



June 29, 2012

Mr. Paul Karaffa  
ENERGY STAR Product Development  
U.S. Environmental Protection Agency  
Energy Star for Office Equipment  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Re: Proposed Energy Star Program Requirements, Product  
Specification for Telephony Test Method, Rev. May-2012

**TELECOMMUNICATIONS  
INDUSTRY ASSOCIATION**

**HEADQUARTERS**

2500 Wilson Boulevard  
Suite 300  
Arlington, VA 22201-3834  
+1.703.907.7700

**D.C. OFFICE**

10 G Street, N.E., Suite  
550 Washington, DC 20002  
+1.202.346.3240 MAIN  
+1.202.346.3241 FAX

[tiaonline.org](http://tiaonline.org)

Dear Mr. Karaffa:

The Telecommunications Industry Association (TIA) hereby submits its comments on the proposed testing methodology for its ENERGY STAR Program telephony product specification requirements.<sup>1</sup>

## **I. INTRODUCTION**

TIA represents the global information and communications technology industry through standards development, advocacy, tradeshow, business opportunities and market intelligence. TIA's hundreds of member companies' products and services empower communications in every industry and market, including healthcare, education, security, public safety, transportation, government, the military and entertainment. Our members work through TIA's voluntary, consensus-based process to enhance the business environment for telecommunications, broadband, mobile wireless, information technology, networks, cable, satellite, unified communications, emergency communications and the sustainability of technology.

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<sup>1</sup> Draft 1 V3.0 Energy Star Telephony Test Method, *available at* [www.energystar.gov/ia/partners/prod\\_development/revisions/downloads/telephony/ES\\_Telephony\\_Test\\_Method\\_Draft\\_1.pdf?d387-abad](http://www.energystar.gov/ia/partners/prod_development/revisions/downloads/telephony/ES_Telephony_Test_Method_Draft_1.pdf?d387-abad).

TIA's TR-41 Engineering Committee (User Premises Telecommunications Requirements) develops voluntary standards for telecommunications terminal equipment and systems, specifically those used for voice services, integrated voice and data services, and Internet protocol (IP) applications. Together with its three subcommittees and their working groups, the committee develops performance and interface criteria for equipment, systems and private networks, as well as the information necessary to ensure their proper interworking with each other, with public networks, with IP telephony infrastructures and with carrier-provided private-line services. In addition, TR-41 develops criteria for preventing harm to the telephone network, which become mandatory when adopted by the Administrative Council for Terminal Attachments (ACTA). The committee is also engaged in providing input on product safety issues, identifying environmental considerations for user premises equipment and addressing the administrative aspects of product approval processes. TIA is accredited by the American National Standards Institute (ANSI). Of particular relevance to this proceeding, many TIA members, including those who participate in TR-41 standards activities, produce telephony products implicated by the revised draft ENERGY STAR telephony test method.

TIA members have long been supporters of the ENERGY STAR program and commend the program's outreach to industry to ensure that the requirements of the ENERGY STAR program evolve to reflect developments in technologies while enabling our companies to innovate best-in-class technologies. TIA's members greatly value the ENERGY STAR certification, and rely on this certification to market their products to retailers and consumers. ENERGY STAR has played a critical role in providing incentives and reward the production of energy efficient technologies.

TIA believes that the current certification criteria for telephony products has cultivated a competitive environment for manufacturers as well as furthered the EPA's ENERGY STAR program's efforts through the implementation of practicable and reasonable qualification efficiency requirements. Generally, the fact that many manufacturers' products meet the ENERGY STAR certification today should not necessarily suggest that thresholds are outdated or ineffective. TIA believes that this is instead an indication of a successful and dynamic partnership between the EPA, DOE, and the manufacturers to increase the energy efficiency of products. Maximum consumer benefit will occur if the ENERGY STAR program continues to implement realistic and achievable standards that enable recognition of and the associated awards for innovation through certification.

## **II. DISCUSSION**

### **1. TIA recommends that a definition of the term "wireless" be provided in the definition section.**

The term "wireless" is used several times in the document in reference to Wireless IP Telephones, Wireless VoIP Telephones, and wireless networks. To avoid possible confusion with "cordless," which is also widely used in the document, TIA recommends that "wireless" be included in the definitions section clearly indicating that it applies to the connection of VoIP phones to the internet via a wireless (WiFi) access point. TIA also recommends that the phrases Wireless VoIP Telephones and Wireless IP telephones be consolidated to say Wireless VoIP Telephones.

### **2. TIA recommends the definition of Hybrid Telephone be clarified.**

As written, the definition of a hybrid telephone (Line 29) could be read to apply to either an Analog Telephone alone or to a VoIP Telephone alone. TIA recommends that the definition

of Hybrid Telephone be changed to read, “A Telephone or component of a Telephone system that has the ability to ultimately convert sound into both analog waveforms for transmission through an RJ11 connection and Internet Protocol data packets for transmission through an Ethernet connection.”

