energy standards will happen out of necessity, if not this year, then very soon. The builders that embrace higher performance building practices now will find that once they have done so, it becomes second nature, and ceases to feel like a challenge at all. We really can deliver better comfort and indoor air-quality, efficiency and lower carbon emissions with a favorable ROI to homeowners and developers now. Why on earth would we wait?

Testimony by:

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