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J.B. HOYT
DIRECTOR, GOVERNMENT RELATIONS

August 15, 2005

Mr. Richard Karney
ENERGY STAR® Program Manager
U.S. Department of Energy
Building Technologies Program
1000 Independence Avenue, SW
Washington, D.C. 20585-0121

Dear Mr. Karney:

Thank you for the opportunity to submit follow-up comments after the stakeholder hearing for Dishwasher ENERGY STAR levels held on July 13, 2005.

In our previous submission of July 8, 2005, Whirlpool highlighted the following issues and stated our positions:

- Whirlpool agrees that a new ENERGY STAR level should be established for Dishwashers
- Inclusion of standby power is appropriate, however, it should be represented by a combined kWh measurement for product use plus standby power, not by separate Energy Factor (EF) and standby power values
- Water consumption should not be included as a criterion since (a) water use in Dishwashers is a very small portion of national water use and (b) water consumption in Dishwashers is highly correlated with the already-regulated energy use
- Manufacturers need sufficient lead-time from the issue of the final qualification level to the effective implementation date to comply appropriately

The recent signing of the Barton-Domenici Energy Policy Act of 2005 has significant implications for the revised ENERGY STAR qualifications that we would like to address. The Energy Bill as signed into law on August 8, 2005 stipulates that revised ENERGY STAR qualification levels be established by January 1, 2006 and take affect on January 1, 2007. Additionally, the new ENERGY STAR qualification requirement will be used to make a comparison of baseline energy data from 2003, 2004, and 2005 produced product to energy data from 2006 and 2007 produced product for the purpose of determining manufacturers' tax credits.

This timetable mandate and the requirement to compare 2006 & 2007 energy efficiency to previous years has a significant impact on our specific recommendations for the revised ENERGY STAR requirements as detailed below.

We believe the fundamental technology is available to enable development of significantly more energy efficient dishwashers. AHAM and Whirlpool had previously requested a 24-month timeframe from establishment of the new requirements to the effective date. This time is required to complete engineering development, laboratory and consumer testing, production tooling, supplier readiness, and market launch. However, the Energy Bill timetable mandate allows only 12 months. In order to meet the timetable mandate and also drive development of more energy efficient dishwashers without sacrificing wash performance, we are recommending that the department implement a two-phase plan as follows:

Phase I effective January 1, 2007:

- Raise the ENERGY STAR qualification level from an EF = 0.58 to EF = 0.62. This change increases the ENERGY STAR benefit over minimally compliant product from 26% to 35%.

Phase 2 effective January 1, 2010:

- Further raise the ENERGY STAR qualification level from an EF= 0.62 to the equivalent (see bullet #3) of EF = 0.68 This change increases the ENERGY STAR benefit over minimally compliant product from 35% to 48%.
- Incorporate a 1-watt standby power limit into the requirements.
- Replace the Energy Factor (EF) with Total Annual kWh as the sole measure of annual cycle energy consumption plus standby power for ENERGY STAR compliance.

Rationale:

This two-phase approach resolves several issues that arise from certain requirements of the Energy Bill. Additionally, in retrospect this two-phase approach actually provides the opportunity for a much stronger energy policy and additional national energy savings. Specific points:

- Resolves the conflict between manufacturers' request for 24 months of development time and the Energy Bill 12-month mandate.
- Provides a short term (2007) incentive to encourage consumers to purchase higher efficiency dishwashers and a long term (2010) incentive for manufacturers to launch a new generation of high efficiency dishwashers.
- Recognizes that consumer satisfaction with the wash performance of Dishwashers having an EF > .62 is dramatically lower with today's technology.
- Incorporates a standby power limit into the ENERGY STAR requirements without causing undue complications and complexity in determining which 2006 and 2007 dishwashers qualify for the tax credit. Incorporating this change in phase II eliminates any conflict with the Energy Bill regarding baseline comparisons.
- Provides a means to incorporate standby power in the ENERGY STAR qualification criteria with a single compliance measure (total annual kWh). In addition, elimination of Energy Factor as a measure will eliminate redundant calculations for manufacturers and provide greater relevance to the end consumer. Incorporating this change in phase II eliminates any conflict with the Energy Bill (which uses EF in 2006 & 2007).

- Allows adequate engineering time to overcome wash performance problems with higher efficiency machines prior to 2010.

We were initially concerned that the Energy Bill would complicate the new ENERGY STAR requirements. However, with the two-phase approach recommended herein, we now believe that even greater national energy savings can be realized through a short term and long term approach.

