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Kathleen Vokes
ENERGY STAR® Program
U.S. Environmental Protection Agency
Washington, DC 20036

Dear Kathleen:

CEE appreciates the opportunity to provide comments on the draft ENERGY STAR Version 3.0 specification for set-top boxes (STBs). CEE is the binational organization of energy efficiency program administrators, whose members are responsible for ratepayer-funded efficiency programs in 41 states and 8 Canadian provinces. In 2009, CEE members' budgets represented over 88 percent of the total $6.1 billion in state- and province-authorized program budgets. In short, CEE members actively work to make ENERGY STAR the relevant platform for energy efficiency across North America. The following comments were developed by the CEE Consumer Electronics Committee (Committee) and the organizations listed below have chosen to indicate their strong individual support for this letter.

## ENERGY STAR Set-top Box Strategy

CEE recognizes the set-top box market to be characterized by a relatively small number of manufacturers and with few products overall (there are 52 products from 7 manufacturers that now appear on the ENERGY STAR qualifying products list). We have also heard anecdotally that some service providers believe their only choice from a business perspective is to provide all ENERGY STAR STBs or none at all. If accurate, these circumstances pose a fundamental challenge to a key tenet of the ENERGY STAR Program and brand--that product labeling is reserved for approximately the top 25 percent most efficient models available. Given this, we seek to learn the brand-level considerations and how the strategy for STBs aligns. This information will help energy efficiency program administrators to design programs that most effectively promote these products in a manner consistent with the overall brand strategy.

## Market and Technical Information

Although we appreciate the hard work EPA has done to gather information in support of this specification, without more complete information on market penetration and estimated energy savings CEE is unable to make an informed assessment of the Version 3.0 proposal. Based on our

participation at the March 19 stakeholder meeting, it is our understanding that the data set EPA has assembled does not include all STBs in the market and that the total number of products on the market is unknown. Though at the meeting one manufacturer commented that the data set is reasonably robust in terms of the type of products it includes, without information on the total number of products on the market it is difficult for us to understand how the top 25 percent of models will be identified.

In addition to being a necessary input for ENERGY STAR specification setting purposes, information on the number of products in the market and their energy use is a critical input to energy savings analyses. Without understanding the baseline level of efficiency, it will be difficult for EPA and energy efficiency programs to calculate the savings that are offered by an ENERGY STAR labeled product. Through these comments, we underscore the importance of this information. We support any additional information collection efforts that EPA may be able to undertake with its limited resources and hope that CEE in the future will be in a position to collect and share this type of information with EPA and other stakeholders through the Consumer Electronics Energy Efficiency Program Center we are working to develop. Through our industry outreach efforts, we will also continue to encourage industry representatives to provide this information in a manner that protects their confidential business interests.

In assessing the provisions of this specification and the implications for energy efficiency programs seeking to promote ENERGY STAR qualified STBs, CEE would also appreciate more information on new product developments that EPA may have collected in the course of developing this specification. For example, discussion at the stakeholder meeting seemed to indicate that the movement to STBs with multi-room architecture offers an opportunity for additional energy savings and that the increasing prevalence of Internet Protocol (IP) STBs may also impact energy use. We ask EPA to make any of its findings on these matters available to stakeholders. Without more specific information on the market presence of these products and their duty cycles, it is challenging for us to assess the levels proposed for ENERGY STAR qualification and how IP and multi-room products that do qualify might be included in energy efficiency programs for electronics.

## Effective Date and Specification Nomenclature

As suggested in the specification proposal, we support moving the effective date to June to better align with STB industry product development cycles. Given energy efficiency programs' interest in accelerating the markets' movement to higher efficiency levels than offered by the current Version 2.0 specification (some members are reporting that service providers in their service territories are already supplying all ENERGY STAR compliant boxes), we would have concerns about the effective date being pushed back any further.

We are also interested in learning whether EPA considered naming Version 3.0 Tier 2 consistent with the nomenclature used for future tiers within the television specification. Under this nomenclature, the 2013 specification would be known as Version 4.0. Committee members report that the use of versions is less confusing and makes for easier communications with various audiences regarding incentive levels in their programs.

## Total Energy Consumption (TEC) Allowances

As CEE has not performed its own research or spoken directly with any manufacturers or other industry experts regarding the proposed TEC allowances in the draft specification, it is not able to comment on the specific levels proposed for Tier 1. In addition, when the Committee met to discuss the draft STB specification, it did not have the benefit of EPA's specific Tier 2 proposal. Now that EPA has formally circulated a proposal, CEE staff plans to convene the Committee to discuss it and may develop comments at that time.

