Appliance Standards Awareness Project

June 4, 2020

Dr. Stephanie Johnson
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Building Technologies Program, EE-5B
1000 Independence Avenue SW
Washington, DC 20585

RE: Docket Number EERE–2019–BT–TP–0041: Request for Information for Test Procedures for Commercial Warm Air Furnaces

Dear Dr. Johnson:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP) on the request for information (RFI) for test procedures for commercial warm air furnaces (CWAFs). 85 Fed. Reg. 26626 (May 5, 2020). We appreciate the opportunity to provide input to the Department.

We urge DOE to amend the test procedure for CWAFs to capture the impact of improved insulation. DOE notes in the RFI that ANSI Z21.47-2012, sections of which are incorporated by reference in the DOE test procedure, includes a test method for determining jacket losses. However, the jacket loss percentage is not included in the equation to calculate thermal efficiency.[1] In the 2016 direct final rule (DFR) for CWAFs, DOE explained that using insulation comprised of foam, a vacuum, inert gases, aerogel, or evacuated panels are all examples of insulation improvements that would not increase the insulation thickness.[2] The Northwest Energy Efficiency Alliance (NEEA) found that increased enclosure insulation could reduce energy consumption by up to 11%.[3] Since the impact of improved insulation is not currently considered in the test procedure, two CWAF units could have the same efficiency rating and yet provide significantly different performance if one unit had better insulation than the other. Capturing the impact of improved insulation would provide testing results that would better reflect the efficiency of CWAFs during a representative average use cycle, and, in turn, provide better information to purchasers.

We urge DOE to ensure that all electrical consumption associated with CWAFs is captured in either the CWAF test procedure or the test procedure for commercial unitary air conditioners (CUACs). The term sheet from the Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) working group for CUACs and CWAFs contained a recommendation that DOE amend the test procedure for CUACs to better capture total fan energy use including "the energy use with the supply fan operation when the unit is in heating mode."[4] The term sheet stated that DOE would initiate the rulemaking no later than January 1, 2016 and publish a final rule by January 1, 2019, but DOE has yet to issue a proposed rule. DOE should work to promptly advance a rulemaking to implement the term sheet

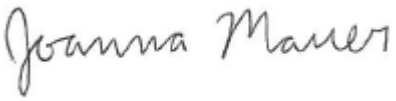
[1] 85 Fed. Reg. 26631.
[2] https://www.regulations.gov/document?D=EERE-2013-BT-STD-0021-0050. p. 4-4.
[3] https://neea.org/img/documents/Energy-Modeling-of-Commercial-Gas-Rooftop-Units-in-Support-of-CSA-P.8-Standard.pdf. p. 16.
[4] https://www.regulations.gov/document?D=EERE-2013-BT-STD-0007-0093.

recommendation, which should capture the energy use of the supply fan in heating mode, including for equipment where the supply fan also circulates air heated by a CWAF.

In addition, DOE notes in the RFI that there can be auxiliary electrical consumption associated only with the furnace operation. We urge DOE to incorporate a measurement of this auxiliary electrical consumption in the test procedure for CWAFs. As with incorporating the impact of improved insulation, capturing auxiliary electrical consumption would better reflect the efficiency of CWAFs during a representative average use cycle, thus providing better information to purchasers.

Thank you for considering these comments.

Sincerely,



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