CEE Together We Can Change National Markets

April 15, 2004

Rich Karney
ENERGY STAR Program Manager
US Department of Energy
1000 Independence Avenue SW
EE2J
Washington, DC 20585

Dear Rich:

The CEE Residential Appliance Committee (Committee) thanks the Department of Energy (DOE) for the opportunity to comment on the proposed 2007 ENERGY STAR clothes washer specifications. The Committee applauds DOE's efforts to increase the efficiency of residential washers, and in particular, its efforts to include Water Factor (WF) within the criteria. This marks a major milestone in the program, and opens up new opportunities for ENERGY STAR partnerships with many water and wastewater stakeholders.

As you may know, the Committee comprises CEE-member energy efficiency program managers that support the national ENERGY STAR Program locally through rebates, education, and other strategies. CEE also invited select water efficiency program managers to participate in the Committee as it developed these comments. A list of the organizations that developed and support these comments is given below.

In December 2004, the CEE Board of Directors adopted a new residential clothes washer CEE specification to take effect January 1, 2007 that includes Tier 1 levels of 1.8 Modified Energy Factor (MEF) and 7.5 WF. The Committee strongly urges DOE to consider tightening the ENERGY STAR energy and water efficiency levels consistent with the 2007 CEE Tier 1.

Qualification of Top-Load Models
Though DOE stressed the importance of top-load models in its analysis document, the Committee would like to point out that when the original ENERGY STAR specification for residential clothes washers was set in 1997, no top-loading models qualified. Despite the lack of top loaders, DOE set the level at an appropriate mark given the market and technical conditions, and the program has been successful as a result.

Research on Consumer Preference
In its analysis document, DOE references manufacturer-supplied information on consumer preference for top loaders. The Committee questions the statistic that 85% of consumers prefer top loaders for two reasons. First, in the Appliance Magazine Annual Report on Laundry Appliances from September 2003 and on record in California Energy Commission hearings, Maytag indicated that nearly 40% of consumers prefer front loading models. Secondly, due to the small number of top loaders currently qualified for ENERGY STAR, the 30% market

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penetration numbers reached in 2004 can be used as a correlate for front loader sales. In both instances, the data demonstrate that the 85% statistic understates consumer preference for front loaders.

Further, specific efficiency program data do not support the argument that 85% of consumers prefer top loaders. For example, in Seattle, over 6,000 washers were rebated between January 1, 2004 and March 31, 2005, constituting nearly 50% of all washers sold in the area. Of these 88% were front loaders and only 12% were top loaders. These data clearly show that consumer preference for front loaders is well above the 15% level argued by manufacturers. In addition, anecdotal evidence from appliance retailers in many areas of the country shows that between one-quarter and one-half of all new washer sales are front loaders.

Perhaps the most compelling research on the importance of loading type to consumers was completed by DOE itself as part of the recent federal standard revision. The research showed that door location is not at the top of the list of key features for consumers. In the Technical Support Document for the washer rulemaking, DOE reported on extensive national focus group and conjoint analysis work.[1] The stratified samples established by the researchers presented a cross section of American consumers and provided results with high levels of statistical confidence.

The text below is excerpted from the Department's Technical Support Document from Appendix J, Clothes Washer Consumer Analysis. What is clear from this research is that cost is the most important purchasing attribute. This is addressed in the Committee's comments below. Door location ranked far down the list of important attributes, and was only listed as a "top five" attribute by 13.5 percent of conjoint participants.

The DOE consumer research is summarized as follows:

> *Door placement is not as important as other attribute*s. Although the focus groups included door placement as one of the 10 most important attributes, both the conjoint results and survey results show that door placement is not as important to consumers as a number of other attributes… In the calculation of importance statistics, door placement was second from last in importance among the six attributes used in the conjoint. In addition, 70 percent of the survey respondents said that they would consider purchasing a front-loading machine if they were going to buy a new clothes washer. For these people, door placement was tied for last in terms of importance, comprising only 8 percent of total utility.

Cost Impact

As cited above, DOE research showed that cost was the most important consumer concern regarding clothes washer purchase. To investigate how DOE's focus on top loaders would impact consumer prices, the Committee examined whether there was a price difference between

[1] "Final Rule Technical Support Document (TSD): Energy Efficiency Standards for Consumer Products: Clothes Washers" U.S. Department of Energy, Washington, DC 20585, December 2000, Appendix J

front and top loading models that would qualify at the proposed 2007 levels. The average retail price of a front loader meeting the CEE Tier 1 level is $996, while the average price of a top loader meeting the proposed ENERGY STAR criteria is $1274. While top loaders minimally compliant with current ENERGY STAR levels may carry a lower price than front loaders, this price differential does not appear to hold true at the higher efficiency end of the spectrum, where the new ENERGY STAR levels are planned.

Manufacturer Impact

In the analysis document provided by DOE, it appears that the primary reason that DOE proposed the 1.72 MEF and 8.0 WF levels as opposed to the Appliance Committee recommendation was that three manufacturers' top loaders would qualify. The Committee would like to note that one manufacturer, GE, has a top loader currently meeting the 2007 CEE Tier 1 level. The Committee questions the Department's emphasis on ensuring three top loading models qualify as opposed to one, as one qualifying model demonstrates technical feasibility. If it is important that more than one manufacturer produce a top loader at the proposed ENERGY STAR levels prior to 2007, the Committee urges DOE to reconsider comments submitted by Fisher & Paykel in October 2004.

