



August 14, 2018

To: Ryan Fogle, EPA Manager, ENERGY STAR® for IT and Data Center Products;
John Clinger, ICF International

Re: ITI Comments on ENERGY STAR® Computers Version 7.0 Final Draft

The Information Technology Industry Council (ITI) appreciates the opportunity to provide additional comments on the ENERGY STAR® Computers Version 7.1 Final Draft Specification. We identified select areas of concern and recommend the following changes for the Final Draft Specification and Test Method.

ENERGY STAR Program Requirements (Draft Version 7.1)

1. General Note

With on-going personal computer (PC) form factor innovation, it is becoming challenging to update ENERGY STAR specifications outside the scheduled revision cycle. This could become a source of confusion for both system manufacturers and certifying bodies (CBs) when certifying new products. ITI requests an on-going *Frequently Asked Questions (FAQ)* update process to provide guidance for both manufacturers and CBs, as the new PC form factors enter the market. ITI is happy to further discuss a process with the EPA.

2. Mobile Workstation Definition

ITI appreciates EPA for proposing the new Mobile Workstation definition. We do have a concern on point (1) of the definition below pertaining to callout on the specific MTBF standard. Bellcore TR-NWT-000332, issue 6, 12/97 – is a very old standard and is no longer used for reporting MTBF. The MTBF standards continue to evolve and referencing a specific standard, that is no longer applicable, becomes a challenge for compliance. While we prefer listing generic MTBF tools, for now we propose the following change, where the ‘issue x’ refers to a specific issue number in effect at the time of MTBF assessment. ITI is happy to discuss further during ENERGY STAR Computers version 8.0 development.

c) Mobile Workstation: A computer which meets the definition of Notebook Computer but also meets all of the following criteria:

- (1) Has a mean time between failures (MTBF) of at least 13,000 hours (based on either ~~Bellcore TR-NWT-000332, issue 6, 12/97~~ Telcordia SR-332, Issue x or field collected data).



3. Alternative Low Power Mode (ALPM) Definition

ITI appreciates EPA for proposing the new ALPM definition. This was needed to address new computer usages. However, we noticed that the definition is limited to systems that ‘must maintain immediate responsiveness to network connections and user interface devices’. Per our previous discussion and comments, some systems (e.g. system with disconnected Modern Standby) should still come under the definition of ALPM but may not support full network connectivity requirements on page 5, section 1(E)(3) and Section 3.5.1 (iii) (option 1 & option 2). In other words ALPM definition should decouple the need to meet both ‘immediate responsiveness to network connections and user interface devices’. ITI proposes the following amendment to the ALPM definition:

Alternative Low Power Mode (ALPM): A low power mode that the computer enters automatically after a period of inactivity or by manual selection that is defined by the display turning off and the computer entering a state of reduced functionality. A computer with Alternative Low Power Mode must maintain immediate responsiveness to network connections ~~and~~ or user interface devices. P_{ALPM} represents the average power measured when in the Alternative Low Power Mode.

4. Network proxy capability definitions:

ITI appreciates changing Low Power Mode (LPM) to Alternative Low Power Mode (ALPM) throughout the document. However, with the new specific ALPM definition it will exclude systems that support ‘sleep mode’ that otherwise could also meet the network proxy capabilities listed on pages 5-6, section 1(E)(3). ITI does not believe that was EPA’s intent. This is consistent with language under ‘Full Network Connectivity’ definition in section 1(E)(3). ITI proposes the following amendments to network proxy capability requirements to accommodate systems that support sleep mode. Also EPA inadvertently used ‘LPM’ instead of ‘ALPM’ in a couple of places (see Table 1 below).

Table 1: Network Proxy Capability Definitions

Network Proxy Type	Definition
Base Capability	To maintain addresses and presence on the network while in Sleep Mode or ALPM , the system handles IPv4 ARP and IPv6 NS/ND
Service Discovery / Name Services	While in Sleep Mode or ALPM , the system allows for advertising host services and network name. Includes Base Capability



Remote Wake	While in Sleep Mode or ALPM, the system is capable of remotely waking upon request from outside the local network. Includes Base Capability
Full Capability	While in Sleep Mode or ALPM, the system supports Base Capability, Remote Wake, and Service Discovery/Name Services

5. Requirements for Desktop, Integrated Desktop, and Notebook Computers

On page 11, section 3.5.1 (ii) refers to Equation 3 (Calculation of Allowance for Enhance-Performance Integrated Displays). Per the ENERGY STAR V7.0 specification this sub-item (ii) is missing the text that is found in the note box above this item. This section needs to be corrected. The item ii should be corrected to read as follows:

ii. The Integrated Display adder allowance ($TEC_{INT_DISPLAY}$) applies only for Integrated Desktops and Notebooks and may be applied for each display. For Enhanced-performance Integrated Displays, the adder is calculated as presented in Table 9 and Equation 3.

6. Table 9 footnotes

Table 9 footnotes need to be corrected. The text in the note box pertaining to mobile workstation got mixed with footnote xiii $TEC_{INT_DISPLAY}$ Adder. This section needs to be cleaned up by separating the footnotes from the mobile workstation notes. EPA should review all the footnotes after the note boxes are removed in the final specification.

ENERGY STAR Program Requirements (Final Draft Test Method)

7. Section 5 Test Conduct

ITI appreciate a new section 5.1 (E) on ALPM testing. This will help remove any confusion on how systems with ALPM are tested and results used in the TEC calculation. However, the ALPM section references section 6.3 for long idle mode testing. The reference to section 6.3 is not needed, as the new section 5.1 (E) is self-sufficient. Further, ALPM mode is not only replacing long idle mode power testing, it is also replacing sleep mode power testing with a total of 3 modes (short idle, ALPM, and Off power). This is consistent with EPA’s intent in section 3.5.1 (iv) to replace $(PSLEEP \times TSLEEP)$ and $(PLONG_IDLE \times TLONG_IDLE)$ with $(PALPM \times TSLEEP)$ and $(PALPM \times TLONG_IDLE)$ for TEC calculations.



ITI proposes the following amendment to section 5.1(E)

For Alternative Low Power Mode Testing ~~(Section 6.3)~~, the UUT shall be allowed no more than 20 minutes from the point of ceased user input before measurements must be started. If any default settings cause the UUT to enter the Alternative Low Mode after 20 minutes, begin taking measurements when the UUT has reached the 20 minute mark. Display sleep settings shall be set to default for Alternative Low Power Mode Testing. When conducting the test ~~in section 6.3~~, replace all instances of “long idle mode” and “Sleep mode” with “alternative low power mode”, and apply the definition of alternative low power mode from the ENERGY STAR Specification for Computers.

Sincerely,

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