October 12, 2012

Mr. Doug Anderson  
Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Re: EPA “Most Efficient” Program for Windows

Thank you for the opportunity to comment on the EPA Most Efficient Program for windows. The members of the American Architectural Manufacturers Association (AAMA) Rapid Response Team have reviewed the proposed criteria and offer the following comments:

Proposed Most Efficient Criteria

AAMA will encourage participation in the Most Efficient program as long as reasonable expectations within each climate zone are established. As the proposed climate zone variations in SHGC criteria exhibits, EPA is fully aware of the differing performance requirements for windows based on region. The same consideration for climatic variance must then be applied to U-factor criteria.

In abandoning the differing U-factor requirements of each climate zone, the Most Efficient program can serve to ultimately discourage homeowners’ investment by severely increasing payback length. For example: requiring triple pane Insulating Glass in the South, as needed to achieve the proposed $\leq 0.20$ U-factor, will result in an untenable 100-year payback.

The following table provides the AAMA recommended criteria revisions, which exhibit substantial, cost-effective and regionally accurate U-factor revisions. The AAMA proposed U-factors achieve a substantial 25% increase in stringency over the proposed ENERGY STAR® 2014 criteria. These revisions are regionally accurate and cost-effective -- and offer homeowners the ability to invest in products that will reduce their energy costs.

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>ES Draft 1 U-factor</th>
<th>MOST EFFICIENT U-factor</th>
<th>AAMA Proposed U-factors</th>
<th>MOST EFFICIENT SHGC (current ES)</th>
<th>MOST EFFICIENT VT</th>
<th>AAMA Proposed VT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>≤ 0.27</td>
<td>≤ 0.20</td>
<td>*≤ 0.20 / ≤ 0.22</td>
<td>Any</td>
<td>≥ 0.40</td>
<td>Any</td>
</tr>
<tr>
<td>North-Central</td>
<td>≤ 0.29</td>
<td>≤ 0.20</td>
<td>≤ 0.22</td>
<td>≤ 0.30</td>
<td>≥ 0.40</td>
<td>Any</td>
</tr>
<tr>
<td>South-Central</td>
<td>≤ 0.31</td>
<td>≤ 0.20</td>
<td>≤ 0.25</td>
<td>≤ 0.30</td>
<td>≥ 0.40</td>
<td>Any</td>
</tr>
<tr>
<td>South</td>
<td>≤ 0.40</td>
<td>≤ 0.20</td>
<td>≤ 0.30</td>
<td>≤ 0.27</td>
<td>≥ 0.40</td>
<td>Any</td>
</tr>
</tbody>
</table>

*≤0.20 fixed /≤0.22 operable

Visible Transmittance

While the promotion of energy-efficiency has served to heighten homeowners’ knowledge of the importance of fenestration U-factors and Solar Heat Gain Coefficient, most consumers have and will continue to base their purchases on aesthetics and window clarity. Manufacturers are fully aware of homeowners’ Visible Transmittance expectations in each climate zone and ensure that their products meet these expectations. The EPA intent to ensure that VT remains at levels consistent with homeowners’ expectations is achieved by utilizing the SHGC of the ENERGY STAR program. These climate zone specific SHGCs significantly reduce the possibility that darkened glass will be an issue.

Mandating a whole product VT of $\geq 0.40$ is punitive to products with grids and products with heavy frames and sashes, and has the potential to impact casements and awnings due to frame-to-glass ratio.
An additional and important consideration is the adoption of sea turtle lighting ordinances by numerous counties and cities along the Florida coastline which mandate a Visible Transmittance value of .45 or less, in accordance with rules established through the Florida Fish and Wildlife Conservation Commission (FWC). If the VT of ≥ 0.40 in the proposed criteria is maintained, very few windows meeting the Florida coastal requirements would be available.

Based on these factors, AAMA cannot support a VT requirement for the Most Efficient program.

**NAFS Certification**

AAMA supports adding an air, water and structural (AWS) component to the program. However, we recommend that the proposed minimum performance grade of >15 be increased to ≥20 to further ensure AWS integrity.

A national network of laboratories accredited by AAMA to test to the NAFS Standard is available through the following link: [http://www.aamanet.org/accreditedlabs_results.asp?keyword=nafs&state=&Submit.x=29&Submit.y=10](http://www.aamanet.org/accreditedlabs_results.asp?keyword=nafs&state=&Submit.x=29&Submit.y=10)

**Program Length and Criteria Revision**

AAMA suggests that the cycles for both the ENERGY STAR and ENERGY STAR “Most Efficient” Programs be revised to an appropriate timeframe that balances the necessary and costly adjustments to manufacturing lines with a reasonable payback on the substantial investments needed to meet Most Efficient windows requirements.

A minimum of a 36- to 48-month cycle offers manufacturers the needed time to consult with R&D, make affordable and sound decisions in enhancing product lines, and develop promotional and marketing materials to educate and inform consumers of energy-saving product enhancements.

**General Comments**

A review of the products currently represented within the Most Efficient program shows that the established appliance criteria allows 8% of the products to meet program requirements. The proposed criteria for windows allows only one-tenth of one percent of currently available products to achieve Most Efficient status. This exclusivity not only reduces homeowners’ abilities to obtain the recommended products, but points them toward products that have a much higher production cost and therefore a significantly higher retail price.

The need for affordability within the Most Efficient program cannot be understated. American homeowners remain in the midst of a devastating economic period. The EPA's intent to increase energy-efficiency should not continue to result in creating products that are unaffordable to U.S. consumers.

We appreciate this opportunity to offer comments on the implementation of the ENERGY STAR Most Efficient program for windows and remain available to provide additional information if necessary.

Thank you.

Rich Walker
American Architectural Manufacturers Association
President and CEO