

A Decade of DOE ZERH: Making Zero Energy Homes Available Everywhere

We've come a long way in ten years!

When the U.S. Department of Energy's Zero Energy Ready Home program began in 2013, zero energy homes were a novelty, limited to high-end custom homes and highly subsidized prototype homes. Consumers who wanted a zero energy home had difficulty finding a builder and often had to do much of the research themselves to determine what technologies and construction methods would be needed to achieve a home with net zero energy bills.

Building on past energy-efficiency efforts, in 2013 DOE laid out the criteria for the DOE Zero Energy Ready Home program, offering builders a practical roadmap to achieve zero energy home construction.

The DOE ZERH program has grown from 131 homes certified in 2013 to 5,373 homes certified in 2023 and 24,700 total certified single-family and multifamily homes as of July 2024. In 2023 DOE added a certification for manufactured homes. One of the country's largest manufactured home builders recently became a partner and they have already certified more than 7,000 homes as of July 2024.

Today DOE Zero Energy Ready Homes are available in nearly every state in the country in every category from affordable to production, custom, multifamily, and manufactured homes.





The builder, United Way of Long Island, made this home out of magnesium oxide structural insulated panels which are highly insulating as well as bug and mold resistant. Spray foam insulates the attic and a very efficient 22 SEER, 3.75 COP mini-split heat pump heats and cools the home.

A Decade of DOE ZERH Data

PNNL has analyzed data on DOE ZERH homes in DOE's Housing Innovation Awards every year since the program's inception to evaluate saving and identify trends. Here are some highlights from data on over 350 award participants, from 2013 to 2023.



sealed to stop drafts and thoroughly insulated to maximize comfort and efficiency. With ZERH Version 2, builders meet all of the criteria of the ENERGY STAR Certified Homes program and the EPA's Indoor airPLUS program as

10. HIGH-PERFORMANCE WINDOWS Windows meet climate-specific specifications for high efficiency

score of -11 and should save its home owners about \$3,400 a year in energy

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DOE Zero Energy Ready Home Program https://www.energy.gov/eere/buildings/ zero-energy-ready-home-program August 2024, PNNL-SA