



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

OFFICE OF  
AIR AND RADIATION

August 23, 2012

Dear Computer Server Manufacturer or Other Interested Stakeholder:

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached **Draft 3** Version 2.0 ENERGY STAR® Specification for Computer Servers. The deadline to provide comments on this Draft 3 Specification is **September 28<sup>th</sup>, 2012**.

Draft 3 incorporates input received during EPA's data assembly process and from discussions with stakeholders on issues such as product family structure and blade server testing conditions. During this time, EPA has also maintained a regular participatory role in development meetings for the Server Efficiency Rating Tool (SERT) and will further develop SERT-related areas of this specification as we move toward Draft Final. EPA encourages the participation of interested stakeholders in the SERT Beta-2 process, as SERT will be required for measurement and reporting in the Version 2.0 Computer Servers specification. Visit [www.spec.org/sert/](http://www.spec.org/sert/) for more information and to sign up for the SERT Beta-2 program.

The following are some of the key elements of this Draft 3 Specification:

- Section 1: Definitions largely mirror those presented Draft 2. The definition for Computer Server has been further revised.
  - New definitions have been proposed for resilient servers and high performance computing systems. EPA has also replaced the storage equipment definition from Draft 2 with a storage product definition that aligns with the definition found in Version 1.0 ENERGY STAR Data Center Storage specification under development.
- Section 2.1: EPA has clarified that multi-node servers are within scope in Version 2.0. EPA has also added definitions for High Performance Computing Systems and Large Servers and proposes to exclude them from this specification.
- Section 3.2: Power supply efficiency and power factor requirements match those included with Draft 2. Language in this section has been revised to reflect the inclusion of multi-node servers under the existing blade server power supply requirements.
- Section 3.4: EPA has clarified that blade server shipping documentation may be provided electronically on the Partner's website in lieu of printed format with the product.
- Section 3.6 – 3.8: For Idle Mode and Full Load, EPA has reduced all base Idle State Power Allowances by 8 watts and will now apply the hard drive adder to all hard drives in the system. Additionally, EPA proposes a 20 watt adder for each additional power supply. Section 3.8 contains new language specifying testing conditions for blade servers, requiring testing of half-populated blade chassis and allowing submission of fully-populated blade chassis as an additional option.
- Section 3.9: The existing requirement for graphical processing units (GPGPUs) has been revised to apply to all Auxiliary Processing Accelerator (APAs), as defined in Section 3.9. Additional testing considerations have been added for these products, and a total idle power consumption limit for all installed APAs has been set at 46 watts. This limit was calculated from power consumption data of fully-featured GPUs in the Workstation/Computer space.

- Section 4: EPA remains committed to developing a new electronic format for the Power and Performance Datasheet (PPDS) prior to the finalization of Version 2.0. An excel template with revised Version 2.0 data for collection has been released with this specification. EPA welcomes feedback on the proposed changes to data collection for the PPDS. Additionally, EPA is proposing to remove the requirement for additional power and performance data from another benchmark other than the required SERT data.
- Section 5: EPA is proposing to provide additional flexibility in the requirements for data reporting frequency for systems that successfully implement timestamping.
- Test Method: A separate Test Method is included in the distribution. It is based on the version distributed with the dataset development documentation. Dc powered servers have been removed from the test method. DOE seeks stakeholder feedback on the inclusion of testing for servers with three phase power supplies. Additionally, DOE seeks stakeholder feedback on memory scrubbing or other maintenance cycles initiated during idle mode operation, including descriptions of their effects on idle mode power consumption, their duration, their frequency, and any existing data to assist in this analysis.

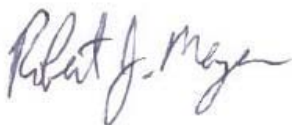
More details regarding EPA's rationale for the changes listed above are included in note boxes throughout the document.

#### **Comment Submittal**

All stakeholders are encouraged to provide written comments on the Draft 3 Specification to [servers@energystar.gov](mailto:servers@energystar.gov) by **September 28<sup>th</sup>**, as noted above. All comments will be posted to the ENERGY STAR Product Development web site unless the submitter requests that their comments remain confidential. If you support particular aspects of the Draft 3 Specification, please also state this in writing. It is equally important that EPA understand which portions of the draft specification meet with stakeholder approval, in addition to identifying the sections that may need further revision.

Thank you for your continued support of the ENERGY STAR program. Stakeholder participation is critical to developing a meaningful specification and to the overall success of ENERGY STAR. Please direct any specific questions on the specification to RJ Meyers, EPA, at [Meyers.Robert@epa.gov](mailto:Meyers.Robert@epa.gov), or 202-343-9923; or John Clinger, ICF International, at [John.Clinger@icfi.com](mailto:John.Clinger@icfi.com), or 202-572-9432. For questions on the test method, please contact Bryan Berringer, DOE, at [Bryan.Berringer@ee.doe.gov](mailto:Bryan.Berringer@ee.doe.gov), or 202-586-0371.

Sincerely,



Robert Meyers  
Product Manager, ENERGY STAR Computer Servers