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

July 24, 2023

Mr. Bryan Berringer
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-2020-BT-STD-0014: Notice of proposed rulemaking for energy conservation standards for refrigerated bottled or canned beverage vending machines

Dear Mr. Berringer:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP), the American Council for an Energy-Efficient Economy (ACEEE), and the Northwest Energy Efficiency Alliance (NEEA) on the notice of proposed rulemaking (NOPR) for energy conservation standards for refrigerated bottled or canned beverage vending machines (BVMs). 88 Fed. Reg. 33968 (May 25, 2023). We appreciate the opportunity to provide input to the Department.

We support the proposed standards for BVMs. DOE has proposed to adopt trial standard level (TSL) 4, which corresponds to the efficiency levels that yield the maximum net present value (NPV) of consumer savings at a 3% discount rate. The proposed standards would achieve per-unit energy savings of 30% to 45% compared to units just meeting the current standards.[1] We note that for all product classes except for Class A, DOE found that higher efficiency levels than those proposed in the NOPR are cost-effective.

The average life-cycle cost (LCC) savings for Class B, Combination A, and Combination B machines range from $190 to $287. For Class A machines, the LCC savings are slightly negative (-$6). However, the simple payback period (5.7 years) is significantly less than the lifetime of the equipment (13.4 years), and the NPV of consumer savings is positive at both the 3% and 7% discount rates. Additionally, DOE notes that the small negative LCC savings for Class A machines in year 1 is expected to be positive by year 2 of the Rule, due to the reduction in total installed cost associated with components that will decrease in cost due to price learning.[2] We therefore support the proposed standards for all equipment classes.

We support DOE's approach of using adjusted energy use baselines that incorporate the energy efficiency improvements associated with the use of propane refrigerant. To comply with the expected Final Rule following the December 2022 EPA NOPR, manufacturers of BVMs will transition to low-GWP

[1] 37%, 35%, 30%, and 45% energy savings for product classes Class A, Class B, Combination A, and Combination B, respectively.
[2] https://www.regulations.gov/document/EERE-2020-BT-STD-0014-0020. p. 34019.

refrigerants. While many BVMs use R-134a today, manufacturers have indicated that they will transition to R-290, propane.[3] Furthermore, DOE determined that BVMs in all equipment classes and available sizes can transition to propane while staying within charge limits.[4] Since R-290 is associated with greater system efficiency than R-134a,[5] DOE adjusted the baseline efficiency levels to reflect these efficiency gains. We support this approach, which we believe appropriately reflects what the BVM market will look like in advance of the compliance date of any amended standards.

Thank you for considering these comments.

Sincerely,

Rachel Margolis
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Appliance Standards Awareness Project

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[3] https://www.regulations.gov/document/EERE-2020-BT-STD-0014-0006. p. 3-23.
[4] 88 Fed. Reg. 33976. DOE expects that all BVMs will be able to meet the 114 gram refrigerant charge threshold for R-290 required in the addenda to ASHRAE standards 15 and 34.
[5] https://www.regulations.gov/document/EERE-2020-BT-STD-0014-0006. p. 5-5.