August 12, 2024

Ms. Ann Bailey  
Director, ENERGY STAR Product Labeling  
Ms. Holly Tapani  
ENERGY STAR HVAC Program  
United States Environmental Protection Agency

(Submitted via email to MostEfficient@energystar.gov)

Re: AHRI Comments in Response to ENERGY STAR Most Efficient 2025 Proposed Recognition Criteria for Air Source Heat Pumps

Dear Ms. Bailey and Ms. Tapani:

Johnson Controls, Inc. (Johnson Controls) is pleased to provide comment on the U.S. Environmental Protection Agency’s proposed 2025 (EPA) ENERGY STAR® Most Efficient (ESME) Recognition Criteria for Air Source Heat Pumps issued July 9, 2024.

Johnson Controls (JCI) is a leading global provider of heating, ventilating and air conditioning equipment, building controls, security and fire/life safety solutions which includes brands such as York, Metasys, Simplex, Grinnell, Zettler and Tyco. The company has nearly 100,000 employees and over 1,000 locations globally and has long been a leader in sustainable and energy efficient technology. Since 2020, we have been transforming our business to focus on building decarbonization and water conservation through the trifecta of low-carbon, energy efficiency, electrification, and digitalization.

Principals

JCI is supportive of updating the ESME program. We share EPA’s mutual goals of recognizing and promoting industry leading energy efficient HVAC products. We also believe this should be done in concert with our principals of keeping cost to consumers as low as possible by minimizing unique performance requirements that, while well intentioned, exponentially increase manufacturers’ design and testing burden.

Timing

In alignment with our feedback to CEE’s proposed specification changes for 2025, we respectfully request that the proposed ESME program align with our requested 1/1/2026 effective date versus the proposed 1/1/2025. JCI urges EPA to align the ESME criteria with the CEE Advanced Tier (without reducing the proposed EER2 levels) to avoid, unique product
efficiency tiers which require additional lab testing and performance certification. While JCI understands these comments are directed at the ESME program, in taking a holistic view of the other performance criteria which impacts a manufacturer’s overall portfolio, JCI also request that the pending CEE updates align with the base ES program at the base / minimum level with ESME being positioned higher again with the caveat that EER2 level not be reduced from present levels.

Criteria

In principal, JCI recommends minimal changes to the proposed 2025 ESME program based on the current 2024 criteria (released October 2023) as these products have not have time to be sufficiently commercialized in the market. JCI believes that for programs such as Energy Star, Energy Star Most Efficient, the CEE 25C Tax Credits and other similar incentive programs, that a minimum of two full heating and cooling seasons are needed to ensure market adoption and allow inventory of non-qualifying products to be sold-through. As noted, the 2024 ESME specification was not finalized until October of 2023 and thus did not allow manufacturers sufficient time to redesign and reposition products for the market in the few short months prior to the 2024 programming effective date. Due to EPA’s American Innovation and Manufacturing (AIM) Act mandating a transition to Low GWP refrigerants beginning 1/1/2025, manufacturers were not anticipating changes in efficiency levels for incentive programs like that of ES, ESME and CEE until at least a year after 1/1/2025. Back-to-back, serial rulemakings from multiple agencies (DOE, EPA ESME, EPA AIM, CEE, etc.) are disruptive to the entire HVAC market, result in higher development cost, increase the potential for stranded / slow moving inventory and result in higher cost to consumers.

Future Criteria

JCI would propose the following ESME levels for a 1/1/2026 or later effective date. JCI would emphasize that we do not support any further reduction of EER2 levels from current levels for both ducted and ductless categories. As noted in our CEE comments, JCI’s customers continue to express their support for full-load cooling efficiency due to their largest operational cost occurring due peak cooling months. JCI would explore the option of a future full load heating metric as grids in some markets shift from peak summer cooling to peak winter heating.

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<th>System Type</th>
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</tbody>
</table>

cont.
CVP / ccHP Criteria

As previously noted, JCI would request alignment of ESME cold climate criteria with that of CEE’s optional cold climate metrics with the noted exception of EER2 levels not being reduced from present levels. In support of test procedure alignment, JCI would support use of the AHRI 210/240 Controls Verification Procedure (CVP) but would not be opposed to the use of the Energy Star (ES) version of CVP as an acceptable equivalent for some period of time to allow development and audit labs to better understand its unique test requirements. JCI would encourage EPA to minimize additional test burden to manufacturers by closely aligning its final version of CVP with the recently released AHRI 210/240 CVP thereby avoiding additional testing burden that could occur if EPA were to finalize a unique CVP test procedure.

Installation Criteria

JCI recommends a level playing field between ducted and ductless products regarding the installation capabilities per the current (base) ES 6.1 specification. JCI’s research shows there are multiple product offerings currently in the market, both ducted and ductless which can support several of the noted criteria. Therefore, for the proposed ESME, JCI recommends that equivalent installation criteria (meeting 2 or more requirements) be applicable to both ducted and ductless or the criteria be dropped altogether. JCI does not support any installation criteria for the (base) ES 6.1 as we feel such high end features should be reserved for the ESME criteria.

Conclusion

JCI thanks EPA for the opportunity to comment on ESME and stands ready to answer any questions the agency might have.

Respectfully,

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