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

**Re:** Proposed EPA Program Requirements, Product Specification for Telephony Test Method, Rev. Sep-2011

Dear Ms. Kaplan:

The Telecommunications Industry Association (TIA) hereby submits its comments on the Environmental Protection Agency (EPA)- and Department of Energy (DOE)- proposed testing methodology for its ENERGY STAR Program telephony product specification requirements.<sup>1</sup>

## **I. Introduction and Background**

TIA represents the global information and communications technology (ICT) industry through standards development, advocacy, business opportunities, market intelligence and world-wide environmental regulatory compliance. Thousands of companies and individuals, with combined annual revenues of over \$1 billion, work through TIA 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 greening of technology.

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<sup>1</sup> EPA, *Program Requirements, Product Specification for Telephony Test Method, Rev. Sep-2011* (Sept. 21, 2010) (“Draft Testing Specification”).

TIA's TR-41 Engineering Committee (User Premises Telecommunications Requirements)<sup>2</sup> 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 EPA's ENERGY STAR program, and highly value the benefits of certification of compliance with the ENERGY STAR requirements. The EPA is commended for its outreach to industry in the proposal at hand, including its October 4, 2011 webinar where it provided a number of clarifications on the proposal. TIA members also appreciate the EPA's efforts to ensure that the requirements of the ENERGY STAR program

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<sup>2</sup> A detailed overview of the most recent TR-41 (along with all other TIA standards committees) activity is provided in TIA's annually released report on its standards activity. *See* TIA, 2010-2011 Standards & Technology Annual Report (rel. Apr. 2011) at 8-11, available at [http://tiaonline.org/standards/about/documents/StarReport\\_10-11.pdf](http://tiaonline.org/standards/about/documents/StarReport_10-11.pdf).

evolve to reflect developments in technologies. TIA's members greatly value the ENERGY STAR certification, and rely on this certification to market their products to retailers and consumers.

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 energy consumption efficiency in products, and should be embraced. 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. TIA Supports the Proposal to Include Corded Telephones that Use External Power Supplies to the ENERGY STAR Program

As stated above, TIA is generally supportive of the ENERGY STAR program, and specifically notes its support for the proposal in the Draft Testing Specification to add corded telephones that use external power supplies to the ENERGY STAR program, including voice over internet protocol (VoIP) corded telephones. TIA also agrees with the decision by EPA-DOE to not include cellular telephones under this proposal,<sup>3</sup> including cellular telephones that have VoIP capability.<sup>4</sup>

However, TIA believes that EPA-DOE should clarify several aspects of the Draft Testing Specification related to its scope of application, and that the lack of clarity in the scope of application at this time warrants further fact-gathering and consideration by EPA-DOE before implementation:

- It is unclear that **VoIP telephones which do not utilize Session Internet Protocol (SIP) will be subject** to the Draft Testing Specification. TIA, in the spirit of technology neutrality, believes VoIP phones using alternative protocols, such as Megaco, H.323, and others, should be included.
- It is unclear to TIA **whether “hybrid” telephones which have both analog and VoIP capabilities will be covered** by this Draft Testing Specification, and we urge clarification as to how such telephones will be tested (whether as an analog telephone, VoIP telephone, or both).

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<sup>3</sup> It is TIA’s understanding that all cellular telephones are being addressed by EPA-DOE under the battery charging system (BCS) specification standards, on which TIA plans to comment once proposed by DOE. This was reaffirmed by EPA-DOE during the October 4, 2011 webinar.

<sup>4</sup> During the October 4, 2011 webinar, it was stated by EPA-DOE that cellular telephones which support contemplated VoIP services will be addressed in some future specification, and do not fall under the Draft Testing Specification.

TIA believes that such ambiguities in the Draft Testing Specification should be resolved before EPA-DOE proceeds further, and that further consultation should be effected with stakeholders to provide clarity in technical program rules. Doing so would greatly reduce a possible future need for rule revisions, and would provide certainty to those designing products that are planned to be compliant with ENERGY STAR program criteria as well as others certifying compliance. TIA therefore urges EPA-DOE to ensure that it builds a broad record that vets all concerns with proposed changes to the ENERGY STAR program before applying new program criteria to VoIP phones. A further period for comment and/or consultation before proceeding may be appropriate to ensure that all relevant issues get full consideration by EPA-DOE.

