NRDC Comments on ENERGY STAR Set Top Box Specification

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Comments

• Big Picture Observations/Challenges

• Specific Comments/Questions on V3.0 Tier I
Pace of Progress – Fast Enough?

• E-Star looking at set tops for more than 5 years now
• Standby power remains REALLY HIGH
• 50%-70% of the annual energy use of these systems is consumed when the box is NOT IN USE
WHAT IF...

• STBs were battery operated
• Consider your Blackberry or I-Phone
Smart Phones vs. STB

- Smart phones use a trickle of power when in “ready mode.” Same needs/features as STB:
  - ✔ Need to track each discrete user. Billing, security concerns.
  - ✔ Always ready to receive/send e-mail, phone, call, wake instantly
  - ✔ Can receive/play voice, data, video
Need Next Generation STBs

• Only work as hard as task requires
• Standby should be closer to 3W or so when not in use, not 10W – 20W+
• Need to account for all of the components in the system
Allowable Energy

• DVR with HD, multi-tuner, DOCSIS
  
  \[= 72 + 45 + 25 + 16 + 20\]
  
  \[= 178 \text{ kWh/yr}\]

• About same annual energy as 2010 42” Panasonic Plasma TV

*The DVR uses as much energy as the TV!*
A “Low Standby Power World”

If standby ≤ 5W and on mode remains ~ 25W then:

Annual energy use = 80kWh/yr

• Specification needs to focus and drive down standby.

• Is the TEC test method/formula really working?
Two Missing Pieces Each 24/7

- LNB – one per dish, if 7W then:
  
  \[ 61 \text{ kWh/yr EACH} \]

- ONB – optical network box. Now 20W

\[ 175 \text{ kWh/yr} \]
Verizon Optical Network Terminal
Comments on V3.0 Tier I Spec
V3.0 EPA Data

• Data analysis plot helpful
• Would like to also see actual on and sleep power levels that were reported to better assess where the opportunities lie.
• Nothing confidential about a model’s power use
• “Model” specific data useful to compare vs. best in class Asia/Europe models(did EPA try to collect this data?)
Qualification (Lines 54-58)

• Need to continue to “couple”/“tie” box qualification to particular source provider

• Most demonstrate box as shipped meets the requirements

• Possible same box complies when used on Comcast, but not on Time Warner
Interaction with Service Providers (cont.)

• Could be great box but:

  a) Service provider turns off certain key energy saving features before deploying
  
  b) Service provider’s “head end” can not take advantage of box’s power saving features
DOCSIS

• What % of models have DOCSIS?
• What is the status of industry’s efforts to develop a more efficient version of DOCSIS? Key for TIER 2.
Test Method

• Restricts downloads to 2 hours/day (lines 301-305 of APD section). Good thing.

• Test method does not, however, address this currently. Need to verify this and add needed language.