

**Version Tracking Document for  
ENERGY STAR Certified Homes for the States of Oregon and Washington Version 3.2 (Rev. 09)  
09/01/18**

In the time since Revision 08 of the Version 3.2 ENERGY STAR Certified Homes Program Requirements for the States of Oregon and Washington were released, EPA has modified, clarified, and refined various aspects of the program documents, primarily in response to partner questions and comments. This document is a summary of these edits, organized by the program document containing the change. EPA has also posted the revised program documents, labeled Version 3.2 (Rev. 09), on its [Website](#).

All revisions are categorized as a Change, Clarification, or Refinement. These are defined as follows:

**Change** – The addition, deletion, or modification of a program requirement. A change will typically result from a partner question or feedback indicating that EPA’s original intent is not being met or due to changes in relevant standards (e.g., ENERGY STAR labeled product requirements, NAECA standards, ICC codes). A change is the most significant type of edit for partners because it is likely to change the way that partners comply with the program.

**Clarification** – The clarification of a program requirement, typically resulting from a partner question indicating confusion or ambiguity. Clarifications are not intended to significantly change the scope of the program guidelines, but rather to clarify the original intent of the requirement. A clarification is secondary in importance to a change; it should not significantly alter the way that most partners comply with the program.

**Refinement** – A minor revision, such as an improved choice of words, a grammatical correction, or a correction to a typographical error. A refinement is the least important type of edit; it should have no impact on the way that partners comply with the program.

## **Oregon and Washington Program Requirements**

### **1. Change – Elimination of plant-certification pathway for modular homes**

The plant-certification path for modular homes has been eliminated because it is not frequently utilized and may be causing confusion among partners.

To further clarify the remaining certification process for modular homes, the first line of the Eligibility Requirements section has been updated to explicitly encompass modular homes as follows:

“The following site-built or modular homes are eligible to earn the ENERGY STAR:”

To indicate that 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, the following sentence has been added to Step 4 of The ENERGY STAR Certification Process section:

“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.”

And a new Footnote has been added as follows:

“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.”

Finally, the Version of the program requirements applicable to a modular home, which was based upon the home’s “sale date”, has been changed to be based upon the “permit date”, to align with the policy for other site-built homes.

### **2. Refinement – Replacement of references to “RESNET” and “HERS” with industry-standard terms**

Because EPA has a process by which additional VOO’s can operate using ANSI / RESNET / ICC Std. 301, the terms RESNET and HERS have been replaced in all program documents with the

industry-standard terms “EPA-Approved Verification Oversight Organization” and “ERI” respectively.

**3. Clarification – Explicit requirement for homes to be registered and receive rating**

To ensure that ENERGY STAR certified homes are encompassed by an VOO’s quality assurance protocols, ENERGY STAR Certified Homes are now explicitly required to receive a rating and be registered with an EPA-approved VOO. The first paragraph under Step 4 of the ENERGY STAR Certification Process has been updated as follows:

“4. Using a Rater, verify that all requirements have been met in accordance with the Mandatory Requirements for All Certified Homes and with the on-site inspection procedures for minimum rated features of an EPA-Approved VOO. 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, register the rated home with the same EPA-Approved VOO. The Rater is required to keep electronic or hard copies of the completed and signed National Rater checklists and the National HVAC Design Report.”

**4. Refinement – Updating document titles for consistent naming format**

To avoid potential confusion, and use a consistent naming format, the title of and references to the Rater Checklists and other mandatory requirements, namely the “Rater Field Checklist”, “Rater Design Review Checklist”, “HVAC Design Report”, “HVAC Commissioning Checklist”, and “Water Management System Builder Requirements”, have been updated to “National Rater Field Checklist”, “National Rater Design Review Checklist”, “National HVAC Design Report”, “National HVAC Commissioning Checklist”, and “National Water Management System Builder Requirements”, respectively.

**5. Refinement – Footer: Removal of implementation date**

To reduce unnecessary complexity and avoid potential confusion, the implementation dates for Revisions and their associated Footnotes have been removed from the footers of program documents. Furthermore, these dates have been integrated into the Effective Date Sections of the program requirements documents.

The first sentence of Footnote 8 has also been removed as it has been integrated into the Effective Date Sections of the program requirements documents.

**6. Refinement – Exhibit 1: ENERGY STAR certified products specification versions**

To clarify that efficiency levels of products described as “ENERGY STAR” in the Reference Design Home aligned with the specifications for the ENERGY STAR certified product when this Version was first released, a new Footnote has been added to Exhibit 1 as follows:

“Note that the efficiency levels of ENERGY STAR certified products aligned with these product specifications when this Version was first released. These efficiency features form the basis of the ENERGY STAR ERI target, regardless of any subsequent revisions to ENERGY STAR certified product specifications. EPA recommends, but does not require, that current ENERGY STAR products be included in ENERGY STAR homes. For current ENERGY STAR products, visit [www.energystar.gov/products](http://www.energystar.gov/products).”

