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July 30, 2010

Ms. Katharine Kaplan
Energy Star Program Manager
U.S. Environmental Protection Agency
Washington, DC 20460

Re: ENERGY STAR® Program Requirements for Set-top Boxes

Dear Ms. Kaplan:

On behalf of the National Cable & Telecommunications Association ("NCTA"),[1] I am responding to the request by the Environmental Protection Agency ("EPA") for comments from industry stakeholders on the ENERGY STAR® Program Requirements for Set-top Boxes. NCTA and its members have supported and continue to support the voluntary ENERGY STAR federal program designed to promote the manufacture and use of more energy-efficient set-top boxes.

We welcome this opportunity to submit comments and recommendations on the EPA's Discussion Guide for Proposed Edits to Versions 3.0 and 4.0 ENERGY STAR® Program Requirements for Cable, Satellite, and Telecom Service Providers, distributed to industry stakeholders on July 6, 2010 ("Discussion Guide").

Service Provider Fleet/Purchase Requirements

In the Service Provider Fleet/Purchase Requirements section of the Discussion Guide, the EPA outlined two options to help encourage more service providers to partner with ENERGY STAR. One option is to pro-rate the annual new purchase requirements on a monthly basis for partners who join the ENERGY STAR® program after the start of a calendar year.

[1] NCTA is the principal trade association for the U.S. cable television industry, representing cable operators serving more than 90 percent of the nation's cable television households, more than 200 cable program networks, and suppliers of equipment (including set-top boxes) and services to the cable industry.

NCTA supports this option and commends EPA for working with industry stakeholders to explore new methods to encourage further participation in the ENERGY STAR® program. In the interest of exploring additional incentives to further encourage service provider participation, we also request the EPA consider lowering the new purchase requirement threshold of 50% of all new set-top boxes purchases in a calendar year to 25%, and consider allowing refurbished boxes to be counted towards the new purchase threshold (assuming they are reconfigured to be brought into compliance ENERGY STAR® requirements). We believe the addition of these changes would give service providers even greater incentive to participate in the ENERGY STAR® program.

The second option proposed by the EPA would reward service providers an additional 50% credit towards annual purchase/fleet requirements for deploying products with the capability for advanced energy efficiency features (e.g., a "Deep Sleep" button or mode). EPA indicates that it expects that such advanced features "will have the potential to reduce STB power consumption to 2 watts or less for at least 4 hours per day" and that "EPA intends to make advanced energy efficiency features a requirement for qualification in the Version 4.0 specification." [2]

While we again commend the EPA for exploring new ways to encourage the development and deployment of more energy-efficient set-top boxes, it is not clear whether set-top power consumption can be reduced to 2 watts or less by the June 2013 frame anticipated for Version 4.0 of the specifications. Moreover, advanced energy efficiency features, to the extent that they encompass such modes as "Deep Sleep," "Hibernate" or even "Off," raise a number of initial concerns that extend beyond energy management and must be considered carefully by service providers. For example, one such concern is the impact to the network and the quality of delivered services when numerous set-tops return from the advanced energy efficiency mode and simultaneously request updates to guide information and other data. Another concern is the potential negative reaction from customers who must wait for their set-top to return from the advanced energy efficiency mode before they are able to effectively use the device.

Furthermore, we are concerned that a requirement that set-top boxes include advanced energy efficiency features as described are inconsistent with the objectives encompassed by the Total Energy Consumption ("TEC") approach adopted by the EPA and incorporated in the current version of the ENERGY STAR® specifications.[3]

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[2] *See* Discussion Guide for Proposed Edits to Versions 3.0 and 4.0 ENERGY STAR® Program Requirements for Cable, Satellite, and Telecom Service Providers, distributed to stakeholders (July 6, 2010).

[3] *See* ENERGY STAR® Program Requirements for Set-top Boxes Version 2.0 (April 23, 2008).

The EPA showed great wisdom and leadership in endorsing the TEC approach, recognizing that as set-top box features evolve, manufacturers and service providers would need the flexibility to determine the best approach to designing energy efficient products and services by a reasonable date while also retaining a comparable metric in which performance can be assessed nationwide. Adopting aggressive advanced energy efficiency features on the other hand will result in a much different approach to designing set-top energy efficiency, one which we feel will result in significant constraints that could stifle innovation and limit the cable industry's ability to include market driven features in future set-top boxes. We urge the EPA not to make advanced energy efficiency features as described a requirement for qualification in ENERGY STAR® specifications.

