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Dear Ms. Polad,

Enclosed please find comments from Philips Consumer Electronics on the Draft 2 version 3 Energy Star Program requirements for Televisions. This is provided as follow up from the Stakeholders meeting held in San Diego on Oct 18, 2007. Some of the issues raised in this feedback document were discussed at the meeting; others were not mentioned at that time.

Fundamentally, Philips strongly supports any program, such as Energy Star, that promotes sustainability of the environment. We always seek to make as many of our products as possible comply with the Energy Star guideline. However, designing products is driven by a mix between customer requirements in term of features and price, the competitive environment, and environmental consciousness. Therefore in some cases, we are driven by market factors, to prioritize other aspects over energy efficiency. We find this an unfortunate reality of the market. That said, in all cases we do strive to minimize power consumption in our designs, as reduced power consumption can always enable smaller physical weight and volume for a product, and increased reliability of components.

Specifically, relating to the abovementioned draft proposal we do feel that there are some shortcomings in the document, and therefore, offer the following suggestions for improvement.

- 1) Definition N page 4 - "Download Acquisition Mode (DAM)
 - a. The last sentence of the definition, "*TVs without EPG functionality may not have a distinct Download Acquisition Mode.*"
 - i. Required behaviors should not reside in the definitions section of a specification. (this simply is not a good practice in specification writing)
 - ii. This "requirement" is too restrictive, in that the definition of EPG (J), is too restrictive a use for DAM mode. Many TVs download information other than EPG in DAM mode, as is mentioned in the first sentence of the definition.
 - iii. We request that this sentence be struck from the definition, as there are other aspects described therein that define what DAM is.
 - b. In the first sentence of the definition, the phrase "*and/or otherwise communicating with a connected device through a network protocol*" does cover many other cases but is too specific. Removal of the words "*with a connected device*" would make it more general. The resulting suggestion, **and/or otherwise communicating through a network protocol**" allows for cases where information other than EPG, for instance a channel map, is downloaded from a network (not another device).
 - c. The inclusion of monitoring for emergency messaging/communications should be a separate issue unrelated to DAM mode. Monitoring emergency messaging/communications requires 24/7 operation. Section 3) B.1 states the requirement

of a maximum 3 hour DAM usage in a 24 hour period. Thus defining emergency messaging/communications as part of DAM mode would automatically disqualify any product with this feature from Energy Star. I would suggest a separate definition for an “emergency messaging/communications” feature, and a separate allowance for higher power standby modes for devices which support this feature.

- d. As well as devices that include emergency monitoring, there are many other Combination TV units which potentially remain attached to a network device in excess of 3 hours per day. For example, TVs in hotels or at retail point of sale, although inactive much of the time, must remain in communication with a system controller or server 24/7. This class of product would, similar to devices that monitor emergency messaging, require a different set of requirements for DAM mode. Limiting DAM to 3 hours for such devices would automatically exclude all such devices from the Energy Star Program.
- 2) Section 2 qualifying products: *"This specification does not cover products with computer capability (e.g., a computer input port, DRAFT 2 ENERGY STAR Program Requirements for TVs: Version 3.0 5 such as VGA) that are marketed and sold as 1) computer monitors or 2) dual function televisions and computer monitors"...* - **This seems to imply that we can't market something that is both a TV and PC Monitor as having both functions.** Many TVs today do support VGA functionality via the inclusion of a DB15 connector and support of VGA timings; however they are marketed and sold primarily as TVs. It seems that a better distinction is needed. As stated one could interpret that any TV with a VGA connector might not qualify.
 - 3) Section 3.A. On Mode/Active Power
 - a. This section makes no reference as to whether measurements should be made with a POD module installed or not. Philips suggests that for TVs that support POD modules, the measurements should be made without the module installed
 - b. This measurement criteria lumps TV Combination Units in with TVs. As the definition of TV Combination Units includes devices that are inseparable from TVs, this doesn't seem realistic. The spec lumps together devices that offer quite different functionality from a basic TV into the same category as a TV.
 - i. Suggestion 1 – Devices that are a combination of two existing separate devices should not exceed the Energy Star criteria for those two devices separately in order to qualify under this program. – Thus a TV/DVD combi should not exceed the combined power usage of a TV and DVD sold separately both of which qualify for Energy Star.
 - ii. Suggestion 2 – For devices whereby a module included in the TV has no separate “stand alone” equivalent in the market, or does have a “stand alone” equivalent, but there is no defined Energy Star criterion for such; If the manufacturer can demonstrate that the TV itself, meets the Energy Star criteria with the module removed or disabled, according to some pre-agreed sample size and lot variation, then the set should still qualify for the Energy Star logo.
 - 4) Section 3.C. Standby Level – Similar to my comments in section 1d) and 3), above and beyond additional allowances for DAM mode and for Active Mode Power, TV combination units require an additional allowance for standby modes. In this my suggestions are analogous to the section above
 - a. Suggestion 1 – Devices that are a combination of two existing separate devices should not exceed the Energy Star criteria for those two devices separately in order to qualify under this program. – Thus a TV/DVD combi should not exceed the combined standby power usage of a TV and DVD sold separately both of which qualify for Energy Star.

