



Pennsylvania Housing Finance Agency Financial Incentives and Passive House Partnership

In 2015, the Pennsylvania Housing Finance Agency (PHFA) adopted new funding criteria—making it the first U.S. state to offer tax credits for affordable housing developments built to Passive House standards. This approach has served as a model for dozens of other states, spurring new high-efficiency homes for disadvantaged communities nationwide.

Pennsylvania Agency Goals

The Pennsylvania Housing Finance Agency (PHFA) administers Low Income Housing Tax Credits (LIHTC), allocating millions of dollars of federal funding annually for affordable housing development. By 2014, developers were consistently surpassing PHFA energy efficiency building requirements for tax credits, and PHFA began seeking new, more challenging requirements.

In 2015, a coalition of 25 industry stakeholders (including members of the Mayors' offices of Philadelphia and Pittsburgh) approached the PHFA to advocate for the inclusion of "Passive House" standards in LIHTC funding criteria. In adopting Passive House, PHFA became a national leader, providing tax credit incentives for Passive House high-performance envelopes and efficient HVAC systems within certifiable affordable housing communities and zero net energy (ZNE)-capable homes.

CASE STUDY PURPOSE

Demonstrate the impact of local government and home certification program partnerships in driving successful energy efficient home development.

LOCATION

Pennsylvania

PARTNERSHIP ROLES

Pennsylvania Housing Finance Agency (PHFA):

Provides tax credits to low-income housing developers, including those who meet optional Passive House standards.

ZNE Community Coalition:

25 industry stakeholders who advocated for inclusion of Passive House in PHFA funding criteria.

Passive House Institute US (PHIUS) & Passive House Institute (PHI):

Develop and implement Passive House standards internationally.



Belfield Town Homes

First Certified Passive House Project in Pennsylvania

Year: 2012

Developer: Onion Flats & Raise of Hope

Architect: Onion Flats Architects

Builder: Onion Flats Construction

Photo credits: Sam Oberter & Tim McDonald

PARTNERSHIP RESULTS

- 2015-2016: PHFA funded 900+ Passive House affordable housing units
- As of December 2016: 400 of the units were completed and 500 units were under construction

Passive House is the best tool I've found to get buildings to a carbon neutral standard by 2030, cost-effectively.

TIM MCDONALD
PRESIDENT, ONION FLATS

A Passive House Partnership

Passive House is implemented by two organizations: Passive House Institute US (PHIUS) and the Germany-based Passive House Institute (PHI). PHFA-funded developers can get their project certified by either organization.

Passive House is based on a set of building science principles that prioritize the design and construction of high performance building envelopes by incorporating superinsulation, airtight construction, balanced heat- and moisture-recovery ventilation, and a minimal space conditioning system. As a result, Passive House buildings maximize indoor comfort for occupants and offer the best path to ZNE by minimizing the load that renewables must provide for the building.

The PHFA awards LIHTC funds through a highly competitive, points-based system. To integrate Passive House standards in its application process, the PHFA created a new category worth 10 points (out of 120-points) for "Passive House Certification" as verified by an independent third-party. This provides all Passive House projects an extra competitive edge to qualify for the highly competitive LIHTC funds.

Developers have taken a strong interest in this path to earn the additional points. Over the past several years, PHFA approved 17 buildings with 900 new Passive House affordable housing units, which represents the largest concentration of Passive House/Net-Zero Energy-capable dwelling units in the country. As of December 2016, 7 Passive House multifamily buildings (400 units) were completed and 10 buildings (500 units) were under construction.

Long-term State Benefits

By introducing Passive House standards into its LIHTC application process, the PHFA has ushered in important benefits:

- Greater community access to high-performance buildings within the Pennsylvania affordable housing market.
- New Passive House knowledge and training for PHFA staff, valuable to their careers.
- Exemplary partnership model, enabling rapid adoption and proliferation of sustainability benefits, including:
 - City Mayors' office members' and industry stakeholders' leadership in advocating for PHFA adoption of Passive House standards.
 - Implementation of Passive House as a voluntary measure, enabling developers to protect project cost-effectiveness (although PHFA-funded Passive House projects have been built at little-to-no cost premium over other similar projects).
- Strong demonstration of Passive House success applicable to other U.S. jurisdictions; today, 11 other housing finance agencies have included Passive House certification in their funding systems, and nearly 20 others are considering ways to adopt Passive House principles.