Testing, Qualification and Labeling

In the Testing, Qualification and Labeling section of the Discussion Guide, the EPA has proposed the following requirements for set-top box testing, qualification and labeling:

1. *Direct-to-Retail STBs:*
    - *Product Testing & Submission is the responsibility of the OEM.*
    - *Labeling & Periodic Reporting is the responsibility of the OEM.*

2. *Leased STBs whose energy performance is independent of configuration/usage:*
    - *Product Testing & Submission may be performed by the OEM or the Service Provider.*
    - *Labeling & Periodic Reporting may be performed by the OEM or the Service Provider.*

3. *Leased STBs whose energy performance is dependent upon configuration/usage:*
    - *Product Testing & Submission is the responsibility of the Service Provider, but may be performed by the OEM at the request of the Service Provider.*
    - *Labeling & Periodic Reporting is the responsibility of the Service Provider.*

As the EPA is aware, service providers lack the laboratory facilities, equipment, and other resources necessary to perform ENERGY STAR® qualification testing directly, but instead rely upon their manufacturers to perform these functions. NCTA feels that, consistent with current practices, the responsibility for product qualification testing should remain with the manufacturer. However, we seek clarification on what the term "configuration/usage" means, and under what specific circumstances the EPA believes service providers should assume responsibility for qualification testing.

We also seek clarification on how, if at all, the proposals outlined in this section of the Discussion Guide may impact the existing periodic testing requirements defined in Section 3 of the ENERGY STAR® Program Requirements for Cable, Satellite, and Telecom Service Providers.[4] However, regardless of which party is responsible for product qualification testing, we believe manufacturers should not be precluded from placing the labeling on the set-top box on behalf of their service provider customers.

Reporting

In the Reporting section of the Discussion Guide, the EPA has proposed that service providers "...report additional sales data about deployments and installation/usage of various home-networking protocols." We seek clarification on what specific information is needed to meet this proposed requirement. For example, what is meant by the term "additional sales data," particularly in situations where service providers lease, not sell, set-top boxes to their customers? What is meant by the term "installation/usage," and what specific "home-networking protocols" must be reported?

Energy Efficiency Criteria

In the Discussion Guide, the EPA proposes incorporating a number of changes to the energy efficiency criteria previously proposed in Draft1, Version 3.0[5] and the Tier 2 proposal to supplement Draft 1 for set-top boxes.[6] NCTA offers the follow comments regarding these proposed changes.

- In the Draft 1 Version 3.0 specification, the EPA defined a Multi-room set-top as follows:

> *Multi-room STB: A Cable, Satellite, IP or Terrestrial STB that is capable of distributing simultaneous, independent streams of video content to multiple displays or thin-client/remote STBs within a single family dwelling. For the purposes of this specification, a connected display must have a resolution of no less than 480i. Products that provide gateway services in multi-subscriber scenarios are not considered multi-room STBs under this specification.*

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[4] *See* ENERGY STAR® Program Requirements for Cable, Satellite, and Telecom Service Providers (April 23, 2008).

[5] *See* Draft 1 Version 3.0 ENERGY STAR® Set-top Box specification (February 23, 2010).

[6] *See* Tier 2 proposal to supplement the Draft 1 Version 3.0 ENERGY STAR® Set-top Box specification (March 23, 2010).

As we discussed in our comments on March 26, 2010, we respectfully request that the EPA clarify that a multi-room set-top is not limited to distributing video content to only thin-client/remote set-tops but may distribute content to other set-top devices as well.[7] Distributing to non-thin-client/remote in a multi-room environment still aligns with the EPA's goal of promoting multi-room deployments and reducing the total number of installed DVRs. Additionally, we do not understand why a connected display must have a resolution of "...no less than 480i" and suggest that the EPA delete this requirement.

- The base functionality annual energy allowance allocated to the Thin Client/Remote category is 22 kWhr/year. As we discussed in our comments on March 26, 2010, we believe this allowance is too low.[8] Given that this category of set-tops will be used to receive services distributed over a home network, we respectfully request that the EPA raise the allowance from 22 kWhr/year to 32 kWhr/year in order to accommodate the energy contribution of home network interfaces, such as MoCA and WiFi, which are expected to be deployed in this device category.