### **III. Definitional Changes and Clarifications Needed in the Draft Testing Specification**

TIA submits the following definitional input to the Draft Testing Specification:

- In the proposed definition of a “**VoIP Telephone**,” TIA recommends that corded and cordless phones be defined separately. Making such a distinction will reflect EPA-DOE’s appreciation of the different technical characteristics of corded and cordless phones, and would allow for future distinctions to be made between the two categories of VoIP telephones in future updates to the ENERGY STAR testing procedures and standards should EPA-DOE determine that procedures and standards differ between the two.
- The term “**Idle Mode**” is used in the Draft Testing Specification to represent the case where the telephone is off-hook, but receiving a dial tone. TIA believes this term may result in some confusion in compliance because the term “Idle State” is generally regarded within the industry to represent the situation where the telephone is connected for service while on-hook. Therefore, TIA suggests that another term be used in place of “Idle Mode” in the specification.
- The definition of “**External Power Supply (EPS)**” is limited to devices that provide a low voltage DC output. TIA notes that some EPSs that are included in the current Telephony Program provide an AC output. Therefore TIA supports changing the definition of EPS from “designed to convert line voltage AC input from the mains to lower DC voltage(s)” to “designed to convert line voltage AC

input from the mains to lower *AC or DC output* voltage(s).”

- “**Product Families**” should, aside from differences in color or housing, also include multi-handset telephone families where the family consists of one base unit with its cordless handset and N-1 additional handsets, each with its own charging unit, forming an N handset system. Typically, in these Product Families, the base unit with its handset is required to meet the energy usage standard for that configuration, while each additional handset with charger unit must meet the energy usage standard for its configuration. Separate submittals for multiple handset systems that differ only in the number of additional handsets would be time-consuming and wasteful of resources. TIA proposes that this be explicitly stated in the Product Family definition.
- The terms “**Computer Connectivity**” and “**VoIP Phone with Computer Connectivity**” are not defined, but appear to refer to switching or routing capabilities in VoIP telephones. One or both of these terms should be defined, and the relationship to such capabilities defined. TIA welcomes further discussion on this topic with EPA-DOE.

#### IV. Testing Changes and Clarifications Needed in the Draft Testing Specification

TIA submits the following input to the Draft Testing Specification related to the testing conditions:

- On page 7, the EPA asks whether there are “any undesired consequences which might arise from allowing such a broad range of VoIP systems,” and whether “more specific requirements limit the ability to test the phone itself or place undue burdens on test houses.” As noted in 5.1(D), a VoIP connection server is required. This server may be unique to the VoIP phone manufacturer’s products and will require further time for discussion between the manufacturer and test house. TIA also suggests that an output condition for Power Sourcing Equipment (PSE) be provided in the testing procedure.
- **Section 4(G)**, a requirement for a 95% confidence level is required for measurement accuracy. TIA is unaware whether power meter manufacturers include statements about the confidence level of the meter’s accuracy in product specifications, and EPA-DOE is urged to ensure that it is reasonably possible for telephony manufacturers to determine the confidence level.
- Also in **Section 4(G)**, the measurement uncertainty is required to be less than or equal to 5%, or 0.1 watts (W) for measurements less than 0.5 W. TIA believes that this represents a disjointedness in the measurement accuracy required by both Power over Ethernet (PoE) and regular AC power meters, because the uncertainty

requirement changes from 0.1 W at 0.5 W to 0.03 W at 0.6 W, while returning to an allowance of at least 0.1 W for values that are 2.0 W or higher.

- **Section 5.2(A)(2)** provides a requirement to report the average value of PoE measurements if “the difference in power between **any** of the seven readings and their average is less than 10% of the average value.” TIA believes that this requirement should be to report the average value if the difference between **each** of the readings and the average is less than 10% of the average. For example, if the readings recorded are 2.0 W, 2.2 W, 2.4 W, 2.5 W, 2.6 W, 2.8 W, and 3.0 W, the average value would be 2.5 W, with 10% of that average being .25 W, and only three of the seven readings would actually fall within 10% of the average value. 5.2(A)(3) supports the need for making this change because it states that if the difference between any of the seven readings and the average is greater than or equal to 10% of the average (as would be the case in the above example), additional measurements are to be taken until the criteria is met. TIA believes that this inconsistency should be reconciled in Section 5.2(A)(2) before EPA-DOE moves forward with this testing specification.
- **Section 6.1(6)** provides direction on measuring the AC power input voltage and frequency. Because of the sequence of steps enumerated, it is implied (but not clearly stated) that these preliminary voltage and frequency measurements are to be made with the telephone off-hook while drawing a dial tone. Such a requirement in 6.1(6) would result in preliminary measurements of the input conditions for analog telephones being made with the telephone off-hook and drawing dial tone, but the actual testing of the telephone being done while the telephone is on-hook. TIA therefore urges for the specification to provide parity in the state of the telephone for both preliminary and actual testing, or that the specification recognize that a difference in measurements might occur due to this requirement.
- TIA also notes that analog telephones as defined under the ENERGY STAR program are subject to one test, while under this draft proposal, VoIP phones would be subject to two tests. TIA notes that the single test for analog phones is the same as the standby power mode in the current requirements (termed “Partially On (Sleep) Mode” in the draft proposal. VoIP phones would then have an additional test in what “Idle Mode,” where the telephone is off-hook while drawing a dial tone. TIA requests that EPA provide a rationale for this disparity.

**V. 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**

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