Topic	Subtopic	Comment	Response
Additional Functionality Allowances	DOCSIS	Several stakeholders suggested that EPA provide greater allowance for DOCSIS functionality including the following proposals: • DOCSIS 2.0: One stakeholder suggested 20 kWh/yr to allow for 2.25 W power in all modes • DOCSIS 3.X: The same stakeholder suggested an allowance of 50 kWh/yr to allow for approximately 8.5W power in full bandwidth on-modes and 4.5W power for low bandwidth 1-downstream and 1-upstream sleep/APD modes. Another stakeholder asked that EPA retain the 20 kWh/yr for all DOCSIS. • The first stakeholder further proposed an allowance for DOCSIS modems with greater than 8 downstream and 4 upstream, or an exception for these functionalities until further study, and allowing only one DOCSIS allowance per STB.	Stakeholder comments and market data indicate that shipments of DOCSIS 3.0 equipment exceeded that of DOCSIS 2.0 by a factor of four in 2012 (IHS iSuppli). Nonetheless, EPA will be maintaining the Version 3.0 allowance for DOCSIS, which was based on DOCSIS 2.0 power requirements because: - DOCSIS 3.0, which supports multiple data channels, is typically used on multi-room STBs, and is therefore better addressed through the multi-room adder, and - There exist new ultra-wideband tuners that provide multiple channels at lower power.
Additional Functionality Allowances	Video Processing and Transcoding	Noting that the definition of Advanced Video Processing (AVP) includes the "capability to transcode audio/video signals in accordance with standards H.264/MPEG 4 or SMPTE 421M," several stakeholders recommended an additional allowance for transcoding (e.g. MPEG2 to H.264), transrating (e.g. HD bitrate to Mobile bitrate), transcaling (e.g. HD resolution to Mobile resolution), and audio conversions functionality required for supported mobile clients. Requests ranged from 10 to 18 kWh additional allowance for AVP with one stakeholder suggesting alternatively that EPA apply the Draft 1 AVP allowance multiple times if more than one channel is being processed. Another stakeholder further suggested that EPA include an additional 10 kWh/yr allowance for multiple simultaneous decoding if the device supports direct video output to multiple displays or Picture-in-Picture capability.	Since transcoding for output to mobile devices or picture-in-picture is not being tested, EPA is not proposing to provide a specific allowance for this capability. In the case of transcoding for increased DVR storage, a DVR adder already exists that should be able to accommodate additional storage through larger hard drives.
Additional Functionality Allowances	Home Network Interface	Several stakeholders requested that the Draft 1 specification 8 kWh/yr allowance for Home Network Interface (HNI) be increased to sufficiently account for STBs operating with either: • MoCA 1.x:2.0 -2.5 W continuously • MoCA 2.x:0.5 (Sleep) – 3.5 W (On) with power management Requests included increasing the total HNI allowance to 15-17 kWh/yr and a separate 5 kWh/yr allowance for MoCA. Another stakeholder commented that the Version 3.0 10 kWh/yr HNI allowance should just be retained. Secondly, one stakeholder urged EPA to consider the scenario where an STB simultaneously streams content to multiple client devices via multiple HNI interfaces noting that while there might be limited implementation of such architectures today, it is expected to be a beneficial approach for service providers as they extend the availability of services throughout the home.	Given that a significant number of MoCA 2.0 enabled STBs will ship this year and continue to increase beyond 2014, EPA has restored the Home Networking Interface allowance to the Version 3.0 level account for the expected power of MoCA 2.0 in On Mode and Sleep Modes. EPA has excluded IEEE 802.3 wired Ethernet from the Home Network Interface allowance eligibility because stakeholders noted that MoCA is one key differentiator between Thin Clients and Over-the-top (OTT) Internet Protocol boxes. The power associated with Ethernet is typically less than MoCA and can instead be covered by the base allowances.
