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U.S. Environmental Protection Agency
Via email: windows@energystar.gov

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Re: Comments to ENERGY STAR for Windows, Doors and Skylights Version 6.0 Final Draft Criteria

Dear Doug and Emily,

On behalf of NSG Group/Pilkington North America ("PNA"), I express our appreciation for this opportunity to provide comments in response to the Final Draft of EPA's proposed to ENERGY STAR for Windows, Doors and Skylights Version 6.0.

Best regards,

Connie K. LaFayette
Business Development Manager – Architectural Glass
NSG Group | Pilkington North America, Inc.

**Comments of NSG Group/Pilkington North America to
Energy Star for Windows, Doors, and Skylights
Final Draft Version 6.0**

NSG Group/Pilkington North America ("PNA") submits the following comments to the Energy Star for Windows, Doors, and Skylights ("Energy Star" or " U.S. Energy Star") Final Draft Version 6.0 issued July 31, 2013 ("Final Draft" or "Final Draft Criteria").

I. PNA Fully Supports Adoption of the Final Draft.

PNA supports the adoption of the Final Draft for these reasons.

First, the Final Draft Criteria was developed by EPA in an open and collaborative environment in which all stakeholders were given generous periods of time and numerous opportunities to be heard.

Second, throughout the process, EPA evidenced a willingness to consider and, where appropriate, resolve stakeholder concerns by modifying the criteria. (Examples of this are found in changes made to doors, ½ light and full light; the addition of equivalent energy performance criteria in the north; several modifications to installation instructions; changes to the effective date; changes to U-factor in the North-Central and South-Central Zones; changes to skylight specifications; and changes to the air leakage labeling requirements).

Third, the Final Draft Criteria will significantly increase national annual aggregate energy savings and significantly reduce greenhouse gas emissions related to residential energy use.

Fourth, the Final Draft Criteria is fair to window manufacturers. By moving the effective date to 2015, EPA has responded favorably and fairly to manufacturers that have asked for more time to comply with the new specifications set out in the Final Draft.

Fifth, the Final Draft Criteria is product neutral and fair. By including multiple trade-offs to the prescriptive U-factor specification in the Northern Zone, products that deliver equivalent energy performance will have equal access to the Energy Star label.

Sixth, while PNA would have preferred an even greater U-factor stringency in the Northern Zone (specifically, a 0.25 U-factor), the 0.27 prescriptive U-factor retained by EPA in the Final Draft is a significant movement in the right direction of increased stringency.

Finally, the Final Draft criteria rejected comments calling on EPA to forego any meaningful stringency increase in the Northern Zone. Several stakeholders asked EPA to make only a token change to Northern U-factor, namely, changing it from 0.30 to no lower than 0.29.

Properly, EPA did not accede to this request. Doing so would have been inappropriate for a number of reasons.

First, such a nominal U-factor change would be virtually meaningless, if not misleading to consumers, since it would not result in any meaningful reduction in energy consumption, either in the aggregate or for individual consumers using Energy Star labeled windows in the Northern Climate Zone.

Second, Northern Zone stringency has lagged far behind all other Energy Star climate zones for the last 15 years. Comparing Energy Star's 1998 Northern Zone criteria to its 2012 criteria reveals only a 14.3% increase in stringency, whereas, the South-Central Zone increased U-factor stringency by 53.4% and the Southern and North-Central Zones each increased U-factor stringency by 20% over the same period.

In the Final Draft, U-factor stringency in the Southern Zone will realize a 46.7% increase over Energy Star's 1998 criteria while the Northern Zone will experience a 22.9% increase in stringency. For the Northern Zone, this is clearly a step in the right direction. Anything less would be inconsistent with actions taken by Energy Star in other climate zones, which would, in turn, be unfair to Northern Zone consumers.

Third, according to the NFRC Independent Verification Program, the accepted U-factor performance tolerance for an Energy Star labeled window is 10%. As applied to the current, 2012 Energy Star prescriptive U-factor criteria of 0.30 in the Northern Zone, this performance tolerance means that a Northern window could actually have an acceptable, tested U-factor ranging from 0.27 to 0.33. Viewed in this context, a proposed reduction in Northern U-factor from 0.30 to no lower than 0.29 is meaningless.

