

TO: ENERGY STAR WSD Program, USEPA
FROM: John Jennings, Senior Product Manager, NEEA
RE: Comments Related to ENERGY STAR Windows Discussion Guide
DATE: 10-23-19

The Northwest Energy Efficiency Alliance (NEEA) is pleased to submit the following comments on the ENERGY STAR 7.0 Windows, Doors and Skylights Discussion Guide. We encourage EPA to proceed quickly with an update to the certification requirements and procedures because the market is moving quickly and already passing ENERGY STAR levels in some areas.

General Points

Based on our successful involvement with Energy Star Residential Windows in the early 1990's and a number of other programs over the years that have leveraged ENERGY STAR, we understand that manufacturers want the advantage of the ENERGY STAR label, but they commonly are resistant to making any change without a clear value proposition. However, given that 80%+ of all windows sold are now ENERGY STAR or equivalent efficiency, it no longer provides that advantage and serves less as a differentiator in the marketplace.

We also understand that increasing product cost is a central issue - companies don't want to incur large costs to change product design. However, advances in window technology (e.g. thin triple IGUs that can fit in current designs with only the added cost of the IGU) are showing that added cost can be quite low.

NEEA territory borders Western Canada and we feel it is time to make a significant jump in Northern Zone ENERGY STAR to be consistent with Canada. The technology to do it cost effectively is available and it is appropriate if initially the share of the market that is ENERGY STAR is low, even below 50%, thus keeping its role as an indicator of best in class, leading energy efficient products. NEEA and our utility funders help promote better products through both market transformation programs and utility incentives. We anticipate being able to target advanced ENERGY STAR windows with these efforts to help the industry make the transition to better products.

Finally, we feel EPA should maintain ENERGY STAR as a meaningful mark of the Most Efficient products (the cutting edge) by setting a significantly lower threshold U-Value. It is essential for this to stay ahead of codes (which may require more frequent changes or a greater step each time if less frequent).

Specific Responses to EPA Statements or Questions (in Bold)

"EPA proposes that the filtered list of product lines selected for FenStar is a reasonable proxy for products available for sale". It is not the same thing as being commercially available for sale to have manufacturers "identifying the product lines that they plan to label for ENERGY STAR, and making those product lines available for verification testing". Manufacturers can develop a line and test prototypes before they actually put them on the market.

“EPA was asked to consider payback within the length of time a typical homeowner stays in a home—around 10 to 13 years instead of the product life (~20 years)”. The energy savings aren’t tied to the homeowner, they are tied to the period of time the window is functionally installed, no matter how many occupants come and go. The building owner that bought and installed the windows will recover the extra cost paid, if selling the building sooner, through the appreciated value of the building. Therefore the time frame for cost-effectiveness should be the window life. This is consistent with methodologies used in the Northwest.

“EPA is proposing three different methods for estimating the cost of ENERGY STAR WDS”.

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In none of these methods is installation cost included. We recommend including a factor for labor to be able to take into account potential decreases in labor due to specific features of advanced high performance windows, as well as possible increases due to better sealing practices.

In the past ENERGY STAR has looked at small incremental changes in U-value that lead to small savings but "easy" to accomplish; bigger savings require bigger changes but usually cost more. We think the real cost can be much lower than the conventional notion that a 0.01 decrease in U-value requires \$1/sf increase in product cost. We are hoping the final ENERGY STAR analysis will support this assertion of lower cost change.

“LBNL and NREL have each developed new building energy modeling tools that use EnergyPlus”. We support the conversion to EnergyPlus. It is becoming the standard for commercial building design professions and building science. However, it is not a tool that will be commonly used by residential designers and contractors. We understand that this is not the intent of EPA’s recommendation.

11. Should EPA consider setting a minimum SHGC in the Northern climate zone?

This is an appropriate and welcome improvement for Northern regions. Glare and heat gain, when it does occur, can be handled in more specific ways, such as intermittent shading. People may still select tinted windows for privacy reasons, but that should not be a criteria for ENERGY STAR.

27. Should EPA consider extending the effective date beyond the typical 9 to 12 months after release of a final specification?

Could EPA put the qualifying product list on a “continual maintenance” basis such that as products become available they are tested and added to the list? Why have a fixed reference in this day and age? Consider having an on-line database that periodically updates (e.g. every year) like many other product QPLs. This would eliminate the need to rush to a certification deadline.