



Passive House Institute US

DOE CHALLENGE HOME and PHIUS PARTNER TO MAKE IT EASIER TO REACH NEW LEVELS OF ZERO NET-ENERGY READY

This partnership between DOE and PHIUS enhances coordination between voluntary peak performance new home label programs to expedite market transformation to net-zero ready homes that are so energy efficient that small renewable energy systems can offset most or all annual energy consumption. Net-zero ready homes can help address climate change, economic, and energy security issues. By working together, we create a continuous path to net-zero ready performance with minimal confusion to the housing industry.

This is a voluntary home label program recognizing homes that comply with PHIUS+ standards. Key requirements beyond DOE's Challenge Home specifications include:

1. Airtight shell ≤ 0.6 ACH50.
2. Annual heating and cooling requirement ≤ 15 kWh/m²/yr (4.75 kBtu/sf/yr) (Note: This metric is a benchmark of a cool moderate climate that might be adjusted by PHIUS according to climate variations as necessary.)
3. Primary energy ≤ 120 kWh/m²/yr (38.1 kBtu/sf/yr) (Note: This metric is a benchmark of a cool moderate climate that might be adjusted by PHIUS according to climate variations and differing fuel mixes as necessary.)

In addition, the Passive House program includes the following recommendations that vary with climate:

1. Window U-value ≤ 0.65 W/m²/K for cold climates, window U-value ≤ 0.8 W/m²/K for cool moderate climates, and window U-value ≤ 1.6 W/m²/K for hot climates
2. Ventilation system with heat recovery with $\geq 75\%$ efficiency with efficient fan @ 0.45 Wh/m³
3. Thermal bridge-free construction ≤ 0.01 W/mK

Builders who follow these guidelines and have them verified under the PHIUS+ approved process are allowed to market and label their homes as PHIUS+ certified Passive Homes.