

**BEFORE THE UNITED STATES
DEPARTMENT OF ENERGY**

IN THE MATTER OF
ENERGY CONSERVATION STANDARDS
FOR BATTERY CHARGER AND
EXTERNAL POWER SUPPLIES

Docket No. EERE-2008—BT-STD-0005
RIN 1904-AB57

**COMMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION
REGARDING THE PROPOSED ENERGY CONSERVATION STANDARDS FOR
BATTERY CHARGERS AND EXTERNAL POWER SUPPLIES**

Dated: May 29, 2012

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I. INTRODUCTION

The Telecommunications Industry Association (TIA) appreciates the opportunity to provide comments on the Notice of Proposed Rulemaking regarding Energy Conservation Standards for Battery Chargers and External Power Supplies.¹ TIA represents the global information and communications technology industry through standards development, advocacy, tradeshow, business opportunities and market intelligence. For over eighty years, TIA has enhanced the business environments for broadband, mobile wireless, information technology, networks, cable, satellite, and unified communications. 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, the environment and entertainment. TIA's members produce the equipment and solutions that make

¹ Department of Energy, *Energy Conservation Program: Energy Conservation Standards for Battery Chargers and External Power Supplies; Proposed Rule* (Docket Number EERE-2008-BT-STD-0005), 77 Fed. Reg. 18478-18649 (Mar. 27, 2012) (NPRM).

up our Nation's rapidly evolving communications networks, and many TIA members produce products directly affected by the proposed rulemaking.

TIA is a telecommunications standards body accredited by the American National Standards Institute (ANSI). TIA's standards committees create consensus-based voluntary standards for numerous facets of the ICT industry.² Among other areas, TIA's standards committees develop protocols and interface standards relating to current U.S. Government technology priorities such as Smart Grid,³ health care ICT,⁴ and emergency communications infrastructure⁵ in such areas as fiber optics, public and private interworking, telecommunications cable infrastructure, wireless and mobile communications, multimedia and voice over internet protocol ("VoIP") access, as well as vehicular telematics.

Relevant to the NPRM, TIA's TR-41 Engineering Committee (User Premises Telecommunications Requirements) develops voluntary standards for telecommunications

² TIA publishes an annual report that includes the latest actions taken by each respective TIA engineering committee toward the development of standards for the advancement of global communications. An overview of the most recent TR-41 (along with all other TIA standards committees) activity is provided in this report on its standards activity. See TIA, Standards & Technology Annual Report (September 2010), *available at* http://tiaonline.org/standards/about/documents/StarReport_09-10.pdf.

³ TIA's TR-50 (Smart Device Communications) is responsible for the development and maintenance of access agnostic interface standards for the monitoring and bi-directional communication of events and information between smart devices and other devices, applications or networks. See <http://tr50.tiaonline.org>.

⁴ TIA's TR-49 (Healthcare ICT) is responsible for development and maintenance of standards for the healthcare ICT applications which involve medical devices, network infrastructure, applications, and operations support. See <http://tr49.tiaonline.org>.

⁵ Engineering Committee TR-8 formulates and maintains standards for private radio communications systems and equipment for both voice and data applications. TR-8 addresses all technical matters for systems and services, including definitions, interoperability, compatibility, and compliance requirements. The types of systems addressed by these standards include business and industrial dispatch applications, as well as public safety (such as police, ambulance and firefighting) applications. See <http://tr8.tiaonline.org>.

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 and testing issues, identifying environmental considerations for user premises equipment and addressing the administrative aspects of product approval processes. Of particular relevance to this proceeding, many TIA members, including those who participate in TR-41 standards activities, produce telephony products implicated by the NPRM on Energy Conservation Standards for Battery Chargers and External Power Supplies. TIA has previously submitted comments to both the Department of Energy (DOE)⁶ and the Environmental Protection Agency⁷ on this matter.

TIA appreciates the energy conservation program run by the DOE and recognizes the success of the program in achieving energy efficiency gains in a variety of product categories.

