

## Appliance Standards Awareness Project

February 22, 2021

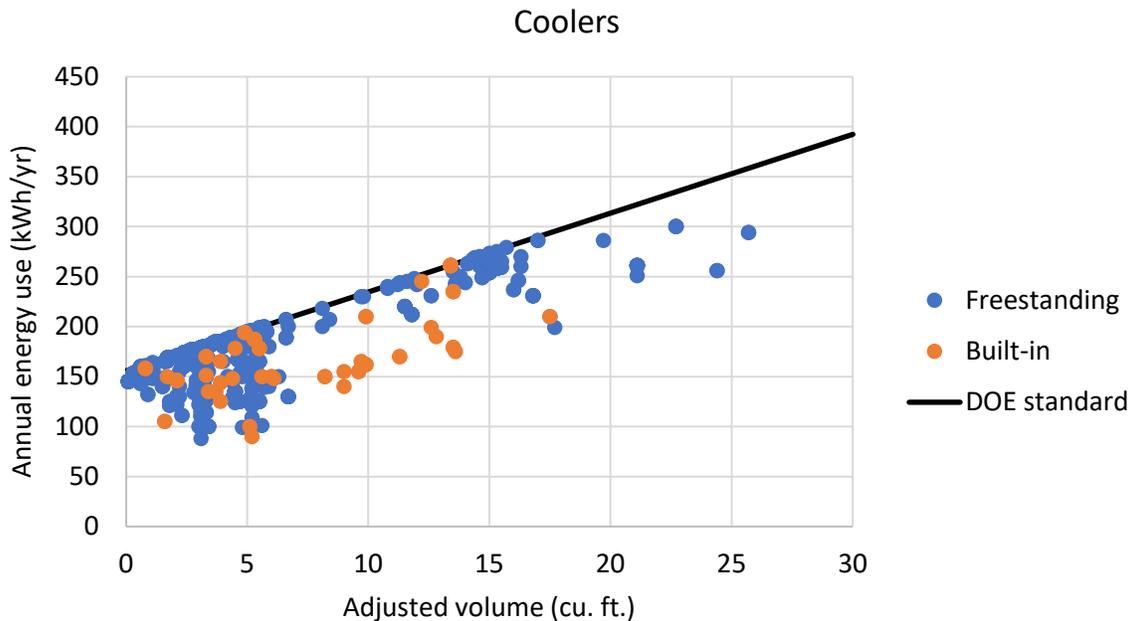
Dr. Stephanie Johnson  
U.S. Department of Energy  
Office of Energy Efficiency and Renewable Energy  
Building Technologies Office, EE-5B  
1000 Independence Avenue SW  
Washington, DC 20585

**RE: Docket Number EERE-2020-BT-STD-0039/RIN 1904-AF00: Request for Information for Energy Conservation Standards for Miscellaneous Refrigeration Products**

Dear Dr. Johnson:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP) on the request for information (RFI) for energy conservation standards for miscellaneous refrigeration products (MREFs). 85 Fed. Reg. 78964 (December 8, 2020). We appreciate the opportunity to provide input to the Department.

**There is significant opportunity to improve the efficiency of MREFs.** As shown in the graph below,<sup>1</sup> there are both freestanding and built-in coolers across the range of volumes that consume significantly less energy than models just meeting the current standards.<sup>2</sup> The most efficient product, which is a built-in cooler, consumes 54% less energy than a model just meeting the current standards.



<sup>1</sup> Models in the DOE Compliance Certification Database as of January 20, 2021.

<sup>2</sup> Coolers represent about 98% of the total shipments of MREFs. Combination coolers, which combine a cooler compartment with a refrigerator or freezer compartment, make up the remaining shipments.

