

August 20, 2021



**EPA ENERGY STAR Windows Team
Environmental Protection Agency (EPA)**

Subject: NEEA Comments in Support of Proposed ENERGY STAR V7 Specification for Residential Window, Door, and Skylight Draft 1 Specification

Dear EPA ENERGY STAR Windows Team,

The Northwest Energy Efficiency Alliance (NEEA) is a non-profit organization working to effect market transformation through the acceleration and adoption of energy-efficient products, services, and practices. NEEA is an alliance of more than 140 Northwest utilities and energy efficiency organizations working on behalf of more than 13 million energy consumers.

On behalf of the Alliance, we are submitting written comments on the recently published ENERGY STAR specification V7 for windows (and doors and skylights). We are pleased that the proposed changes significantly increase the thermal performance requirements for ENERGY STAR certification. We have been waiting a long time for this important step for efficiency, particularly for colder Northern Zone climates. NEEA was intimately involved in successfully changing the windows market by leveraging ENERGY STAR when it first began, and we need this specification change to continue to advance the windows market. We look forward to continuing that involvement.

This specification change is an important first step toward reaching a level where triple glazing (0.20 U-value or better) becomes the dominant window solution in the northern half of the country by 2030. Since the 0.20 U level is close to Canada's current ENERGY STAR window spec (at 0.21), achieving parity between the two countries will help the window industry through a more uniform and consistent market. We also see this as a critical first step in moving the market to the triple pane platform which will be key to unleashing a whole range of even more efficient products. Once manufacturers commit to these performance levels, then they can iterate on improvements in coatings, gas fills, frames, spacers, etc. that will get us closer to the U-0.10 benchmark.

Thermal Performance. It is clear that the current ENERGY STAR specification for windows is out-of-date, with market share close to 86% nationally. A concern of ours with the current spec (V6) has been the reality that manufacturers and builders continue to produce and install less efficient, double pane windows, and have not invested in innovation. While we are supportive of the proposed U value of 0.22, we are concerned that this value may not go far enough and leave ENERGY STAR lagging behind the market soon after the effective date. We encourage EPA to consider a U-value of 0.20 or better. This level of performance has a number of advantages.

First, and foremost, it will help ENERGY STAR maintain relevancy in a market that is poised for innovation. Second, a U-0.20 level of performance will provide better harmonization with the Canadian ENERGY STAR specification; i.e., all US ENERGY STAR products will automatically meet the Canadian specification as well. Third, a U factor of 0.20, equivalent to an R-value of 5, provides a clear marketing message to end consumers through comparison to conventional opaque insulation products. Finally, a U=0.20 ensures that ENERGY STAR requires a triple pane

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product, creating a platform for further technical improvements that allows ENERGY STAR to continue to advance in performance and maintain its relevancy well into the future.

Timing. We support allowing time for the new spec to go into effect (we recommend no later than January 2023) to give companies time to add to their product lines to meet the new specification. We encourage ENERGY STAR to also commit to a timeline and performance goals for Version 8 within three years after V7 takes effect. This provides a signal to manufactures to be preparing for continued improvement rather than a one-time upgrade and providing more justification for them to invest in ENERGY STAR products over the long run. A similar approach was used in ENERGY STAR televisions and was successful in providing direction for manufacturers to make significant changes to their product roadmaps.

Availability and Cost. We know that there is currently available qualifying product from several major manufacturers and a number of smaller ones. Through the Partnership for Advanced Windows Solutions (PAWS), the national labs are already providing technical support to window companies to help them redesign products and production lines to produce products that will meet the new performance goals. These efforts, plus increased market demand leading to increased production, will help reduce costs. EPA's cost study estimated a current average payback of 13 years, just within the expected average period of homeownership according to a recent NAHB survey ([Home Buyers Want Energy Efficient Windows | Eye On Housing](#), June 2021). The survey also found high desirability among homebuyers for ENERGY STAR windows, even ranking them and triple pane windows at the top of the list of essential and desirable features. This bodes well for demand for these products that will enable manufacturers to scale production that will in turn lower costs for products. We have seen previously how innovations like low-e coating are now very inexpensive compared to their initial introduction to the market; we expect similar cost reductions for ENERGY STAR triple pane products.

Utility Programs. It is well known by now that the energy savings potential from lighting is diminishing and HVAC programs are slow to pick up momentum. Envelope measures, like high performance windows, can be a good compliment and a new source of additional savings for utility programs and the country as a whole, continuing meaningful progress on carbon emission reductions.

Resiliency. Homes with thermally improved windows will be far more resilient during power outages or extreme weather. As we have all seen, these extreme events are becoming more common. A strong ENERGY STAR windows specification will be a relevant factor in resiliency and equity discussions.

Supporting US Manufacturing and Jobs. Today, builders who want high performance windows often have to import expensive products from Europe. An improved ENERGY STAR specification will increase the supply of domestic triple pane products adding jobs to the economy.

Thank you for your efforts on this specification and the continued evolution and advancement of the windows market.

Sincerely,



Jeff Harris
Chief Transformation Officer
Northwest Energy Efficiency Alliance