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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF AIR AND  
RADIATION

November 1, 2021

Dear ENERGY STAR® Light Commercial HVAC Brand Owner or Other Interested Party:

With this letter, the U.S. Environmental Protection Agency (EPA) is pleased to present the [ENERGY STAR LCHVAC Draft 1 specification](#) for stakeholder review. EPA plans to hold a webinar on November 16<sup>th</sup> from 12pm-2pm ET to discuss the Draft 1 specification in greater detail. Stakeholders are encouraged to submit comments on this Draft to EPA no later than December 13, 2021.

#### Background

EPA begins this specification revision in response to the forthcoming increase in stringency of federal minimum efficiency requirements for HVAC equipment that will go into effect on January 1, 2023. As the 2023 requirements are more stringent than those posed by the Version 3.1 specification, it is critical that the ENERGY STAR criteria for LCHVAC products receive an update in parallel. EPA therefore intends for Version 4.0 to take effect by January 1, 2023.

#### Proposal Summary

To ensure that that ENERGY STAR continues to distinguish the top performing products in terms of energy efficiency while supporting national decarbonization goals, the Version 4.0 Draft 1 specification proposes the following changes and identifies other areas for further discussion:

- **Scope:** EPA proposes to bring units with a cooling capacity below 65,000 Btu/h into the scope of this Version 4.0 specification after they were previously removed from scope for Version 3.0. This proposal is based on manufacturer feedback indicating that the market would be best served by an ENERGY STAR specification that offers certification to these products. EPA has however been unable to find updated installation cost and energy usage data to suggest whether payback times for these units has improved. As such, EPA welcomes the submission of data regarding the purchase, installation, and/or energy costs of these units. The performance criteria proposed for these products aligns with associated CEE Tier 2 criteria levels.
- **Performance Criteria:** EPA proposes higher IEER and EER requirements for Central Air Conditioner (CAC) products and higher IEER, EER and COP at 47°F requirements for Air-Source Heat Pump (ASHP) products. The stringency of these criteria recognizes those products that clearly perform at a level above the 2023 federal minimum efficiency requirements. EPA does not propose a change to the criteria for VRF mini-split systems as DOE is currently reviewing the test method and federal standard applicable for such products.
- **Cold Climate Recognition:** EPA proposes recognizing ASHP and VRF mini-split products meeting cold climate performance requirements with an "ENERGY STAR Cold Climate" label. EPA believes

that capacity maintenance at low temperatures is a critical component to cold climate performance because if a product cannot maintain capacity, it is likely to become undersized for the intended application. As such, the criteria put emphasis on a product's ability to maintain heating capacity at very low ambient temperatures while also retaining a high COP. EPA does however seek industry insight into the whether a moderately increased COP at low temperatures is more influential than capacity maintenance on annual energy costs.

- **Gas/Electric Packaged Units:** EPA proposes that the gas furnace included in a Gas/Electric Packaged Product must have 3 or more capacity stages. This is intended to incentivize the use of multi-capacity heating technologies that are known to provide energy and cost savings.
- **Connected Criteria:** EPA does not propose criteria that would lead to a "Connected" designation for LCHVAC products due to an understanding that demand response and energy management programs for commercial units are typically implemented by a building management system (BMS) as opposed to the unit itself. As EPA recognizes that a unit's ability to communicate with building occupants, utilities, and other equipment may lead to additional energy and cost savings, the Agency seeks industry insight into what, if any, open source communication protocols are being used for LCHVAC products.

#### **Comment Submittal Process**

Stakeholders are encouraged to provide written comments for EPA consideration to [LCHVAC@energystar.gov](mailto:LCHVAC@energystar.gov) by **December 13, 2021**. All comments will be posted to the [ENERGY STAR LCHVAC Product Development website](#) unless the submitter requests otherwise.

#### **Stakeholder Meeting**

EPA plans to host a stakeholder webinar on November 16<sup>th</sup> from 12pm-2pm to discuss the Draft 1 specification and address initial stakeholder comments and questions. Stakeholders interested in participating in this discussion should RSVP [here](#).

Please direct any questions to Abigail Daken, EPA, at [daken.abigail@epa.gov](mailto:daken.abigail@epa.gov) or 202-343-9375, and Cody Niblett, ICF, at [cody.niblett@icf.com](mailto:cody.niblett@icf.com) or 202-862-1245. For test procedure inquiries, please contact Ashley Armstrong, U.S. Department of Energy, at (202) 586-6590 or [Ashley.armstrong@ee.doe.gov](mailto:Ashley.armstrong@ee.doe.gov).

Sincerely,



Abigail Daken, Product Manager  
ENERGY STAR for HVAC

Enclosures:

[ENERGY STAR Light Commercial HVAC Version 4.0 Draft 1 Specification](#)  
[ENERGY STAR Light Commercial HVAC Version 4.0 Draft 1 Data and Analysis](#)

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