

ENERGY STAR[®] Commercial Griddle Industry Stakeholder Meeting
Orlando, Florida
February 4, 2009

Meeting Notes

Commercial griddle 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 discuss comments received on the Draft 1 ENERGY STAR Specification for Commercial Griddles and present a revised proposal for Draft 2. 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 discussion led by Rachel Schmeltz, ENERGY STAR Program Manager, and proposed next steps toward creating a Draft 2 specification for review and comment. Stakeholders with additional comments and/or data should submit this information to Rebecca Duff, ICF International, at rduff@icfi.com by **February 20**.

Discussion Summary

Ms. Schmeltz reviewed the proposed requirements of the Draft 1 commercial griddle specification. To date, EPA has received comments in the following areas:

- Partner commitments
- Performance levels
- Test procedures
- Approach for comparing energy use
- Data quality and compliance

Individual comments are identified in the Power Point presentation that accompanies these discussion notes along with EPA's response to each comment. For those areas that generated additional and more detailed group discussion, EPA has provided a summary of stakeholder comments and responses from EPA, below.

Electric Griddle Performance Levels

There was concern that the Idle energy rate proposed for electric griddles (i.e., 320 watts/ft²) is too low and is not representative of the top 25% of the marketplace. EPA acknowledged that the electric griddle data set is small (i.e., 11 units) and more data should be collected to confirm, or indicate a need for new, performance levels.

- The current data set is not representative of the marketplace. EPA needs data from those manufacturers who are not currently involved in the process to get a better sense of the range of efficiencies available in the marketplace. At least 10-12 data points would be needed to round out the data set.
- EPA Response: Collecting data on 10-12 more units will be a challenge within the proposed timeframe due primarily to testing capacity (third party).
- What about waiting a year to collect data and then proposing levels at that point?
- We need something in the marketplace now so that utilities and end users can have a benchmark to use to identify high efficiency griddles. Building a data set could take a long time. What is the procedure for revisiting the specification if EPA moves forward with the levels as proposed in the Draft 1 specification?

- EPA Response: EPA monitors the marketplace and can revisit specification levels within the first year if there is a need to adjust the requirements to further market penetration of energy efficient models.
- All manufacturers attending this meeting are willing to conduct more testing, even on standard low efficiency models, to demonstrate the need for revisions to the proposed Idle energy rate level. However, EPA's proposed deadline may be too tight to perform testing and collect this data.
- Some manufacturers are not set up for testing to ASTM while those manufacturers that do have the capability face resource and time constraints.
- Most manufacturers would be more comfortable if a third-party laboratory conducted the testing.
- In addition to Fisher Nickel, who manages PG&E's Food Service Technology Center, Southern California Gas and Southern California Edison can also test equipment.
- Perhaps manufacturers can offer up data on competitor's products to include in the data set. One caveat is that the equipment is typically in used condition.
- Would EPA be willing to bring together a group of manufacturers and engineers to determine what Idle energy rate level makes sense based on engineering principles as well as data?
- EPA Response: Would this be an acceptable approach for utilities that need to justify their incentive programs?
- The first thing that utilities consider is the potential energy savings and Idle tends to drive energy use.
- Most importantly the griddle must be able to cook food to the specifications provided by the end user. EPA should consider raising the Idle energy rate level for electric griddles because cooking energy efficiency is the most important performance metric.
- EPA Response: What about taking a tiered approach for electric griddles? For example, the first phase, which would go into effect May 1, could be based on data and engineering principles, along with the assumption that the current data set lacks standard efficiency units. This first phase would be slightly less stringent than what was proposed in Draft 1 and 1-2 years afterwards, a second phase could take effect that brings the levels more in line with the initial Draft 1 proposal. Phase 2 would provide manufacturers with a roadmap for new product design. EPA would like to see at least 1-2 additional data points to indicate where standard efficiency lies.
- EPA should refer to the requirements as "phased" as opposed to "tiered". Tiers suggest that levels will go into effect simultaneously, which will be confusing to the manufacturers and end users.
- What is the main reason behind those units in EPA's data set that cannot make the current proposal for Idle energy rate?
- Primarily insulation but it could also be due to the controller or location of the temperature probes under the griddle plate.
- There hasn't been anything to work toward in this industry so it's important to get something out there that serves as a goal for increased efficiency. If EPA takes a phased approach, utility programs can get off the ground with rebates. The current Draft 1 levels could be used for Phase 2 levels, which EPA could then revisit within 1 year to make sure they still make sense.
- There should be at least 2 years between Phase 1 and Phase 2.

