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Ms. Abigail Daken  
Manager, ENERGY STAR HVAC Program  
United States Environmental Protection Agency  
Washington, DC 20460

**Submitted via e-mail: [cacashp@energystar.gov](mailto:cacashp@energystar.gov)**

**Re: EPA ENERGY STAR Residential Air Source Heat Pump (ASHP) and Central Air Conditioner (CAC) Equipment Version 6.0 Draft 1 Specification.**

Lennox International Inc. (Lennox) hereby submits comments on the *United States Environmental Protection Agency (EPA) ENERGY STAR Residential Air Source Heat Pump (ASHP) and Central Air Conditioner (CAC) Equipment Version 6.0 Draft 1 Specification* as published by the EPA on April 23, 2019.

Lennox is a leading provider of climate-control solutions for heating, air conditioning, and refrigeration markets. Lennox is a publicly-traded company that has thousands of employees, and it manufactures equipment addressed by the EPA ENERGY STAR ASHP and CAC program criteria.

#### **A. General Comments.**

Lennox believes the EPA ENERGY STAR program can effectively promote increased energy efficiency. This can be accomplished by maintaining a program that is not burdensome to administer combined with *reasonable* specifications for energy performance criteria that consider impacts to consumers, contractors, distributors and manufacturers. Unfortunately, the proposed draft Version 6.0 ASHP/CAC presents significant problems, including both substance and timing. Lennox recommends that EPA strongly consider the following for the ENERGY STAR residential ASHP and CAC specifications:

- ***ENERGY STAR should maintain the current performance levels through January 1, 2023, when updated Department of Energy (DOE) ASHP and CAC minimum energy conservation standards go into effect.***
- ***ENERGY STAR criteria should be performance based and must avoid prescriptive requirements including multi-stage requirements.***
- ***ENERGY STAR should not impose requirements beyond the current DOE federal test procedure which applies to ASHP and CAC products.***
- ***ENERGY STAR should not impose regional heat pump requirements.***
- ***AHRI 1380 should be the foundation for discussing optional connected criteria. While a significant ENERGY STAR ASHP/CAC update is not timely, this AHRI standard can provide valuable information for future discussions.***

Historically, when EPA overreaches by imposing uncoordinated or burdensome ENERGY STAR requirements, participation in the program declines precipitously. While Lennox conceptually supports the ENERGY STAR program, Lennox will continue to evaluate participation based on cost, value and the associated return on our investment. EPA's proposal to impose significantly altered requirements prior to the DOE energy conservation standard change in 2023 risks Lennox's participation in the program and potentially a similar decline in ENERGY STAR participation within the HVAC industry. Although Lennox produces many models that are rated as the most efficient ASHP and CAC products available in the market and supports the EPA ENERGY STAR efforts to recognize and promote highly efficient products, Lennox does not support the proposed Version 6.0 specification and would need to seriously consider our continued participation in the program if enacted. The current regulatory landscape for HVACR manufactures includes impending DOE standard actions including the following which directly impact Lennox:

- Establishment of standards for Fan Efficiency Rating effective July, 2019.
- Increase standard for Single Package Vertical products effective September, 2019.
- Establishment of standards for Walk-In Coolers and Freezers effective January, 2020.
- Increased standards for Residential ASHP and CAC products effective January, 2023.
- Increased standards for Commercial Unitary Air Conditioners effective January, 2023.

The new DOE standards require significant product redevelopment resources. Other current significant manufacturer burdens and manufacturing redevelopment demands include an increasing effort to move toward low GWP refrigerants which will double the development burden of the impending DOE standards. Significant work also exists to develop the appropriate safety standards and industry training to aid in a safe transition to low GWP refrigerant alternatives classified as mildly flammable.

Lennox is strongly opposed to the proposed timing of changes to the requirements of the ENERGY STAR program prior to scheduled DOE energy conservation standard changes. Instead of adding to the already substantial regulatory related development challenges, Lennox would most likely choose to forego participation in the ENERGY STAR program to focus on an already challenging regulatory related development burden.

Lennox further recommends that any changes to the ENERGY STAR residential ASHP and CAC criteria be coordinated with the Consortium for Energy Efficiency (CEE). CEE is the leading consortium of efficiency program administrators across the United States and Canada. CEE members work to unify energy program approaches across jurisdictions to increase the success of efficiency programs. Lennox finds that having one set of specifications that can be promoted by all efficiency programs in the US and Canada makes it easier for contractors, distributors, and manufacturers to engage and hence allows for a larger impact on the market for enhanced energy efficient products.

