

April 30, 2010

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ENERGY STAR Set-Top Box Program
U.S. Environmental Protection Agency
1310 L Street, NW
Washington, DC 20460

Subject: ENERGY STAR® Products Enhanced Testing and Verification for Consumer Electronics and IT Products: comments from DIRECTV

Dear Kathleen:

In response to the EPA's request, from the March 31 discussion about ENERGY STAR's enhanced testing and verification efforts concerning Consumer Electronics and IT Equipment, DIRECTV would like to offer the following comments.

Qualification and Verification Testing using In-House Labs should continue to be allowed for Service Provider provisioned Set-Top Boxes

The proposed testing of service provider provisioned set-top boxes using third-party independent labs, whether for qualification or for verification purposes, is fraught with difficulties:

- These STBs operate as designed only when attached to the specific service provider's network, e.g. an AT&T head-end or a properly configured DIRECTV satellite signal distribution network.
- These STBs require that service providers authorize services on them prior to testing, as they must be measured while processing the specific input signals proscribed by the test procedure (e.g. high definition sports programming).
- Procurement of a service provider's STBs through retail channels typically requires a service subscription with that provider, not something a third-party lab would necessarily be willing or able to obtain.
- The quantities of service provider provisioned set-top boxes for which testing would be applicable on an annual basis is fairly small: for example, DIRECTV typically produces only ~8 new models each year.

Difficulties such as these will make it very expensive for even one independent third-party lab, let alone a robust market of labs, to offer the capability to test a variety of service providers' set-top boxes. In addition to the difficulties above, which are unique for the case of service provider provisioned set-top boxes, the difficulties facing other CE products can be expected to often apply to these STBs as well. For example, the additional step of 3rd party lab testing will create disruptions in product development cycles and increases costs.

None of the aforementioned difficulties apply to service providers' in-house labs, however. These labs are already pre-configured with the necessary head-end simulators, authorization tools and procurement mechanisms, being busy year-round performing hundreds of other functional and quality assurance tests on products. Service providers' In-House Labs are already capable of, and should continue to be allowed to perform, ENERGY STAR testing.

Verification Testing of Service Provider provisioned Set-Top Boxes, whenever needed, can be performed in In-House Labs with "Witnesses"

In slide 3 of the charts presented at the March 31 meeting, two rationales for verification testing are given. Not only can this testing verify that products continue to meet the ENERGY STAR requirements regardless of changes in the production process, it furthermore can provide consumers with confidence that ENERGY STAR products are delivering the savings they expect. These are important goals that will help ensure that the integrity of the ENERGY STAR program is maintained, and DIRECTV supports these goals.

To achieve these goals, witness testing can be relied upon when performing verification testing. DIRECTV is willing to provide reasonable access by an impartial third-party to its In-House Lab in El Segundo, California to witness verification testing of qualified DIRECTV set-top boxes when selected through the EPA's enhanced market-based testing program.

Any CE Standard Operating Procedure for Product Failure and Dispute Resolution must consider the issue of "outlier" products

Slide 16 of the March 31 presentation states that the EPA intends to be building off the "Computer Verification Testing Guidelines and Procedures Manual" when creating a similar manual applicable to CE products. Appendix D of that document provides a Standard Operating Procedure (SOP) that describes EPA's process for determining qualified product failures and resolution of disputes about test results. It is DIRECTV's firm opinion that any dispute resolution process for CE products must consider the issue of "outlier" products.

Comments titled "Comment to Energy Star – STB Testing procedure and power distribution.", provided in the currently underway set-top box proceeding, describe how "outlier" STBs can exist due to variations in the parts (e.g. chips, hard drives, supplies) that comprise a STB. The comments note that an STB product line can fail ENERGY STAR qualification, even though more than 99% of the STBs would have passed, if an "outlier" happens to be selected and tested. DIRECTV agrees fully that a disconnect exists between the ENERGY STAR allowances, which are being developed using average STB power measurements (and often with just a single prototype device tested), and ENERGY STAR testing procedures which require 100% compliance across all

products measured. As DIRECTV wrote in its April 9 letter to you in the STB proceeding:

“The risk is simply becoming too great that a single “outlier” (even if it were one in a hundred or a thousand) or a carelessly executed test would force an STB product line, and perhaps a Service Provider as well, to drop out from ENERGY STAR program participation. This would be an extraordinary punishment indeed!”

We suggest that the SOP applicable to CE devices be drafted to allow either 1) the use of an average of measurements to verify that a product passes ENERGY STAR qualification or 2) the ability to exclude a small percentage of units tested (e.g. 10%) in the event one of the units tested doesn't pass.

Conclusion

Thank you for this opportunity to provide comments on the qualification and verification processes for STBs. DIRECTV welcomes any questions you may have.

Sincerely,

Steve Dulac
Director, Engineering