Fourth, the Canadian Energy Star Program has already announced that, effective February 1, 2015, it will require a 0.25 prescriptive U-factor in its most populace Climate Zone 2, which overlaps much of U.S. Energy Star's Northern Zone. Canada's decision to adopt a 0.25 prescriptive U-factor in essentially the same climate zone as the U.S. Energy Star's Northern Zone is strong evidence that a less stringent, 0.27 U-factor in the U.S. is more than adequately justified. Moreover, specifying a prescriptive 0.25 U-factor in NRCan's Energy Star Zone 2 virtually assures adequate product availability to meet the less stringent, 0.27 U-factor criteria in the United States. In that regard, any window meeting the 0.25 U-factor prescribed for Zone 2 by the Energy Star Program in Canada will also qualify for an Energy Star label in the U.S. Energy Star's Northern Zone.

Finally, requests that the Northern U-factor be "no lower" than 0.29 are built on an underlying, yet unstated, assumption that, under the Final Draft, windows with a 0.29 U-factor will not qualify for an Energy Star label in the Northern Zone. However, that is, simply, not true. Under the Final Draft, a window labeled with a 0.29 U-factor will qualify for an Energy Star label, so long as it delivers equivalent energy performance by having an SHGC \geq 0.37. In short, given the flexibility

provided by the multiple trade-offs included in the Final Draft criteria, there, simply, is no need, or basis, upon which to limit the prescriptive Northern U-factor to 0.29.

In support of the multiple trade-offs included in the Northern Zone, one stakeholder noted that: "This will allow manufacturers to offer even more viable product options to the market-place."¹ As noted above, with an appropriate SHGC, windows with a 0.29 U-factor are fully eligible for an Energy Star label in the Northern Zone. Given the increased number of viable product options added to the market-place by Northern trade-offs in the Final Draft, there is no reason, whether technical or economic, to limit the prescriptive U-factor in the North to 0.29.

IV. Conclusion

No code, standard or criteria can guarantee that all participants will get everything they want. The Final Draft is no different. A number of stakeholders, including PNA, sought a 0.25 prescriptive U-factor in the Northern Zone. Others sought a U-factor no lower than 0.29. EPA struck a fair balance between competing positions by setting the prescriptive U-factor in the North at 0.27 and providing equivalent energy performance trade-offs that allow higher SHGC windows with 0.28, 0.29 and 0.30 U-factors to bear the Energy Star label. Importantly, EPA struck this balance in transparent and collaborative proceedings where everyone has numerous opportunities to be fully heard.

Lowering the prescriptive U-factor in the north to 0.27 is an important step necessary to ensure that Energy Star Version 6 will benefit northern consumers. Adding trade-offs ensures that the Final Draft Criteria is product neutral and fair and that multiple paths exist for manufacturers to comply with the new, more stringent criteria. It will also ensure that a robust variety of products, all delivering equivalent energy performance, will be available in the market-place.

The fact that Canada's Energy Star Program is adopting a prescriptive 0.25 U-factor in its most populace zone, a climate zone that significantly overlaps with the northern zone of the U.S., establishes not only that a 0.27 prescriptive U-factor is technically feasible, but is also economically and environmentally sound and desirable.

When Canada's Energy Star revisions take effect on February 1, 2015, it will virtually assure that Energy Star labeled windows with a less stringent ≤ 0.27 U-factor will be readily available at competitive prices throughout the Northern Zone of the United States.

Numerous stakeholders have asked that the effective date of Version 6 be extended. In response, EPA has honored that request in an effort to ensure that all manufacturers have time to meet or exceed the specifications set out in the Final Draft.

PNA supports the new criteria set out in the Final Draft, specifically, including the Northern Zone criteria, and looks forward to working with EPA in its implementation.

¹ Pella Corporation comment to the Draft 2 criteria, paragraph 1, February 8, 2013.