- b. Suggestion 2 – For devices whereby a module included in the TV has no separate “stand alone” equivalent in the market, or does have a “stand alone” equivalent, but there is no defined Energy Star criterion for such; If the manufacturer can demonstrate that the TV itself, meets the Energy Star criteria for standby power with the module removed or disabled, according to some pre-agreed sample size and lot variation, then the set should still qualify for the Energy Star logo.
- 5) In the Note section on page 6 there are several comments regarding power allowances for wide color gamut and motion blur improvement.
- a. In arguments given by at last week’s stakeholders meeting, EPA consultants stated that wide color gamut LCD TVs will utilize CCFL backlights with 20% reduced brightness. This implies a reduction of 40% brightness at the screen surface. Such performance degradation would not be acceptable to a consumer.
 - b. If backlight brightness tracks linearly with power consumption (which I’m not sure is a good assumption), a 20% backlight brightness increase would require 20% more power delivered to the backlight. Given a power supply efficiency of 75% (also an assumption), this would imply 27% more power into the backlight. Given that the backlight is the largest power consumer in an LCD TV, a 27% increase in its power budget will result in a significant increase in the TV’s power consumption (somewhere on the order of 20-30%)
 - c. If in fact the market research data stating the 40% of LCD TV in 2008 will be wide color gamut, this increased power would vastly skew the average power of LCDs in the market in 2008/9 to a higher value.
 - d. As was described in the stakeholder meeting, the Energy Star formulas are derived from a market weighted distribution of technologies and measured data, allowing for 25% of all products to qualify. According to EPA market research, there will be a very high market penetration (40%) of this wide color gamut feature. However, displays with this feature were not included in the measurement database, as very few are available on the market today
 - e. Philips requests that the EPA consider adjusting LCD-TV measured data to compensate for the stated expectation of 40% penetration, and an appropriately calculated higher backlighting power requirement, in this 40% of the LCD-TV market. Given that LCD TVs form the majority share of the market, the current Active Power limits will probably result in much less than 25% of TV qualifying for Energy Star.
- 6) Section 4.E.2.d Testing of Factory Default Settings: In the current draft, we perceive several aspects of this section which don’t reflect the reality of how TVs are shipped and sold, nor does the text reflect the intent of the IEC 62087 document. Currently the text does not reflect comments made in the note at the bottom of page 11. Although that note exists in the draft it is not clear how it will be incorporated into the next requirements document.
- a. General : References to external documents such as IEC 62087 and IEC 62301 should be referenced in a section on Normative standards, if their contents are to be incorporated into this standard. For instance, the reference to a “standard mode” in the note, must either be incorporated from the IEC document via normative reference, or must be defined in this document itself.
 - b. In section 4.E.2.d. – The exclusion of section 11.3.4, “special functions “ (In the current rev of IEC 62087- section 11.4.x “additional functions”) is particularly against the spirit of the IEC 62087 document. This section was written to allow the exclusion of ‘extras’ that are ancillary to the primary functions of the TV (reception of signal and rendering of images and audio). Philips feels that, if such

functions can be toggled off, then the product should be able to qualify for Energy Star even if they are included in a factory default mode.

- i. One suggestion is that this would be acceptable as long as there is a clear message indicating that toggling such a feature off will save power.
 - c. Regarding the note. Philips feels that if the terms “home mode” and “retail mode” are ultimately incorporated into the document they must be defined. Such a definition must be loose enough to allow the use of other similar terminology.
 - d. The Energy Star requirement should refrain from dictating specifics as to how a particular manufacturer’s user interface should work. In some cases manufacturers may allow users to choose from several modes in a start up menu. As long as it is indicated whether any particular mode is Energy Star compliant or not (for instance in visible help text), and there is at least one Energy Star compliant mode to choose from, the set should be considered to have an Energy Star “default” mode.
 - e. The requirement that, *“If retail is selected, the TV will prompt the user each time they turn on the product to confirm they wish to keep the product in this setting.”*, is too strict. In retail this would require that sales clerks go around to every set, every day to remove this warning. It should be sufficient to require the warning to remain on screen for xx seconds, and then time out. The text could be modified to read , *“If retail is selected, the TV will prompt the user each time they turn on the product to indicate that the product is not in an energy efficient mode.”*,
- 7) Date of implementation: 9/1/08 :
- a. This date should be slipped since we are already 3 months behind the original schedule on setting these specs.
 - b. This date doesn't make any sense since it is in the middle of the product cycle, so it will be disqualifying products which were launched in spring 08. Requiring such a date for transition effectively pushes the requirements up to our spring 08 launch (6 months earlier) which is impractical, given where CE manufacturers are in their current design cycles (2008 design specifications are already set)
 - c. Applying the new Energy Star requirements by April 1 2009 makes much more sense given the product cycles and where most manufacturers are in the design cycle This will also create a lot less potential for logistical errors.
 - d. MOST OF ALL - Regardless of implementation date, the energy savings achieved in the market by the will not be affected because it is too late to change 2008 designs at this point in time. We will get what we get. Keeping the date in Sept 2008, will only create logistic problems for manufacturers and retailers as well as the EPA.