

ENERGY STAR® Commercial Oven Stakeholder Meeting
Orlando, FL
February 4, 2009

Meeting Notes

Commercial oven manufacturers and other stakeholders participated in a meeting hosted by the U.S. Environmental Protection Agency (EPA) on February 4, 2009, prior to the North American Association for Foodservice Manufacturers Show. The purpose of the meeting was to introduce stakeholders to the ENERGY STAR program, review the Draft 1 ENERGY STAR Specification for Commercial Ovens, and discuss stakeholder comments received to date. The Attendee List and meeting presentation are available on the ENERGY STAR Web site at: www.energystar.gov/productdevelopment. Click on the "New Specifications in Development" link.

Below is a summary of the slides presented by Rachel Schmeltz, ENERGY STAR Program Manager, and key discussion topics. Stakeholders with additional comments and/or data should submit this information to Rebecca Duff, ICF International, at rduff@icfi.com by **February 20**.

Overview of ENERGY STAR and the Specification Development Process

Ms. Schmeltz provided an overview of the ENERGY STAR program and touched on each of the Guiding Principles that serve as a reference for EPA when developing an ENERGY STAR specification. These include:

- Significant energy savings will be realized on a national basis.
- Product energy consumption and performance can be measured and verified with testing.
- Product performance will be maintained or enhanced.
- Purchasers of the product will recover any cost difference within a reasonable time period.
- Specifications do not unjustly favor any one technology.
- Labeling will effectively differentiate products to purchasers.

Ms. Schmeltz then guided attendees through the steps of the ENERGY STAR specification development process and discussed the following important elements that make this process successful:

- Consistency – additional steps have been added to the process to allow for more consistent and frequent stakeholder involvement.
- Transparency – all EPA documents and comments are posted to the ENERGY STAR Web site.
- Inclusiveness – in addition to manufacturers, EPA engages other industry stakeholders such as trade associations, utilities, retailers, and end users.
- Responsiveness – EPA acknowledges receipt of all comments, responding promptly to questions and/or requests for meetings and conference calls.
- Clarity – additional discussion is provided in each draft specification discussing EPA's approach and justification for any changes.

Draft 1 ENERGY STAR Specification Requirements

Ms. Schmeltz first provided an overview of the standard ENERGY STAR Partner Commitments and expanded on the following key requirements:

- Annual submission of qualified product data;
- Product labeling requirements; and
- Annual submission of ENERGY STAR shipments.

She then presented the key elements of the Eligibility Criteria (i.e., technical specification) including: eligible product types; ASTM test procedures for measuring idle and cooking/baking energy efficiency; and proposed performance levels. EPA's current data set was presented with the proposed levels. Ms. Schmeltz shared the potential energy and dollar savings from the Draft 1 proposal and presented a simple payback analysis for electric/gas full-size convection ovens and a double-rack oven, which was estimated to be less than 3 years, depending on the product type.

The following questions were asked by meeting participants:

- Is the annual submission of ENERGY STAR shipments tied to specific model number?
- EPA Response: No, EPA is only interested in the total number of ENERGY STAR units shipped. In fact, EPA does not see individual manufacturer submittals, only the aggregate number. ICF International collects all of that data and aggregates the total for EPA.
- Can end users display/promote that they use ENERGY STAR qualified equipment?
- EPA Response: There are several ENERGY STAR programs, including one for small businesses, that offer several promotional options to the building owner/end user. We would need to look into this further in regards to commercial foodservice, specifically.

Discussion Summary

Ms. Schmeltz then reviewed the stakeholder comments received to date on the Draft 1 specification. These comments are summarized in the accompanying Power Point presentation. A summary of the discussion that followed is provided below.

Definitions

- For the rack oven definition, EPA should also include "the ability to product steam". This capability impacts the energy consumed by the oven.
- Even though it doesn't exist today, there could be a rack oven designed to not use steam. Why should we limit the specification to one technology?
- Shouldn't the ENERGY STAR specification use the definitions included in the ASTM standards to be consistent within the industry?
- EPA Response: We started with the ASTM definitions but they are too broad as written and EPA wanted to be more specific with regard to what types of ovens are covered by the specification. For example, the ASTM rack oven definition could also include revolving tray ovens, which are not covered by the ENERGY STAR specification.
- EPA should include a definition for mini-rack ovens. There are currently 4 manufacturers that make these ovens but they are growing in market share.
- Mini-rack ovens are close to convection ovens but are used more for baking with steam injection. The difference between rack and convection ovens is the amount of steam delivered and timing. For example, rack ovens introduce ½ gallon of water every 20 seconds at the beginning of the cycle. Also rack ovens have internal steam generators.
- EPA Response: EPA doesn't have any data on mini-rack ovens. A definition could be included in the specification as a placeholder until we can learn more about these product types and collect data.
- The ASTM test standards do not address mini-rack ovens. There are two options for revisions: (1) to address them under the convection test method or (2) to address them under the rack oven test method.
- All manufacturers are encouraged to participate on the ASTM F26 committee, which meets twice a year. The next meeting will be April 21 and 22 in Vancouver.

Conclusion: EPA will include a definition for mini-rack ovens in the Draft 2 specification. EPA will not duplicate the definitions contained in the ASTM test standard because they are too broad and will not adequately serve the purpose of this ENERGY STAR specification. EPA will consider the request to add a “steam” requirement to the definition for rack ovens.