Additional Functionality Allowances	Multi-room	One stakeholder agrees with the EPA's decision to not revise the multi-room allowance from the Version 3 value of 40 kWh/yr since quickly-evolving multi-room capable devices still have relatively small market share and further adoption should be encouraged by EPA. The stakeholder noted that it is more cost effective to have one device delivering multiple services and that transcoding and additional tuners allow viewing on energy efficient devices such as tablets and smartphones.	EPA agrees with stakeholders that multi-room STBs provide a method of saving energy across the entire home. EPA's analysis supported increasing the allowance in Draft 2 such that in combination with decreased base allowances and reduction of select adders, highly featured multi-room boxes can continue to qualify.
Additional Functionality Allowances	Multi-stream	A stakeholder commented that a 25 percent reduction to the Cable/Satellite Multi-stream allowance – from 16 kWh/yr to 12 kWh/year – is more appropriate, particularly if the allowance is applied only once regardless of the number of streams supported by the device. Likewise, another stakeholder proposed that EPA maintain the 8 kWh/yr for the first stream and then apply 6 kWh/yr for the second stream and 5 kWh/yr for each stream above two.	Rather than provide multiple allowances, EPA has proposed a 16kWh/yr for the Cable/Satellite multi-stream allowance to permit higher-functionality STBs to continue to qualify.
Additional Functionality Allowances	CableCARD	One stakeholder requested further CableCARD allowances, as multiple CableCARDs are needed to support more than six turners in an STB.	EPA has maintained the CableCARD allowance of 15 KWh/year. EPA does not have data from the proposed test method indicating higher power usage associated with multiple CableCARDs supporting more than 6 tuners. EPA expects that any additional overhead power needed for these models is addressed with the Multi-room allowance.

Topic	Subtopic	Comment	Response
Additional Functionality Allowances	Networking	Several stakeholders requested that EPA include functionality allowances for networking or include enough overhead in the base allowances to account for these features in future devices. One stakeholder noted that multi-function STBs with Internet connectivity and telephony will soon enter the European market and expects these devices to also become available in the US during the effective dates of ENERGY STAR Version 4.1. Another stakeholder commented that disabling the function during testing does not eliminate the system overhead. • Telephony (Voice Over IP, Femtocell, eMTA, DECT) • Network Router: A stakeholder proposed a 5 kWh/yr allowance noting that a multi-room STB that supports clients must embed an IP Network Router (with DHCP) to assign IP addresses to the connected devices (e.g., Client STBs). Another stakeholder proposed an allowance of 28 kWh/yr corresponding to the Draft ENERGY STAR Small Network Equipment specification power allowance of 3.2 W. • Access Point: One stakeholder requested EPA include an 18 kWh/yr additional allowance based on the Draft ENERGY STAR Small Network Equipment specification. • Network Switch: A stakeholder proposed a 5 kWh/yr allowance noting that a Multi-room STB may manage the IP traffic between the MoCA network and the customer's broadband router eliminating the need for an additional network bridge (Ethernet-to-Coax, MoCA-to-Ethernet) thereby saving total household energy.	EPA has provided definitions and allowances for networking functionality in the Draft 2 specification to permit gateways and other near-term products with home networking functionality to qualify. The allowances are based on those in the draft ENERGY STAR Specification for Small Network Equipment, including ones for access point, router, and telephony. The switch capability should already be covered by the Home Network Interface (HNI) adder.
Additional Functionality Allowances	Advanced Video Functionality	Several stakeholders recommended that EPA provision for future advanced video functionalities, such as 4k Ultra High Definition and 3-D, by including additional functionality allowances or sufficient buffer in the base allowances. One stakeholder further suggested that EPA consider only those functionalities that are most likely to enter the market over the next 30 months and obtain nontrivial market share. A second stakeholder noted that EPA need not be concerned that these adders would be invoked by manufacturers and service providers in order to gain margin for ENERGY STAR compliance, as the cost of initial implementations are expected to be high due to their significant technological complexity. • High Efficiency Video Processing: Separately, two stakeholders suggested that EPA include a 20 kWh/yr allowance (similar to European Voluntary Agreement) for high efficiency video decoding providing compression efficiency significantly beyond H.264/AVC including, but not limited to HEVC (H.265). • Ultra High Definition (4k): Two stakeholders proposed that a STB capable of minimum output resolution of 3840×2160 pixels in progressive scan mode at minimum frame rate of 24 fps (abbreviated 2160p24) receive 30 kWh/yr (similar to the European Voluntary Agreement)	EPA has added definitions for Ultra HD, High Efficiency Video Processing, and 3D Capability; however, EPA is not proposing any allowances for these functionalities at this time due to lack of data on their energy consumption. EPA may consider reasonable allowances in a future Version 4.2 STB specification once performance data for these functionalities become available.
