



June 9, 2006

Rachel Schmeltz  
ENERGY STAR Program Manager  
Environmental Protection Agency  
c/o Charles Anderson, ICF  
Ariel Rios Building, SW, MS 6202J  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Ms. Schmeltz:

On behalf of the undersigned supporting organizations, CEE appreciates the opportunity to provide comments on the ENERGY STAR specification for commercial dishwashers (Draft 1). These comments were developed by CEE's Commercial Kitchens Committee (the Committee), including CEE members that administer energy-efficiency programs as well as program administrators from sponsoring water agencies.

Given the marketplace and the type of equipment being addressed, the Committee believes that commercial dishwashers are a very good application for an ENERGY STAR label. We believe labeling would be an effective strategy to differentiate commercial dishwashers in the market that are proven to use less water and energy for a given level of performance. The Committee supports EPA's efforts to develop an ENERGY STAR label for commercial dishwashers in order to help consumers identify these high-performance products and benefit from them. Having reviewed the draft criteria, the Committee has the following concerns.

Today, there is no data available to differentiate commercial dishwashers by their energy performance directly and there is no industry-accepted, test procedure available to start collecting this data. While an energy test procedure is being developed, EPA is proposing to use dishwasher rinse water as a proxy for energy consumption as the basis for an ENERGY STAR label. As currently proposed in the draft criteria, the Committee is not confident that dishwasher energy consumption is properly isolated and accounted for using rinse water as a proxy. The Committee recommends that EPA conduct additional research to demonstrate with a high degree of confidence that rinse water consumption is a reliable proxy for energy consumption, resulting in quantifiable energy savings, for specific types of commercial dishwashers. The Committee is ready to support an ENERGY STAR program using rinse water consumption as an "interim labeling criteria" based on this information.

If, for some reason, it is not possible to use rinse water consumption as a reliable proxy for energy consumption, then the Committee recommends that EPA expedite efforts to develop a credible, industry-accepted, energy test procedure and to collect performance data for analysis.

In sum, to avoid the potential for future confusion in the market, the Committee believes it would be better for EPA to either address only those products in which rinse water consumption is a reliable indicator of energy consumption, or wait until an energy test and performance data are available. Detailed comments from the Committee are provided below.

## **Programs Support an ENERGY STAR label for Commercial Dishwashers**

The Committee supports an ENERGY STAR label for commercial dishwashers *in concept* and encourages EPA to move forward in the specification development process. Efficient commercial dishwashers would lend themselves very well to a label since they offer an excellent opportunity to save both water and energy and would enable consumers to differentiate products based on performance. Indeed, the combination of water and energy savings makes efficient commercial dishwashers a very attractive product from both consumer and efficiency program perspectives. The Committee members are very willing to make use of the ENERGY STAR label in their programs; however, they currently do not have confidence that the proposed criteria and product categories provide a reasonable assurance of energy savings.

## **ENERGY STAR Criteria Should Include a Reliable Measure of Energy Consumption**

Energy-efficiency program administrators need energy performance data in order to meet the expectations of regulators as well as consumers. Because energy-efficiency programs are publicly funded, program administrators are required to demonstrate that the energy savings from program-supported efficiency measures are real, while meeting or exceeding consumer performance expectations. Energy-efficiency program administrators are in the strongest position to defend measures when direct energy consumption data is available. Given that energy data is not available for commercial dishwashers, the Committee needs greater assurance that energy consumption is adequately represented using rinse water as a proxy.

### *Direct Measure of Energy Consumption*

To be useful to programs, the Committee strongly recommends that the proposed ENERGY STAR dishwasher specification add criteria for dishwasher energy consumption as soon as possible. While the Committee is not expert in commercial dishwasher test procedures, we would like to see a commercial dishwasher test procedure developed that includes pre-heat energy, idle energy, and all energy consumed during the wash and rinse cycles. In addition, the ENERGY STAR program could benefit from load sensing and/or stand-by requirements, as appropriate, to help prevent dishwasher runs under “no-load” conditions.

In general, we urge EPA to adopt an energy consumption metric for commercial dishwashers that lives up to ENERGY STAR’s reputation for delivering cost-effective energy savings while maintaining superior product performance. CEE’s Commercial Kitchens Committee looks forward to working closely with EPA to assure that the newly developed energy test meets the needs of efficiency programs.

### *Rinse Water Consumption as an Interim Proxy for Energy Consumption*

The Committee appreciates EPA’s attempt to use rinse water use as a proxy for energy consumption while an energy test procedure is being developed. This may be an appropriate course of action during the interim period, but the Committee lacks confidence that energy consumption is properly isolated and accounted for in the specific types of equipment being proposed for an ENERGY STAR label.