**3. TIA recommends that the test method standardize terms and definitions with more commonly used industry terminology.**

Several of the terms referenced in describing various operational modes are not commonly used in telephony industry standards, and in some cases they are diametrically opposed to their traditional telephony meanings. “Partial On (Sleep) Mode” is commonly referred to as “Idle Mode.” The “On Mode” subcategory of “Idle (Off-hook) Mode” is commonly referred to as “Dial Tone Mode” or “Call Origination Mode.” And the “On Mode” subcategory of “Operation Mode” is commonly referred to as the “Communication Mode.” Furthermore, the current mode definition hierarchy has the rather confusing case of “Operation Mode” being a sub-subcategory of “Operating Modes” For clarity, TIA recommends adopting terms commonly used and well understood in the telecommunications industry to avoid situations like using “Idle Mode” to describe an “off-hook” state when the term has been associated with a phone in the “on-hook” state for over 100 years.

**4. TIA requests clarification on additional energy usage allowances being made for products with different functionalities.**

The Note following the definition of Digital Answering Technology in the Functionalities paragraph indicates that the Answering Machine and Combination Cordless Telephone/Answering Machine product categories are to be replaced by defining Digital Answering Technology as a function. (Line 63). This suggests that an additional energy use

allowance may not be provided for cordless base units that have an integrated answering device function as opposed to those units that do not. Integrated digital answering technology as a functionality will result in more energy usage than a device that does not have the functionality, particularly in the Communication Mode (Operation Mode in the current draft text). TIA seeks clarification as to whether an additional energy use allowance will be provided for digital answering technology as well as for other functionalities that may be integrated into the devices.

**5. TIA seeks clarification regarding the procedure for testing additional handsets.**

The definition of Unit Under Test (UUT) states that the specific sample of a representative model undergoing measurement includes the base product (the Telephone) and any accessories packaged with it. (Line 108). TIA seeks clarification whether the term “accessories” in this paragraph includes additional handsets sold and packaged together with the base unit. Later in the document, in the section on Test Conduct, one of the two test configurations regarding additional handsets and accessories is described as “If shipped with the UUT, all additional Handsets and accessories connected and setup in their default configuration.” (Line 214). TIA seeks clarification on whether additional handsets qualify as accessories under the definition of UUT, or if accessories should be understood to mean other things shipped in the package with the base unit exclusive of additional handsets.

**6. TIA recommends that the testing of additional handsets take into account real-world use.**

Additionally, TIA appreciates that the definition of Product Family has been expanded to cover variations in the number of additional handsets. (Line 111). TIA recommends that the testing of additional handsets take into account real-world use rather than multi-handset product

families being “tested in their highest energy-consuming configuration (i.e., with the highest number of additional handsets).” (Line 120). TIA recommends instead that an energy usage limit be set for the base unit with its handset and an energy usage limit be set for each additional handset. To take into account a system with a total of N handsets, this would place a limit X on the base unit with its handset and a limit Y on each additional handset, so the system would consume no more than  $X + (N-1)Y$  watts. This approach is also consistent with being able to specify an energy use limit on additional handsets sold separately.

Additionally, the requirement that UUTs be tested with “all additional Handsets and accessories connected and setup in their default configuration,” needs clarification. (Line 215). For example, some cordless phone systems will support up to 12 handsets. They may be shipped in product families consisting of up to say 5 handsets (so that a 12 handset system would consist of the 5-handset model plus 7 additional handsets purchased separately), but only support up to 4 handsets in active use at any one time on a call. In this case, it would be reasonable to do the on-hook testing with all 5 handsets sold together as a product family member connected to ac power. But the off-hook testing should be done with only 4 handsets off-hook. The remaining handset should remain on-hook. In general, the off-hook testing of a product family should be conducted with only the maximum number of handset off-hook that can actually be active on a call at one time.

**7. TIA supports using the default brightness settings of displays for testing but would not be opposed to the proposal to test at both minimum and maximum brightness settings and averaging the results.**

The test procedure calls for testing products in the “as-shipped” condition. (Line 203). A Note following this statement equates “as-shipped” as meaning the default brightness setting for backlit displays. TIA supports this position but is also open to the DOE proposal in the Note to

consider measuring the energy usage for displays that have user adjustable brightness controls with the display brightness at both its minimum and maximum setting and averaging the results. TIA notes that cordless handsets often have backlit displays the light briefly when the phone rings, goes off-hook, or when button is pushed. However, the backlight typically goes out after a few seconds (and certainly within the allowed 5 minute wait interval before testing begins) to preserve handset battery life. There should be no attempt to force the backlight of a cordless handset into an on state for purposes of the measurement.