Additional Functionality Allowances	Removable Media Player	One stakeholder recommended that the definition of Removable Media Player be expanded to include other external devices similar in functionality to Blu-Ray and DVD such as a memory stick or tablet via a USB port or other digital interface for later viewing noting that transfers to any of these devices would require some additional processing power and memory that should have a corresponding allowance.	EPA is not proposing an allowance for other removable media such as memory stick or table via a USB port because these devices are not tested under the proposed test method. The base allowances account for the overhead of such media capabilities (including DVR) that are not in operation during Sleep Mode and non-recording On Mode tests.
Additional Functionality Allowances	Wi-Fi	Stakeholders commented in favor of an additional allowance for MIMO wireless interfaces but noted that the proposed allowance amount is insufficient. One stakeholder commented that data for their device using two spatial streams in the 5 GHz range indicates wireless functionality should be 16 kWh/yr and recommends quadrupling the allowance for each spatial stream and in both the 2.4 GHz and 5 GHz bands. Others requested allowances greater than 25 kWh/yr for carrier-grade Wi-Fi interfaces. One stakeholder noted that new technologies and improved processes will drive energy efficiency improvements in future generations of STBs (in time for Version 5.0).	EPA has increased the power allowance for MIMO HNI Wi-Fi in the Draft 2 specification to better reflect the energy usage of this capability.

Topic	Subtopic	Comment	Response
Auto Power Down		Two stakeholders requested that EPA clarify the Auto Power Down (APD) requirements in Section 3.2.3, noting that APD is usually controlled by service-provider software not the STB manufacturer. One stakeholder commented that EPA specify that the party that supplies or provisions the STB application software shall enable APD capability while the second stakeholder similarly proposed revised text as follows: "Products shipped with software from the manufacturer shall ship with APD enabled by default, with APD timing set to engage after a period of inactivity less than or equal to 4 hours. Where the parameter is downloaded by the STB, the default download shall set APD timing to engage after a period of inactivity less than or equal to 4 hours in order to qualify for ENERGY STAR APD credits."	EPA has modified the APD requirement such that it applies to both default software as shipped by the manufacturer as well as software downloaded by default from the software provider. EPA also wishes to note that the current Partner Commitments require Service Provider partners to "Ensure that qualified set-top boxes continue to meet the requirements in the ENERGY STAR product specification for the duration of their deployment. This includes deploying and configuring hardware such that power management features and notifications provided by the original equipment manufacturer function as intended . . ." EPA proposes to retain these requirements to ensure that end-users continue to benefit from energy savings throughout the deployment.
Base Allowances	Cable DTAs	Stakeholders commented that Cable DTAs will continue to be shipped beyond 2013 and requested they be retained within the scope. One stakeholder clarified that Cable DTAs are "one way" devices meaning they receive signal directly from the service provider but do not allow for two way communication such as ordering and receiving on-demand movies. Stakeholders also requested: • Base allowance of 25--30 kWh/yr to reflect the current best in class • Include additional functionality allowance for AVP, HD, Home Networking, WiFi, and Multi-Stream (Cable/Satellite) or define Cable DTA as excluding Cable upstream technologies, CableCARD, and DVR recording (DVR), so as to closely align with FCC rules that currently allow this class of set-tops to exclude separable security.	Per stakeholder comments that Cable DTAs continue to ship, EPA has reinstated the base allowance for Cable DTAs to recognize the top performing models currently on the market and provide an alternative to higher energy consuming Cable STBs.