Because water is a conduit for the energy used during the rinse cycle it seems logical to the Committee that variations in rinse water consumption would correlate with corresponding variations in energy consumption. According to the PG&E’s Food Service Technology Center

rinse water accounts for approximately 70 percent of the total energy used by typical, high temperature dishwashers (tank type) and approximately 95 percent of low-temperature dishwashers (fill and dump type).

EPA's working assumption appears to be that rinse water consumption is a good proxy for energy consumption "on average" across the commercial dishwashers types being proposed for inclusion in the ENERGY STAR program. In order to justify their inclusion in incentive programs, administrators need to know the anticipated energy savings for each of the product categories being proposed, not just an average across the different types. As it stands, program administrators would find it difficult to justify incentive programs based on the information provided by EPA. Until an energy-based test is available, the Committee recommends that EPA narrowly define commercial dishwasher categories that put ENERGY STAR in the best position to isolate energy consumption when using rinse water cycle consumption as a proxy. For instance, given that energy, water and chemicals can potentially substitute for one another, perhaps ENERGY STAR could consider focusing only on high-temperature machines in an attempt to isolate energy and water consumption.

#### *Product Subcategories with Different Energy Use Profiles*

Upon reviewing the data plots (gallons per rack by GPR rank) for the proposed product categories, the Committee noted a wide variation in water consumption (and by proxy energy consumption) for each of the six product categories. The degree of variation led the Committee to wonder if energy and water consumption were being properly isolated and accurately accounted for; or if there were separate categories of products embedded in the data – or both. Apparently the NSF database used by EPA to develop the draft performance criteria does not differentiate subcategories, such as "fill-and-dump" machines, "re-circulating" or "tank" machines, and pot and pan washing machines. These subcategories have different water (and energy) performance characteristics that could potentially skew the analysis. Since ENERGY STAR's draft criteria appear to be based on average rinse water consumption across these subcategories, the result could be that some performance levels may be too high (e.g., low temperature). The Committee recommends that EPA conduct further research to identify models falling into each of these subcategories (and others) and consider whether to treat them independently or exclude them in the ENERGY STAR labeling criteria.

#### **ENERGY STAR Criteria Should Include Some Assurance that Performance Will be Maintained**

Industry stakeholders have commented that rinse water consumption could be reduced to meet the ENERGY STAR draft criteria with some models leaving behind a chemical residue on plates and glasses as a result. Apparently there is no industry test method for chemical residue. The Committee recommends that ENERGY STAR investigate this assertion. Perhaps a "residue" test is needed to assure adequate rinse cycle quality similar to the "buttermilk test" that addresses soil removal in the NSF test procedure.

#### **ENERGY STAR Should Minimize Confusion from Future Changes in Criteria**

The Committee understands that EPA is proposing to use rinse water consumption as a proxy for energy consumption until data is available on dishwasher energy consumption directly. The

Committee sees the potential for confusion in the marketplace should models that qualify under the interim rinse water-based test not qualify when the direct-energy criteria is added to the program. To minimize market confusion and disruption, the Committee recommends that EPA either wait until a direct energy test can be developed or narrow the scope of products covered so that the future addition of a direct energy criterion will result in minimal changes to ENERGY STAR's qualifying products list. Clearly, advance communication with industry and consumers will be necessary to manage this transition successfully.

The Committee urges EPA to further investigate the areas above before moving forward with a commercial dishwasher label in order to safeguard the ENERGY STAR brand on which efficiency programs have come to rely for promotion and outreach.

Once again, the Committee would like to thank the Environmental Protection Agency for the opportunity to comment on the draft ENERGY STAR commercial dishwasher specification. These comments are endorsed by the Supporting Organizations below. Please contact CEE Program Manager, Ted Jones, at 617-589-3949, ext. 230 with any questions about these comments.

Sincerely,



Marc Hoffman  
Executive Director

**Supporting Organizations:**

Wisconsin Division of Energy  
Pacific Gas & Electric  
MidAmerican Energy Company  
Efficiency Maine  
City of Toronto Water Efficiency Group  
Efficiency Vermont  
National Grid  
Sierra Pacific Power Company  
Puget Sound Energy  
Vermont Gas Systems  
The Southern California Gas Company

The Gas Networks  
Bay State Gas  
Berkshire Gas  
KeySpan Energy Delivery  
NSTAR Gas  
Unitil  
Northern Utilities Natural Gas