Fisher & Paykel is a successful, mainstream manufacturer of ENERGY STAR-qualified, top-loading clothes washers. Within Fisher & Paykel's public comments, which were not included in the summary at the end of the DOE analysis, the manufacturer states that though they do not currently produce a top loader at the 1.8 MEF and 7.5 WF level, the CEE Tier 1 is achievable by vertical axis washers. Without sufficiently tough limits, Fisher & Paykel went on to say that the program would be meaningless, and that they support DOE adopting the CEE Tier 1 levels for the ENERGY STAR program.

Fisher & Paykel's comments are important given that DOE's decision-making criteria include the statement that the levels "must not rely on proprietary technologies of one or a small set of manufacturers." While even three manufacturers may constitute a small set, it appears that DOE is comfortable setting the ENERGY STAR specification at such a level. However, based upon Fisher & Paykel's statement that the CEE Tier 1 level is achievable, DOE should consider that two, not one, manufacturers can and will produce top loaders at the levels proposed by the CEE Appliance Committee if they are adopted by ENERGY STAR. The Committee urges DOE to reconsider the levels given the likely introduction of Fisher & Paykel models at CEE's Tier 1.

Efficiency Program Impacts

A second criterion that DOE has cited with regard to setting the clothes washer specification is "significant energy savings." Members of the Appliance Committee share this goal and urge DOE to reconsider the proposed levels, which leave considerable energy and water savings on the table.

Faced with aggressive kWh savings targets, several efficiency programs have already begun promoting clothes washers at the 2007 CEE Tier 1 with excellent results. These include the NW

Alliance and the Energy Trust of Oregon. At the Sacramento Municipal Utility District, clothes washers at the 2007 CEE Tier 1 level currently constitute 40% of all products rebated.

Lost Energy and Water Savings

These programs, as well as many others, need the kWh savings associated with the 1.8 MEF level to justify continued support of the clothes washers, and in some cases, all ENERGY STAR appliances. While the difference in energy savings between 1.72 MEF and 1.8 MEF, 31 kWh annually, may seem insignificant on an individual unit basis, it is huge in the aggregate. When multiplied over the 1.2 million ENERGY STAR washers expected to be sold in 2007, the lost national energy savings amount to 37 GWh each year. Energy efficiency programs need to capture those savings.

One example of the importance of residential clothes washers to achieving energy savings is provided by the Northwest Power and Conservation Council's Power Plan. This document provides a map to energy planning and policy in the Northwest region for the next 5 years, with the goal of ensuring an adequate, efficient, and reliable power supply. In the plan, residential clothes washers performing at 1.8 MEF or better are identified as the third largest source of achievable, cost-effective conservation in the residential sector, providing 140 aMW over a 20 year period, amounting to 5% of the total conservation needed in the region.

Water efficiency savings opportunities are being shortchanged through the specification proposal as well. DOE analysis shows that approximately 550 gallons of annual water savings per model are at stake by setting the WF level at 8.0 rather than 7.5. This adds to 670 million gallons per year of wasted water, too much to be ignored by water efficiency programs. Based on a PG&E estimate, 3 kWh are needed to pump every 1,000 gallons of water used. In total, lost energy savings associated with the 8.0 WF proposal account for an additional 2 GWh annually, not including energy used for wastewater treatment. Moving the Water Factor to 7.5 could leverage additional water stakeholders to become ENERGY STAR promotional partners.

Implementation Date and Future Innovation

The Department has stated that the analysis is based on currently available models and makes no predictions regarding future advances. While the Committee agrees that predicting future technological improvements is difficult, the number of model introductions at the CEE Tier 1 level in the last six months provides an indication of future direction. Over 30 models have been introduced by seven manufacturers including Electrolux, GE, Maytag, and Whirlpool. And with an implementation date over a year and a half away, additional product introductions are nearly certain.

The Committee would like to thank the Department of Energy for the opportunity to comment on the 2007 ENERGY STAR clothes washer criteria, and looks forward to an ongoing discussion with DOE regarding promotion of ENERGY STAR clothes washers. In particular, the Committee encourages DOE to participate in an open dialogue with stakeholders regarding how the final criteria are to be selected.

Please contact CEE Residential Program Manager Rebecca Foster at (617) 589-3949 ext. 207 with any questions about these comments.

Sincerely,

Marc Hoffman
CEE Executive Director

Supporting Organizations:
American Council for an Energy Efficient Economy
Cape Light Compact
City of Austin
Efficiency Vermont
Metropolitan Water District of Southern California
National Grid
Natural Resources Defense Council
New York State Energy Research and Development Authority
Northeast Energy Efficiency Partnerships
Northwest Energy Efficiency Alliance
Northwest Power and Conservation Council
Pacific Gas & Electric
PacifiCorp
Sacramento Municipal Utility District
San Diego County Water Authority
Seattle City Light
Seattle Public Utilities
Tacoma Power
United Illuminating
Wisconsin Department of Administration, Division of Energy