Base Allowances	Thin Clients	One stakeholder encouraged EPA and to reduce the proposed annual energy consumption levels since Thin Clients do not need to connect to the service provider head end and thus should have similar power levels to over-the-top IP STBs (2 W in On and <1 W in Sleep). Conversely, other stakeholders commented that Thin Client hardware capability differs from OTT IP STBs (e.g., video processing capability, network interfaces such as MoCA, reliability, and security), and recommended allowances from 15 kWh/yr to 35 kWh/yr, with one stakeholder specifying that power levels of 5W on and 1W sleep, or perhaps 5W and 2W sleep should be expected. These stakeholders further argued that EPA should not disincentivize the deployment of Thin Clients by setting limits that are too stringent, while the first stakeholder countered that service providers already have a cost saving incentive to deploy less expensive Thin Clients instead of larger DVR STBs.	EPA acknowledges stakeholder's concern that Thin Clients operating with MoCA may have higher power demands compared to an OTT STB and has revised the Home Network Interface allowance to address this aspect. EPA has also increased the allowance from Draft 1 to 15 kWh/yr. This allowance is within reach of currently-qualified Thin-client STBs if they can Auto-power Down to 1.5 W, which EPA expects to be achievable with MoCA 2.0.
Base Types		One stakeholder commented that the definitions of base types has changed significantly, with the original hierarchy being deleted, with the UUT precedence in Section 4.4 the order of connection becomes Cable, Thin Client, Satellite, which is incorrect. Instead the base definitions for Cable, Satellite etc. should be reinstated to restore the desired hierarchy.	Per the stakeholder's comment, EPA has clarified the connection precedence hierarchy, by including the order directly in the base allowance table. The hierarchy should be identical to Version 3.0, but simpler to understand.
Deep Sleep	Scope	One stakeholder recommended that the Deep Sleep incentive exclude Thin Clients and those STBs that have a low power state meeting the definition of Sleep Mode.	EPA has revised the Draft 2 specification so that Thin Clients and Over-the-Top Internet Protocol STBs are not eligible for the Deep Sleep State incentive. Data indicate that some of these types of STBs are already achieving very low Sleep Mode power states such that no further incentive is necessary in Version 4.1.
Deep Sleep	Definition	One stakeholder commented that the distinction between Sleep Mode and Deep Sleep State should be in the degree to which the device powers down rather than recovery time to On Mode, and together with another stakeholder, commented that the recovery time to On Mode be no greater than 30 seconds.	EPA has revised the Deep Sleep State incentive to make it proportional to the savings over regular Sleep Mode and has placed the definition within that of Sleep Mode, such that the STB must recover to On Mode within 30 seconds.

Topic	Subtopic	Comment	Response
Deep Sleep	Incentive Level	One stakeholder commented that EPA should reduce the size of the Deep Sleep incentive to 9% as there is no way to tell how many users will implement Deep Sleep, while another stakeholder proposed that the Deep Sleep Incentive be graduated between 0% (when Psleep = 0.5 x Ptv) and 17% (when Psleep = max(0.15 x Ptv, 3W)) because that would invite all products to pursue Deep Sleep.	EPA has maintained the Draft 1 Deep Sleep State incentive level since it is aligned with the expected time a STB would be in Deep Sleep State under currently accepted usage patterns. However, EPA has limited the scope of eligibility for Deep Sleep so that the incentive is applied only in cases where the AEC does not credit this low power mode and is not longer offering the incentive to Over-the-top IP STBs and Thin Clients.
