

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



OFFICE OF
AIR AND RADIATION

October 6, 2011

Dear Data Center Storage Manufacturer or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached Draft 2 Version 1.0 ENERGY STAR[®] Data Center Storage specification. Comments on Draft 2 are due to EPA **no later than November 4, 2011**.

Since the release of Draft 1, EPA has worked with a wide range of stakeholders to revise and clarify the approach associated with this new ENERGY STAR product category. The attached Draft 2 presents a proposed scope and package of efficiency requirements that enable the program to highlight the top performers in the market in the near-term and contains provisions to support more robust efficiency criteria going forward. EPA's rationale for proposals and important discussion topics are highlighted in note boxes located throughout the document. The following key changes were made in this draft:

- **General Formatting and Partner Commitments:** The structure and sections of the specification are now aligned with ENERGY STAR formatting requirements. Stakeholders are encouraged to review, in particular, the revised proposal for use of the ENERGY STAR mark in association with Storage Equipment.
- **Definitions:** EPA reviewed existing and new definitions in the specification and compared them to the 2011 Storage Networking Industry Association's (SNIA) dictionary to identify potential conflicts. Definitions are aligned with the 2011 SNIA dictionary where they were found to be sufficiently descriptive for use in the specification. Product classification definitions originally drawn from the SNIA Storage Taxonomy are revised to align with updates presented in the *SNIA Emerald[™] Power Efficiency Measurement Specification*¹.
- **Product Families:** The family structure is revised to reflect EPA's proposal to pursue "bookending." This approach provides a representative testing structure by evaluating maximum and minimum points in a group of configurations, representing the maximum and minimum configurations intended for sale as ENERGY STAR qualified (not necessarily the limits of available configuration options).
- **Program Scope:** The Version 1.0 scope of the program is solidified to cover Online-2, Online-3, and Online-4, as defined in the *SNIA Emerald[™] Power Efficiency Measurement Specification*, Version 1.0 (23 August 2011). EPA will consider other sectors of the market in future revisions to the program.
- **Power Supplies:** Efficiency and power factor requirements for all primary power supplies are set at levels that align with those of Climate Savers/80Plus Silver. This proposal will be revisited if industry-gathered data on storage power supplies justifies modification. Additionally, stakeholders have raised concerns about power supplies associated with "embedded" hardware manufactured by third parties (e.g., network switches). Placeholder language is added under Table 3 in reference to this topic and EPA encourages stakeholder comments and proposals on this issue.

¹ http://www.snia.org/tech_activities/standards/curr_standards/emerald

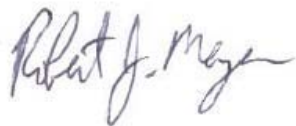
- **Efficiency Criteria:** In support of a future active mode efficiency requirement, EPA intends to initially require the reporting of certain key data for the first version of the Storage specification. This would require that a Data Center Storage product be evaluated using a predetermined active mode testing methodology, with results to be publically disclosed via the ENERGY STAR program as part of the Power and Performance Datasheet. EPA proposes the use of the *SNIA Emerald™ Power Efficiency Measurement Specification*, Version 1.0 (23 August 2011) as the basis of Active State evaluation and data disclosure.
- **Ready Idle:** A framework for Ready Idle power limits is also included. EPA proposes that products be required to meet the power limits ultimately set for this requirement in addition to disclosing active mode efficiency.
- **Energy Efficient Features:** To ensure ENERGY STAR Data Center Storage products offer a top-tier energy-efficient platform, EPA proposes a list of core features required of all products qualified in the program. EPA has added a new section to capture these features and welcomes stakeholder input and comments on this feature list.

EPA will host a stakeholder meeting at the Storage Networking World (SNW) Fall 2011 conference in Orlando, FL on Thursday, October 13, 2011. A Webinar will be offered for those who cannot attend in person. The agenda will be focused on elements from Draft 2, Product Families, and other key topics. **Please RSVP to storage@energystar.gov no later than Tuesday, October 11, 2011** with the subject "RSVP – Storage SNW October 13 Meeting," and indicate in-person or remote attendance.

Stakeholders are encouraged to review the Draft 2 specification and send comments to storage@energystar.gov no later than November 4, 2011. For further information on specification development activities to date, visit the ENERGY STAR Product Development website at www.energystar.gov/NewSpecs and follow the link for "Data Center Storage."

Thank you for your continued support of the ENERGY STAR program. Please direct any specific questions to RJ Meyers, EPA, at Meyers.Robert@epa.gov, or 202-343-9923; or Evan Haines, ICF International, at ehaines@icfi.com, or 202-572-9456.

Sincerely,



Robert Meyers
U.S. Environmental Protection Agency, Climate Protection Partnerships Division
ENERGY STAR Program