



October 7, 2011

Rebecca Duff
ICF International

Subject: Comments on Draft 3: Version 2.0 Commercial Dishwasher Specification

Dear Ms. Duff,

We have reviewed the third draft Energy Star specification Version 2.0 for commercial dishwashers. Our comments are as follows:

1. Modes and Metrics – The definition of “Rinse Mode” should be revised to clarify that it is the sanitizing rinse rather than a pumped rinse from a multiple tank machine. The definition of “sanitizing rinse” from NSF/ANSI 170-2010 is “a solution of water that is either heated or uses chemical sanitizing agent and is sprayed onto cleaned dishes to achieve sanitization”.
2. Qualification Terms – We are concerned about the statement that for models with gas, steam and electric heat options, “each option would be required to be tested and certified to be ENERGY STAR qualified”. Since electric heat may be 80% of sales for a given model, we would like the option of maintaining qualification on electric heat models but not on gas or steam heat.
3. Flight Type Requirements – We are concerned about the statement that “EPA found that while the auxiliary tank heater does increase the energy load on the machine this is typically a small (e.g. 5 kW) amount as compared to the drop in booster heater energy (e.g. 15 kW). In addition, there is significant energy savings at the building level tied to the reduction of final rinse water consumption.” Our testing showed that a single tank flight type machine with an auxiliary rinse tank uses approximately 10% more in water and energy costs than the same model without auxiliary rinse. This evaluation did include savings from the building water supply due to reduced water consumption. Also, even though it is true that there is a drop in booster heater operating energy consumed due to the reduced water consumption, our evaluation showed there is still a net increase in overall energy consumption of approximately 14% with the auxiliary rinse machines. For these reasons, we still believe there should be two categories of machines, standard rinse and auxiliary rinse. We hope more data can be provided to obtain a better understanding of the differences between these two types of machines.

Also, we do not believe there should be a “prescriptive” requirement that all ENERGY STAR flight type dishmachines include heat recovery. Heat or energy recovery models are not as high manufacturing volume as non energy recovery. This is largely due to the increased initial cost. When operating energy consumption criteria are established, the energy recovery models will be more likely to qualify. Energy recovery is available on rack conveyor machines as well as door type machines and these are not mandated by the ENERGY STAR criteria.

4. Supplemental Devices – We prefer that supplemental devices such as prewash temperature control and drain water tempering, that are included with a machine when shipped from the factory, should render a machine ineligible for ENERGY STAR. Although we understand there are difficulties enforcing this restriction, the amount of water they consume should be a factor worth bearing in mind. As an alternative, we can support inclusion of an education disclaimer noting the possible energy impacts of these devices.
5. Calculations for Water Consumption – The formula in b. 1) for gallons per rack for stationary rack machines seems much more complicated than necessary. When the test is run, the weight of water for each cycle is measured and expressed in gallons per cycle or gallons per rack when there is one rack in each cycle. The formula can be simplified as the weight of water for x number of cycles divided by 8.34 lbs/gal divided by x cycles.

Also, the gallons per rack calculation for conveyor machines with user-adjustable speed control should be reported at both the minimum and maximum speeds. Qualification may be determined by the water consumption at the maximum speed. However, it is important to inform operators that running at the slower speeds will reduce their operating efficiency.

We suggest adding an alternate test method that allows the use of a calibrated flow meter to measure the amount of water consumed over time. A suggested meter specification is a measurement increment of 0.1 GPM and an accuracy of $\pm 1.5\%$.

6. Test Requirements – There has been much discussion with DOE and EPA regarding representative test samples or base models for families of products. There are two significant concerns with the proposed definition of a “product family”. First, manufacturers prefer to have the option of testing one representative “worst-case” model and use these ratings to qualify models that knowingly use less energy or water. We don’t mind “penalizing” ourselves if it vastly reduces the amount of testing needed to qualify a large number of models. We request a statement be added that allows sound engineering judgment for representative test samples. A qualification can be added that models can only be waived from testing if they have lower energy or water consumption than the representative test model.

The second concern is that the criteria of water consumption and idle energy rate are not necessarily related when looking at various machine configurations. The definition of “Product Family” states; “variations of one model offered within a single product line with design differences limited to: finish/color; length of pre-wash section, voltage, and orientation (e.g., corner, straight through models)”. In other words, models A, B, C & D may all be different but if models A & B have the same water consumption and models A and C have the same idle energy consumption, what models are required to be tested? We propose that for water consumption, either model A or B is tested and model C or D (two tests). However, for idle energy, either model A or C is tested and model B or D is tested. Thus the product families and representative models could be different for each criterion.

7. DOE Test Method Validation – We would like to know if DOE completed their validation of the commercial dishwasher test methods expected at the end of September. If the test procedures are required to be changed, this could delay progress tremendously since the NSF and ASTM standards must go through the ANSI process.
8. Effective Date – We are extremely disappointed that every model currently qualified must be retested by a third party CB before the September 1, 2012 effective date. This is obviously a case of EPA/DOE determining that CFSE manufacturers are “guilty until proven innocent”.

Thank you for the opportunity to comment on the second draft. If you have any questions regarding this letter, please don't hesitate to call.

Sincerely,



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