



HOSHIZAKI AMERICA, INC.

April 3, 2017

Ms. Kirsten Hesla
ENERGY STAR
US EPA
Washington, D.C. 20460

RE: Comments on Draft 2 Version 3.0 ENERGY STAR Commercial Ice Maker Specification

Dear Ms. Hesla,

Thank you for the work ENERGY STAR put into this draft of Commercial Ice Maker Version 3.0. We welcome the chance to review the standard.

Below is a list of concerns and also answers to questions in your draft:

1. Thank you for the improvements in the harvest break points to mirror that of the DOE.
2. Due to the changing market resulting from DOE standard changes for January 28, 2018, we suggest setting a target of 20% of the market and when the threshold exceeds 35% to review and change accordingly. ENERGY STAR is looked at as mandatory in some buying sectors and to have too few models to select from would negatively impact the market.
3. Further comments concerning the standard draft are as follows:
 - a. For remote condensing units (batch or continuous), the classifications should be separated into remote condensing unit with remote compressor (RCU-RC) and remote condensing unit without remote compressor (RCU-NRC). The DOE separates this class into two separate sections due to the increased energy needs for remote condensing unit with remote compressor. Lumping the two under one RCU section results in no RCU-NRC models meeting the ENERGY STAR draft 2 requirements. Many restaurants are requesting RCU-NRC models due to their small footprint and lower heat and noise in the consumer area. The DOE has separate reporting areas for RCU-RC and RCU-NRC and this data can help determine where the qualification criteria can be modified.
 - b. For batch ice-making head, only 1 model qualifies between 400 and 1200 pounds/day. This large of a range with only one model qualifying does not adequately give choices to the public. We suggest modifying the curves to get between 15-20% market penetration for such a popular segment.
 - c. For batch self-contained, only 4% of the models qualify under this section. This qualification rate is too low and should be reviewed for adequate market penetration.
 - d. For continuous ice-making head, only 1 model qualifies between 600 and 2000 pounds/day. This qualification rate is too low and should be reviewed for adequate market penetration.

- e. For continuous self-contained, we suggest a cutoff to match that of DOE for the range of 50 to 200 pounds/day as there are no models that qualify for version 3 below 200 pounds/day. We need to make sure it is not too stringent between 50 and 200 lbs/day to allow for adequate market penetration.
 - f. For continuous remote units with more than 800 pounds/day, no models qualify for this standard that have below a 100% ice hardness. The three units that qualify show either no adjusted energy or considerably lower than the measured value. Continuous ice makers are classified as continually freezing and harvesting at same time. Tube ice and drum ice have a longer freeze time to allow for super cooling the ice. On top of that, the test results should not reflect any ice hardness above 100% since this goes against physics in lowering the energy use actually collected from the machine during the test. We request ENERGY STAR to further review the data in the database and allow for qualification of true continuous ice makers for this standard.
4. Comments concerning hydrocarbon refrigerants should be prefaced with the fact that the charge amount is limited by federal regulation to 150 grams. This charge limit essentially excludes models that can harvest over 500 pounds/day and all remote models. Until refrigerant blends are approved by the EPA for use in all commercial ice makers, it should be clarified that hydrocarbon refrigerants are not feasible for all commercial ice maker classifications and sizes.
 5. Test requirements for samples are mentioned. The ACIM group requests that the test project undertaken with steamers also be tried with ACIM. Replacing yearly verification testing with quarterly UL/ETL inspections tied into the existing audit framework would result in significant savings in time and money. Any changes in ice harvest, energy, and water usage can be attributed to the parts called out specifically in the UL/ETL safety report (i.e. compressors, water valves, fan motors, control boards, etc.). We request a trial period to be reviewed with AHRI testing in 2017/18 in parallel with UL/ETL audits to determine the effectiveness of this alternative to verification testing.
 6. ENERGY STAR effective date should coincide with the DOE changes. The federal register lists the effective date of DOE changes as January 28, 2018 and we request the same date for ENERGY STAR effective date. This would follow the precedent set in Commercial Refrigerators which shared the same date of March 27, 2017 for DOE 2017 and ENERGY STAR version 4.

We look forward to the final draft and hope for a challenging and achievable standard for Commercial Ice Makers. Thanks again for all your help in this matter.

Sincerely yours,



Stephen Schaefer