

Thank you for opening up a comment period for stakeholders to respond to the proposed Energy Star version 4.0 for Commercial Refrigerators and Freezers. We agree that a new revision will be necessary pending the adoption of the DOE 2017 federal standards for CRE.

Our first comment is, since the DOE 2017 federal standard is currently in a litigation situation, we question if it is good procedure to revise the Energy Star levels based on a federal standard that may or may not be changing due to the outcome of the litigation?

In the note section under 3) Qualification Criteria in version 4.0, it notes that the EPA performed an extensive analysis of performance data from various databases to aid in setting the new V4.0 limits. It further notes that only equipment that currently meets the DOE 2017 standards was used to set V4.0 levels. By definition the Energy Star guidelines are to include the top performers of all equipment available. We believe that since the DOE 2017 deadline is almost a year away and any research performed by EPA on these sites was done well over a year prior to the requirement date there will be many more models that will qualify to the DOE2017 limits and will be added to the DOE website. We can assume that equipment that is presently listed on the DOE website that does not comply with the DOE2017 will need to be redesigned to meet to the new limits. The notes indicate that there were 654 models currently listed that meet the DOE2017 limits but how many are there that do not meet these limits that will require either delisting or re-engineering to meet the new levels? Assuming these models get redesigned they would need to be included in the data set for the EPA to make an accurate assessment of the database to set accurate and meaningful V4.0 requirements. We do not believe that it is prudent to base the new version 4.0 off a dataset that is bound to change substantially in the coming months. The EPA further notes that the 654 models provides a "good indication of the current market..". We would suggest that all of the equipment currently listed on the DOE website provides a better indication of the current market, not just the top 654 models.

The draft further notes a few technology options that could be used by manufacturers to improve efficiencies to meet the new proposed levels. Was any research performed on the dataset to determine if the technologies were already used to obtain the current levels? With respect to the LED lighting most models would already be using this technology and occupancy sensors are not an option for this type of equipment. Improved insulation will have minor effects in these equipment classifications if it were available and increasing the insulation (wall thickness) will either require a smaller internal capacity, which directly affects the amount of energy allowed as volume is the variable in the energy equations, or require a larger footprint for the equipment which would result in issues with fitting into pre-designed floor space in installations. With respect to alternate refrigerants, there is some data that suggests that hydrocarbon refrigerant use may result in more efficient systems. Test results we are seeing show averages more in the 5 - 8% range, certainly not 30% as noted. However, these refrigerants are highly flammable which requires a major capital investment by manufacturers and they have limitations. What research has the EPA performed on the impact to small businesses brought on by this new version? There have been instances where equipment containing HC refrigerants have not been permitted to be used in certain locations due to local laws. We are confident that in the future these issues will be worked out but having the EPA relying on this technology today could be questionable at best. The DOE 2017 federal standard specifically noted that they were not including alternate refrigerants as a design option when setting the 2017 standards.

The EPA has made available on your website, data plots showing the logic behind the proposed levels. What is not made clear is the type of equipment in each category. Take for instance the category VCS.SC.L, $0 < V < 15$. This category may include equipment that is cold wall manual defrost and

equipment that is forced air automatic defrost. In like size equipment the cold wall manual defrost cabinet will always be significantly more efficient but it is unlikely to be used by most foodservice operations as it will not provide the performance required. Did the EPA research if the equipment used to verify the proposed new efficiency levels is cold wall manual defrost or forced air automatic defrost? We suspect that there are few to no forced air auto defrost cabinets that will meet the new EPA levels proposed in this category. Further to the discussion, has the EPA performed an analysis of this category to determine currently how many different total models there are in the marketplace that make up this category and how many meet the DOE 2017 requirements? Research will show the industry is struggling to meet the DOE 2017 limits particularly on the smaller size models in this category much less the EPA proposed new limits. The EPA recognized this when V3.0 was released as the limits were raised from V2.1 in this category and still few models will meet that level. We are not generally a proponent of over regulating but as these energy requirements shrink they will start to separate designs traits (cold wall manual defrost vs forced air automatic defrost) which have a major influence on operation. If these distinctions are not addressed it will be impossible to obtain Energy Star on the equipment that operators need to meet their needs. A review of the domestic market shows that this issue is currently being addressed by the EPA with that equipment as there are different categories for manual and auto defrost cabinets.

Did the EPA sort out the equipment in the DOE listing for freezers that were not rated at 0F in the VCS.SC.L category? It would appear in looking at the EPA data plots online and comparing them to the DOE listing that there are some products in the EPA plots that were not rated at 0F and these were used to calculate the V4.0 levels for low temp products tested at 0F. I was also able to find a refrigerator that was incorrectly listed on the DOE website under freezers that was used in the EPA plots for low temp equipment. Fairly easy to find as it is a wild point but these errors tend to skew the data. I was able to find these errors with minimal effort but it causes me to be concerned about the integrity of the database as a whole. Clearly the EPA needs to take a much closer look at the data for any new version for Energy Star compliance to be valid.

This new Energy Star requirement would come less than 2.5 years after the adoption of the previous version 3.0. With the adoption of V3.0, manufacturers now have a cost and time burden to bear to re-qualify equipment to Energy Star as third party agencies are now required. While we realize that the Energy Star program is optional, it is in many instances a requirement to sell product into certain markets. By implementing new requirements for the program so soon after the current version, the manufacturer is again taking a major cost and time hit. We would ask that the EPA recognize this and consider pushing back the adoption date for V4.0 until at least 10/1/18 (allowing 4 years for version 3.0) to relieve some of this expense burden.

Further complicating the manufacturers burden of re-designing equipment to meet the DOE 2017 standard, we are now looking at re-designing equipment again to meet new Energy Star requirements, while given less than one year to do so, compounded by the challenge of again re-designing the equipment to meet the new EPA imposed SNAP ruling within the next 2 -3 years. We ask that the EPA recognize these compounding issues when adopting new versions of qualification requirements.

Lastly, the draft notes that in setting the requirements for V4.0 the EPA "seeks reasonable savings beyond the DOE 2017 standards". A review of our current products shows that "reasonable" ranges from 20 to 40% lower levels with an average of 30%. We believe that everyone realizes that the DOE 2017 requirements are a major leap in energy efficiency that has manufacturers stretching their resource to comply with and questioning whether those levels are reasonable hence the litigation

associated with the new requirements. Dropping the Energy star levels 30% beyond those levels is not reasonable taking into account the issues raised above.

Once again, thank you for the opportunity to submit comments on this issue and we trust that all of the responses will help develop an improved document moving forward.

Regards,

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