



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

OFFICE OF  
AIR AND RADIATION

October 10, 2019

Dear ENERGY STAR® Commercial Dishwasher Partner or Other Interested Party:

With this letter, the U.S. Environmental Protection Agency (EPA) is releasing the [Draft 2, Version 3.0 ENERGY STAR Commercial Dishwasher Product Specification](#). This draft includes proposals in response to stakeholder feedback on the Draft 1 specification and [additional data](#) provided to EPA.

EPA will hold a webinar to discuss the Draft 2 specification on October 22 from 2pm to 4pm; please [RSVP here for the specification webinar](#). We encourage stakeholder input on the Draft 2, Version 3.0 ENERGY STAR Commercial Dishwasher Product Specification. Please submit any comments to [commercialdishwashers@energystar.gov](mailto:commercialdishwashers@energystar.gov) by **November 7, 2019**.

All comments will be posted to the ENERGY STAR [product development website](#) unless the submitter requests otherwise.

EPA thanks stakeholders for their performance data and feedback on the Draft 1 specification. The enclosed [comment response document](#) contains a summary of comments on the Draft 1 specification and an explanation of EPA's response in each case. A majority of comments, however, are directly addressed in the note boxes in the Draft 2 specification. Changes resulting from this information in Draft 2 include: revised performance requirements, addition of an energy recovery credit for washing performance, updated definitions including one for energy recovery, and planned data collection for future revisions.

Performance Criteria, Water Consumption: EPA received several comments from stakeholders on the Draft 1 water consumption requirements, on both the need for the requirement and the proposed requirement levels. EPA remains committed to ensuring that user experience is a top priority in product specifications, and thus is proposing to revert to ENERGY STAR commercial dishwasher product specification Version 2.0 water requirements for all dishmachine types. Multiple stakeholders commented that user experience would be negatively impacted if water requirements were made more stringent, due to a decrease in rinseability performance. Rinseability ensures that particles washed off dishware are not redeposited, maintaining proper appearance of clean and sanitized ware. EPA acknowledges that this requirement was historically provided as a substitute for washing performance metrics while the ASTM test procedures were in development. At the same time, protecting against trade-offs between energy efficiency gains and increased water consumption remains a priority. EPA notes that the industry is working on a test procedure that can quantify the relationship between water and rinseability via the NSF 3 standard, and expects to review and reference this test procedure once finalized by industry.

Performance Criteria, Washing Energy: EPA received comments and additional masked data regarding the Draft 1 proposed washing energy requirements. EPA thanks stakeholders for the additional product information, which allowed the Agency to confirm that proposed levels are appropriate, with minor modifications to ensure that multiple manufacturers and product types can meet them.

Performance Criteria, Idle Energy: EPA received comments from stakeholders that the current measurement of idle energy (door closed) omits the energy use in some cases of the internal / external booster heater, and recommended that this be included in the performance metric. EPA received data confirming that the booster heater did have significant power consumption and is measured in the ASTM

test procedures (F1696/F1920). EPA is proposing to collect this data through Version 3.0 in order to update the idle energy requirement in a future revision. EPA notes that all existing idle performance data for ENERGY STAR omits this energy and, as such, there is insufficient data to incorporate booster heater idle energy into the existing idle format for Version 3.0.

Energy Recovery Credit: EPA received comments from multiple stakeholders that the current ASTM test procedures for washing energy need special considerations for energy recovery machines. Due to inlet temperature differences between energy recovery machines and conventional machines, the same dishmachine would appear to require additional energy when tested to the energy recovery case. EPA notes that a long term strategy that addresses this issue is to account for the pre-heat energy used by the machines, calculated in ASTM as the *primary domestic hot water energy*. EPA is proposing to collect this value through Version 3.0 to allow requirements to be developed in this format in a future revision. In the short term, EPA is proposing an energy recovery credit to the washing performance requirement, where dishmachines meeting proposed energy recovery definitions are eligible for a credit based on product water consumption (gal / rack), up to a maximum value.

Scope: Due to lack of product data and no existing certifications for low temp Pot Pan Utensil and Flight Type machines, EPA removed requirements for these configurations and placed them out of scope in Draft 1. EPA received no comments about this scope revision.

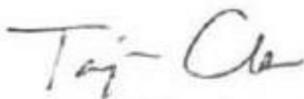
Definitions: EPA clarified several definitions, referencing NSF 170-2015 when possible, and included additional definitions based on stakeholder requests and comments. New definitions were constructed for energy recovery, based on user experience benefits for this technology. Stakeholders are encouraged to review the new and revised definitions to ensure they remain reflective of products on the market.

The exchange of ideas and information between the EPA, industry, and other interested parties is critical to the success of ENERGY STAR. Specifications and meeting materials will be distributed via email and posted on the ENERGY STAR website. To track the EPA's progress on this specification, please visit the [product development website](#).

Please contact me at [Crk.Tanja@epa.gov](mailto:Crk.Tanja@epa.gov) or 202-566-1037 and Dan Baldewicz at [Dan.Baldewicz@icf.com](mailto:Dan.Baldewicz@icf.com) or 518-452-6426 with questions or concerns. For any other commercial dishwasher related questions, please contact [commercialdishwashers@energystar.gov](mailto:commercialdishwashers@energystar.gov).

Thank you for your continued support of the ENERGY STAR program.

Sincerely,



Tanja Crk, Product Manager  
ENERGY STAR Commercial Food Service

Enclosures:

[Draft 2 Version 3.0 ENERGY STAR Commercial Dishwasher Specification](#)

[Draft 2 Version 3.0 ENERGY STAR Commercial Dishwasher Data Package](#)

[Draft 1 Version 3.0 ENERGY STAR Commercial Dishwasher Comment Response Document](#)