

Energy Star Tier 2 must include SEPARATE GUIDELINES for one-way and two-way networks.

DIRECTV made the point in its Draft 2 comments that Tier 2 allowances cannot be met in one-way satellite networks. While Draft 3 guidelines increased nominally the Tier 2 allowances and moved the Tier 2 date out somewhat, these changes did not address the fundamental issue.

When a network is two-way, a STB can readily go into a sleep mode that consumes little energy, as it can at regular intervals briefly come out of that mode, power its communication interface and request updates to EPG and system information (such as authorizations) from the headend. This is true for Telco networks and most larger Cable networks, giving operators of these systems an ability to comply with the draft Tier 2 guidelines.

A one-way STB network, including the great majority of satellite installations as well as smaller cable systems, is incapable of this. A one-way STB has no way of requesting data and as a result must always be listening for EPG and system info. The functionality required for this precludes a sleep mode that consumes only a few watts (necessary to achieve the ~50% energy savings targeted by the Draft 3 Tier 2 guidelines). Furthermore, if the STBs in a one-way network were required to stop listening, a customer's experience with the service would be harmed: for example, DVR recordings requested by a customer who is away from home would be missed and STBs could readily miss authorizations requiring subsequent calls to customer service. By requiring one-way STBs to stop listening, the competitiveness of one-way systems is put at risk.

DIRECTV recognizes that if the Tier 2 guidelines were designed to be achievable by one-way networks, then the operators of two-way networks wouldn't necessarily take the additional measures of redesigning headends and STBs needed to get the 50% energy savings targeted by EPA. On the other hand, operators of one-way networks such as DIRECTV will not be able to participate in the ENERGY STAR STB program at all if they cannot foresee a path that can result in compliance with Tier 2 allowances. There is a simple solution to this problem, however: include separate Tier 2 guidelines for one-way and two-way networks. The Tier 2 allowances for one-way service provider installations would be based on improvements possible by more efficient implementations of STBs, and would be less aggressive than the Tier 2 allowances for 2-way presently proposed.

It is important to note that a service provider can have both one-way and two-way installations. For competitive reasons, both of the top satellite service providers have begun experimenting with connecting STBs to their customers' broadband services. In the case of DIRECTV, connected STBs number in the tens of thousands at present and are being used to deliver new Video On Demand services. In the next few years, as more customers have home networks and broadband connections, and as more satellite STBs have the ability to connect through these, more satellite service provider installations will assuredly be two-way. These two-way installations would comply with the two-way Tier 2 guidelines.

For monitoring purposes, it would be appropriate for the EPA to require service providers to report on the numbers of one-way and two-way installations as part of their annual reporting obligations.

Lead-time for Guideline Revisions

The EPA has left a number of areas undefined in the Draft 3 guidelines. DIRECTV is concerned that when defining these open areas, the EPA may not afford manufacturers and service providers enough time to adapt to these changes. To resolve this concern, a process and timeline for changes to the guidelines must be included in these guidelines.

For example, changes to the “% purchased” and “% deployed” values must be introduced no later than 18 months from their effective dates, as in the case of DIRECTV our purchasing commitments extend more than a year. If the EPA changed these values with only 6 months lead time (i.e. changed during the 2nd quarter and effective the first of the following year), a service provider might not be able to continue to participate in the ENERGY STAR STB program.

In another example, the values for follow-on Tiers must be locked in no later than 36 months from their effective dates, as STB development cycles involving new silicon typically exceed 30 months.

Refurbished STB Energy Savings

In our Draft 2 comments, we suggested that service providers may be able to reduce the power consumption of legacy products. We added that any software changes to these legacy products will require considerable commitment of time and money to design, test, and deploy and that there should be some incentives for service providers to do so. It is consistent with the goals of the ENERGY STAR STB program to encourage these changes, and DIRECTV welcomes how EPA responded in Draft 3 with a new definition of “refurbished qualified STBs” and formulas that allow deployments of these to be counted towards the percentage of qualified STBs purchased and deployed in a given year.

Unfortunately, the improvements that DIRECTV expects to be possible with legacy STBs via software upgrades may not result in the energy consumption of these STBs dropping within Tier 1 (not to mention Tier 2) allowances. Nevertheless, these improvements are of importance as they will apply to large numbers of deployed products and provide immediate benefit to consumers. The proposal for Draft 3, then, does not result in giving service providers the incentive to make legacy improvements.

A solution to this problem would be for EPA to use a modified definition of “EQUIVALENT refurbished qualified STBs” with the formulas proposed in Draft 3. For example, if a 20 kWh/yr reduction is needed for a legacy STB to meet the Tier 1 requirement, this could be met by a 10 kWh/year reduction in two legacy STBs or a 5

kWh/year reduction in four legacy STBs, and not only by a 20 kWh/year reduction in a single legacy STB. We specifically propose the definition: “An equivalent refurbished qualified STB equals the number of refurbished STBs whose total energy reduction is equal to or greater than the reduction necessary for a single refurbished STB to meet ENERGY STAR criteria.”.

Use of ENERGY STAR remote boxes

Draft 3 states that a service provider must install ENERGY STAR qualified remote boxes “at every opportunity” when an installation has a Gateway STB installed, which seems equivalent to a deployment target of 100%. It would be more appropriate to use the same target for remote boxes as for all other types of boxes (i.e. 50% for purchases and 50% for deployments).

External Power Supplies

EPA proposes a compromise in which only newly manufactured STBs (and not refurbished STBs) require an ENERGY STAR compliant EPS. This proposal unfairly burdens STB designs that use an EPS over STB designs with internal power supplies by imposing a double requirement. The separate ENERGY STAR EPS program has its own criteria for success and its own compliance dates which will not necessarily stay in synch with the criteria and compliance dates for the ENERGY STAR STB program: consequently these should be kept separate.

Revised Purchase and Deployment Requirements for Service Providers

The EPA proposed fleet requirement unfairly penalizes service providers with large installed STB populations. DIRECTV, having tens of millions of deployed STBs, would not be able to meet the proposed fleet requirement for many years while a newer service provider with few STBs currently would be able to comply readily. Discouraging the largest service providers from participating in the ENERGY STAR STB program with a requirement such as this one seems inconsistent with EPA’s goals.

DIRECTV strongly prefers that EPA use purchase and deployment criteria from Draft 3 with modifications that reflect the “Reburbished STB Energy Savings” comments above.

Qualification Procedures

EPA suggests that 3 randomly selected STBs must meet the ENERGY STAR criteria with more than 10% margin, else 5 randomly selected STBs must meet the criteria with no margin. DIRECTV proposes instead that the averaged test results for 5 randomly selected STBs be compared against the ENERGY STAR criteria, as this is far simpler and is what any average person would expect is being done.

Requirements Remain in Flux

Numerous changes to Draft 3 are already anticipated as a result of the various meetings held since its release and the correspondences that have followed. DIRECTV applauds that EPA remains receptive to changes and believes that the ENERGY STAR STB program will see better participation as a result. Many of these new changes are expected to be significant, however, and time is needed for stakeholders to review the proposed changes, evaluate their impact and provide feedback. It would be appropriate for another full drafting round to be planned for by EPA before a Final Draft is released.