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October 5, 2012

Via Email

Amanda Stevens
U.S. Environmental Protection Agency
ENERGY STAR® Appliance Program
<mailto:appliances@energystar.gov>

Re: ENERGY STAR Product Specification for Clothes Washer Version 7.0 and Dryer Version 1.0

Dear Ms. Stevens:

Thank you for the opportunity to comment on these two drafts. Our ongoing commitment to the growth, success and integrity of the ENERGY STAR promise continues to be a strong source of pride for our company.

As a very active member of the Association of Home Appliance Manufacturers (AHAM), Whirlpool Corporation has worked closely with them in the development of the comments they submitted (under separate cover) on these two proposed specifications. **Please be advised that we support and echo the positions taken by AHAM. Our comments herein supplement those remarks, particularly on the proposed levels which AHAM cannot offer comments either for or against given their position as an industry organization.**

Thank you again for your consideration and we look forward to our continued collaboration.

Sincerely,

A handwritten signature in black ink that reads "Nick Gillespie". The signature is written in a cursive, flowing style.

Nick Gillespie
Government Relations Manager

Whirlpool Corporation Comments
ENERGY STAR Clothes Washer Version 7.0-Draft
October 5, 2012

Proposed Qualification Criteria

We applaud EPA for trying to ensure consumers have the option to choose between a reasonable selection of efficient front and top load clothes washers that meet their various ergonomic, cleaning and rinse performance and payback needs. However, in our analysis of the data and logic used to determine whether or not the proposed criteria of Modified Energy Factor ≥ 2.6 , Water Factor ≤ 3.7 would accomplish these goals, we believe we found just the opposite for all the reasons outlined in AHAM's comments. Additionally, we would also like to offer insights not noted in AHAM's comments regarding the data used to calculate the \$89 savings, the resultant payback period, the Consumers Union test and our recommendation for ENERGY STAR levels. They are as follows:

- 1) Using an average of the markets we have direct data on plus the highest cost markets cited in the USA Today article of September 29, 2012, we are still dramatically below the EPA number. This results in a cost savings of \$17.64 per year or only 35% of the EPA savings number. Our comparison is between the proposed 7.0 revision and the current revision 6.0 E-Star level, which we believe is the correct approach. The savings we calculate would dramatically extend the consumer payback period, rendering the economic justification for the EPA proposed level invalid. Our calculations and assumptions are embedded the following Excel file:



ESTAR Savings
Comparison to Std, V.

- 2) The data on the Consumers Union (CU) cleaning and rinse performance scores were cited in the ENERGY STAR draft as evidence of satisfactory cleaning performance. The CU test utilizes a more intensive cleaning cycle, not the "Normal" cycle used by the DOE test procedure. The CU test uses heavy energy and water intensive cycles to achieve their reported cleaning scores. To illustrate this point, we have charts in the embedded Excel file that illustrate the significant performance differences. The models shown here are very competitive models in the market place that did very well in CU testing.



Summary - CU vs.
DOE Test of FL & TL c

As one can see, cleaning, gentleness, cycle time and efficiency are affected by as much as 20 percent and directly correlate with the test procedure used and the cycle selected. As was the case with the ENERGY STAR dishwasher revision in 2011 and the most recent Consortium for Energy Efficiency (CEE) clothes washer Tier Levels, the ENERGY STAR Guiding Principle of "product performance being maintained or enhanced with

increased efficiency” cannot be preserved without a “real life” performance testing requirement that coincides with any new energy and water levels that exceed a MEF of ≥ 2.4 and ≤ 4.0 WF for top loaders and a ≥ 2.6 Modified Energy Factor/Water Factor ≤ 3.7 for front loaders. Note, we are continuing to explore whether or not the latter level for front loaders could be slightly higher without a cleaning and rinse performance component to go with it. Having unprecedented energy and water ENERGY STAR levels without a cleaning score will negate any net efficiency and monetary benefits the consumer was expecting. If a model uses extremely low levels of water and energy, but does not clean and rinse garments to a consumer’s satisfaction under normal conditions, they will respond by selecting more water and energy intensive cycles like the ones used by Consumers Union. In turn, ENERGY STAR will fail to get their targeted environmental benefits. Also, without a performance test, some manufacturers will accelerate this consumer behavior by gaming and proliferating clothes washers that do not clean in the name of meeting the new levels with a smaller investment.

Whirlpool’s Recommendation for V7.0 Specification Levels

Whirlpool is proposing an **ENERGY STAR level of ≥ 2.4 Modified Energy Factor/Water Factor ≤ 4.0 for top loaders and a ≥ 2.6 Modified Energy Factor/Water Factor ≤ 3.7 for front loaders along with the an effective date that harmonizes with the start date of DOE’s revised standards—March 7, 2015 (as proposed by AHAM).** This would accomplish ENERGY STAR’s goal of getting the total number of qualified models to fewer than 25 percent while striking a delicate balance between efficiency, cleaning/rinse performance and consumer preference in the forthcoming clothes washer specification. Moreover, as AHAM points out in their comments, this approach would ensure a simpler crosswalk in 2015 and would also acknowledge the inherent differences between what DOE has determined are two separate product classes.

