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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF AIR AND
RADIATION

December 6, 2022

Dear ENERGY STAR Set-Top Box Partner or Other Interested Stakeholder:

The purpose of this letter is to present a proposal from the U.S. Environmental Protection Agency (EPA) to sunset the ENERGY STAR specification for set-top boxes. EPA recognizes the significant and long contribution of ENERGY STAR set-top box stakeholders and is committed to carefully considering all input. EPA requests feedback on this proposal no later than January 16, 2023.

Under certain circumstances, EPA makes the determination that an ENERGY STAR specification for a particular product category should be sunset rather than revised. Some or all of the following factors play into such a decision:

- Additional, cost-effective efficiency gains are not available or anticipated
- The market has evolved such that the product type is being discontinued
- Power use of ENERGY STAR certified products is no different from conventional products, hence, the program offers no clear energy efficiency differentiation.

Rationale for Proposed Sunset

As evidenced by the latest report from the Set-Top Box Energy Use Voluntary Agreement (VA) [Annual Report](#) for 2021, most of the pay TV service providers are proactively enabling consumers to watch video programming without the use of set-top boxes through their support of apps that can be used across various devices. Set-top box deployments decreased 31% from 2012 to 2021 and future projections indicate even a steeper decline. The majority of adults (54%) now watch video regularly on devices other than televisions, such as tablets, smartphones, and computers. Consistent with the above noted pay TV service provider actions, the latest trends show that consumers are moving away from set-top boxes with the emergence of Smart TVs that come pre-loaded with apps that eliminate the need for a set-top box. More than three quarters of American households now have at least one Smart TV, and Smart TVs now represent 57% of all TVs used in the US. Nearly all Smart TVs (86% in a recent study) are now used to access at least some video directly without a set-top box.

ENERGY STAR Program Background

In 2008 the set-top box was one of the biggest energy users in the American home. These devices, typically provided by cable, satellite, or phone companies, consumed 27 billion kilowatt-hours of electricity that year, as much as the entire state of Maryland. In that same year, EPA launched ENERGY STAR criteria that coupled rigorous energy saving specifications for set-top box hardware with new requirements for pay TV providers that wished to earn ENERGY STAR recognition for their devices. EPA called on pay TV providers to purchase and deploy ENERGY STAR set-top boxes or upgrade a large part of their deployed fleet to meet ENERGY STAR

specifications -- driving demand for efficient boxes and ensuring consumer savings. In 2011, EPA raised the bar on requirements for both box makers and pay TV providers and did so again in 2014 and 2016.

To drive towards these greater efficiencies, EPA first focused on a number of technological hurdles to efficiency. This included the development of a **fair and repeatable energy use test**. The ENERGY STAR test procedure for this category was later codified into an industry-wide standard for testing set-top boxes under the Set-Top Box Energy Use Voluntary Agreement.

To address pre-existing barriers to energy efficiency, EPA worked through key industry standard development efforts to ensure standards prioritized efficiency including MOCA 2.0, DOCSIS, and the Open Cable standard. Whereas in the past it was perfectly acceptable for set-top boxes to be on 24 hours a day and for final industry standards for set-top box communication and data transmission to assume that the device was always on and operating at full power, industry now recognized that boxes should operate in a range of power states, and scale power based on the amount of activity the box is engaged in -- realizing big energy savings.

Using data gathered by the Natural Resources Defense Council, which sounded the alarm about the energy consumption of set-top boxes, EPA set efficiency criteria for a range of pay TV boxes. The Agency complimented its specification development work with partner recruitment efforts such that shipments of ENERGY STAR set-top boxes continued to grow. In 2009, 50% of set top boxes shipped to US costumers were ENERGY STAR certified. By 2011, this number grew to 62% and then 88% in 2012. ENERGY STAR and its leading partner companies, including: AT&T, DirecTV, Dish Network, EPB, Suddenlink, and Verizon as well as 14 manufacturers, were an early efficiency driver in the set-top box space, delivering enormous national dollar and greenhouse gas savings by dialing back the power use. Over the life of this ENERGY STAR specification, about 240 million ENERGY STAR set-top boxes were sold saving almost 140 tWh of electricity, and almost 100 million metric tons of greenhouse gases were avoided.

Proposed Timing

With the introduction and continuation of the Set-Top Box Energy Use Voluntary Agreement, which EPA believes will prevent backsliding, as well as the notable shift in the market to lower energy using alternatives to accessing content like smart TVs and content viewing on mobile phones, EPA now proposes to sunset the ENERGY STAR program for hardware and pay TV providers.

Proposed Milestones for Sunsetting the ENERGY STAR Set-Top Box Program

EPA proposes the following milestones associated with implementing this proposal:

- ENERGY STAR certified set-top box products and their manufacturers as well as ENERGY STAR Service Provider partners will continue to be recognized at www.energystar.gov until September 29, 2023.
- No new Partnership Agreements for the Set-Top Box program will be accepted by EPA as of March 31, 2023.
- No new certified product information for the Set-Top Box program will be accepted by EPA as of March 31, 2023.
- Manufacturers and Service Provider Partners must stop using the ENERGY STAR name and ENERGY STAR mark in association with all Set-Top Box products manufactured and services offered on or after September 29, 2023.
- To minimize the cost of labeling changes and be in compliance by September 29, 2023, manufacturers of Set-Top Box products are encouraged to remove ENERGY STAR references on Web sites or in other collateral materials as these materials are reprinted or changed in the coming months. Manufacturers are permitted to use up existing printed material, including packaging, in order to minimize waste.

Stakeholders are invited to comment on this proposal to sunset the ENERGY STAR Set-Top Box program. Any feedback or data you wish to share with EPA may be submitted via email to STBs@energystar.gov, no later than January 16, 2023. In closing, EPA appreciates the efforts of all set-top box stakeholders to advance a cleaner environment through the ENERGY STAR Program and applauds your success in moving the market towards greater energy efficiency.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ann Bailey'.

Ann Bailey, Chief
ENERGY STAR Labeling Branch
US Environmental Protection Agency

For more information, visit: www.energystar.gov

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