Deep Sleep	Button/Switch 2 Second Activation	Several stakeholders commented that the requirement for of a "clearly marked button or switch on the remote control and/or the front face of the STB that enable Deep Sleep within 2 seconds of being pressed" is unsuitable for the following reasons: • A STB with a normal power button that activates the same low power mode meeting deep sleep levels may be excluded because it is not a separate or clearly marked button for deep sleep. Users are more likely to use one power button that two separate buttons resulting in greater savings. • An STB may require more than 2 seconds to enter deep sleep to prevent accidental entry or allow for saving state, which should not be a problem as long as the Deep Sleep measurement time is sufficiently long to measure representative savings. A few stakeholders commented generally that EPA should encourage innovation and competitive differentiation and not over prescribe methods for Deep Sleep State implementation as a deep sleep function that frustrates consumers will be disabled by all but the most conscientious consumers. One stakeholder proposed that EPA allow manual Deep Sleep State initiation per the manufacturers' instructions. Conversely, another stakeholder suggested that EPA require a button on the remote control with a two second or less initiation time to prevent implementations initially seen in other countries which required the user to push the button in some abnormal way, such as holding the button for 15 seconds or via a series of button presses.	EPA has adjusted accessibility requirements for Deep Sleep State with the intention of increasing flexibility, but has removed a front-panel switch or button from the list of available options as users are expected to rely on the remote control when controlling the STB. EPA has also expanded the above requirement to include methods of activation formerly reserved for "set-back boxes" by permitting activation of Deep Sleep State through a timer or network command for all STBs. Further, EPA and DOE have provided a path to the Deep Sleep credit via scheduled sleep or other paths to Deep Sleep State that fall outside of the AEC. In addition, EPA has only specified the minimum time for the STB to respond to user input (2 seconds), rather than requiring the STB to fully enter Deep Sleep within a certain time (in case there are any shut-down actions that need to occur, or if the request was initiated accidentally and the request needs to be reversed).
Deep Sleep	Wake to Record	One stakeholder commented that it is essential for DVR STBs to be capable of pre-scheduled waking from Deep Sleep State to record content which should be feasible with a simple design upgrade. The stakeholder argued that this requirement should be reasonable given 20-year old VCR was able to wake to record a show and then go back to sleep and as such, consumers expect this convenience today. The stakeholder also suggested that the test method verify this requirement.	EPA agrees that in order to meet user expectations, a Deep Sleep STB may not interfere with scheduled recordings. Therefore, EPA proposes that in order to receive the Deep Sleep incentive, the box must be able to wake itself to recordings or other user-scheduled actions.
Deep Sleep	Programmable Scheduler/Timer	One stakeholder suggested that in order to receive the Deep Sleep State incentive, STBs have a built in scheduler that allows users to select specific times each day when the device enters and exits Deep Sleep, while another commented that STBs receiving the Deep Sleep State incentive be shipped with Deep Sleep enabled from 1 AM to 5 AM by default, when almost all users are unlikely to be watching TV.	EPA and DOE have proposed including a scheduled Deep Sleep test in the Draft 2 specification, to enable STBs with scheduled Deep Sleep to receive the Deep Sleep incentive in Version 4.1.
Deep Sleep	Prompts	One stakeholder further commented that the service provider should not include prompts for the user to disable Deep Sleep State settings.	In this Draft 2, EPA does not propose to restrict the STB from prompting the user to disable Deep Sleep based on the positive experiences with Auto-power Down implementations to date.
Deep Sleep	Version 5.0	One stakeholder expressed support for requiring new STBs to achieve power levels of 3W or less when not in use in Version 5, given this is the largest potential for energy and cost savings and such performance appears increasingly attainable even among satellite STBs. However, two other stakeholders objected to the proposed mandatory Version 5.0 deep sleep requirement for all STBs. Due to the limitations of one-way satellite broadcast systems, one stakeholder commented that it places satellite service providers at a disadvantage. The two stakeholders commented that Deep Sleep should only be required for Thin Clients, while continuing to be strongly incentivized for other types of STBs.	EPA acknowledges the technical challenges associated with Deep Sleep State but believes, based on stakeholder commitments to out year implementation of Deep Sleep, that these challenges will be overcome during the life of Version 5.0.

