Appliance Standards Awareness Project
American Council for an Energy-Efficient Economy

October 16, 2023

Mr. Lucas Adin
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Building Technologies, EE-5B
1000 Independence Avenue SW, Washington, DC 20585

RE: Docket Number EERE-2023-BT-TP-0014: Notice of Proposed Rulemaking for Test Procedures for Air-Cooled, Evaporatively-Cooled, and Water-Cooled Commercial Package Air Conditioners and Heat Pumps

Dear Mr. Adin:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP) and the American Council for an Energy-Efficient Economy (ACEEE) on the notice of proposed rulemaking (NOPR) for test procedures for air-cooled, evaporatively-cooled, and water-cooled commercial package air conditioners and heat pumps (CUACs and CUHPs). 88 Fed. Reg. 56392 (August 17, 2023). We appreciate the opportunity to provide input to the Department.

We support the Department's proposed test procedure, which generally incorporates the recommendations of the ASRAC CUAC and CUHP test procedure working group term sheet[1] and also includes several corrections and additions that were raised in the AHRI Standard 1340-202x Draft. We believe that these updates will significantly improve the representativeness of the test procedure, with corresponding energy efficiency metrics that more comprehensively capture the energy consumed by the equipment.

We support DOE's proposal for determining minimum part-load airflow. Recommendation #6 in the term sheet instructs that airflow for all test points must be no less than $0.008*Q_{A\ test}$ SCFM.[2] The NOPR discusses the lowest-stage (D) test point in particular because the minimum part-load airflow has a significant impact on the calculated IVEC and IVHE due to the large number of hours associated with the operation of the indoor fan at that airflow. DOE explains that CUAC/CUHP equipment is often capable of modulating minimum airflow across a large range of values. While there are as-shipped airflow settings,

[1] https://www.regulations.gov/document/EERE-2022-BT-STD-0015-0065
[2] 24% * $Q_{A,test}$ * 400 SCFM/ton /12,000, where 24% is the percentage of ventilation air (a *weighted average* of the required ventilation for the reference buildings used in the modeling in the ASRAC development of the updated metrics).

generally, the field installer can change the settings to meet the specifications for a particular installation. Because a lower airflow yields a more favorable efficiency rating, we are concerned that manufacturers will elect to use the lowest possible airflow for testing, subject to the constraints of Recommendation #6 in the term sheet, even if it is not the most representative of the operation of a particular basic model. DOE's proposal in the NOPR attempts to protect against testing using unrepresentative minimum part-load airflows, and thus artificially high energy efficiency ratings. Specifically, DOE is proposing that the airflow at the D test point must be "*no lower than the highest*" of: (1) as-shipped system control settings, (2) default system control settings specified in the manufacturer installation instructions, as applicable, and (3) $0.008*Q_{A\ test}$ SCFM. We believe that DOE's proposal builds on the term sheet to improve representativeness by considering the default and as-shipped settings.

Thank you for considering these comments.

Sincerely,

Rachel Margolis
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Appliance Standards Awareness Project

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