At this point, the Committee has identified one overarching question for EPA, which is related to the setting of future performance specifications. The Committee would like to understand if EPA has explored the feasibility of generating energy savings through back end/head end/network, software, and chip improvements. If so, we ask EPA to share its assessment so that stakeholders are in a better position to assess the Tier 2 levels that are proposed.

## Future ENERGY STAR Requirements

EPA has used chronological "tiers" to specify future requirements in at least three recent electronics product specifications: STBs, televisions, and audio/video equipment. As noted in prior comments to EPA on this practice, while CEE appreciates EPA's proactive efforts to provide a focal point in the marketplace for manufacturers and efficiency programs (and for this reason, some CEE members support this practice), we have concerns about the implications for the ENERGY STAR brand, and stakeholders have not had the benefit of supporting consideration.

In a rapidly evolving product category like electronics, predicting future performance and setting appropriate ENERGY STAR specification requirements is extremely challenging. For example, a significant technological innovation could revolutionize energy performance in the next six months, rendering predetermined future ENERGY STAR levels too low to save energy. Under such a scenario, the top performers and consumers may be inadvertently disadvantaged. Alternatively, the economic landscape could limit manufacturer research and development funds to the point where predetermined future ENERGY STAR levels are unachievable, causing the brand to lose relevance in that product category.

EPA demonstrated its willingness to revisit specification levels to ensure they maintain their relevance when it proposed to revise the STB provisions that were adopted in 2008 (referred to as both Version 2.0 Tier 2 and Version 3.0). Further, we recognize that EPA reserves the right to revise the specification should technological and/or market changes affect its usefulness or its impact on the environment. While these are seemingly reasonable and responsible actions, we have concern that a preannouncement creates an artificial convergence or stake that may or may not lead to products that live up to the ENERGY STAR brand promise. This represents a substantial risk. Changing requirements at a later date could subvert the very purpose for which the future levels were set—to provide some certainty and allow manufacturers and other stakeholders to plan around them.

To the extent that the practice of setting future requirements is in any way expected going forward, CEE requests that all stakeholders be engaged to comment on brand implications.

## Duty Cycle

As discussed at the March 19 stakeholder meeting, we encourage the EPA to evaluate the ongoing appropriateness of the duty cycle estimates for calculating the TEC. We understand the difficulty in this task and would appreciate being able to review the original source assumptions used to develop the values. We would welcome any effort by EPA to study this issue in more detail to help inform future specifications. CEE and its members would be pleased to provide what assistance we can given the importance of duty cycle information for program design and evaluation.

## Test Data

We were pleased that at the stakeholder meeting, EPA offered to distribute to stakeholders an Excel file containing source information for the STBs that were tested to inform the Draft 1 TEC levels. To extent possible, this file would be most helpful if it contains: a) test power in all operating modes; b) base functionality and additional functionality descriptions; c) auto power down capability; d) maximum TEC for box configuration; and e) year of manufacture. This information is important for energy efficiency programs to assess and design cost-effective incentive programs for ENERGY STAR set-top boxes.

## Labeling by Manufacturers

EPA has requested input on some manufacturers' request that they be permitted to use the ENERGY STAR mark on all STBs that meet the specification requirements, even if those STBs are not deployed through ENERGY STAR partner service providers. CEE supports EPA's interest in ensuring that all STBs deployed in the field meet the ENERGY STAR qualification levels and we understand from various discussions at ENERGY STAR stakeholder meetings that service provider decisions on matters like software and frequency of downloads greatly impact the efficiency of STBs in the field. On the other hand, enabling manufacturers to label all STBs could provide them with incentives to go farther with their efficiency efforts. The Committee has identified one possible compromise for EPA's consideration: allow manufacturer labeling of the STBs that meet the specification and implement a strong verification program to ensure that the STBs continue to meet the specification once deployed by service providers. Such verification might include in-home testing of boxes to calculate whether their energy consumption is the same as when the product was qualified by the manufacturer.

Thank you again for the opportunity to comment on this important specification revision. If you have any questions about these comments, please contact CEE Program Manager Margie Lynch at MLynch@cee1.org or 617-337-9277. CEE looks forward to continuing to work with EPA on this specification and the promotion of ENERGY STAR qualified set-top boxes.

Sincerely,

Marc Hoffman
Executive Director

**Supporting Organizations**

BC Hydro
Cape Light Compact
Commonwealth Edison
Midwest Energy Efficiency Alliance
New York Energy Research and Development Authority
Northeast Energy Efficiency Partnerships
Northwest Energy Efficiency Alliance
NSTAR
PNM
San Diego Gas and Electric Company
Western Massachusetts Electric Company
Wisconsin Focus on Energy