Topic	Subtopic	Comment	Response
Definitions	Displayless Video Gateways	Stakeholders recommended not limiting the definition of “Displayless Video Gateways” to specific network protocols or security layers as it may unintentionally exclude certain devices from scope (e.g. Wi-Fi), proposing that it instead be simply defined as an STB without a direct video connection. Two other stakeholders noted the potential for confusion with the term “Gateway” as defined in the industry voluntary agreement: a “device that is capable of joining multiple Service Provider delivery protocols or provisioning at least two of video, voice, or broadband services from a Service Provider.” One of the stakeholders commented that EPA should use the term “Headless”, while another asked that EPA simply clarify that this definition of “Gateway” does not apply to STBs or the EPA proposed “Displayless Video Gateway”.	EPA has revised the definition of Displayless Video Gateway to simply refer to the absence of local video connections, rather than specific protocols. EPA has also proposed retaining "Gateway" as the term for these devices as they may in some cases combine multiple services (e.g., network or voice in addition to video).
Definitions	High Definition	One stakeholder noted that it is unclear whether the High Definition (HD) Resolution definition includes 1080p.	EPA has proposed eliminating this adder due to the ubiquitous nature of the feature.
Definitions	Multi-room	One stakeholder commented that "single-family dwelling" should be replaced with "single-family living unit" in the definition of Multi-Room, to avoid confusion in the context of multi-family apartment buildings.	Per stakeholder comment, EPA has clarified the definition of Multi-room so that it applies more broadly to all single-family units including apartments in multi-family buildings.
Definitions	Service Provider	One stakeholder commented that the definition of Service Provider should not include installation as customers may self-install their equipment.	Per stakeholder comment, EPA has clarified the definition of Service Provider so that it mentions “installation or support services” to include organizations with customers who self-install their equipment.
Duty Cycles	Thin Clients	Two stakeholder questioned the appropriateness of generic STB usage profiles to Displayless Gateways and Thin Clients, respectively. One of the stakeholders recommended that Version 4.1 include a mechanism to ensure that customer usage hours credited are consistent and continuously updated as more accurate data become available.	EPA is maintaining the Draft 1 usage profile for calculation of the AEC given that it is not specific to particular types of STBs and instead is a generic metric applying to any given STB that might be found in a typical U.S. household. While the duty cycle of Thin Client STBs may differ from that of a standalone STB, EPA does not have sufficient data to develop an alternative duty cycle. Furthermore, EPA notes that whole-home gateways without a direct video connection may result in more Thin Clients being placed at the primary TV (in addition to being used with secondary and tertiary TVs), such that their usage profile may approach that of a standalone STB.
Smart TV Incentive		One stakeholder urged EPA to consider another incentive that encourages the purchase of servers which, through the use of industry standards such as RVU (www.rvualliance.org) and DLNA (www.dlna.org), can result in the elimination of Thin Clients entirely. The stakeholder recommended a reduction of the AEC allowance by a value equal to half of the AEC allowance for the corresponding Thin Client.	EPA recognizes the potential of smart TVs to reduce the overall household energy use but believes these benefits should be recognized within the Televisions specification, where they may be tested and validated. Furthermore, even if STBs provide RVU or similar capability, they may deployed in homes that have not yet adopted a compatible TV.

Topic	Subtopic	Comment	Response
Testing	DOE NOPR	Four stakeholders commented that EPA should not reference the proposed U.S. Department of Energy test procedure for STBs contained in the Notice of Proposed Rulemaking published in the Federal Register on January 23, 2013, unless and until it is adopted. Instead stakeholders suggested EPA reference only CEA-2043 for the following reasons: • CEA-2043 is a consensus standard developed under the formal, open standards-setting process of ANSI. • The proposed DOE test procedure is not close to final as public comments were only received on April 8, 2013. • The proposed DOE test procedure has been opposed on a number of technical, legal, and procedural grounds. • It is not certain that the results produced by testing according to the DOE NOPR will be consistent with existing ENERGY STAR test results, which form the basis for allowances in Version 4.1. One stakeholder also commented that EPA return to using the TEC metric and the former product family approach, as DOE's AEC and Basic Model methodologies have not been finalized.	EPA and DOE are committed to working together on set-top boxes. As such, all test method references in this draft specification will remain harmonized with the DOE NOPR (test conditions, AEC calculation, etc.). Numerous stakeholders have commented to EPA and DOE that the definition of a STB basic model, as originally proposed in the DOE Notice of Proposed Rulemaking (NOPR), should be modified, and that DOE should provide additional clarification on what constitutes a STB basic model. EPA and DOE worked together to develop a solution, which provides the necessary clarifications in the ENERGY STAR specification, while DOE works through its regulatory process in considering all the comments received on the NOPR. In the near term, EPA and DOE propose to retain the product family definition and structure for qualification, which allows for updates to the STB firmware or software as long as those changes continue to meet the ENERGY STAR requirements. EPA also proposes to continue to reference the DOE NOPR test methods in this draft. Ultimately, DOE and EPA are committed to harmonizing on all aspects of the set-top box test procedure. Therefore, EPA intends to migrate the ENERGY STAR specification to the basic model approach once DOE finalizes the test procedure rulemaking for set-top boxes and provides the additional clarity stakeholders are seeking.
