

# ENERGY STAR<sup>®</sup>

## Residential New Construction Programs

### Historical Document

This document is provided for reference because it has been superseded by a more recent Version or Revision. Please find current program documents on the [Program Requirements](#) webpage.

Use of older Versions and Revisions, such as this document, are typically limited to homes and buildings with a permit date (or, for manufactured homes, a production date) prior to a specified date. Consult the [Implementation Timeline](#) table to assess whether a home or apartment is still eligible to be certified using this document.

For questions or more information, contact us at [energystarhome@energystar.gov](mailto:energystarhome@energystar.gov).



# ENERGY STAR Single-Family New Homes Pacific Program Requirements, Version 3.2 (Rev. 13)

**These Program Requirements shall only be used in Guam, Hawaii,  
& the Northern Mariana Islands**

## Eligibility Requirements

Site-built or modular <sup>1</sup> detached Dwellings <sup>2</sup> (e.g., single-family homes and duplexes) and Townhouses <sup>3</sup> are eligible to participate in the ENERGY STAR Single-Family New Homes (SFNH) program. To determine the applicable SFNH program requirements, including the minimum Version and Revision, to which a home is eligible to be certified, visit [www.energystar.gov/SFNHVersions](http://www.energystar.gov/SFNHVersions).

While primarily intended for new construction, existing homes (e.g., undergoing a gut rehabilitation) are also eligible to participate in the ENERGY STAR SFNH program, with guidance available at: [www.energystar.gov/GutRehabGuidance](http://www.energystar.gov/GutRehabGuidance).

For information about other ENERGY STAR residential new construction programs, visit [www.energystar.gov/newhomesrequirements](http://www.energystar.gov/newhomesrequirements).

Note that compliance with these requirements is not intended to imply compliance with all local code requirements. <sup>4</sup>

## Partnership, Training, and Credentialing Requirements

The following requirements must be met prior to certifying homes:

- Builders are required to sign an ENERGY STAR Partnership Agreement and complete the online Version 3 Builder Orientation, which can be found at [www.energystar.gov/homesPA](http://www.energystar.gov/homesPA).
- Energy Rating Companies (e.g., rater companies and Providers <sup>5</sup>) are required to sign an ENERGY STAR Partnership Agreement, which can be found at [www.energystar.gov/homesPA](http://www.energystar.gov/homesPA).
- Raters <sup>6</sup> are required to complete EPA-recognized training which can be found at [www.energystar.gov/newhomestraining](http://www.energystar.gov/newhomestraining), and be credentialed by a Home Certification Organization (HCO) <sup>7</sup> prior to completing inspections. Learn more at [www.energystar.gov/hco](http://www.energystar.gov/hco).

## ENERGY STAR Certification Process

1. The certification process defines separate requirements based upon the percentage of occupiable space <sup>8</sup> that is air conditioned:
  - a. **For a home with  $\leq 50\%$  air-conditioned occupiable space:** The certification process provides a prescriptive set of measures that must be used, coupled with an ERI rating for quality assurance purposes. Use an EPA-recognized HCO's Approved Software Rating Tool to configure the home to be certified. While the resulting ERI is not required to meet a specific target value, it is required that each individual measure listed in Exhibit 1, ENERGY STAR Prescriptive Efficiency Measures For a Home with  $\leq 50\%$  Air-Conditioned Occupiable Space, be included in the home and meet or exceed the listed performance level. The ERI value shall be calculated using ANSI / RESNET / ICC 301 including all Addenda and Normative Appendices, with new versions and Addenda implemented according to the HCO that the home is being certified under, with approved exceptions listed at [www.energystar.gov/ERIEExceptions](http://www.energystar.gov/ERIEExceptions).
  - b. **For a home with  $> 50\%$  air-conditioned occupiable space:** The certification process provides flexibility to select a custom combination of measures for each home that is equivalent in performance to the minimum requirements of the National Program Requirements, Version 3.2, ENERGY STAR Reference Design Home, as assessed through energy modeling. An EPA-recognized HCO's Approved Software Rating Tool shall automatically determine the ENERGY STAR ERI Target, which is the highest ERI value that each rated home may achieve to earn the ENERGY STAR. <sup>9</sup>  
  
Using the same software program, configure the preferred set of efficiency measures for the home to be certified and verify that the resulting ERI meets or exceeds the ENERGY STAR ERI Target.  
  
