

From: Rodgers, Terry [trodgers@syska.com]
Sent: Wednesday, March 26, 2008 6:38 AM
To: Howard, Arthur
Cc: Johnston, Christopher M; Duff, Rebecca M.
Subject: RE: CFRT 3/18/08 EPA EnergyStar DRAFT Program Requirements for Computer Servers - Public Review & Comment

Howard,

Some comments from Syska Hennessy Group for consideration:

1. Power Supply Cooling Fans: The EPA guideline should include an inlet air temperature requirement as part of the measurement of this component. Many of these devices have variable speed fans that will increase in speed when inlet air temperatures increase. The higher the specified inlet air temperature, the more energy efficient the supporting infrastructure can be designed to operate. If server manufacturers have leeway to test server efficiency at different inlet air temperatures, they will pick inlet air temperatures that optimize their internal power use (low air temps) which will conflict with the supporting infrastructure strategy of raising inlet air temperatures to optimize energy efficiencies of the supporting infrastructure. It should also be noted, that ASHRAE TC9.9 is on record of considering raising the existing "recommended" range for server inlet air temperatures to allow for more efficient infrastructure operation (energy reduction) and especially to increase the availability for use of water-side and air-side economizers.
2. Standard Information Reporting Requirements: The EPA guideline should be compatible with the ASHRAE TC9.9 "Thermal Report" for a given model and configured device. The EPA version should provide additional granularity beyond what ASHRAE Thermal Report provides to include idle and sleep mode power/cooling requirements.
3. Power and Temperature Measurements Requirements: The EPA should require that compute devices be required to make device inlet air temperature, fan speed, and processor utilization measurements available to end-users via industry accepted open protocols that can be monitored for user defined alarm conditions (SNMP traps?) and export to typical facilities related monitoring & control systems (BMS, DDC, PLC, DCS, etc.) to improve the overall management and operation of critical facilities in an energy efficient manner.
4. Power supply efficiency should be tested at 208VAC rather than at 230VAC. The majority of servers in the USA are powered at 208 rather than 230. EPA requirements are probably not of much interest and of no legal effect outside the US.

Thanks,

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