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Ryan Fogle
Environmental Protection Agency
(Submitted via email to o labgraderefrigeration@energystar.gov)
Re: Response to Proposed Changes to ENERGY STAR® Lab Grade RF Version 2.0 Draft 1 Specification

We appreciate the opportunity to provide the following comments to provide input on the Environmental Protection Agency (EPA) ENERGY STAR® Lab Grade RF Version 2.0 Draft 1 Specification
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Trane Technologies (Trane) is a climate company with well-known brands such as Trane and Thermo King, which are global leaders in stationary and transport air conditioning and refrigeration products, as well as industrial process refrigeration with respect to life sciences. Trane Technologies is well known for its global leadership in transitioning away from today's high global warming potential (GWP) refrigerants. Trane began transitioning its global high performance chiller portfolio in 2015 and Thermo King began transitioning its EU transport refrigeration products in 2014, long before regulations began taking shape. Trane Technologies has committed to reducing our customer's emissions by one gigaton (1 billion metric tonnes) CO2e between 2020 and 2030.

Trane Technologies shares the following considerations with EPA as they consider changes to the program.

EPA may wish to consider that the current proposal does not include considerations for the large number of varying sizes of units that are currently available to refrigerated medication customers that meet both energy star and NSF 456. As written, the proposal would significantly reduce the number of available units and sizes of refrigerators and freezers for storage of vaccines and refrigerated medications that are certified to NSF-456.

Available units with both approvals will likely be reduced to one quarter of those currently available further limiting available sizes and competition in near term increasing cost for vaccine storage. This jeopardizes availability of size and vaccine capacity options for customers that are required to purchase both NSF and Energy star approved units.

NSF 456 is focused on protecting vaccines under specific use cases which includes challenges to the refrigeration system. The refrigerator has to be designed to have sufficient refrigeration capacity to recover under these customer use cases. The standard was developed to engineer in solutions to minimize temperature excursions and to improve refrigerated medication performance under typical customer use cases.

NSF 456 specifies the total temperature variation a refrigerator or freezer can have in the usable space based on the vaccines, and refrigerated medications that are commonly stored in refrigerators or freezers.

	No. of products Qualified for E-Star V1.1	No of products Qualified for Proposed E-Star V2.0	Percentage of Currently E-Star Listed products still qualified for E-Star V2.0	No of products NSF certified & E-Star (V1.1) Listed	Percent of E-Star V1.1 listed products also NSF certified	No of products NSF certified & qualified for Proposed E-Star V2.0	Percent of E-star listed & NSF certified products still eligible for E-star V2.0
Overall	991	340	34.3%	256	25.8%	67	26.2%
Refrigerator-HP	605	215	35.5%	180	29.8%	46	25.6%
Refrigerator-GP	21	0	0.0%	6	28.6%	0	0.0%
Freezer-HP	249	89	35.7%	67	26.9%	18	26.9%
Freezer-GP	12	12	100.0%	3	25.0%	3	100.0%
ULT	104	24	23.1%	0	0.0%	0	-

EPA may also wish to consider the ability of the units to perform in higher elevations, higher ambient and humidity conditions that are common for these units in the Western Mountains and Southern part of the country like the Gulf coast.

Unfortunately, the proposed new standard will not provide enough refrigeration capacity to adequately perform across the varying geographical and environmental conditions throughout the United States especially for products that comply with NSF 456.

For example, at higher elevations, the lower density of air more energy is needed to get the same performance to get the same amount of cooling capacity. That additional energy is used to move more air across condenser and evaporator so that refrigeration capacity is not compromised.
Also, at higher ambientes and humidity conditions, the energy star standard is designed to be tested within very tight ambient and humidity conditions. Equipment is operated in a wide range of ambient temperatures and humidity conditions to support critical end-uses. By reducing the energy usage units do not have sufficient efficacy to adequately perform in higher ambientes and higher humidity conditions leading to temperature excursions for refrigerated medications and excessive condensation being produced leading to possible safety issues with condensation overflow on refrigerators and freezers. It appears that some manufactures have derating, total ambient and humidity range of operation, on their units so they can get lower energy values on energy star tests.

We would like to brief the EnergyStar staff regarding these concerns and request a meeting to answer any questions that you may have.

We greatly appreciate the opportunity to provide these comments. Please contact me with any questions.

Sincerely,

Helen Walter-Terrinoni

Helen Walter-Terrinoni
Director – Global Climate Policy
Trane Technologies