- The base annual energy allowance allocated to the Digital Transport Adaptor ("DTA") under Version 4.0 is 24 kWhr/year, a greater than 30% decrease from the 35 kWhr/year proposed for such devices under Version 3.0.[9] As we discussed in our comments on April 12, 2010, given that DTAs are, by their very nature, designed and built to operate as energy efficiently as possible, we believe that the proposed Tier 2 allowance is too low.[10] We respectfully request that the EPA raise the proposed Tier 2 allowance from 24 kWhr/year to 30 kWhr/year. This would maintain a similar allowance reduction percentage for Tier 2 as currently proposed for the Cable set-top category.

- The annual additional energy allowance allocated to DOCSIS under Version 4.0 is 15 kWhr/year. However, as we discussed in our comments on April 12, 2010, we anticipate that DOCSIS 3.0 will be in use in set-tops by the proposed Version effective date of June 1, 2013.[11] To account for the additional energy necessary to support DOCSIS 3.0, we believe that the proposed Tier 2 allowance is too low. We respectfully request that the EPA retain the Version 3.0 allowance of 20 kWhr/year for Version 4.0.

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[7] *See* Letter from Andy Scott, Vice President of Engineering, NCTA, to Kathleen Vokes, ENERGY STAR Product Manager, U.S. Environmental Protection Agency (March 26, 2010) .

[8] *Id.*

[9] The EPA has proposed that Version 3.0, Tier 1 become Version 3.0, and that Version 3.0, Tier 2 become Version 4.0 in the final ENERGY STAR® specification.

[10] *See* Letter from Andy Scott, Vice President of Engineering, NCTA, to Kathleen Vokes, ENERGY STAR Product Manager, U.S. Environmental Protection Agency (April 10, 2010) .

[11] *Id.*

- The base allowance for IP set-top boxes is 24 kWh/year in version 4.0. However, after adding the allowance for Advanced Video Processing and Home Network Interface, the total allowance available to the manufacturer is 42 kWh/year, which is 4kWh/year less than the 46 kWh/year originally proposed in Draft1, Version 3.0 as well as the Tier 2 proposal to supplement Draft 1. NCTA respectfully requests that the base allowance for IP set-top boxes be increased to 28 kWh/year for Version 4.0.

- Finally, the "Additional Tuner" allowance has been re-named "Multi-stream," and is available for use with IP base types that process multiple simultaneous video streams without a physically separate tuner. We seek clarification on whether the Multi-stream allowance applies to non-IP boxes that process multiple simultaneous video streams without physically separate tuners.

Enhanced Testing and Verification

The EPA feels that testing of ENERGY STAR® products, including set-top boxes, should be done by manufacturers with laboratories, or access to laboratories, accredited to the ISO/IEC 17025 standard.[12] However, NCTA does not support imposing this requirement on service providers. Such a requirement would likely make in-house verification testing infeasible, and force service providers to retain the services of prohibitively expensive third-party laboratories, an approach that would likely discourage service providers from participating in the ENERGY STAR® Program. [13]

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[12] ISO/IEC 17025:2005: General requirements for the competence of testing and calibration laboratories.

[13] Third-party testing for set-top boxes will be prohibitively expensive due to unique product characteristics of the set-top box. A set-top box provided by a cable operator is part of a network and cannot be measured on a stand-alone basis. Each independent laboratory would need a headend configured for the software employed by each specific cable operator.

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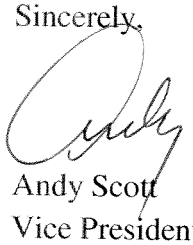
NCTA looks forward to working with the EPA and other stakeholders in developing the ENERGY STAR® Program Requirements for Set-top Boxes. We believe the comments and suggestions we have offered will help balance the goals and objectives for the program with an ever-increasing desire by cable customers for additional features and functions in set-top boxes, and establish reasonable criteria that will allow cable service providers and manufacturers to make improvements in product energy efficiency. Should you have any questions or seek additional information, please do not hesitate to contact me.

Sincerely,



Andy Scott
Vice President of Engineering

cc: Stephen Pantano, ICF International