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May 16, 2024

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

Submitted via e-mail: HVAC@energystar.gov

Re: EPA ENERGY STAR Residential Furnace and Central Air Conditioner Sunset Proposal

Lennox International Inc. (Lennox) hereby submits comments on the *United States Environmental Protection Agency ENERGY STAR Residential Furnace and Central Air Conditioner Proposal* as published by the EPA on April 16, 2024.

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 Residential Furnace and Central Air Conditioner proposal.

A. General Comments.

Lennox believes the EPA ENERGY STAR program can effectively promote increased energy efficiency. Effective promotion of energy efficiency is 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*. Further, *the ENERGY STAR program should be nationally based* and work to unify energy program approaches across jurisdictions to increase the success of efficiency programs and avoid regional requirements which dilute program participation and effectiveness. As a publicly traded company, Lennox supports environmental stewardship and efforts to improve energy efficiency that reduce emissions. Lennox recommends for the base ENERGY STAR program that the EPA take a technology-neutral strategy promoting the responsible use of all energy sources, while recognizing the importance that both energy efficiency and fuel diversity play in meeting future energy demands. The U.S. market has very diverse climates which require different solutions for human comfort, safety, and affordability. Fuel flexibility provides states and localities the opportunity to benefit from a wide range of energy efficient products that lowers energy usage and customers' utility bills, while ensuring consumers have choices in selecting the product that works best for their space heating and cooling needs.

Lennox recognizes and supports the promotion of Heat Pump products in the U.S. market to improve energy efficiency and reduce emissions. Lennox offers a wide range of Heat Pump products to support these efforts, including being the first manufacturer to complete the

Department of Energy Cold Climate Heat Pump Challenge. While this was a great accomplishment for Lennox, there are still many challenges to meeting the diverse comfort needs of the U.S. market including consumer economics, sufficient electrical grid infrastructure, and application issues for existing homes for broader adoption of Heat Pumps in residential applications. While significant progress is being made to overcome these challenges, we find that a balanced approach that encourages energy efficiency for all heating and cooling products is more appropriate than incentivizing one single option for all consumers. In addition to industry leading Heat Pump products, Lennox manufactures Furnace and Air Conditioning products with industry leading efficiency levels and finds there is still much room to drive a more efficient product mix to further reduce energy consumption and greenhouse gas emissions.

B. Specific Issues regarding the ENERGY STAR Residential Furnace and Central Air Conditioner Proposal

Lennox submitted comments previously in regard to the May 18, 2023 Sunset Proposal for Furnaces and Central Air Conditioners and appreciates the actions the EPA is taking to address the issues raised in those comments. While several of the issues raised have been addressed in the EPA proposal, Lennox finds the issues raised in those comments to remain valid. In addition to the above general comments, Lennox is providing comments regarding specific issues related to the ENERGY STAR Proposal outlining the key issues with supporting detail as follows

- **Lennox strongly supports the continuation of the ENERGY STAR Residential Furnace specification and the increase in for gas furnaces to 97% AFUE.**
- **Lennox supports the addition of ENERGY STAR dual-fuel specification to the Residential Furnace specification.**
- **Lennox appreciates the extension of the ENERGY STAR Residential Central Air Conditioner specification but asked for further consideration of continuing the program.**

Lennox strongly supports the continuation of the ENERGY STAR Residential Furnace specification and the increase in for gas furnaces to 97% AFUE.

With the November 2023 DOE Final Rule publication moving the minimum standard to 95% AFUE, Lennox supports increasing the ENERGY STAR specification to 97% AFUE and finds this to be an appropriate incremental increase in efficiency for gas furnaces. This would also harmonize levels with the CEE Residential Heating and Cooling Initiative Tier 3 for gas furnaces and the associated requirements of the IRA 25C Tax Credit levels. Lennox has consistently promoted that the *ENERGY STAR program should be nationally based and work to unify energy program approaches across jurisdictions to increase the success of efficiency programs and avoid regional requirements which dilute program participation and effectiveness.* Lennox would encourage expedited implementation of the proposed change to the Residential Furnace specification to help achieve this goal.

Lennox supports the addition of ENERGY STAR dual-fuel specification to the Residential Furnace specification.

Lennox recommends that the ENERGY STAR Residential Furnace specification also include levels for dual-fuel systems that require a 95% AFUE gas furnace in combination with a heat pump. Dual-fuel solutions provide an effective means to increase efficiency and reduce emissions in a manner that may be more palatable to consumer concerns of meeting the heating load and comfort at low ambient conditions.

Lennox understands that the recently released DOE Test Procedure NOPR is proposing means to calculate the combined efficiency of these applications as developed collaboratively between the industry and other stakeholders. Lennox would recommend moving forward with a simple near-term approach to require a 95% AFUE furnace combined with a heat pump while DOE finalizes the Test Procedure and EPA does further data analysis regarding.

Lennox also supports further work to evaluate potential for heat pump replacement with an existing furnace and appropriate controls to aid in the acceleration of heat pump adoption while minimizing consumer disruption and cost. As stated in prior Lennox comments, Dual-fuel heat pump/gas furnace solutions should be encouraged in both new and existing residences as an alternative to all-electric solutions and can aid in avoiding the additional installation and operating cost while allowing a pathway for broader heat pump adoption to save energy, reduce emissions and improve grid resiliency.

Again, Lennox supports accelerated adoption of heat pumps but notes the EPA comment matrix regarding backsliding stating that “heat pumps provide additional functionality at little extra cost”. Lennox would caution that this is a broad statement that may not be accurate in many situations. Particularly in replacement situations there are many considerations including heating building load, need for building envelope improvements, electrical requirements, duct upgrades for increased airflow and other than can add considerable cost. Dual-fuel solutions can be a great benefit to aid in potential overcoming cost obstacles and customer acceptance.

Lennox appreciates the extension of the ENERGY STAR Residential Central Air Conditioner specification but asked for further consideration of continuing the program.

Lennox finds the extension of the ENERGY STAR Residential Central Air Conditioner specification through 2025 a welcome change but asked that EPA fully consider continuing the program. Efforts toward electrification/decarbonization have identified gaps in the U.S. electrical grid to support these efforts. Moving the thermal load from gas to electric will result in a significant increase in electric peak in winter energy use compounding this issue. In addition, the peak cooling load performance of certain heat pump products must be considered as they could have significant peak cooling load impacts.

While the U.S. transitions toward these goals the EPA should continue to promote energy efficiency for all HVAC products as it is the most effective method to reduce overall energy consumption and impacts to the grid. This includes continued recognition for both Furnace and Central Air Conditioning products as outlined in our previous comments in detail. Lennox would ask for further review of the issues presented there and consideration of continued Central Air Conditioner recognition

In conclusion, Lennox supports the ENERGY STAR proposal for Furnace products and consideration of a dual-fuel addition to the specification. Lennox also recommend the EPA maintain the Central Air Conditioner program and take a technology neutral approach that promotes improved energy efficiency for all HVAC product types. Lennox finds this considers the diverse space heating and cooling needs for the U.S. market and maintains cost effective choices for consumer to encourage reduced energy consumption and associated emissions.

Sincerely,

A handwritten signature in cursive script that reads "David Winningham". The signature is written in black ink and is positioned above the typed name.

David Winningham
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