⁶ See Comments of TIA to the Department of Energy, *Energy Conservation Program: Test Procedures for Battery Chargers and External Power Supplies*, (Docket No. EERE-2009-BT-TP-0019) (filed Jan. 28, 2011) available at http://www.tiaonline.org/gov_affairs/fcc_filings/documents/TIA%20Letter%20to%20DOE%20re%20BCS%20Testing%20NPR%20012811.pdf.

⁷ See Comments of TIA to the Environmental Protection Agency, *Program Requirements, Product Specification for Telephony Test Method* (filed Oct. 13, 2011) available at http://www.tiaonline.org/gov_affairs/fcc_filings/documents/TIA%20Comments%20to%202011%20ENERGY%20SAR%20Draft%20Telephony%20Testing%20Procedure%20101311.pdf.

One reason for the success of the program has been the selection of product categories where the future of the technology and competing technologies are well understood, the pathway to efficiency gains is clear, and the functionality of the product is not in a state of flux.

Refrigerator-freezers, air conditioners, water heaters, furnaces, washers and dryers, ovens, pool heaters, showerheads, faucets, among others, are examples of single function, mature products covered by the Energy Policy & Conservation Act⁸ where the product technology was in a phase where the DOE could set standards that are technically feasible and economically justified. ICT equipment and devices are more complex and less mature than other technologies where the DOE has determined to set efficiency standards in the past. While battery charger systems and external power supplies are less complex than some ICT equipment, these technologies will still require greater regulatory flexibility given the variety of designs utilizing and integrating battery charger functionality and external power supplies into modern electronic equipment. TIA has serious concerns with elements of the proposed rulemaking regarding the technological feasibility as well as the potential negative impacts on manufacturers and consumers resulting from the proposed regulations, which we will discuss in more detail below.

⁸ Pub. L. 94-163 (42 U.S.C. §§ 6291-6309) (EPCA).

II. DISCUSSION

1. TIA AGREES WITH THE DOE FINDING THAT WIRELESS CHARGERS SHOULD NOT BE INCLUDED IN THIS RULEMAKING

Mandating standards on nascent and immature technologies, such as wireless chargers, restricts innovation, limiting the functionality and utility that the technology can achieve. TIA agrees with the DOE that mandated standards for wireless chargers would have a negative impact on consumer utility for a nascent technology and wireless chargers should be exempt from the proposed rulemaking. Wireless charging systems are in active development by a number of technology companies.

Wireless charging systems are expected to transform how consumers charge their various electronics devices by providing the convenience of charging multiple devices from a single station. Rather than plugging multiple chargers or power adapters into multiple outlets, loosely coupled wireless charging systems will allow consumers to wirelessly charge a cell phone, a camera, a pair of hearing aids, a music player, a tablet, and other battery-powered devices at the same time at a single station. In this way, loosely coupled systems can alleviate consumers' need to maintain separate chargers for every battery-powered device they own. By providing consumers with more convenient charging options, it will help to ensure that devices are charged when they are needed most.

2. TIA SEEKS CLARIFICATION REGARDING HOW THE PROPOSED REGULATION WOULD APPLY TO CORDLESS PHONES AND OTHER CONTINUOUS USE TECHNOLOGIES WHERE DEVICE AND BATTERY CHARGER FUNCTIONS CANNOT BE PHYSICALLY SEPARATED

The proposed rulemaking places severe and technically impossible requirements for the manufacture and testing of cordless phones and other continuous use technologies. The proposed testing procedures seem to presume that telephony energy expenditures between a cordless phone or base unit and the active battery charging functions are easily disengaged. In practice, cordless telephones and base units lack the ability to render dormant the telephone functional circuitry while at the same time maintaining active battery charger operations, creating untenable measurement requirements applying the proposed regulation to base units with cordless phones. The base unit does not contain a power switch since it is not intended to be shut down at any moment. As a result, testing cordless phones with base units presents a unique challenge. Testing the battery chargers while the other functionalities are active would result in the inability of many technologies to meet the proposed efficiency requirements. Under the DOE's prescribed test method for Battery Chargers, this difficulty is acknowledged but not resolved in Appendix Y to Subpart B of Part 430 (emphasis added):

4.4 Limiting Other Non-Battery Charger Functions

a. If the battery charger or product containing the battery charger does not have any additional functions unrelated to battery charging, this subsection may be skipped.

b. Any optional functions controlled by the user and not associated with the battery charging process (e.g., the answering machine in a cordless telephone charging base) shall be switched off. If it is not possible to switch such

functions off, they shall be set to their lowest power-consuming mode during the test.

