Comments of Procter and Gamble Corporation Regarding Energy Star Proposed Criteria for 2007 Clothes Washers

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Procter and Gamble (P&G) is a global manufacturer of laundry and dish products and is the leading detergent manufacturer in North America and the world.
P&G appreciates the opportunity to comment on proposed Energy Star criteria for clothes washers in January 2007. Like other stakeholders for the residential appliances energy saving programs, the Procter and Gamble Company fully supports these important programs in North America.

Background

Consumers view the appliance and the laundry products as the system to get their laundry clean – but the performance they desire from their laundry system is much broader than stain removal or whiteness.

Consumer Definition of End Result/Outstanding Performance:

The most important characteristics the consumer uses to measure performance are:

1. Stain removal
2. Whitening
3. Color and Fabric care
4. Rinsing
5. Softening
6. Scent delivery

This broader performance is very important to consumers and is critical to consumer satisfaction (a system for example that provides great whiteness but generates color or fabric damage it not an option for consumers). Each and every consumer has their very own idea of great performance; the habits that vary by consumer are an indication of this. Consumer are sensitive to changes in the performance their system particularly if the change relates to performance– we can see this globally (e.g. as regions migrate to higher performing wash systems, the number of steps carried out outside the machine reduces significantly), within individual regions and from consumer to consumer. Changes in appliance design will have an effect on consumer satisfaction and habit change. If a new system does not at least match current laundry performance, the consumer will, sometimes to the detriment of energy and water savings, undertake compensatory actions to deliver a satisfactory laundry performance. In addition, a reduction in performance from an Energy Star appliance could negatively impact the Energy Star brand, which today stands for efficiency without compromise.

P&G is not an appliance manufacturer and cannot comment on specific MEF and WF. Only manufacturers know how they will achieve the target MEF and WF levels with the current equations in place. It is, however, with great pleasure that P&G takes this opportunity to comment on the proposed changes to appliances. It has become clear to P&G from a range of testing we have carried out that only if performance expectations are met by the consumer will she choose to select the cycles on the machine that were designed to save energy and water.

If performance, in its broadest sense is not reached, consumers will modify their behavior to obtain the benefits they seek, often at the expense of energy and water savings.
As will be seen in the attached comments, the dynamic play between the thermal energy, water usage, mechanical action and chemical use is complex. To achieve the desired saving in energy and water requires that we take into consideration any consumer habit change that will be forced upon the consumers for them to maintain their laundry performance.

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P&G Comments/Observations

Given the correlation between performance (see definition above) and energy/water savings, it is extremely important to maintain the performance of the system (appliance plus chemistry). Without the performance, consumers will exhibit compensatory behaviors that will significantly reduce the targeted energy and water savings and potentially negatively impact the Energy Star brand, which today stands for efficiency without compromise. P&G today has no comment on energy and water savings from the High Efficiency (low water wash) machines, as the consumer has no choice but to select a low water wash/rinse which, relative to the conventional toploaders, will save energy and water. P&G does, however, have comments on conventional toploaders (traditionally deep fill machines that have an agitator), which are challenging when it comes to energy and water savings. It is particularly important to note that too high a reduction in water in these conventional agitator top loading machines will lead to conditions that will force consumers to double rinse and thus minimize intended water savings.

Comments that will help deliver intended energy and water savings in conventional toploaders for today and the future.

1. **Performance measure**: For the future, it will be important to incorporate a performance measure to ensure that the system (appliance plus commercially available chemistry) is delivering all the benefits that consumers enjoy today. Only if the performance is attained in the cycles designed to deliver energy savings, will the consumer accept the targeted energy savings. There are industry groups dedicated to develop and upgrade test methods to capture the performance of different wash systems today.

2. **Conventional Toploaders that have been set to deliver lower wash temperatures can work to save energy: Even though these machines are deep fill machines, the consumer can save energy if she selects the intended cycles. In order for this to happen she will need to know that her machine is a lower temperature machine (the "warm" cycle has been decreased from ~90F to ~75F) and be assured that she will get the performance she needs. Furthermore, the consumer will have to experience excellent performance under the cooler wash temperatures for the habit change to be sustainable.**
   It is our experience that lowering the temperature in conventional agitator toploaders without additional changes will decrease the performance of the system and without performance, consumers WILL compensate.
   - It is important to educate consumers about the fact that these machines deliver cooler wash temperatures. If they are used to getting ~90F in their "warm" setting and now in the new Energy Star machines they get ~75F for the "warm" setting, they will select more "hot" cycles because the consumer thinks that the "warm" setting is too cool to clean. If, however, the consumer is told to expect cooler washes when the "warm" cycle is selected and is educated about ways to get the right performance at those temperatures, the consumer will embrace and try the change. Only if the performance is as expected will the habit change will be sustainable and lead to significant energy savings.
   - It is also important to educate consumers about the benefits of washing in cold (energy savings, color care and money savings) while educating them on how to get the performance they need under cooler wash temperatures.

3. **Low Water Conventional Toploaders will have a difficult time saving significant water if the technology employed leads to inability to rinse well and inability to add liquid fabric softener to the rinse**. Today's spray rinsing technology designed to lower the amount of water usage has taken two important benefits away from consumers forcing them to compensate by double rinsing:

- Spray rinsing today has reduced the ability to rinse away the dirt and detergent solution at the end of the wash. If clothes feel soapy, consumers WILL re-rinse. Furthermore, clothes will become dingy quickly if there is inadequate soil removal at the end of the wash. For perspective, today 11% of all loads are already re-rinsed, 63% of which are re-rinsed to remove excess suds/detergent/soil. If spray rinses as they are today are employed and rinsing is not effective, this number will increase significantly.
- Spray rinsing today has removed the ability to deliver liquid fabric softener during the rinse. If consumers cannot deliver liquid fabric softener in their main cycle, they WILL re-rinse. Today, 50% of the households in the US today use a liquid fabric softener. We know today that if consumers do not have an automatic dispenser in their machines that they will take the trouble to "catch" the rinse in order to get liquid fabric softener there. If they miss the rinse cycle somehow, they will re-rinse. Fabric softeners provide significant benefits to consumers, softening, color care, less wrinkling and scent. Dryer sheets are NOT a replacement for liquid fabric softeners; their strength lies in static control and scent, not softening. In spray rinse machines today, liquid fabric softeners are not an option. Consumers will find a cycle in the washer that will allow them to deliver it. This will cause them to rinse twice defeating the water savings.