March 17, 2006

United States Environmental Protection Agency
Office of Air and Radiation
Energy Star Program
Washington DC 20460

Dear Energy Star Program,

Intel appreciates the opportunity to comment on Draft 1 Version 4.0 ENERGY STAR specification for computers and looks forward to an ongoing dialogue on the subject. In summary, our comments address the following elements of the Energy Star draft:

(1) Desktop and notebook classification
(2) Sleep and stand-by requirements
(3) Workstations
(4) Power supply requirements for 5V stand-by
(5) Active Network Configuration

The comments and recommendations that follow represent a summary of Intel's assessment of the latest draft computer specification. A detailed explanation, data and reasoning behind these recommendations can be provided.

Desktop and notebook classifications

Intel requests that the following be considered:

- Similar to desktop computers, define two categories of notebook computers – basic and performance.
- Set desktop and notebook system classification for idle power targets based on the number of cores of the microprocessor. i.e. basic = single package, single core; performance = single package, 2 or more cores.
- Introduce a new idle target of 20 W for Performance notebook computers.
- Round existing idle targets as follows:
  - Desktop performance – 75W
  - Desktop basic – 50W
  - Notebook basic – 15W

Sleep and standby requirements

Intel requests that the following be considered:

- Define managed (w/WOL or equivalent) sleep state and unmanaged sleep state (w/o WOL or equivalent); set targets for each.
- Remove WOL or equivalent requirement for stand-by.

Intel Corporation
2200 Mission College Blvd.
Santa Clara, CA 95052
USA

- Sleep/standby targets would become:
  - Managed sleep w/WOL – 10W (desktop), 5W (notebook)
  - Sleep w/o WOL – 5W (desktop), 4W (notebook)
  - Standby w/o WOL – 2W (desktop and notebook)

Workstation

Intel requests that the following be considered:

- Per the ITI recommendation, set workstation idle power targets at 50% of the maximum power supply rating.
  - PSU rating as a surrogate indicator of the various application critical configurations.
- Further clarify the workstation definition (to distinguish from desktop computers) by including additional mandatory attributes in the definition:
  - Use of registered or buffered memory with error correction (ECC)
  - Product is marketed as a workstation
  - Single package, 2 or more cores
  - >450W power supply

Power Supplies

Intel requests that the following be considered:

- Set 5V standby efficiencies per a load-based scale as follows:
  - 50% efficiency @ 0-250mA
  - 60% efficiency @250mA-1A
  - 70% efficiency @ >1A

Active Network Configuration

Instead of introducing new requirements that would raise power consumption, focus should remain on creating managed power states that will increase the enabling of power management. We believe that our recommendations for sleep and standby requirements will help facilitate this end goal.

We would be happy to further discuss our rationale for these positions at your request. In addition, we will provide a "track changes" version of the Draft 1 Version 4.0 Energy Star specification for computers with our detailed comments included.

Thank you for your consideration of these comments.

Intel Corporation
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Santa Clara, CA 95052
USA