Note that, regardless of the measures selected, the Mandatory Requirements for All Certified Homes in Exhibit 2 of the National Program Requirements, Version 3.2, are also required and impose certain constraints on the efficiency measures selected (e.g., insulation levels, insulation installation quality, window performance, duct leakage). Furthermore, on-site power generation may not be used to meet the ENERGY STAR ERI Target.
2. Construct the home using the measures selected in Step 1 and the applicable Mandatory Requirements in:
  - a. **For a home with  $\leq 50\%$  air-conditioned occupiable space:** Exhibit 2 of this document.
  - b. **For a home with  $> 50\%$  air-conditioned occupiable space:** Exhibit 2 of the National Program Requirements, Version 3.2
3. Using a Rater, verify that all requirements have been met in accordance with the applicable Mandatory Requirements for All Certified Homes and with the inspection procedures for minimum rated features in ANSI / RESNET / ICC 301, Appendix B. <sup>6</sup> If drywall will be installed, this will require a minimum of two inspections: one at pre-drywall and the other at final. All items shall be verified for each certified home and sampling protocols shall not be used. For modular homes, a Rater must verify any requirement in the plant not able to be verified on-site because a feature will be concealed prior to shipment. Finally, submit the home to the HCO for final certification and follow the HCO's certification and oversight procedures (e.g., quality assurance, recordkeeping, and reporting). The Rater is required to keep electronic or hard copies of the completed and signed Rater checklists and the National HVAC Design Report.

The Rater must review all items on the Rater checklists to verify that each inspection checklist item has been met within program-defined tolerances.

In the event that a Rater determines that a program requirement has not been met, the home cannot earn the ENERGY STAR until the item is corrected. If correction of the item is not possible, the home cannot earn the ENERGY STAR. In the event that an item on a Rater checklist cannot be inspected by the Rater, the home also cannot earn the ENERGY STAR. The only exceptions to this rule are in the Thermal Enclosure System Section of the National Rater Field Checklist for a home with  $> 50\%$  air-conditioned occupiable space, where the builder may assume responsibility for verifying a maximum of eight items. This option shall only be used at the discretion of the Rater. When exercised, the builder's responsibility will be formally acknowledged by the builder signing the checklist for the item(s) that they verified.



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In the event that a Rater is not able to determine whether a program requirement has been met (e.g., an alternative method of meeting a checklist requirement has been proposed), then the Rater shall consult their Provider. If the Provider also cannot make this determination, then the Rater or Provider shall report the issue to EPA prior to project completion at: [energystarhomes@energystar.gov](mailto:energystarhomes@energystar.gov) and will receive an initial response within 5 business days. If EPA believes the current program requirements are sufficiently clear to determine whether the item in question has been met, then this guidance will be provided to the partner and enforced beginning with the house in question. In contrast, if EPA believes the program requirements require revisions to make the intent clear, then this guidance will be provided to the partner but only enforced for homes permitted after a specified transition period after the release of the revised program requirements, typically 60 days in length.

This will allow EPA to make formal policy decisions as partner questions arise and to disseminate these policy decisions through the [Policy Record](#) and the periodic release of revised program documents to ensure consistent application of the program requirements.

## Exhibit 1: ENERGY STAR Prescriptive Efficiency Measures For a Home with ≤ 50% Air-Conditioned Occupiable Space

The ENERGY STAR Prescriptive Efficiency Measures are the set of efficiency measures required to be used to construct an ENERGY STAR Certified Home in the Pacific that has ≤ 50% Air-Conditioned Occupiable Space. No tradeoffs are allowed. In addition, note that the Mandatory Requirements for a Home with ≤ 50% Air-Conditioned Occupiable Space, Exhibit 2, contain additional requirements such as prescriptive air sealing requirements.

Envelope, Windows, & Doors
<ul style="list-style-type: none"> <li>Wall insulation shall be ≥ R-5.</li> </ul>
Cooling Equipment
<ul style="list-style-type: none"> <li><b>Bedroom Mini-Split HVAC</b> - Mini-split AC's or HP's ≥ 16 SEER or SEER2, each with ≤ 10 ft. of ductwork, shall serve all bedrooms. No space cooling is required outside of bedrooms, but if any space cooling is provided outside bedrooms, it must be provided using mini-split AC's or HP's ≥ 16 SEER or SEER2, each with ≤ 10 ft. of ductwork. A single mini-split head is permitted to serve one or more bedrooms using up to 10 ft. of ductwork per head.</li> </ul>
Water Heater
<ul style="list-style-type: none"> <li>DHW equipment shall include a solar water heater system with a Solar Fraction ≥ 90%. <sup>10</sup></li> </ul>
Ceiling Fans & Lighting
<ul style="list-style-type: none"> <li>Ceiling fans shall be installed in all primary living areas greater than 75 ft<sup>2</sup> and be ENERGY STAR certified. <sup>11</sup></li> <li>LED light bulbs shall be installed in 100% of ANSI / RESNET / ICC 301-defined Qualifying Light Fixture Locations.</li> </ul>