**7. Refinement – Exhibit 1: References updated to latest RESNET standard**

To account for the newly released ANSI standard version of the RESNET standard, references to “RESNET Standard” have been updated to “ANSI / RESNET / ICC Standard 301”.

Additionally, a new Footnote has been added to these updated references as follows:

“The version of ANSI / RESNET / ICC Std. 301 utilized by RESNET for HERS ratings is used to model this parameter.”

**8. Refinement – Effective Date Section: Revised structure and format of Implementation Timeline**

To help ensure partners are aware of the implementation timeline(s) applicable to the homes that they certify, the Effective Date section has been revised as follows:

**Effective Date**

To determine the program Version and Revision that a home is required to be certified under, look up the location and permit date of the home in Exhibit 3. Program requirements for other locations can be found at [www.energystar.gov/newhomesrequirements](http://www.energystar.gov/newhomesrequirements).

This Exhibit contains all implementation timelines applicable on or after September 1, 2016. Implementation timelines applicable prior to this date can be obtained by contacting [energystarhomes@energystar.gov](mailto:energystarhomes@energystar.gov).

**Exhibit 3: ENERGY STAR Certified Homes Implementation Timeline for Oregon and Washington**

State / Territory	Homes Permitted On or After This Date Must Meet the Adjacent Version & Revision	Version	Revision
WA	07-01-2016	National v3.1	Rev. 08
	07-01-2018	Oregon and Washington v3.2	Rev. 08
	01-01-2019	Oregon and Washington v3.2	Rev. 09
OR	07-01-2016	National v3.1	Rev. 08
	01-01-2019	National v3.1	Rev. 09
	04-01-2019	Oregon and Washington v3.2	Rev. 09

**9. Change – Exhibit 3: Continued Use of Rev. 08 HVAC Design Report**

To reflect that previously collected Rev. 08 HVAC Design Reports are permitted to be used after the release of the next Revision of the program requirements, so long as no aspect of the system design changes, a new Footnote has been added to Exhibit 3, as follows: “Homes certified under Rev. 09 of the program requirements are permitted to use either Rev. 08 or 09 of the National HVAC Design Report.”

**Oregon and Washington ERI Target Procedure**

**1. Refinement – Updating document title for consistent naming format**

To avoid potential confusion, and use a consistent naming format, the title of this document has been updated to “Oregon and Washington ERI Target Procedure”

**2. Refinement – Replacement of references to “RESNET” and “HERS” with industry-standard terms**

Because EPA has a process by which additional VOO’s can operate using ANSI / RESNET / ICC Std. 301, the terms RESNET and HERS have been replaced in all program documents with the industry-standard terms “EPA-Approved Verification Oversight Organization” and “ERI” respectively.

**3. Clarification – References updated to latest RESNET standard and various parameters clarified**

To account for the newly released ANSI standard version of the RESNET standard, references to “RESNET’s 2006 Mortgage Industry National Home Energy Rating Systems Standard” have been

updated to “ANSI / RESNET / ICC Standard 301”. Additionally several parameters have been clarified as to how they should be configured in the ENERGY STAR Reference Design Home. To reflect this the following edits have been made:

- The Glazing: Interior Shade Coefficient Section has been updated to “Same as Energy Rating Reference Home, as defined by ANSI / RESNET / ICC Std. 301”
- The Service Water Heating Systems: Use (Gallons per Day) Section has been updated to “Same as Energy Rating Reference Home, as defined by ANSI / RESNET / ICC Std. 301, except for reduced usage resulting from low-flow plumbing fixtures, R-3 pipe insulation, and the dishwasher specified in the Lighting, Appliances, & Internal Gains Section.”

In addition, this has been associated with a new Footnote as follows: “That is to say, representative of reference clothes washer gallons per day, standard distribution system water use effectiveness, a hot water piping ratio of 1.0, and no drainwater heat recovery.”

Furthermore, the row stating “Distribution System Type: Standard, without recirculation” has been deleted because this new footnote is a better explanation of how the ENERGY STAR Reference Design Home should be configured.