Testing	Network Connections for Test	One stakeholder commented that the UUT Connection Precedence for Displayless Gateways and additional Multi-room STB testing should be revised to Coax (satellite), Coax (MoCA), and lastly Coax (HPNA) and that Table 7 Output Connections lists only direct connection technologies, but the notebox below it also refers to connection through clients, which can also be MoCA, Wi-Fi, etc.	EPA has revised the tables of connections, putting the service provider and home network connections in separate tables.
Testing	Novel Networking Functionalities	One stakeholder commented that EPA require additional networking functions (routing, switching, telephony) to be hooked up to live systems prior to testing. The stakeholder stated that testing for these functions should focus on recording the “idle” or “ready” state power of these functions, as that is where these devices spend the majority of their time.	EPA has retained the connection of networking functions during test in Draft 2. These functions will be tested in their idle states.
Timeline		One stakeholder commented that EPA should strongly consider including a “Draft 2” specification and corresponding review cycle in the Version 4.1 development process. Another stakeholder commented that if it takes too long to develop new networking functionality allowances, EPA should complete this task in two steps. First, issue Version 4.1 without delay but leave inclusion of multifunction STBs until Version 4.2, allowing for the finalizing of functionality allowances and related test method language.	EPA is releasing a Draft 2 Version 4.1 specification to allow stakeholders more time to review the proposed changes. EPA still intends to finalize the specification in the next couple of months and has therefore proposed inclusion of definitions for forthcoming functionalities like 4K and 3D and stated the intention to develop adders for these functionalities, as needed, via a subsequent Version 4.2 specification revision.
Toxicity and Recyclability		One stakeholder commented that EPA should honor the current ENERGY STAR Partnership Agreements and not expect existing Partners to accept additional conditions in order to remain Partners. Stakeholders argued that the proposed recycling requirements are unsuitable for the content protection and anti-tamper measures employed in STBs and may result in the breach of contractual agreements with content providers. Two stakeholders reported that they already recycle over 90% of STBs, far higher than the average for other consumer electronics. One stakeholder supported the inclusion of toxicity (RoHS) requirements while another stakeholder argued they are unnecessary since there are already regulatory regimes in place, both domestically and internationally, that address EPA’s concerns.	EPA has proposed a change to the STB Partnership Agreement to ensure that as efficiency requirements become more stringent, manufacturers do not trade other environmental features in favor of efficiency. When citing non energy requirements, EPA references existing standards---in this case European Union RoHS. In light of this change, Partners need to re-sign Partner Agreements, preventing outdated requirements and any competitive disadvantage that might otherwise occur to newer Partners. EPA thanks stakeholders for their feedback on the proposed recycling requirements and their current efforts to responsibly retire models. Recognizing the unique anti-tamper measures necessary for video content delivery as well as the active refurbishing practice existing in this product category, EPA has removed the recyclability requirements from the ENERGY STAR Partnership Agreement. Nevertheless, EPA continues to encourage stakeholders to keep EPA informed of their progress with sustainable practices to be considered for special distinction such as ENERGY STAR Partner of the Year. To learn about the application process for these awards, please visit www.energystar.gov/awards.