**Alternative refrigerants represent a path to higher efficiency levels beyond the “max-tech” levels evaluated in the last rulemaking.** We understand that many coolers are now using isobutane (R-600a) as the refrigerant.<sup>3</sup> In the 2016 direct final rule for MREFs, DOE did not include alternative refrigerants as a technology option. In the 2011 refrigerators final rule, DOE found that using isobutane compressors can reduce energy use by 5% relative to HFC-134a compressors,<sup>4</sup> and Samsung reports that isobutane can reduce energy use by 6.5%.<sup>5</sup> Alternative refrigerants can thus allow for achieving higher efficiency levels than the “max-tech” levels evaluated in the last rulemaking.

**We continue to encourage DOE to consider adopting the IEC 62552:2015 test procedure for consumer refrigeration products.** In our comments on the 2019 test procedures NOPR for consumer refrigeration products, we described how the IEC 62552:2015 test procedure may be more representative than the current DOE test procedure and may also better capture the potential savings from variable-speed compressors.<sup>6</sup> We also explained that because the IEC test procedure is an international test standard, which is being adopted in other major economies, harmonizing with the IEC test procedure could reduce test burden on manufacturers who sell products internationally. We continue to encourage DOE to consider adopting the IEC test procedure for consumer refrigeration products, including MREFs.

**We encourage DOE to consider establishing standards for ice makers with harvest rates less than 50 lb/24 hr either as part of the MREF rulemaking or the automatic commercial ice makers (ACIM) rulemaking.** In our comments on the 2020 RFI for automatic commercial ice makers (ACIM), we encouraged DOE to consider expanding the scope to ice makers with harvest rates less than 50 lb/24 hr given the large annual shipments and the significant potential efficiency gains.<sup>7</sup> In the last rulemaking for MREFs, DOE initially considered including ice makers with low harvest rates in the scope of coverage.<sup>8</sup> DOE estimated that the stock of ice makers with harvest rates less than 50 lb/24 hr was about 5.5 million in 2014 and that these small ice makers can consume up to 1,075 kWh/year on average.<sup>9</sup> We encourage DOE to consider establishing standards for ice makers with harvest rates less than 50 lb/24 hr either as part of the MREF rulemaking or the ACIM rulemaking.

Thank you for considering these comments.

Sincerely,



Joanna Mauer  
Technical Advocacy Manager

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<sup>3</sup> See, for example: [http://pdf.lowes.com/useandcareguides/819130027197\\_use.pdf](http://pdf.lowes.com/useandcareguides/819130027197_use.pdf);  
[https://www.wineenthusiast.com/wine-enthusiast-32-bottle-dual-zone-max-compressor-wine-cooler?gclid=Cj0KQCQiAyJOBbHDCARIsAJG2h5dXM1qpt01suv1t0mMG2jm0mpfiuNOA3Y5ejCv7PkcVtWXF-K1zwckaAj-tEALw\\_wcB&srccode=PGGL10](https://www.wineenthusiast.com/wine-enthusiast-32-bottle-dual-zone-max-compressor-wine-cooler?gclid=Cj0KQCQiAyJOBbHDCARIsAJG2h5dXM1qpt01suv1t0mMG2jm0mpfiuNOA3Y5ejCv7PkcVtWXF-K1zwckaAj-tEALw_wcB&srccode=PGGL10).

<sup>4</sup> <https://www.regulations.gov/document?D=EERE-2008-BT-STD-0012-0128>. pp. 5-62, 5-63.

<sup>5</sup> <https://news.samsung.com/us/samsung-earns-energy-star-emerging-technology-award-for-20-refrigeration-models-in-2017/>.

<sup>6</sup> <https://www.regulations.gov/document?D=EERE-2017-BT-TP-0004-0022>.

<sup>7</sup> <https://www.regulations.gov/document?D=EERE-2017-BT-STD-0022-0005>.

<sup>8</sup> <https://www.regulations.gov/document?D=EERE-2011-BT-STD-0043-0003>. p. 17.

<sup>9</sup> <https://www.regulations.gov/document?D=EERE-2011-BT-STD-0043-0024>. pp. 9-8, 7-14.