- The Service Water Heating Systems: Tank Temperature Section has been updated to “Same as Energy Rating Reference Home, as defined by ANSI / RESNET / ICC Std. 301”.
- The Thermostat: Temperature Setpoints Section has been updated to “Same as Energy Rating Reference Home, but with offsets for a programmable thermostat, as defined by ANSI / RESNET / ICC Std. 301”
- The Lighting, Appliances, & Internal Gains: Internal Gains Section has been updated to “Same as Energy Rating Reference Home, as defined by ANSI / RESNET / ICC Std. 301, except for adjustments for the lighting, refrigerator, dishwasher, and ceiling fans specified in this Section.”
- The Internal Mass Section has been updated to “Same as Energy Rating Reference Home, as defined by ANSI / RESNET / ICC Std. 301”.
- In addition to these edits, a new Footnote has been associated with all parameters included above and has replaced Footnote 7 as follows: “The version of ANSI / RESNET / ICC Std. 301 utilized by RESNET for HERS ratings shall be used to configure this parameter.”

#### 4. **Change – Exhibit 1: Heating Systems and Cooling Systems: Equipment capacity and EAE**

Several changes have been made to clarify how to configure the capacity of the heating and cooling equipment and the Electric Auxiliary Energy (EAE) of non-electric warm furnaces and non-electric boilers of the ENERGY STAR Reference Design.

In the Heating Systems Section, the first row has been revised as follows:

“Heating capacity shall be selected in accordance with ACCA Manual S based on building heating and cooling loads calculated in accordance with ACCA Manual J, Eighth Edition, ASHRAE Handbook of Fundamentals, or an equivalent computation procedure”.

In the Heating Systems Section, a new row has been added at the bottom of this section with the following language:

“For non-electric warm furnaces and non-electric boilers, the Electric Auxiliary Energy shall be determined in accordance with the methodology for the Energy Rating Reference Home in ANSI / RESNET / ICC Std. 301, using the capacity determined in this Section”. This has been associated with a new Footnote as follows:

“The version of ANSI / RESNET / ICC Std. 301 utilized by RESNET for HERS ratings shall be used to configure this parameter.”

In the Cooling Systems Section, the first row has been revised as follows:

“Cooling capacity shall be selected in accordance with ACCA Manual S based on building heating and cooling loads calculated in accordance with ACCA Manual J, Eighth Edition, ASHRAE Handbook of Fundamentals, or an equivalent computation procedure”.

**5. Clarification – Exhibit 1: Lighting, Appliances, & Internal Gains: Tier I lighting**

To clarify that the lighting in this Section is intended to refer to Tier I lighting, the lighting portion of this Section has been revised as follows:

“Lighting: Fraction of qualifying Tier I fixtures to all fixtures in qualifying light fixture locations: 90% for interior; 0% for exterior and garage”

**6. Clarification – Exhibit 1: Lighting, Appliances, & Internal Gains: Dishwasher place setting capacity**

To clarify the dishwasher place setting capacity of the ENERGY STAR Reference Design, this Section has been revised as follows:

“Dishwasher: 0.66 EF, Place Setting Capacity Same as Rated Home”

**7. Clarification – Exhibit 1: Clothes washer and dryer configured with same efficiency as Energy Rating Reference Home**

To clarify the clothes washer and dryer inputs of the ENERGY STAR Reference Design, the Lighting, Appliances & Internal Gains section of Exhibit 1, Expanded ENERGY STAR Reference Design Definition, has been updated to include a new cell with the following language:

“Clothes Washer and Dryer: Same as Energy Rating Reference Home, as defined by ANSI / RESNET / ICC Std. 301”

A new Footnote has also been added to this cell as follows:

“The version of ANSI / RESNET / ICC Std. 301 utilized by RESNET for HERS ratings shall be used to configure this parameter.”

**8. Refinement – Footnote 6: Alignment of window area terminology with Standard 301**

To align the terminology in Footnote 6, used when calculating the Reference Home’s total window area for homes with conditioned basements and attached homes, with Footnote (b) of Table 4.2.2(1) of ANSI / RESNET / ICC Standard 301-2014 the footnote has been updated.

The equation has been updated as follows:

“ $AG = 0.15 \times CFA \times FA \times F$ ”

The first set of bullet points has been updated as follows:

- “AG = Total glazing area
- CFA = Total conditioned floor area
- $FA = (\text{Gross above-grade thermal boundary wall area}) / (\text{Gross above-grade thermal boundary wall area} + 0.5 \times \text{Gross below-grade thermal boundary wall area})$
- $F = 1 - 0.44 \times (\text{Gross common wall area}) / (\text{Gross above-grade thermal boundary wall area} + \text{Gross common wall area})$ ”

The second set of bullet points has been updated as follows:

- “Thermal boundary wall is any wall that separates Conditioned Space from Unconditioned Space, outdoor environment, or the surrounding soil;
- Above-grade thermal boundary wall is any portion of a thermal boundary wall not in contact with soil;
- Below-grade thermal boundary wall is any portion of a thermal boundary wall in soil contact; and

- Common wall is the total wall area of walls adjacent to another conditioned living unit, not including foundation walls.”