March 25, 2022

Douglas W. Anderson

Product Manager for Windows, Doors, and Skylights ENERGY STAR® Labeled Products

Re: Comments on Proposed ENERGY STAR V7 Draft 2 Specification

Dear Mr. Anderson:

The Partnership for Advance Windows (PAWS) Ratings, Codes & Certifications Working Group submits the following comments on behalf of PAWS in response to the ENERGY STAR Version 7.0 Window, Door, and Skylight (WDS) Draft 2 specification. The PAWS Ratings, Codes & Certifications Working Group works with stakeholders across window industry sectors (residential and commercial, new construction and retrofit) to support and create market transformation opportunities for high performance primary and attachment window products through engagement in regulatory and certification processes to achieve carbon reduction and net zero energy building goals.

Windows are essential to the well-being and day-to-day living of occupants. However, most windows in existing buildings and in new construction, including Energy Star v6 qualified products, are poor energy performers. As the U.S. prioritizes net zero energy buildings, addresses carbon emissions, and confronts the challenges of decarbonizing the grid, there is a pressing need to dramatically increase the availability, reduce cost, and increase use of highly efficient window products, in both existing and new buildings. In most buildings, windows are typically the weakest link in the building envelope. They constitute only 10 percent of the surface area, yet account for 30-40 percent of the heat loss in winter and add to cooling peaks and discomfort in summer. The negative impacts of inefficient windows are significant. Nationally, windows in all buildings account for ~4 Quads of energy use each year. This represents ~400 million metric tons of CO_2 and costs building owners more than $40 billion each year. The pathway to transforming the market for efficient windows and capturing even larger long-term energy savings going forward in support of new national energy and carbon goals requires dramatically increasing market share of existing, but underutilized, efficient window and attachment products.

ENERGY STAR has served as a symbol for energy efficiency in America across many product lines for many years. The ENERGY STAR window program has also played a role in promoting thermal improvements to windows, by effectively driving market share of low-E coatings to ~90%. However, program requirements for windows have been stagnant since 2015 while building codes continue to tighten, with the recent outcome that the originally proposed U-factor requirements for climate zone 2 of IECC 2021 were relaxed so as not to exceed current ENERGY STAR requirements. In many ways ENERGY STAR v6 currently acts as a proxy for minimum code efficiency, not as a leader in energy efficiency. As an example, when ENERGY STAR criteria were last changed in 2015 the overall market penetration of ENERGY STAR windows had little impact on adoption since most manufacturers already met the criteria. With the release of ENERGY STAR v7, the EPA has an opportunity to not only enhance cost effective energy savings for building owners but also to position itself to more effectively transform the window market to meet the nation's critical 2030 energy and carbon goals.

We appreciate EPA taking the time and resources to respond to v7 Draft 1 comments and update the modeling and analysis. The performance levels proposed in the v7 Draft 2 specification represent significant progress in window energy efficiency in all climate zones, while providing sensible energy cost paybacks to consumers. The changes in the South, South Central and North Central are all using technology that is widely available in other V6 zones now. The requirements in the North zone will require more changes but you have amply demonstrated that these levels are achievable based on current NFRC Certified Product Database (CPD) data. Furthermore, PAWS intends to provide assistance to both supply and demand side partners who need help in making this transition to a new product mix in the North. It has been a long wait for this important step in colder climates and we are very excited for both the window and the door proposed specifications.

The NFRC CPD data suggests that the performance ranges proposed in all zones are feasible, practical, and widely certified in the most common window operator types. PAWS plans to work with utilities who we expect will offer short term incentives to help the market transition perhaps even in advance of the formal EPA program start date and PAWS commits to working with other supply and demand side partners to help promote a timely and successful launch in mid-2023.

Sincerely,

Partnership for Advanced Window Solutions (PAWS)

www.PAWS.energy

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