



2311 Wilson Boulevard Suite 400 Arlington VA 22201 USA
Phone 703 524 8800 | Fax 703 562 1942
www.ahrinet.org

October 1, 2018

Ms. Ann Bailey
Director, ENERGY STAR Product Labeling
United States Environmental Protection Agency
Washington, DC 20460

(Sent via email to MostEfficient@energystar.gov)

Re: Draft 2019 Criteria for ENERGY STAR Most Efficient Designation

Dear Ms. Bailey:

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is submitting these comments in response to the U.S. Environmental Protection Agency (EPA) ENERGY STAR draft 2019 specifications for its “Most Efficient” designation, issued on July 30, 2018.

AHRI opposes the change proposed for ductless and ducted ACs and HPs to require variable capacity, i.e., at least three stages. The rationale that EPA provided in its summary memorandum to support this change is “the ability of the technology to provide excellent comfort and efficiency, in all climates. In addition, the technology holds particular promise to increase efficiency and grid stability without sacrificing performance.” EPA also noted that most ducted and all ductless ACs and HPs currently recognized as “Most Efficient” would meet this proposed criteria.

During its webinar on September 11, EPA staff noted they had received a comment from a manufacturer that this change would eliminate its best-selling model from the Most Efficient program. In response to a question submitted during the webinar, staff also noted that the variable capacity provides better comfort mostly due to better dehumidification due to longer run times and that variable capacity will allow for better demand response in a smart-grid future.

We do not believe that the rationale supports the change to the specification at this time. Significantly, the existing specification already requires two-stage capacity for these products. The ability to modulate to a lower operating speed, whether it is through two or more stages, is the most significant characteristic of a system that achieves improved dehumidification and efficiency. While EPA noted that, on average, variable-capacity systems achieve greater turndowns, it did not provide evidence that would allow

stakeholders to determine the magnitude of improved dehumidification or efficiency from the marginal improvements in turndown. Therefore, we suggest that EPA maintain the 2018 requirements, especially since this change could potentially eliminate a significant share of sales volume from the “Most Efficient” program.

AHRI agrees with EPA that there is significant potential for two-stage and variable capacity ACs and HPs to integrate with the electricity grid to manage demand. However, one significant piece that will help utilities take advantage of this capability is integrated demand response capability. In an August 3, 2018 discussion guide, EPA inquired about the inclusion of optional connected criteria in the ENERGY STAR Residential Air Source HP and Central AC Equipment Version 6.0 specification. AHRI provided comments jointly with the Heating, Refrigeration, and Air Conditioning Institute of Canada on September 21 supporting a discussion on addressing connected criteria upon completion of AHRI Standard 1380P, *Demand Response through Variable Capacity HVAC Equipment in Residential and Small Commercial Applications*, which is being developed with the contribution of EPA and utility groups. We are requesting that EPA avoid making changes to its “Most Efficient” specification that are aimed at addressing demand response before EPA completes connected equipment criteria for its Version 6.0 ENERGY STAR specification. Once both of these are completed, a full and clear picture will emerge regarding how utilities will apply multiple capacity equipment for electricity demand management and how AHRI members will manufacture equipment to meet those needs.

In summary, AHRI recommends that EPA adopt 2019 Most Efficient criteria for ducted and ductless ACs and HPs that is unchanged from the 2018 Most Efficient criteria for these products.

We appreciate the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me, ayilmaz@ahrinet.org, or Laura Petrillo-Groh, lpetrillogroh@ahrinet.org.

Sincerely,



Aykut Yilmaz
Lead Regulatory Advisor, Heating Technology

cc: L. Petrillo-Groh, AHRI
C. Davidson-Hood, AHRI
A. Daken, EPA