

Leveraging DOE Zero Energy Ready Homes within State QAPs



U.S. DOE Zero Energy Ready Homes are the Homes of the Future... Today. DOE Zero Energy Ready Homes are high performance homes which are so energy efficient, that most or all of their annual energy use can be offset by renewable energy. A lower total cost of ownership and a straightforward program design make the DOE ZERH certification well suited for state QAPs and other affordable housing programs. Here's why:

ZERHs offer a lower total cost of ownership.

"ZERHs" typically have HERS scores in the mid-50s or lower, meaning energy savings of 40%+ compared to standard new homes. Added costs (amortized) to build to DOE ZERH are often lower than the monthly energy cost savings. Beyond energy savings, every Zero Energy Ready Home must pass comprehensive construction checklists for water management, HVAC installation quality, and indoor air quality. These crucial features included in every ZERH can translate into lower costs to maintain and live in the dwelling.

DOE ZERH Certification is straightforward and cost-effective for partners.

If your program already recognizes ENERGY STAR Homes, certifying to DOE ZERH is simple. The steps of plan review, energy modeling, and site inspections by an energy rater are essentially the same between ENERGY STAR Homes and DOE ZERH. The rater/verifier will verify a few additional items for DOE ZERH, and may add a small added fee for this extra scope. DOE ZERH builds off ENERGY STAR Homes and goes beyond for added efficiency and performance (see figure). There is no program registration fee for DOE ZERH projects, and DOE offers extensive training resources for builders, developers, and raters. DOE ZERH accepts single-family and multi-family buildings up to 5 stories, and central HVAC and hot water systems may be used.

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| | | | Solar Ready |
| | | | Eff. Comps. & H ₂ O Distrib. |
| | | | EPA Indoor Air Package |
| | | | Optimized Duct Location |
| | HVAC QI with WHV | HVAC QI with WHV | HVAC QI with WHV |
| | Water Management | Water Management | Water Management |
| | Independent Verification | Independent Verification | Independent Verification |
| IECC 2012 Enclosure | IECC 2009 Enclosure | IECC 2012 Enclosure | IECC 2012/15 Enclosure |
| HERS 70-80 | HERS 65-75 | HERS 55-65 | HERS 48-55 |
| IECC 2012 | ENERGY STAR v3 | ENERGY STAR v3.1 | DOE ZERH |

Additional efficiency and performance measures in DOE ZERH compared to 2012 IECC and ENERGY STAR Homes

Need More Info?

To learn more about states and other affordable housing programs which are already leveraging DOE ZERH in their QAPs and further details about the program, please contact Jamie Lyons (301-889-0017 or jlyons@newportpartnersllc.com) or visit the program website: www.buildings.energy.gov/zero.