<p style="text-align: center;">Whirlpool Corporation Comments ENERGY STAR Clothes Dryer 1.0-Draft October 5, 2012</p>
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Qualification Criteria

Whirlpool believes that the 13 percent step in efficiency over and above the already increased 2015 minimum standard is overreaching, will limit the model choices available to consumers and will significantly increase the payback period (if not make such period illogically long). In addition to the concerns raised by AHAM, Whirlpool has serious concerns with some product modifications which Energy Star feels can help achieve this 13 percent level:

- Airflow (as measured in cubic feet per minute or CFM) cannot be reduced as it substantially increases the opportunity for lint build-up. Such an increased fire risk is not acceptable to manufacturers, safety agencies and consumers alike and is inappropriate in the Energy Star program.
- Energy Star appears to be relying heavily on the NRDC/Ecova study and the drying efficiency measured therein. That study was based on an arbitrary clothes load, ‘To determine the magnitude of these effects, we assembled two test loads of RW clothing for measurement: a smaller 50 percent synthetic, 50 percent cotton load run at the “permanent press” and “normal dry” settings, and a larger 100 percent

cotton load run at the “cotton” and “more dry” settings.’ This load, while interesting and well-intended, is not based on any consumer data, therefore is irrelevant to how consumers actually use clothes dryers. By comparison, the AHAM test is based on extensive consumer research, allowing any testing results to mirror real-world consumer activity. We would urge Energy Star to use the AHAM test load in energy efficiency evaluations for this reason if Energy Star desires to study more consumer relevant loads beyond the current DOE test load.

- EPA assumes that advanced technology is not necessary to reach the proposed levels. No reference is cited in support of that claim. As we have previously communicated, there are a number of improvements that can be made in dryers to improve efficiency without dramatic investment of time and dollars in advanced development. These actions can improve efficiency some 5 – 10 percent above the 2015 CEF level.

Whirlpool’s Recommendation for V1.0 Clothes Dryer Specification Levels

In light of these facts and those put forth by AHAM, the proposed 13 percent increment is not achievable without substantial investment and time for development of new technology. **We feel a more realistic qualification level of 8 percent for both electric and gas dryers at a later date (see AHAM/our proposed effective date) should be used as an incentive for manufacturers.**

A. Drying Time

As AHAM noted in their comments, Whirlpool agrees with the concept of a maximum drying time as this ensures performance is not sacrificed in the name of efficiency (consumers find longer dry times unacceptable and will chose less efficient cycles which shorten those times). That said, we are uncomfortable that Energy Star does not provide support for the 50 minute cycle time. Our research shows that when consumers do laundry, it typically takes the form of an assembly line. Clothes go into the washer and subsequently get transferred to the dryer. While the dryer is running they start another load in the washer. Most people want and/or expect the dryer to complete before that 2nd load of laundry in the washer finishes so they can remove first load from dryer, and transfer second load from washer to dryer. Depending on how full the dryer is stuffed, the fabrics that are in the dryer and the Remaining Moisture Content, this typically has an average range of 30 to 60 minutes. To that end, we believe 60 minutes should be the maximum figure.

B. Auto Termination

The Energy Star proposal requires the use of both temperature and moisture sensors. This highly prescriptive design requirement fails to allow for innovation. In mandating both sensors, the Energy Star program does not demand effectiveness. Whirlpool research shows that use of both sensor types would likely drive up energy use. The Energy Star program is urged to simply specify an efficiency level and avoid prescriptive, innovations stifling requirement on how to achieve that level. Energy Star should also encourage the DOE to implement the test procedure modifications proposed by AHAM to include the automatic termination feature in the DOE test procedure.

C. Warranty Requirements

We believe that the proposed inclusion of a three-year cycle time strays from the Energy Star mission of saving energy for the nation. Warranties are a competitive part of the product mix offered by manufacturers and should be left to the free market to seek a level acceptable to the consumer. Energy Star argues that the control board for a qualifying dryer will be more complex, therefore more expensive. While true, this is not news and not unique to Energy Star dryers. All higher efficiency products utilize increasingly complex designs and components. Such technology is needed to provide the greater precision and/or control that characterize a highly efficient appliance. We strongly urge the Energy Star program to manage products and to avoid such social engineering.

Effective Date

We have several concerns with the proposed effective date of April 2013:

- **Cumulative Regulatory Burden:** Over the 2012-15 time period laundry equipment manufacturers face an unprecedented level of investment in order to address the February 2013 UL dryer safety requirements, April 2013 dryer Energy Star, January 2014 washer Energy Star, January 2015 dryer minimum standard and the March 2015 washer minimum standard. The multitude and magnitude of unique events adds to manufacturing cost, product churn in the marketplace and retailer/consumer confusion. Conforming the Energy Star dates with the minimum standard dates would yield significant mitigation of this issue.
- **Timing:** The time between the proposed start of the dryer Energy Star program and the change in the minimum standard would force manufacturers to invest in two separate model lines in a relatively short period of time. This would likely mean that manufacturers would be unable to re-coup their investment costs.
- **Sale of Pairs:** Over 40% of laundry sales are washer and dryer pairs. And pair sales yield the greatest energy savings for the consumer and the nation. The more efficient the washer (particularly those with lower RMC or remaining moisture content) paired with the more efficient dryer yields this greater savings. If the Energy Star programs for washers and dryers change at significantly different times, manufacturers will not be able to introduce paired models for the Energy Star program.
- **Ideal Timing:** Whirlpool recommends that the timing of both the washer and the dryer Energy Star programs be delayed to March 2015 as noted in AHAM's comments, the time of the washer minimum standards change. This allows manufacturers to make the best use of their scarce investment dollars, reduces the chance for retailer and consumer confusion and allows the Energy Star program to make a bigger splash.
- **Pair Rebates:** One particular opportunity would be for Energy Star to promote to utilities the concept of "pair rebates". For example, a utility could offer a rebate of \$50 on the washer and \$50 on the dryer separately, but \$125 on an Energy Star pair. This would add excitement to the Energy Star program, stimulate sales of pairs and motivate the consumer to maximize the reduction in her laundry utility bill!