



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

October 4, 2006

Dear Commercial Dishwasher Manufacturer,

In May of this year, the Environmental Protection Agency (EPA) released a Draft 1 ENERGY STAR specification for commercial dishwashers. With this letter, EPA is:

- Updating you on the ENERGY STAR specification development effort.
- Requesting feedback on the idle energy test found in ASTM 1696 and ASTM 1920, including evaluation through testing, and proposing a conference call to review this request and answer questions.
- Informing you of and encouraging your participation in the next ASTM F26 meeting at which the test procedures for commercial dishwashers will be discussed in detail.

The ENERGY STAR Specification Development Effort

The Draft 1 ENERGY STAR specification for commercial dishwashers included minimum gallons per rack levels based on testing to NSF/ANSI 3-2003 Standard for Commercial Warewashing Equipment (NSF 3). Although there is a correlation between the water used in the rinse cycle as measured by NSF and the energy used by the dishwasher, it is not a perfect correlation. According to the comments provided by the Consortium for Energy Efficiency (CEE), electric and gas utilities are interested in supporting the market for high-efficiency commercial dishwashers with demonstrated, cost-effective energy savings through their regional incentive programs. However, CEE has commented that its members need accurate and direct energy consumption data to determine whether product energy savings are significant enough to warrant program support. It is EPA's desire to develop an ENERGY STAR specification for commercial dishwashers that assures consumers of both energy and water savings, and can also be used as a basis for utility incentive programs. With this letter, EPA is proposing a way by which this may be accomplished.

Use the Idle Energy Test from ASTM 1696 and ASTM 1920

At the May 2006 ENERGY STAR Industry Stakeholder Meeting during the National Restaurant Association (NRA) Show, David Zabrowski of Fisher Nickel, Inc. presented two test procedures that measure both the *energy and water* consumption of commercial dishwashers under standardized operating conditions (preheat, idle and washing). Specifically, the American Society for Testing and Materials (ASTM) Standard Test Methods cover Hot Water Sanitizing Door Type Dish Machines (F1696) and Hot Water Sanitizing Conveyor Type Dish Machines (F1920). While in an ideal world, EPA would simply cite these test procedures for use when qualifying commercial dishwashers for ENERGY STAR, the procedures have flaws and are currently undergoing revision through ASTM. However, the idle energy test within both of these procedures is sound and usable.

Therefore, we are proposing to use the idle energy test to capture a significant additional portion of dishwasher energy consumption (that is not already addressed by rinse water energy consumption) and would like manufacturer feedback on the measurement approach for this particular test. Attached for your evaluation are ASTM Standards F1696 and F1920. To the extent it is feasible for your evaluation to include product idle energy testing, we encourage you to submit your test results using the attached ENERGY STAR Commercial Dishwasher Data Collection Worksheets (Excel version provided). Please note that although F1696 and F1920 were developed for hot water door type and single tank conveyor type machines, manufacturers should also use these procedures for: hot water sanitizing pot/pan and undercounter machines and low temperature single tank conveyor machines. Specifically:

- Undercounter Machines – ASTM Standard F1696
- Pot/Pan Machines (stationary rack) – ASTM Standard F1696
- Pot/Pan Machines (single tank conveyor) – ASTM Standard F1920
- Low Temperature Single Tank Conveyor Machines – ASTM Standard F1920, using an average tank heater temperature of 135°F +/- 5°F.

We ask that manufacturers include their most current and popular models so that the resulting dataset is truly representative of the products available in the marketplace. The resulting analysis of this data will assist in evaluating whether the energy savings achieved through reduced water heating and idle energy justify the inclusion of commercial dishwashers in local energy-efficiency programs, while at the same time allowing for a more robust ENERGY STAR specification.

EPA plans to hold a conference call in early October with all commercial dishwasher manufacturers to answer questions and/or address any concerns regarding the idle energy test. Manufacturers can choose between the following three dates to participate on the conference call, which will be held between 1:00 – 2:00 p.m. EDT: (1) Monday, October 16th; (2) Tuesday, October 17th; or (3) Wednesday, October 18th. Please RSVP to Rebecca Duff, ICF International, at rduff@icfi.com. Depending on the responses, we may choose to hold more than one conference call to accommodate schedules.

EPA intends to aggregate all idle energy data received and use it only in support of the ENERGY STAR commercial dishwasher specification development process. The attached spreadsheet includes inputs for gallons per rack per the NSF-3 test procedure. We are asking for this data so that the new idle energy data can be easily incorporated into EPA's existing data set. Please send all data and comments on the idle energy test method to Rebecca Duff at rduff@icfi.com. **Data received by January 5, 2007 will be considered for the next version of the Draft specification.**

The idle energy tests are straightforward and can be conducted at manufacturer's facilities. As an alternative to in-house testing, Pacific Gas & Electric's Food Server Technology Center (FSTC) in San Ramon, CA is offering to test commercial dishwashers using the ASTM test procedures at no cost to the manufacturer. Please contact David Zabrowski, Fisher Nickel, Inc., at dzabrowski@fishnick.com or (925) 866-5614 for more information.

Revisions to ASTM 1696 and ASTM 1920

It is important to note that ASTM test methods only exist for high temp conveyor and door type dishwashers at this time. There are no ASTM test methods available for chemical sanitizing door type and conveyor machines, nor is there one specific to undercounter machines (high or low temp). We are also looking for recommendations to make the overall test method relevant for all subcategories of commercial dishwashing equipment. Since the standards are currently undergoing revision, this is a great opportunity for manufacturers to become involved and bring your individual expertise to the table early in

the process. **Interested stakeholders are invited to attend the next ASTM F26 meeting, during which the proposed revisions to the two dishwasher test methods will be discussed.** The meeting will be held at the Hyatt Regency hotel in Atlanta, GA on October 24 - 25. Participants do not need to be members of ASTM in order to attend the meeting. For more information go to: www.astm.org.

EPA appreciates your feedback during the ENERGY STAR specification development process. Please feel free to contact me directly with any questions or concerns at (202) 343-9124 or via e-mail at schmeltz.rachel@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Rachel Schmeltz". The signature is written in a cursive style with a long, sweeping tail on the final letter.

Rachel Schmeltz
ENERGY STAR Program Manager