**8. TIA seeks clarification about how ac power usage measurements are to be made and reported for the base unit and for additional handsets**

The test procedure for ac powered units needs clarification about whether separate power usage measurements are to be made for the base unit and each additional handset in a system, for the base unit and one additional handset in the system as being representative of each additional handset, or of the base unit only. There is a clear statement that a power strip is not to be used, so plugging the base unit and all additional handsets into a power strip and measuring their total power usage at one time is not an option. (Line 268). What units need to be measured may also depend on whether the phone is on-hook or off-hook. Measuring the base unit and a representative additional handset with the phone on-hook would be consistent with the current Version 2.2 specification for Standby Mode measurements and would allow for the inclusion of separate requirements for additional handsets in the Version 3.0 specification. For the off-hook mode, measurement of the base unit power consumption with the maximum number of handsets off-hook that can be on a call at any one time would seem like the logical measurement to make, but this needs to be clarified. In this case, the additional handsets that are off-hook would be removed from their charge cradles during the measurement.

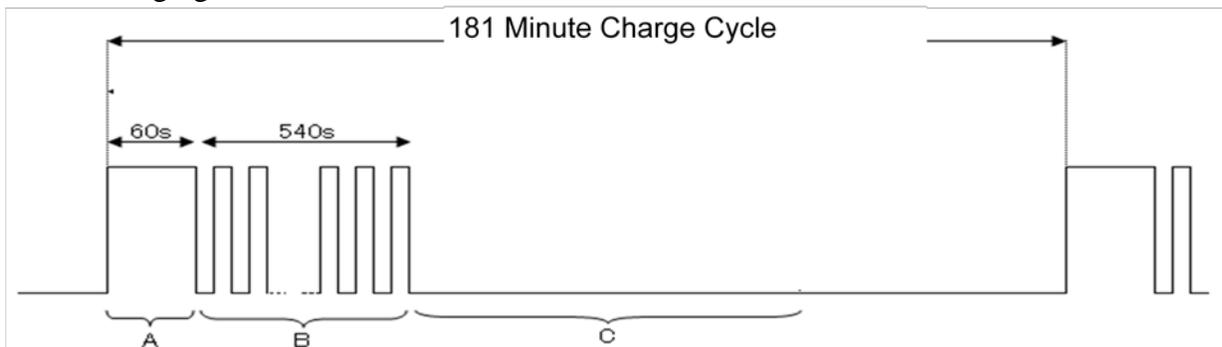
**9. TIA recommends that the wording describing the accumulation of power value samples over a 5 minute period be revised.**

As worded, the process of “accumulating true power values at an interval greater than or equal to 1 reading per second” over a 5-minute interval as described in clauses 6.2 and 6.3 could be interpreted to allow only taking a measurement at the beginning and the end of the 5 minute interval, or even only taking one measurement sometime during the 5-minute interval. TIA believes the intent was to specify a rate (not an interval) of at least one reading per second.

**10. TIA recommends that with certain DECT phone systems, the 5 minute test interval in Partial On Mode will not be sufficiently representative.**

Some phone systems will charge in intervals that would make the 5 minute test interval lead to an inaccurate result. For example, for certain DECT phones, the phone will go into a charging mode every three hours for a 10 minute interval. Testing energy usage within that 10 minute charging interval would lead to over reporting the energy usage of the telephone system. TIA recommends that the 5 minute interval be reconsidered to take into account the intervals of telephone activity. An example of a charge cycle for a telephone for which the 5 minute interval would not be sufficiently representative is included below.

- A: Quick Charging
- B: Normal Charging
- C: Off Charging



- 11. TIA agrees that Idle Mode (TIA prefers to call this the Dial Tone or Call Origination Mode) does not represent an appreciable portion of the normal usage profile for phones and that Idle Mode should not require testing.**

The “Idle Mode” as defined in the proposed test procedures is the condition where the phone is off-hook and receiving dial tone. TIA prefers to refer to this mode by the traditional telephony terms Dial Tone Mode or Call Origination Mode. TIA agrees this mode is of extremely short duration in actual telephone usage, and the power usage would not be significantly different than during the “Operation Mode” (TIA prefers “Communication Mode”) as described in the test procedure. TIA agrees that testing in Idle Mode is not necessary.

### **III. CONCLUSION**

TIA appreciates EPA-DOE’s initiative on this important matter, and looks forward to working with the EPA-DOE on this and other issues vital to the ICT industry.

Respectfully submitted,

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

/s/ DANIELLE COFFEY

Danielle Coffey  
Vice President  
Government Affairs

Brian Scarpelli  
Manager  
Government Affairs

Joseph Andersen  
Director, Technology & Innovation Policy  
Telecommunications Industry Association  
10 G Street NE, Suite 550  
Washington, DC 20002  
Tel: (202) 346-3249  
jandersen@tiaonline.org