

# Zero Energy Designed Homes Certification



**nbi** new buildings  
institute

**RESNET**  
RESIDENTIAL ENERGY SERVICES NETWORK

Viridescent House | Falmouth, ME  
Photo credit: Edward Pais

NBI and RESNET are jointly developing the **Zero Energy Designed Homes (ZED Homes)** certification program that offers value to homebuyers, sellers, and builders.



Homebuyers can be confident that they are buying a premium energy performing home with better value.



Builders can use the certification as a mark of distinction to showcase their top-tier projects.



Efficiency program managers gain a ready-made opportunity to catalyze the market for zero energy homes.

## Zero Energy Designed Certification offers builders market distinction and homeowners higher value

The new energy future for homes is zero energy (ZE) and low-carbon with more than 10,000 residential units around the country already built to ZE performance levels.<sup>1</sup> At the same time, more than 2.4 million homes have been rated under the Home Energy Rating Index (HERS®) program.<sup>2</sup>

Now, New Buildings Institute (NBI) and the Residential Energy Services Network (RESNET®) have teamed up to develop a program that recognize HERS-rated homes meeting ZE performance with a **Zero Energy Designed Homes Certification (ZED Homes)**. The design of the certification offering is currently being finalized though a pilot effort and will be officially released in mid-2019.

**ZED Homes Certification** builds off of the HERS rating and confirms that a house has been built to ZE performance standards using only as much energy as is produced onsite or nearby with clean, renewable resources, such as solar power (nearby resources can be an exclusively allocated share of a neighborhood-based renewables such as a community solar array).

1 <https://netzeroenergycoalition.com/zero-energy-inventory/>

2 [http://www.resnet.us/about/RESNET\\_2018\\_Annual\\_Report.pdf](http://www.resnet.us/about/RESNET_2018_Annual_Report.pdf)



## A growing market for zero energy

As states and local governments increasingly focus on ways to reduce carbon output from buildings, zero energy ordinances and other policies will become more commonplace in the next decade. Buildings in the United States account for roughly 40% of the carbon emissions, which means states and cities must address building efficiency to achieve climate action goals. The **Zero Energy Designed Home Certification** gives HERS Raters the opportunity to deliver on local policy needs and create better value for homeowners.

ZED Homes also give homebuyers assurance that they are making a good choice of a house with premium energy performance. Builders can use the program as a mark of distinction to showcase their ZE homebuilding expertise, and efficiency programs can provide incentives for energy savings based on the rating.

### What are the program requirements?

The requirements of the **ZED Homes Certification** are simple. The rated home's official HERS Index, as calculated by a certified HERS Rater using RESNET Accredited Rating Software, is 0 or lower. This includes the contribution of onsite renewable energy systems.

The rated home's predicted total energy balance is 0 kWh per year or lower. This means that the Total Energy Use (TEU) minus Onsite Power Production (OPP) must be 0 or negative. The TEU and OPP are calculated data points that are generated by the HERS Rater using the same energy model that produces the HERS Index.

### How does the process work?

To participate in the program, a HERS Rater, builder, utility program administrator, or other party will submit documentation to NBI, including the home's address, and pays a nominal certification fee. NBI then uses RESNET's database to directly check the HERS Index, TEU, and OPP and certify that the program requirements have been met. An electronic document is provided to validate the home as a certified **ZED Home**, and the home is listed on the ZED Homes webpage at [newbuildings.org/resource/zero-energy-homes/](http://newbuildings.org/resource/zero-energy-homes/).

RESNET is excited about partnering with NBI to launch the ZED Homes Certification. RESNET's HERS Energy Rating Index provides an industry-recognized mechanism to identify zero energy homes and RESNET's infrastructure of certified HERS Raters will link the program with progressive builders.

-Steve Baden, RESNET  
Executive Director

## What is the cost to certify a home?

The program is being designed through a piloting process to be as streamlined and low cost. The exact certification cost will be determined as the pilot program is concluded with NBI and RESNET working to make this certification affordable. The certification fee is separate from the HERS rating.

## How will this tie into other efficiency programs?

This program is intended to help catalyze the market for zero energy homes by taking advantage of the market-leading HERS environment. The **ZED Homes Certification's** simple design, straightforward requirements, and low cost offer an opportunity for utility program administrators to leverage the HERS index as a way to provide incentives for high performance homes in their service areas.

## What's coming up next?

In a future phase, NBI and RESNET are planning to launch an additional certification level for homes with actual measured energy performance achieving net zero energy. This certification, Zero Energy Operational Homes, will require energy use data reporting. Stay tuned for more on this program in late 2019.

## Can I apply today?

This program is currently in pilot stage (as of February 2019). NBI and RESNET anticipate that the program will formally launch in mid-2019. Check the ZED Homes program webpage at [newbuildings.org/resource/zero-energy-homes/](http://newbuildings.org/resource/zero-energy-homes/) for the most up-to-date information.

## Want to know more?

For questions and comments about the program, or if you are interested in participating, please contact Alexi Miller, NBI senior program manager, at [alexi@newbuildings.org](mailto:alexi@newbuildings.org).



With 20 years of experience in energy efficiency, New Buildings Institute has the knowledge and experience to help guide any project to zero energy. NBI develops research-based building science and technical information to support effective energy efficiency strategies. In addition to working directly with policymakers, utility program implementers, and efficiency industry advocates, we make our information on best practice approaches available to the building community through training events, white papers, design guides, open-source tools, and resources. [www.newbuildings.org](http://www.newbuildings.org)



The Residential Energy Services Network or RESNET is a recognized national standards-making body for building energy efficiency rating and certification systems in the United States. RESNET uses a consensus-based standard development and amendment process, is committed to transparent review and adoption of standards, and provides opportunities for formal public review and comment. RESNET has 20 years of success in setting the standards for quality in home energy efficiency. [www.resnet.us](http://www.resnet.us)