

## Fraze, Douglas

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**From:** Jeffrey Ford Garberson <jeffrey.fordgarberson@ecofactor.com>  
**Sent:** Wednesday, December 23, 2015 3:55 AM  
**To:** daken.abigail@epa.gov; Fraze, Douglas  
**Subject:** Comments on the draft 2 specifications for EnergyStar

Dear Abi and Doug,

Thank you again for your hard work in putting together the latest round of specifications. It is great to see the document moving in the right direction. Please find our comments below.

Best Regards,  
Ford

1. In the A/B testing proposal it is specified that in the case of multiple customer bases, some of which have more efficient algorithmic choices and some less efficient, the least efficient group of algorithms should be used for purposes of the measurement to determine savings. No similar statement is made for the model-based approach.
  - a. We believe that a consistent requirement should be made here for both the model and the A/B testing approaches. If a decision is made to enforce the use of the least efficient operating conditions of a product for the A/B testing approach then the same should be done for the model based approach.
  - b. Further, we feel that if one partner chooses to sell to customers an algorithm that optimizes for comfort rather than efficiency that should not be a reason to disqualify other partners that sell algorithms in a manner that is optimized for efficiency from EnergyStar. Specifically, we propose that companies should have the option if they choose to split their results into groups based upon which algorithms are being run. In that case, if one grouping of algorithms that is sold by one partner passes requirements while those that are sold by another partner that prioritizes comfort does not pass requirements then the EnergyStar label could be applied in cases where the requirements are met.
  - c. We would further like to suggest that in order to preserve confidentiality if it should turn out that fewer than three companies submit A/B test results that the final A/B test savings numbers be masked and that the star be rewarded on a pass/fail basis only.
2. The requirement of  $\leq 2$  W standby mode power draw seems tiny and ill motivated to us. If a product, for example, had 4 W standby power draw that would add ~17.5 kWh per year, which is tiny on the scale of the savings we are talking about. It would make no sense to exclude a product over such a small number if the inclusive savings is large. We recommend significantly loosening if not removing this requirement.
3. In addition, for the power draw requirement it would be helpful to be very clear about:
  - . Does this include battery energy consumption?
  - a. Does this include energy that flows from the wall to charge rechargeable thermostat batteries?
  - b. When the test is performed, will the temperature be allowed to stabilize first? Power draw will depend at least somewhat on the frequency of writes that are performed to report changing temperatures.
4. We think it is important to have the procedure to select thermostats for inclusion in the model (or in the A/B test) spelled out clearly in writing.
5. We think it should not be necessary to have runtime measurements be accurate to the nearest second. That level of precision does not seem useful to any EnergyStar analysis. Requiring minutely resolution would be more than sufficient to allow the desired level of precision in the savings measurements.