## Exhibit 2: Mandatory Requirements for a Home with ≤ 50% Air-Conditioned Occupiable Space

Party Responsible	Mandatory Requirements
<b>Rater</b>	<ul style="list-style-type: none"> <li>Completion of SFNH Caribbean and Pacific Rater Design Review Checklist, Version 3 / 3.2</li> <li>Completion of SFNH Caribbean and Pacific Rater Field Checklist, Version 3 / 3.2</li> </ul>
<b>HVAC System Designer</b>	<ul style="list-style-type: none"> <li>Completion of SFNH National HVAC Design Report, Version 3 / 3.1 / 3.2 with the following exemptions: Section 3, Section 4, and Section 5</li> </ul>
<b>HVAC Installing Contractor</b>	<ul style="list-style-type: none"> <li>Completion of SFNH National HVAC Commissioning Checklist, Version 3 / 3.1 / 3.2</li> </ul>
<b>Builder</b>	<ul style="list-style-type: none"> <li>Completion of SFNH National Water Mgmt. System Builder Reqs., Version 3 / 3.1 / 3.2</li> </ul>

**Footnotes:**

1. A modular home is a prefabricated home that is made of multiple modules or sections that are manufactured and substantially assembled in a manufacturing plant. These pre-built sections are transported to the building site and constructed by a builder to meet all applicable building codes for site-built homes.
2. A Dwelling, as defined by ANSI / RESNET / ICC 301, is any building that contains one or two Dwelling Units used, intended, or designed to be built, used, rented, leased, let or hired out to be occupiable, or that are occupiable for living purposes. ANSI / RESNET / ICC 301 defines a Dwelling Unit as a single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.
3. A Townhouse, as defined by ANSI / RESNET / ICC 301, is a single-family Dwelling Unit constructed in a group of three or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides. Townhouses are also eligible to participate in the ENERGY STAR Multifamily New Construction Program.



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4. While certification will result in compliance with many code requirements, a Rater is not responsible for ensuring that all code requirements have been met prior to certification. For more information about how these program requirements help satisfy code requirements, visit: [www.energystar.gov/newhomesguidance](http://www.energystar.gov/newhomesguidance). In the event that a code requirement, a manufacturer's installation instructions, or an engineering document conflict with a requirement of the ENERGY STAR program (e.g., slab insulation is prohibited to allow visual access for termite inspections), then the conflicting requirement within these program requirements shall not be met. Certification shall only be allowed if the Rater has determined that no equivalent option is available that could meet the conflicting requirement (e.g., switching from exterior to interior slab edge insulation). Note that a home with > 50% air-conditioned occupiable space must still meet its ENERGY STAR ERI Target. Therefore, other efficiency measures may be needed to compensate for the omission of the conflicting requirement.
5. The term 'Provider' refers to an Approved Rating Provider, as defined by ANSI / RESNET / ICC 301, that is approved by an HCO.
6. The term 'Rater' refers to the person(s) completing the third-party verification required for certification. The person(s) shall: a) be a Certified Rater or Approved Inspector, as defined by ANSI / RESNET / ICC 301, or an equivalent designation as determined by an HCO; and, b) have attended and successfully completed an EPA-recognized training class. See [www.energystar.gov/newhomestraining](http://www.energystar.gov/newhomestraining).
7. HCOs are independent organizations recognized by EPA to implement an ENERGY STAR certification program for single-family and multifamily homes and apartments using an Energy Rating Index (ERI) compliance path. Learn more and find a current list of HCOs at [www.energystar.gov/hco](http://www.energystar.gov/hco).
8. "Occupiable Space" is defined as any enclosed space inside the pressure boundary and intended for human activities, including, but not limited to, areas used for living, sleeping, dining, and cooking, as well as toilets, closets, halls, storage and utility areas, and laundry areas. The pressure boundary is the primary enclosure boundary separating indoor and outdoor air.
9. The software program shall automatically determine (i.e., without relying on a user-configured ENERGY STAR Reference Design) this target for each rated home by following the National ERI Target Procedure, Version 3.2 (Rev. 13), available at [www.energystar.gov/newhomesrequirements](http://www.energystar.gov/newhomesrequirements).
10. Solar fraction shall be determined using the [ICC-SRCC OG-300 Solar Water Heating System Certification Program's](https://www.energystar.gov/newhomesrequirements) annual solar fraction rating (SFA) for the rating location closest to the home. For Dwelling Units or Sleeping Units with  $\leq 3$  bedrooms, determine SFA using the Low U.S. DOE Draw Pattern; otherwise, use Medium. A solar water heater system with a Solar Fraction  $\geq 90\%$  that has no backup water heater is permitted to be used. For the OG-300 directory, visit <https://solar-rating.org/directories/certified-companies/>.
11. Primary living areas include dining rooms, living rooms, family rooms, dens, bedrooms and home offices. Primary living areas do not include other spaces, such as kitchens, bathrooms, hallways, stairways, entrances, garages, and utility rooms.