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June 22, 2023

Ms. Ann Bailey
Director, ENERGY STAR HVAC Program
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 Sunset Proposal*, as published by the EPA on May 17, 2023.

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 Sunset Proposal

In addition to the above general comments, Lennox is providing comments regarding specific issues related to the Sunset Proposal. Lennox encourages the EPA consider the potential impacts of this proposal including the following;

- **Heat Pump adoption in dual fuel applications will likely be reduced if high efficiency Gas Furnace incentives / ENERGY STAR ratings are removed.**
- **The Sunset Proposal ignores “straight cool” markets and the removal of an ENERGY STAR designation for Air Conditioners will likely result in a mix down to lower efficiency Air Conditioners in straight cool markets if incentives are eliminated that are currently based on Energy Star levels.**
- **The Sunset Proposal does not consider where the electrical grid has not transitioned to cleaner power generation or is not ready for an all-electric mix.**
- **The Sunset Proposal assumes Cold Climate Heat Pump products are broadly available or commercialized nationally.**
- **The Sunset Proposal ignores consumer choice and technology neutrality.**

Dual Fuel Heat Pump adoption could be limited if Gas Furnace incentives / ENERGY STAR ratings are removed

Residential Heating building loads are significantly higher in many climate zones across the U.S. market than the cooling building loads. While Cold Climate Heat Pump (CCHP) technology is improving Heat Pump performance, supplemental heat will still be required to fully meet the building load and ensure consumer comfort and safety in colder climates. Supplemental electric heat to meet the building load may require extensive electrical upgrades to support the additional load including panel or service upgrades which can be cost prohibitive from both an installation and operating cost perspective. Also, wide adoption of all-electric solutions may not be supported without upgraded electrical infrastructure and could compromise electrical grid resiliency. In addition, larger capacity CCHP to meet the building load will require higher airflow levels and associated upgrades to existing duct work to support the needed airflow adding to the installation cost and operating cost if ductwork is not improved. 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.

Ignores incentives for straight cool markets

The U.S. market includes highly populated southern straight cool markets where there is little if any need for heat including south Florida, south Texas and southern California. These areas typically have significant cooling loads and hours of operation and are well served by Central Air Conditioning products and the EPA should continue to promote higher efficiency Air Conditioner products which are generally lower cost than a comparable efficiency Heat Pump. Consumers should be able to choose the best product that suits their unique individual needs and continued ENERGY STAR recognition should encourage consideration of more efficient products that meet these needs.

Does not consider where the electrical grid has not transitioned or is not ready for all electric

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. While these gaps vary around the country, it is well known that massive infrastructure upgrades are needed to support these efforts as well as to support conversion to renewable energy sources.

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.

The DOE efficiency standards for Furnace products have remained largely unchanged for many years and there is still much room to reduce gas consumption by improved Furnace energy conservation standards. While the DOE has proposed to increase standard levels from the current 80% AFUE minimum standard to 95% AFUE, the DOE Final Rule is still pending, and the earliest implementation is 5 years after publication of the Final Rule. Continued recognition of highly efficient furnaces which can be up to 98%+ AFUE provides the opportunity to incentivize reduced energy use and emissions for both Furnace and dual fuel Heat Pump applications.

Assumes Cold Climate Heat Pump products are broadly available or commercialized

As stated earlier Lennox was the first to develop and complete the requirements of the DOE CCHP Challenge and is now in the process of validating field performance. While these products can provide a step function improvement in Heat Pump heating performance, the commercialization of these products and those being developed by other manufacturers who are competing in the Challenge is still in process. There is also a proliferation of requirements as to what constitutes a CCHP and requirement/processes to validate performance vary by program, which is also problematic. The industry has engaged with the DOE and other stakeholders to address this issue through further amendments to the industry test procedures to ensure that the

measured performance is representative and provides a level playing field for manufacturers. These issues must be resolved before Cold Climate Heat Pumps are broadly available for consumers in cold climates.

Ignores consumer choice and technology neutrality

Lennox recommends for the base ENERGY STAR program that the EPA take a technology neutral approach to promoting the responsible use of all energy sources, while recognizing the importance that energy efficiency and fuel diversity play in meeting future energy demands. The U.S. market has very diverse climates which drive differing needs for human comfort and safety. 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. Promoting energy efficiency broadly in the near term will likely have a larger impact to reduce energy consumption and associated emissions rather than taking a one size fits all approach. Additionally, Lennox recommends not making Furnaces and Air Conditioners the next political issue. If one Administration picks winners and losers, the next Administration can pick winners and losers as well. Lennox prefers the stability, consistency, predictability of a technology neutral EPA that lets innovation and competition win in the market.

In conclusion, Lennox recommends ENERGY STAR program maintain Central Air Conditioning and Furnace products in the ENERGY STAR program and take a technology neutral approach that promotes improved energy efficiency for all HVAC product types that 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,



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