



**Attachments Energy Rating Council**  
355 Lexington Avenue, 15th Floor  
New York, NY 10017  
Tel: 212-297-2122 Fax: 212-370-2149  
info@aercnet.org  
www.aercnet.org

Mr. Douglas Anderson  
Program Manager  
Environmental Protection Agency  
windows@energystar.gov

## The Attachments Energy Rating Council's Response to the ENERGY STAR® Specification of Exterior and Interior Storm Windows Draft 1 Version 1.0

The Attachments Energy Rating Council (AERC) appreciates the opportunity to respond to the ENERGY STAR Specification of Exterior and Interior Storm Windows Draft 1 Version 1.0. AERC has been tasked by the U.S. Department of Energy to rate, certify, and label the energy performance of window attachments, including storm windows. AERC fully supports the development of an ENERGY STAR Program for Exterior and Interior Storm Windows.

This fall, AERC will be launching a rating, labeling and certification program for a variety of window attachment products, including storm windows. AERC looks forward to the opportunity to apply as a certification body for the ENERGY STAR storm windows product category. AERC will serve as a truth-in-labeling program for window attachment products, but ENERGY STAR provides a clear and well-recognized brand that will allow consumers to easily identify the most energy efficient storm window options. AERC concurs with ENERGY STAR's conclusion in the criteria analysis document that storm windows meet all of the ENERGY STAR Guiding Principles.

AERC agrees with ENERGY STAR's assessment that storm windows have a significant energy savings potential at the individual household, as well as national level based on research by Lawrence Berkeley National Laboratory and Pacific Northwest National Laboratory, among others. AERC estimates that 63% of U.S. homes have single pane or double pane clear glass windows, which means a significant opportunity exists to improve the envelope of U.S. homes and save homeowners money on their energy bills, particularly lower income households. Creating an ENERGY STAR category for storm windows will also make it easier for utilities to develop incentive programs for storm windows. A number of efficiency programs around the country, including Efficiency Vermont and Focus on Energy, have run pilot projects to incent storm windows and creating an ENERGY STAR program will spur more utilities and efficiency program to take that step and help consumers to consider this energy efficient technology.

### *Excluded Products*

AERC also supports the inclusion of other window attachment products, such as blinds, shades, and shutters in an ENERGY STAR program either now or in the near future. AERC has developed energy performance ratings for these product categories and modeling by LBNL and field studies conducted by PNNL have showed a substantial energy savings opportunity for these products. LBNL estimated that cellular shades had savings ranging from approximately 4 to 35 GJ and roller shades had savings ranging from approximately 2 to 25 GJ when modeled



with single pane aluminum windows using normal operation schedules.<sup>1</sup> PNNL found heating and cooling savings ranging from 10% to 16% for cellular shades installed in their model homes.<sup>2</sup>

### *Metrics*

AERC encourages EPA to continue to move forward with the metrics proposed in the V1.0 specification, but requests that EPA consider adopting AERC's Annual Energy Performance (AEP) metric in the future. AERC believes that an AEP rating is the easiest way for consumers to understand and make comparisons between products. AERC strongly recommends that EPA consider this as the performance metric on which to base its qualification criteria for future stages of the program.

In the meantime, AERC supports the use of emissivity and solar transmission as the initial metrics for differentiating energy efficient storm panels, as they are easily verified in the International Glazing Database (which will also be used as part of the AERC program) and provides consistency with other programs such as the Regional Technical Forum of the Northwest Power and Conservation Council.

### *Test Methods*

AERC believes that the test methods proposed by ENERGY STAR are appropriate based on the metrics proposed. AERC supports ENERGY STAR's reference and use of the air leakage test method in AERC 1.2. This alignment between AERC and ENERGY STAR will help to minimize the testing burden for storm window manufacturers.

AERC appreciates the opportunity to comment on the ENERGY STAR Specification of Exterior and Interior Storm Windows Draft 1 V1.0 document and is happy to assist EPA in any way possible as it moves forward.

Ralph Vasami  
AERC Executive Director

---

<sup>1</sup> D. Charlie Curcija et al. 2013. *Energy Savings from Window Attachments*.

<sup>2</sup> J.M. Petersen et al. 2016. *Evaluation of Cellular Shades in the PNNL Lab Homes*.