

Katharine Kaplan
EPA Team Lead
ENERGY STAR Product Development
US Environmental Protection Agency
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September 10, 2013

Re: ENERGY STAR[®] Specification for Set-top Boxes Version 4.1, Proposal Memo

Dear Ms. Kaplan:

On behalf of Entropic Communications, Inc., I am offering comments on the Environmental Protection Agency's Proposal Memo for ENERGY STAR[®] Specification for Set-top Boxes Version 4.1 released August 29, 2013.

As the leading supplier of MoCA HNI chips, we were glad that EPA recognized shortcomings in its HNI allowance, but we are disappointed that EPA has proposed rounding down to 15kWh/yr our well-reasoned arguments that 17kWh/yr is necessary for MoCA. We had proposed a separate adder for MoCA HNI, because not all HNIs are equivalent, but EPA still proposes that all HNIs be lumped under a single allowance. We again recommend that the allowance be set to 10 kWh/yr for the HNI base, with an additional 10 kWh/yr for MoCA. Alternately the total for HNI can be raised to 20 kWh/yr.

As a leading supplier of Thin Client SoCs, we were glad to see that EPA increased the baseline allowance for Thin Clients, but the increase is still not enough. Specifically, Thin Client SoCs must meet the same strict functional requirements from Service Providers, such as:

- High-performance multi-core CPU and graphics hardware;
- High-quality HD video decoding up to 20Mbps (i.e., Blu-ray quality vs. sub-5Mbps OTT quality);
- Multi-stream video decoding (whereas OTT is single-stream);
- Multiple video outputs beyond HDMI: RF, NTSC, S-Video, and Component (OTT is HDMI only);
- Both local and network-based remote user interfaces;
- Hardware-based Conditional Access Systems;
- Guaranteed QoS concomitant with a paid-service (as opposed to best effort OTT services);
- Remote manageability and diagnostics; and,
- Interfaces to DVR, and Gateway, and Cloud.

Unfortunately, EPA's proposal of 30kWh/yr still falls short of the realization that Thin Clients use the same silicon as MVPD IP STBs, and hence deserve similar allowances. We recommend increasing the baseline for Thin Client to 40 kWh/yr.

As a leading supplier of SoCs for HD DTAs, we were glad that EPA recognized shortcomings in its Cable DTA allowance. Contrary to earlier drafts in which EPA assumed they were vanishing, DTAs are rapidly evolving towards more sophisticated Use Cases, and EPA's proposal of 40kWh/yr fails to recognize such developments:

- 1080p60 video outputs;
- Tuner and demodulator for out-of-band messages;
- Hardware-based security subsystems;
- RF4CE wireless remote control (in addition to legacy IR remote control); and,
- Four tuners for fast channel-changes (Current CH, Last CH, CH Up, and CH Down).

EPA's current proposal incentivizes old Use Cases, or deployment of full-featured STBs, so we strongly suggest that EPA should allow 50kWh/yr for Cable DTAs.

Conclusion

We request that EPA revise the allowances in accordance with these comments.

Respectfully submitted,

Yoav Hebron
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