Proposed Performance Requirements

- Is market share significant in setting ENERGY STAR performance levels?
- EPA Response: When setting performance levels, EPA looks at model availability. Market share data is important to know but very difficult to obtain and tie to the model performance data. EPA relies on the data set to be representative of models available in the marketplace and then chooses a level that represents approximately the top 25%.
- How should manufacturers test equipment with variable Btu input?
- Technically, these are two separate units and should be tested and reported separately.
- The gas Idle energy rate does not take into account the electricity being used by the motor, usually less than 500 Watts.
- What will EPA do about electric rack ovens when there is no data to support levels?
- EPA Response: Our hope was to be able to review data submitted by manufacturers in response to the data call included in the Draft 1 specification.
- PG&E’s Food Service Technology Center (FSTC) does not currently have the capability to test electric rack ovens. These product types use significant amounts of electricity.
- Would EPA be able to go forward with only a double-rack gas oven specification?
- EPA Response: This may cause some confusion in the marketplace. Historically, EPA has only released commercial foodservice specifications that address both gas and electric options so that no matter what the fuel source, customers could find ENERGY STAR qualified models. What is the market breakdown for rack ovens, electric versus gas?
- Double-rack gas ovens represent more than 65% of the marketplace. Electric (single and double-rack) represents a very small percentage (10%). Perhaps EPA should just focus on gas rack ovens, single and double-rack.
- Southern California Gas has three single-rack gas ovens in its facility and plans to conduct testing by mid-March. This information can be made available to EPA.
- Has EPA ever revisited a specification to relax proposed requirements?
- EPA Response: Yes, if we see that market penetration is low then we may revisit the current levels.
- The gas half-size convection market share is very small (i.e., 95% electric versus 5% gas). Gas half-size ovens should be excluded from the specification.
- EPA should include a minimum of 5 pans for both half-size and full-size convection ovens. This will exclude countertop models.
- EPA Response: Does EPA need to explicitly exclude countertop models?
- The minimum number of pans should automatically exclude countertop models.
- Some manufacturers would like to see countertop units included in the ENERGY STAR specification.
- PG&E’s FSTC has some limited data for countertop models. However, different levels would need to be developed for ENERGY STAR. Countertop models have very different production capacities. Also, the ASTM test method would need to be tweaked slightly to test these product types.

Conclusion: EPA will consider revising the convection oven specification to require a 5-pan minimum to exclude countertop units. Countertop units may be included in this specification if enough data is made available within the proposed timeline. Otherwise, these product types will be considered along with other

ovens in 1 year. EPA will review gas single rack data submitted by Southern California Gas. EPA will also consider moving forward with a specification for gas rack ovens, only.

Set Back Mode

- Several manufactures use manually controlled power saving modes. These can also be set at the factory level (i.e. automatic). When the oven is not used for a chosen period of time (e.g., 15 minutes) then the oven goes into a low power mode.
- The question is how easy is it for the customer to disable this function? Also, how does one factor in recovery time, which is very important to the customer?
- EPA Response: Should this be an ENERGY STAR requirement or should manufacturers be allowed to enable set back modes during testing?
- Operations may vary so an automatic set back mode could hurt business, especially if it cannot be disabled.
- Set back mode is not practical in commercial foodservice; customers won't use it because it may damage their goods.
- For convection ovens, adding a set back mode would add significant cost.
- One option could be to encourage manufacturers to offer set back modes in the specification or require manufacturers to report this capability for inclusion on the ENERGY STAR qualified product list.
- If you allow for set back modes in testing you are not providing for a realistic profile of how the equipment will operate. Therefore, EPA should not make this an ENERGY STAR requirement nor should manufacturers be allowed to use it in testing.
- EPA could work to educate end users about using this feature, when appropriate.

Conclusion: The specification will not require a set back mode and manufacturers should disable this function when testing for idle energy rate. EPA will help to educate end users about these additional energy saving features.

Oven Controls

- Typically ovens have some variation in the different types of controls offered with any one model. In some cases, the units will have the same model number but different sku numbers.
- Manufacturers could report worst case scenario for ENERGY STAR qualification OR report results using all controls to highlight the more efficient options.

Conclusion: EPA will consider requiring manufacturers to test and qualify a model under its worst case scenario (most energy consumptive) in terms of control type and listing this control type on the ENERGY STAR Qualified Product list. Manufacturers would also have the option of testing and reporting all control scenarios to highlight the most efficient.

Next Steps

- There are several areas where additional data is needed to determine requirements:
 - Electric convection ovens (half and full-size)
 - Half-size gas convection ovens
 - Single-rack gas rack ovens
 - Electric rack ovens (single and double-rack)

- Manufacturers are encouraged to submit data to EPA **by February 20**. If additional data is not collected, EPA will exclude rack ovens from ENERGY STAR under this Version 1.0. If this happens then rack ovens will be revisited in 1 year along with the rest of the oven sub-categories.
- EPA plans to send a Draft 2 specification out for review and comment by February 27. The goal continues to be to launch the new specification at the NRA Show in May. However, if more time is needed then EPA will take additional time to work with manufacturers to finalize the requirements.