

ENERGY STAR for Set-top Boxes Specification Background

Introduction

On March 15, 2007, EPA announced its intention to re-open the process to revise the ENERGY STAR program for set-top-boxes (STBs). EPA will hold a kickoff meeting for all interested stakeholders to initiate this effort on May 15 in Washington, DC.

This document is being shared with all stakeholders who have indicated their interest in ENERGY STAR for STBs and is intended to serve the following purposes:

- Provide background on ENERGY STAR’s previous involvement with STBs;
- Outline the drivers for opening the process again; and
- Convey EPA’s goals for the specification development effort and ultimate STB program.

EPA welcomes the wider distribution of this document to others who may be interested in contributing to the revision of the ENERGY STAR specification for set-top-boxes. In addition, EPA appreciates all of the input and feedback that stakeholders have provided over the past several months, which has helped to shape this document and inform the meeting on May 15.

ENERGY STAR’s History with STBs

Background on Previous ENERGY STAR STB Specification

ENERGY STAR’s STB product specification went into effect on January 1, 2001. The specification included Tier 1 energy efficiency criteria that took effect immediately, and more stringent Tier 2 criteria that were expected to become effective on January 1, 2004.

Original Energy-Efficiency Criteria for ENERGY STAR Qualified Set-top Boxes

Product Category	Tier 1: Standby/Low- power Mode	Tier 2: Standby/Low- power Mode
Category 1 <ul style="list-style-type: none"> • Analog Cable TV Set-top Box • Advanced Analog Cable TV Set-top Box • Digital TV Converter Set-top Box • Internet Access Device • Video Game Console • Videophone Set-top Box • Set-top Box (e.g., Internet access device) with Cable Modem for enhanced communications in Standby/Low-power Mode 	≤ 3 Watts	One specification for all set-top boxes:
Category 2 <ul style="list-style-type: none"> • Digital Cable TV Set-top Box • Satellite TV Set-top Box* • Wireless TV Set-top Box • Personal Video Recorder 	≤ 15 Watts (for satellite systems, add ≤ 5 Watts for each LNB)	≤ 7 Watts (for satellite systems, add ≤ 5 Watts for each LNB)

<p>Category 3</p> <ul style="list-style-type: none"> Multifunction Device (i.e., a physically integrated device that has the core function of a satellite TV set-top box, digital cable TV set-top box, wireless TV set-top box, or personal video recorder plus one or more additional functionalities, such as an Internet access device or video game console) 	<p>≤ 20 Watts (for satellite systems, add ≤ 5 Watts for each LNB)</p>	
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However, in June 2003, EPA extended the Tier 1 criteria indefinitely based on input from stakeholders that indicated the following:

- STB technology and the marketplace had not progressed as originally envisioned when the specification was introduced in 2000 due to shifts in the market and other factors; and
- It would have been necessary for EPA to review the Tier 2 specification thoroughly and make appropriate adjustments to ensure the specification would be relevant (i.e., accurately reflect the most energy-efficient models on the market) come the effective date.

On December 16, 2004, EPA notified stakeholders of its intent to temporarily suspend the STB specification effective February 2, 2005, and proceed with developing energy-efficiency criteria for a narrower subset of products: digital-to-analog converter boxes (DTAs). EPA made this decision after determining that current conditions were not conducive to achieving EPA’s goals of working with a wide group of stakeholders to develop a technically-feasible, cost-effective specification that would include Sleep mode to garner increased energy, carbon, and monetary savings.

Drivers for Re-Opening STB Specification Process

In the two years since EPA suspended the STB specification, STBs have evolved in complexity, feature-richness, and energy use. Consumers are increasingly interested in reducing their utility bills and lessening their impact on the environment. Several recent consumer surveys have highlighted growing consumer demand for more efficient electronics products:

- According to a recent Lifestyles of Health and Sustainability (LOHAS) Consumer Report, for example, 80% of consumers rate energy efficiency as important to their purchasing decisions.
- Gallup polls show Americans’ concerns about environmental issues have increased more than 10 percentage points between 2004 and 2006.

Additionally, through recent work on ENERGY STAR specifications for computers, imaging equipment, and DTAs, the ENERGY STAR product development team has enhanced its experience in developing creative approaches to achieve energy savings in electronics products. EPA is eager to bring this knowledge together with the expertise of manufacturers, service providers, and other interested parties to seize potential opportunities to reduce the energy consumption of STBs.

Goal for the Specification Development Process

As with all ENERGY STAR specification development and revision processes, EPA intends to run a fair, transparent, open process that reaches an inclusive set of stakeholders and results in a high quality end product in a reasonable amount of time.

Goals for the STB Program

In keeping with the ENERGY STAR Guiding Principles for specification development, EPA intends to:

- Develop a STB program that drives for the greatest energy savings practical for this category;
- Identify appropriate roles and responsibilities for all relevant stakeholders;
- Develop energy efficiency specifications for STBs that are performance-based and technology neutral – recognizing leaders in the market in terms of energy efficiency;
- Make use of existing test procedures and harmonize, where technically appropriate, with domestic and international partners on both test procedures and requirements; and
- Develop Program Requirements that offer longevity, as well as simplicity, fair comparison of products, and consideration of feature richness.

EPA asks that any comments on this document be shared with Katharine Kaplan, U.S. EPA, via e-mail at kaplan.katharine@epa.gov or Darcy Martinez, ICF International, via e-mail at dmartinez@icfi.com. In order to ensure an open and transparent specification revision process, all written comments will be posted to the ENERGY STAR Web site for review, unless the submitter indicates they should remain confidential.