Conclusion: EPA will explore a tiered or phased approach to electric griddle efficiency levels. Assuming this approach is pursued, EPA will base the first phase idle energy requirement on additional data and discussions with manufacturers and industry experts.

Gas Griddle Performance Levels

- The gas griddle data set is more robust and serves as a better representation of the range of efficiencies within the marketplace.

- EPA should consider including the one data point that seems to be on the cusp. It has high cooking efficiency and only missed the Idle energy rate by about 50 Btuh/ft². There seems to be a natural break in cooking and Idle efficiencies after this model.
- EPA Response: Should we consider increasing the 38% cooking energy efficiency to 40% to recover the potential energy savings due to ENERGY STAR (after increasing idle)?
- There are several models that are near 38% so leaving it at this level provides them with an incentive to improve their Idle energy rate performance since it is within reach.
- Gas levels are fine as proposed, with the one minor adjustment to Idle energy rate.

Conclusion: The Idle level for gas griddles will be revised slightly to allow the one unit, with high cooking energy efficiency, on the line to qualify for ENERGY STAR. The cooking energy efficiency level will remain at 38%.

Test Procedures

One stakeholder suggested that EPA use water-boil efficiency which would eliminate the need for laborious cooking efficiency tests.

- EPA Response: Water-boil efficiency does not represent real world usage and provides an incomplete representation of griddle efficiency.
- A water-boil test was once included in the ASTM test procedure but was dropped because it was not necessarily representative of cooking-energy efficiency and did not provide a production capacity. Also, cooking energy efficiency is dependent on controls whereas water boil does not take efficient controls or control strategies into consideration as it effectively bypasses any controls on the griddle and only provides a rough indication of heat transfer efficacy.

There was also some concern that production rate is not being considered when setting the ENERGY STAR levels.

- Cooking energy efficiency is tied to production rate in the ASTM test procedure.
- If the equipment cannot meet production rate then the customer may have to buy a larger unit, which will mean higher energy consumption.
- ENERGY STAR is not the end all in the purchasing decision. The specification development process needs to be focused on energy use.
- Some of the highest throughput griddles are included in the EPA data set and meet the proposed ENERGY STAR levels.

Conclusion: The current ASTM cooking energy efficiency test method is the best representation of actual use and will continue to be referenced in the ENERGY STAR specification. EPA will investigate the relationship between Idle energy rate and production capacity. However, the fact that the models in the data set that meet the proposed requirements include some of the higher production capacity griddles indicates that it is possible to have a griddle with high production capacity and low Idle energy rate.

Measuring the Griddle Surface

EPA received one suggestion to use *useable* cooking surface area rather than the *max* cooking surface area for normalized idle energy rate when determining Idle energy rate.

- EPA Response: A consistent test method to determine accurately, and consistently, useable cooking surface does not currently exist.

Do end users use the total surface of the griddle in operation, whether or not optimum temperature is achieved?

- Yes, they will use the entire cooking surface and will not know what “useable cooking surface” means.

- The work that Fisher Nickel Inc. did for various manufacturers used extrapolation to provide a visual representation of product performance for end users. The reports available on the Web site were used to provide an estimate on temperature uniformity and are not an accurate representation.

Conclusion: While uniformity is important to EPA there lacks an industry accepted method for determining it in a consistent manner. Normalized Idle energy rate by the “splashguard to splashguard and splashguard to grease trough” method will continue to be the approach for determining maximum energy use in this specification.

Allowable Modifications to ENERGY STAR Qualified Units

EPA was asked what modifications could be made to ENERGY STAR qualified models and they retain their qualification?

