



August 13, 2021

Mr. Douglas Anderson
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

RE: ENERGY STAR® Windows, Doors, and Skylights Draft 1 Version 7.0 Specification

Mr. Anderson:

I write today to voice strong support of the ENERGY STAR® Draft 1 Version 7.0 specification. The draft V7.0 specification is informed by robust analysis, modeling, and pricing data, and we encourage EPA to proceed with swift implementation. As an energy justice-focused organization, we applaud the focus on pairing significant energy savings nationally (9.7 trillion Btu per year) with increasing accessibility of higher performing windows to all Americans.

The current ENERGY STAR® specification enjoys windows market share in the mid-to-upper 80% range and does not sufficiently differentiate higher performing windows in the market, considering the energy savings and other consumer benefits that are *already cost-effective and technically feasible*. While windows represent on average just 7% of a home's thermal envelope area, they are a major contributor to the heating and cooling loads of a home. Yet, features such as triple panes and improved frames and spacers often only appear in a manufacturer's premium products. This means that only a subset of Americans can afford the substantial energy, comfort, and durability benefits of higher-performing glazing.

When higher performance windows and doors are specified, as we see for example in affordable housing developments that have stringent requirements tied to funding, product is often sourced from Europe. We expect that a side benefit of Version 7.0 will be to increase the domestic supply of higher performance windows, with long term benefits to American manufacturers, and to building professionals and consumers who will see more competitive pricing and lower lead times. It is reassuring that EPA's analysis indicated that even the proposed Northern Climate Zone criteria can already be met by more than 50% of product lines. We expect that, as it has with each revision of ENERGY STAR® Windows, Doors, and Skylights, the manufacturing industry will quickly adapt and innovate.

The rigorous cost analysis in the EPA's Criteria Analysis Report supports the position that better windows are achievable at a reasonable cost with currently available technology. The payback period of the Version 7.0 specification – under 10 years in our climate zone – is within range of the average time a homeowner spends in a home and only a fraction of the average lifetime of window (which many would consider a more appropriate payback comparison). The resale value of window replacement projects cited in the report only further demonstrates the value to the consumer, even without considering the substantial *non-energy benefits* enjoyed from day one.

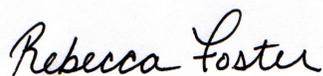
Distribution and efficiency utilities use ENERGY STAR® to advance energy efficiency through rebate and incentive programs, yet one challenge is that the current ENERGY STAR® windows specification offers little or no energy savings over energy code requirements or market baselines. This weakens the ENERGY STAR® brand and complicates justification of utility efficiency incentives for this product class. While we believe there was opportunity in aligning at least the US Northern Climate Zone requirements with the more aggressive ENERGY STAR® standard adopted in Canada, we support that the EPA has found an acceptable balance with its less stringent Version 7.0 specification.

Finally, the non-energy benefits to the consumer are substantial. One benefit of the enhanced specification is higher inside glass temperature in winter, which can lead to increased thermal comfort due to reduced radiative exchange and convective downdraft.¹ Associated condensation resistance may improve long-term durability. Lower HVAC equipment and distribution system costs can result from the lower heating and cooling loads associated with higher performing windows. And resiliency of a building to power outages and extreme weather events (such as Texas experienced this winter) can be increased through the combination of enhanced thermal performance and solar heat gain control. All of these factors are *supplemental* to the appreciable energy savings and lower household energy bills. *This is impact.* We strongly believe that these benefits should be accessible to all households and that this will be achievable as manufacturers scale up production and sales of higher performing windows meeting ENERGY STAR® Version 7.0.

At VEIC, a Vermont-based clean energy organization that works to advance decarbonization across the country, we know that by advancing the ENERGY STAR® Windows, Doors, and Skylights specification, households will save energy, money, and reduce the GHG emissions associated with heating and cooling, all while enjoying considerable non-energy benefits.

We urge you to take swift action. Prompt implementation of the new ENERGY STAR® Draft 1 Version 7.0 specification will ensure that utilities, manufacturers, dealers, and contractors can develop collaborative market strategies to incentivize these top performing windows in new and existing homes.

Sincerely,



Rebecca Foster
CEO

¹ Discussed at length in: Hart, Robert, and Stephen Selkowitz. "Determining the Value of Occupant Comfort from Highly Insulating Windows." In ASHRAE Topical Conference Proceedings, pp. 89-97. American Society of Heating, Refrigeration and Air Conditioning Engineers, Inc., 2019.