



Multi-Room Set-top Boxes (STBs): Summary of Discussion to Date and Straw Man Proposal ENERGY STAR[®] Program Requirements for Set-Top Boxes (Version 2.0) and Service Providers (Version 1.0)

Multi-Room STBs

- A number of stakeholders have noted that some STB models referred to as “multi-room” are designed to provide content to more than one TV in a household.¹ On an average per-TV basis, a single STB serving multiple TVs (with “client” boxes possibly installed at each TV), could lead to energy savings compared to a scenario where each TV is served separately by a STB.
- As such, some stakeholders have proposed that multi-room STBs receive an additional annual energy allowance in the ENERGY STAR specification, or some other benefit, in recognition that: (1) some incremental energy use may be required to serve multiple TVs, and (2) that the overall energy usage per TV may still be less.
- The draft test procedure² (section 5.2.2.h), in recognition of the potential energy savings from multi-room STBs, proposed averaging on a per-TV basis the test results of a multiple room system (i.e., all STBs in the system including client boxes) to derive a single result to compare to the specification criteria.
 - o “For all multiple TV systems, simply perform the test simultaneously on all units, number of which is prescribed by the relevant specification, and note the total average power during the test.”
- Some stakeholders are concerned that this may result in ENERGY STAR qualified STBs that do not save energy as expected in certain cases. The issue arises if a multi-room STB, which qualifies under an average per-TV basis, is used to supply content to only one TV.
- EPA offers a Straw Man Proposal below and seeks feedback from stakeholders. This feedback will also help in addressing numerous stakeholder proposals for additional annual energy allowances related to home network functionalities.

Straw Man Proposal to Address Multi-room STBs

- Manufacturers would:
 - o First test the multi-room STB and compare to the specification criteria assuming the STB will deliver content to only one TV. If the STB passes, then it qualifies as an ENERGY STAR qualified STB under any installation configuration. (i.e., can be used for one or more TVs).
 - o If the multi-room STB does not pass the single TV STB test, then determine if it qualifies as a “Gateway” STB.
 - Add an additional annual energy allowance of TBD to the criteria. (This allowance may be established with a certain number of TVs in mind, e.g., two.)
 - Compare the test results to the more lenient multi-room criteria to see if the STB qualifies.
 - If the STB qualifies as a Gateway STB, manufacturer must clearly indicate in product literature that product only qualifies for ENERGY STAR when providing content to more than one TV.
- Service providers would:
 - o Recognize that a Gateway STB is only ENERGY STAR qualified when providing content to more than one TV, and assure that any Gateway product claimed to be ENERGY STAR qualified is installed accordingly.
 - o When installing a client box that falls within the domain of the ENERGY STAR STB specification (i.e. has a cable, satellite, or terrestrial tuner, or IP telecom functionality) the client box must be ENERGY STAR qualified.

¹ Multi-room as used here means that multiple TVs can view different content at the same time, i.e., as opposed to multiple TVs viewing the same content.

² CSA-C380-06 (Draft 8/15/07) as amended for use with ENERGY STAR STB specification.

- EPA believes there are several benefits to this approach:
 - o Does not require additional test procedures or additional testing of STBs.
 - o May be able to address annual energy allowances for most home networking-related functionalities with a single allowance, thus simplifying the specification.
 - o Provides a more lenient criterion for Gateway STBs, but requires they be installed such that expected energy savings are realized.
 - o Clearly designates roles for identifying Gateway STBs (manufacturers) and ensuring that Gateway STBs claimed to be ENERGY STAR qualified at installation serve more than one TV (service providers).