Manufacturers require clarification as to how this testing procedure requirement should be interpreted. TIA sees the following three options, in order from most to least desirable, for applying this requirement to cordless phones and other continuous use technologies where functions not associated with the battery charging process cannot be switched off:

Option A. Two-Step Measurement Process: Measure the energy consumption of the cordless handset and base unit combined, and then measure the base unit separately. The active battery charger system energy usage can then be calculated as the difference between the two.

Option B. Measure only the energy consumption of the cordless handset plus stand-alone cradle (not base unit) and submit this data if the circuitry of the battery charger of the cordless hand set plus stand-alone cradle is the same as the battery charger circuitry of the base unit with cordless phone.

Option C. Modify the base unit in order to turn off the operation of the telephone, then measure only the energy consumption attributed to the battery charger.

Option A, the two-step measurement process, is the preferred and least costly method for calculating the BCS energy usage of cordless phones. First, BCS energy usage testing as proposed in the proposed rulemaking could be conducted while the telephone functions are active. Second, the telephone function energy usage, with the handset out of the cradle, would then be measured. By deducting the latter from the overall measurement obtained in the first step

described above, the active BCS energy usage can then be attained without necessitating a technically challenging process or added unnecessary costs for manufacturers or consumers.

Option B is the next preferred method with regard to the interpretation of the last sentence reference to the “lowest power consuming mode” in paragraph 4.4 (d) of the proposed regulation. This would interpret the “lowest power consuming mode” as the measurement of the cordless handset in a separate charge cradle when the circuit of the battery charger for the cordless handset and the separate cradle is the same as for the cordless handset on the base unit of the cordless phone. This method would be effective for those cordless phones where the charging efficiency for base units is equivalent to the efficiency of the separate charge cradles, but this may not be the case for all cordless telephone designs.

Option C would be that manufacturers are required to modify base units in order to turn off the operation of the telephone so that only the battery charger’s energy consumption is measured for the sake of the test. Doing this on a “one of a kind basis” for providing test data to DOE might be possible but would be incompatible with allowing sample or random compliance testing by third-party labs. Requiring it in all products sold would impose significant costs on the manufacturer as it would require both mechanical and software modifications that are of no practical use to the end user.

TIA emphasizes that continuous telephony and answering device functionalities are not easily disconnected in order to allow separate measurement of the battery charger function. As written, the proposed regulation could be interpreted to require a complete and costly redesign and manufacture of equipment for the sole purpose of enabling the products to fit within the parameters of the testing requirement. We do not believe that this is the DOE’s intent, so TIA

requests that the DOE provide clarification as to how this section should be interpreted by manufacturers of cordless phones and other continuous use products.

3. TECHNOLOGIES THAT INCLUDE BOTH A BATTERY CHARGER AND AN EXTERNAL POWER SUPPLY ARE DOUBLE REGULATED BY THE PROPOSED RULEMAKING

Some products include both a battery charger and an external power supply, placing these products under two separate regulatory regimes in terms of energy efficiency requirements and testing procedures. TIA seeks clarification on how DOE intends to apply the proposed regulations to these products.

4. THE PROPOSED REGULATION SHOULD NOT REQUIRE PLACING A COMPLIANCE LABEL ON THE PRODUCT ITSELF

Product labeling requirements should be evaluated by balancing the cost and resources required to add the label in the manufacturing process versus the benefit derived from the content of the label being placed directly on the device. In this case, the cost and resources required to add a label to the product or packaging outweighs the benefits. Each product label requirement adds an additional step to the product manufacturing process, increases production costs and consumes additional energy and resources. In this case, a label would act as a declaration of compliance with a mandatory standard. This purpose is more efficiently achieved by including statements of compliance in documentation accompanying the product rather than mandating the addition of a new label to the product itself.

III. CONCLUSION

TIA appreciates the opportunity to provide input and looks forward to working with the Department of Energy and other stakeholders on these issues in the future.

Respectfully signed and submitted on May 29, 2012.

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

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