

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

September 7, 2021

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

**RE: Docket Number EERE–2017–BT–TP–0018/RIN 1904-AD93: Notice of Proposed Rulemaking for Test Procedures for Dehumidifying Direct Expansion-Dedicated Outdoor Air Systems**

Dear Ms. Rivest:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP) and American Council for an Energy-Efficient Economy (ACEEE) on the notice of proposed rulemaking (NOPR) for test procedures for dehumidifying direct expansion-dedicated outdoor air systems (DDX-DOASes). 86 Fed. Reg. 36018 (July 7, 2021). We appreciate the opportunity to provide input to the Department.

**We support the proposed requirement regarding external pressure rise for water-cooled and water-source DDX-DOASes with integral pumps.** DOE explains in the NOPR that AHRI 920-2020 includes a calculation of the energy consumption of non-integral water pumps, which assumes 20 feet of water column of external head pressure.<sup>1</sup> DOE further explains that while the power consumption of integral pumps is captured as part of the overall power measurement, AHRI 920-2020 does not explicitly state the external head pressure to use when testing DDX-DOASes with integral pumps. We support DOE's proposal to specify that DDX-DOASes with integral pumps be tested with 20 feet of water column of external head pressure. This specification would ensure that equipment with integral pumps is tested in a consistent manner and would align with the calculation for DDX-DOASes without integral pumps.

**We support the proposed general control setting requirement.** DOE explains in the NOPR that AHRI 920-2020 does not indicate whether control settings can be adjusted for each of the Standard Rating Conditions.<sup>2</sup> We agree with DOE that controls would not generally be actively adjusted in the field in response to changes in outdoor conditions and that allowing the controls to be adjusted as the test transitions through the four Standard Rating Conditions would thus not be representative of field performance. We therefore support DOE's proposal to include a general requirement that control settings remain fixed once set initially for the first of the Standard Rating Conditions in order to improve representativeness.

**We support establishing a definition for "non-standard low-static fan motor."** DOE explains in the NOPR that AHRI 920-2020 includes instructions for setting the supply airflow rate as well as directions for adjusting the fans in cases where an initial attempt at setting the airflow is unsuccessful.<sup>3</sup> These

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<sup>1</sup> 86 Fed. Reg. 36034.

<sup>2</sup> 86 Fed. Reg. 36036.

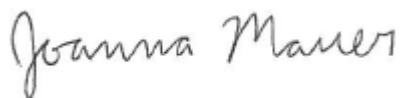
<sup>3</sup> 86 Fed. Reg. 36042.

directions for adjusting the fans are different for fans that have a “non-standard low-static motor,” but AHRI 920-2020 does not contain a definition for “non-standard low-static motor.” We support establishing a definition for these motors to ensure that all manufacturers and other entities conducting testing are applying a consistent approach.

**We support the proposed specification regarding representations for DDX-DOASes distributed with multiple refrigerant options.** The NOPR notes that DOE has identified at least one manufacturer that provides two refrigerant options under the same model number.<sup>4</sup> Because the choice of refrigerant can impact efficiency, DOE is proposing that for basic models that can be sold with more than one refrigerant option, the represented values must be based on the refrigerant(s) that result in the lowest efficiencies. We support this proposed specification, which will ensure that the represented values are not overstating efficiencies for certain refrigerant choices. We also note that manufacturers will have the option of certifying equipment with each refrigerant as a separate basic model if they wish to distinguish the potential improved efficiency performance associated with a particular refrigerant.

Thank you for considering these comments.

Sincerely,



Joanna Mauer  
Technical Advocacy Manager  
Appliance Standards Awareness Project



Christopher Perry, PE  
Manager of Codes and Standards  
American Council for an Energy-Efficient  
Economy

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<sup>4</sup> 86 Fed. Reg. 36044.