**B. Specific Issues regarding the Proposed Criteria.**

**1. ENERGY STAR should maintain the current performance levels through January 1, 2023, when updated DOE ASHP and CAC minimum performance standards go into effect.**

The current ENERGY STAR 5.0 criteria for ASHP and CAC products went into effect on September 15, 2015 following the change in DOE minimum efficiency standards on January 1, 2015. The next change in DOE standards will become effective on January 1, 2023. Now is simply not the time for a major restructuring of the ASHP/CAC ENERGY STAR program. Manufacturers are in the midst of extraordinary regulatory changes requiring significant development efforts to meet the 2023 standards as well as address ongoing regulatory developments outlined above. The transition to low GWP refrigerants will effectively double manufacturer design efforts to achieve the 2023 standard. Major changes to the ASHP/CAC ENERGY STAR program at this juncture could lead to a significant decline in industry participation in the program, contrary to the goals of the ENERGY STAR program.

**2. ENERGY STAR criteria must avoid prescriptive requirements including multi-stage requirements for ASHP and CEC equipment.**

EPA must not impose both performance standards and a prescriptive “design requirement” (the “Staged or Variable Capacity Requirement”) on air-conditioning and heat pump equipment. Doing so is overly prescriptive, prevents manufacturers from meeting applicable performance standards in the most efficient way possible, and inhibits innovation. Moreover, it directly contradicts EPCA statutory provisions, which limit efficiency standards for a given product to a performance standard or a “design requirement.” (42 USC 6291(6)). Furthermore, EPCA enumerates specified products for which a design standard can be established and does *not* include central air conditioners. (See 42 USC 6291(6)(B) and DOE’s finding at 71 FR 59,208 that establishing “both a performance standard and a design requirement is beyond the scope of the Department’s legal authority” and that design requirements cannot be specified for categories of products such as central air-conditioning).

Even if Energy Star is voluntary, EPA should not now promulgate voluntary standards that are grossly inconsistent with the expressed will of Congress and the rulemaking of DOE (the agency with principal jurisdiction over applicable energy conservation standards). For central air conditioning systems, Congress has specified government should not seek to micro-manage equipment engineering, and EPA must not now attempt such micromanagement by mandating variable capacity requirements in addition to heightened performance standards.

Lennox offers a variety of variable-capacity ASHP and CAC products, including two stage and fully variable products. However, EPA should base the primary criteria for the ENERGY STAR ASHP and CAC programs on the federally-mandated energy efficiency metrics for these products and avoid additional prescriptive requirements. Well-designed single-stage equipment can cost-effectively perform above baseline efficiency levels, and EPA should not stray from setting performance-based standards using existing federal metrics for this equipment.

**3. Regionally-specific performance requirements beyond current federal metrics should be avoided.**

Lennox strongly opposes EPA imposing new regional requirements into the ENERGY STAR program for ASHP products. Having one set of specifications that can be promoted by all efficiency programs in the U.S. and Canada makes it significantly more cost effective for contractors, distributors, and manufacturers to participate in programs like ENERGY STAR and hence allows for a larger impact on the market for enhanced energy efficient products. Regional requirements would slice the market into smaller segments and may regionally limit participation in the program, as they necessitate regional specific product designs which individual manufacturers may not be in a position to provide due to the need for additional models, increased costs and limited opportunity in certain markets. This segmentation can reduce consumer offerings and thus competition and has negative market impact on higher efficiency products due to limited consumer choice and higher product cost. Accordingly, ENERGY STAR should not impose new regional ASHP requirements, including tightened HSPF and new Coefficient of Performance (COP) and Percentage of Heating Capacity requirements, before new DOE federal standards applicable to ASHP take effect in 2023. Similarly, it is inappropriate to use the “Appendix M1” testing requirements for ENERGY STAR (e.g., for the “very low temperature Heating Test condition”) in advance of applicable DOE requirements in 2023.

Additional performance requirements beyond the federal metrics will require additional testing by manufactures, resulting in increased cost, resources and burden. Given the proposed EPA timing this would involve re-testing product models already available on the market to meet the ENERGY STAR proposed criteria as well as additional test burden for new products intended for inclusion in the ENERGY STAR program. It is important to note that the ENERGY STAR program requires third party certification, which includes verification testing. Testing to verify additional requirements adds significant burden and could severely strain available testing capacity.

**4. Lennox supports AHRI 1380 as a foundation for discussing optional connected criteria.**

To the extent EPA considers grid connected criteria at this juncture, AHRI 1380 should serve as the foundation for those considerations. Lennox supports the AHRI 1380 standard for grid responsive systems (DR) and encourages the EPA to expand its current ENERGY STAR Communicating Thermostat Specification to recognize products that provide this capability beyond typical set-back DR approaches.

***In conclusion, Lennox recommends that ENERGY STAR maintain the current 5.0 performance criteria through January 1, 2023, when updated DOE ASHP and CAC minimum performance standards go into effect. A major restructuring of the ASHP/CAC ENERGY STAR program is not now timely given the effective date of these significant new DOE performance standards, and the major product redesigns underway to meet DOE requirements. Please feel free to contact us with any further questions.***

Sincerely,

A handwritten signature in black ink that reads "David Winningham". The signature is written in a cursive style with a large, prominent initial "D".

David Winningham  
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