

ENERGY STAR Rater-Design Review Checklist: 2. High-Performance Fenestration

When certifying a home to [ENERGY STAR Certified Homes, Version 3.0/3.1 \(Rev. 08\)](#) [1], the Rater completes and retains the [Rater Design Review Checklist](#) [1] to document partnership status, that windows and insulation meet 2009 IECC requirements, that the HVAC Design Report was completely filled out, and that specified equipment falls within the required parameters. The Rater collects from the HVAC Designer one HVAC Design Report for each system design.

This page shows the checklist requirement for Section 2. High-Performance Fenestration and applicable footnotes.

For information on installing windows, see installation guides linked to the Thermal Enclosure section of the [Rater Field Checklist](#) [1].

For more information on fenestration requirements, see the [2009 International Energy Conservation Code \(IECC\)](#) [2] and/or the [2013 ASHRAE Handbook – Fundamentals](#) [3]. Also see the Solution Center guide, [ENERGY STAR Windows](#) [4].



Rater Design Review Checklist ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 08)

2. High-Performance Fenestration		
2.1 Specified fenestration meets or exceeds 2009 IECC requirements ³	<input type="checkbox"/>	<input type="checkbox"/>

Checklist revised 09/15/2015. Required for homes permitted starting 07/01/2016.¹²

Footnotes

1. The term ‘Rater’ refers to the person completing the third-party inspections required for certification. This person shall: a) be a certified Home Energy Rater, Rating Field Inspector, or an equivalent designation as determined by a Verification Oversight Organization such as RESNET; and, b) have attended and successfully completed an EPA-recognized training class. See energystar.gov/newhomestraining [5]

3. All windows, doors and skylights shall meet or exceed the component U-factor and SHGC requirements specified in 2009 IECC Table 402.1.1. If no NFRC rating is noted on the window or in product literature (e.g., for site-built fenestration), select the U-factor and SHGC value from Tables 4 and 10, respectively, in 2013 ASHRAE Fundamentals, Chapter 15. Select the highest U-factor and SHGC value among the values listed for the known window characteristics (e.g., frame type, number of panes, glass color, and presence of low-e coating). Note that the U-factor requirement applies to all fenestration while the SHGC only applies to the glazed portion. The following exceptions apply:

- a. An area-weighted average of fenestration products shall be permitted to satisfy the U-factor requirements;
- b. An area-weighted average of fenestration products ? 50% glazed shall be permitted to satisfy the SHGC requirements;
- c. 15 square feet of glazed fenestration per dwelling unit shall be exempt from the U-factor and SHGC requirements, and shall be excluded from area-weighted averages calculated using a) and b), above;
- d. One side-hinged opaque door assembly up to 24 square feet in area shall be exempt from the U-factor requirements and shall be excluded from area-weighted averages calculated using a) and b), above;
- e. Fenestration utilized as part of a passive solar design shall be exempt from the U-factor and SHGC requirements, and shall be excluded from area-weighted averages calculated using a) and b), above. Exempt windows shall be facing within 45 degrees of true South and directly coupled to thermal storage mass that has a heat capacity > 20 btu / ft³oF and provided in a ratio of at least 3 sq. ft. of South facing fenestration. Generally, thermal mass materials will be at least 2 in. thick. In Passive House (PHIUS+) certified homes, where triple-glazed window assemblies with thermal breaks / spacers between the panes are used, such windows meet the intent of Item 2.1 and shall be excluded when assessing compliance of a) through e), above.

12. This Revision of the Rater Design Review Checklist is required to certify all homes permitted after 07/01/2016, but is allowed to be used for any home permitted or completed prior to this date. The Rater may define the ‘permit date’ as either the date that the permit was issued or the date of the contract on the home. In cases where permit or contract dates are not available, providers have discretion to estimate permit dates based on other construction schedule factors. These assumptions should be both defensible and documented.

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More Info.

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None Available

Last Updated: Wednesday, January 27, 2016