- EPA Response: We started to look into this issue by contacting UL and CSA representatives. Is there standard language that EPA could reference in the ENERGY STAR specification?
- The manufacturer UL file for each model clearly identifies the components that are used and any deviation would need retesting.
- UL and CSA are self policing. End users know when things are changed out, affecting energy performance. Manufacturers would not be able to get away with changing key components and not reporting the new performance levels.
- UL provides quarterly monitoring where a representative will come out to the manufacturing facility and make sure that the right components, listed in the UL file, are being used.
- Does EPA audit ENERGY STAR qualified products?
- EPA Response: EPA has started to implement quality assurance testing across all ENERGY STAR product categories and plans to do so for commercial foodservice equipment.

Conclusion: This issue is already addressed and policed by UL and CSA. Therefore EPA does not have to address it in the specification.

Addressing Double-Sided, Partial Platens

EPA presented a proposal for addressing double-sided griddles with top partial platens:

- Top platen \geq 80% coverage: test and qualify unit as *double-sided griddle*
- Top platen $<$ 80% coverage: test and qualify unit as *single-sided griddle (top off)*
- Unit sold with a top platen option \geq 80% coverage: unit must be tested and qualify as both a *single and double sided griddle*
- The current ASTM double-sided griddle test procedure does not address partial platens. The cook time under the clam shell is not exactly half of a full top platen.
- The challenge with EPA’s proposal is that manufacturers may test a unit as a double-sided griddle to meet ENERGY STAR requirements but sell as single sided with a top side option.
- Does there need to be a different level for non-contact versus contact top platen? What if the top platen is a broiler?
- Technically the ASTM test procedure does not apply to non-contact top platens.
- EPA Response: This type of equipment would not be eligible for ENERGY STAR because the definition explicitly says “non-contact” and the unit technically cannot be tested by the ASTM procedure.
- When the ASTM test procedure was developed, partial designs were not common in the marketplace.

- There is a labeling issue if you just require single griddle qualification. Plus, some manufacturers are making very efficient double-sided products and they should be able to earn the ENERGY STAR. In general, double-sided cooking is more efficient than single-sided cooking.
- What if a manufacturer has a product that meets ENERGY STAR as a single-sided griddle but sells a top platen that is < 80% coverage. They will benefit from the increased production capacity but not be required to test in the double-sided configuration, which may result in an unfair advantage in the marketplace.
- EPA Response: There are three options for covering double-sided griddles with top partial platens under the ENERGY STAR specification:
 1. Address single-sided griddles only.
 2. Address only single-sided and full double-sided griddles only (no partial platens).
 3. Test these units as both a full double-sided griddle and a single-sided griddle and qualify for both in order to use ENERGY STAR.

Conclusion: EPA will consider the options above and propose one in the next Draft 2 version. Manufacturers are encouraged to send proposals supporting one of these options **by February 20**.

Reporting Data for ENERGY STAR Qualification

- Does EPA really need an “engineer” to sign the performance report accompanying the Qualified Product Information form?
- Requiring the signature of a “responsible party” should be good enough.
- Manufacturers may offer different griddle tops but retain the same model number. How would these be reported to EPA? For example, chrome tops typically have a lower idle energy rate than other griddle plates.
- EPA Response: If the griddle plate changes the energy use profile of the griddle then the manufacturer will need to test each option and report all of these to EPA. Griddle plate type will be listed on the ENERGY STAR Web site.

Conclusion: For a model to bear the ENERGY STAR, it must meet the requirements using all griddle plate options. Manufacturers will be required to report results for each griddle plate to EPA for ENERGY STAR qualification if it changes the energy profile of the griddle. Griddle plate will be listed on the ENERGY STAR Qualified Product list. EPA will require that a “responsible party” sign the test report that accompanies the Qualified Product Information form.

Next Steps

- Stakeholders are encouraged to comment on the options proposed above regarding the treatment of double-sided griddles with partial platens by February 20.
- Manufacturers are encouraged to test additional electric griddles, especially standard efficiency designs, and submit data to EPA.
- 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.