The following topics were raised at the July 13, 2005 meeting in addition to those we noted above. We address them further below:

- 1) New:
 - a) ENERGY STAR levels
 - b) Levels for compact Dishwashers
 - c) Proposed dates of implementation
- 2) Proof of correlation between water consumption and energy usage
- 3) Dishwasher water consumption relative to other national uses
- 4) Increase purpose of ENERGY STAR to include performance-based testing
- 5) Standby power of less than 1 watt

1) Creation of ENERGY STAR Levels for Various Product Categories & Dates of Implementation

Whirlpool agrees that there should be separate definitions and ENERGY STAR levels for standard-size and compact Dishwashers. The definitions in the current energy standard (see ANSI/AHAM DW-1) would apply. Our suggestion for efficiency levels is as follows:

PRODUCT	Phase I (EF)	Effective Date	Phase II (Total kWh)	Effective Date
Standard	.62	1/1/07	325 kWh	1/1/10
Compact	.84	1/1/07	264 kWh	1/1/10

2) Water Consumption Correlation to Energy Use

Whirlpool tested 30 Dishwashers from the model year 2004 for energy and water usage. While there is some model-to-model variation, often caused by feature differences Figure 1, below, shows a 77.8% correlation between energy & water consumption. The 10-year industry composite chart supplied by AHAM (Figure 2) shows a very strong correlation between energy and water consumption. We strongly believe that these charts demonstrate the strong correlation between energy and water consumption. This information is sufficient to preclude the added burden on manufacturers and the Department of collecting and reporting water consumption information for ENERGY STAR qualified dishwashers.

3) Dishwasher Water Consumption Relative to Other National Uses

In addition to the correlation cited above, Whirlpool Corporation does not believe that water consumption should be part of the Dishwasher ENERGY STAR qualification for many other reasons. Specifically:

- The amount of water consumed by the average Dishwasher is less than one-third that consumed by hand-washing of dishes. The Department could have a far greater impact on water consumption by collaborating on a public service campaign create an awareness of this among non-owners of Dishwashers.

- Most major manufacturers no longer recommend pre-rinsing of dishes prior to placing them in a dishwasher. The Whirlpool “Use and Care Guide” specifically states, “It is not necessary to rinse the dishes before putting them into the dishwasher.” A public service campaign could be expanded to include awareness of this waste of water as well.
- Today’s Dishwashers consume approximately one-tenth of one percent of all water consumed in the U.S. according to the Pacific Institute. System leaks alone consume *eight times* as much water.
- All Dishwashers in the United States use less water in a year than is consumed nationwide in one day.

4) Purpose of ENERGY STAR Label is not as a Performance Indicator

A proposal was presented at the July 13 Stakeholders Meeting to include wash performance requirements in the ENERGY STAR criteria. We believe this is outside the scope of the ENERGY STAR program for dishwashers and we strongly object to any such consideration in the criteria. We believe that any government mandated performance requirement for Dishwashers is an unwarranted intrusion on the free market. Wash performance is one of the fundamental competitive advantages that all manufacturers strive to achieve. This is the core benefit of a Dishwasher and any attempt to regulate this would be an anti-competitive move on the part of the Department.

We have studied other non-appliance products that utilize performance-based testing to meet ENERGY STAR qualification, and find substantial difference from the appliance industry. In the case of those non-appliance products, there were circumstances that do not exist for Dishwashers. For example, light bulbs have an ENERGY STAR performance requirement. In this case, it is largely a commodity market, with limited sales assistance and product information. Consumers shopping for home appliances on the other hand, have access to sales assistance, broad consumer information in manufacturers’ literature, and competitive comparison information regularly published in consumer magazines. Further, the warranty provisions of Dishwashers and the critical importance of consumer loyalty to a brand provides more than adequate motivation for manufacturers to satisfy the core consumer requirement, wash performance.

Developing a set of arbitrary performance criteria would be a lengthy and tedious process analogous to development of a new test procedure. It would be subject to debate over determination of criteria, establishing levels of acceptable performance, inconsistency of the measurement systems across laboratories, etc. This strays far from the ENERGY STAR mission of guiding consumers to the most energy efficient products!

Finally, including other aspects of product performance on the label could begin to “manage” consumer behavior. Today, the manufacturers and retailers provide information on product capabilities to the consumer, allowing the consumer to determine which benefits and features are more important to them. If the ENERGY STAR label were used to inform consumers on product performance against a predetermined set of arbitrary criteria, consumer choice may become unnecessarily restricted.

Thus, Whirlpool reiterates our strong objection to expanding the scope of ENERGY STAR requirements beyond energy consumption for Dishwashers.

5) Standby Power

The earlier analysis by the Department showed some 148 models with standby power of less than 1 kWh per year. These models do not consume standby power. Database indications

of 1 kWh or less are attributable to rounding of non-standby power consuming models. A standby power level of one watt can be achieved by known, affordable technology and we support including this level of standby power consumption in the ENERGY STAR qualification level. This equates to approximately 8.5 kWh per year (or \$0.73 operating cost at 8.6 cents per kWh).

Whirlpool and its trade association, AHAM, continue to feel that standby power should be folded into the total annual energy consumption and not have separate prescriptive requirements for it. This will allow manufacturers to optimize their designs for maximum consumer satisfaction, while achieving overall energy consumption targets.

In order for manufacturers to properly allocate engineering and other resources, we strongly urge the Department to adhere to its published schedule and to complete this ENERGY STAR revision before the end of 2005.

Whirlpool Corporation looks forward to continued dialog with the Department on this matter. Please contact the undersigned should you have any questions regarding these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "J. B. Hoyt". The signature is written in a cursive style with a large, looped initial "J".

