



NRDC Input on ENERGY STAR Version 9.0 Draft 2 TV Specification

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On behalf of the Natural Resources Defense Council (NRDC) and its more than 3 million members and on-line activists, we respectfully submit our feedback on ENERGY STAR's Version 9.0 Draft 2 specification for televisions. These comments built off of [NRDC's previous comments](#) that were submitted in response to ENERGY STAR's Draft 1. Overall, we are supportive of the content in Draft 2, with a few exceptions, and urge EPA to finalize the specification as soon as possible so the spec can positively influence the design of 2022 TVs.

1. NRDC strongly supports EPA's 1-watt power limit proposal for Standby-Active Low mode and its use of the test method language being finalized by the CTA-led process.

As we commented previously, it's critically important for ENERGY STAR Version 9 to address the skyrocketing levels of standby power that many brands of today's TVs consume in Standby-Active Low mode when the TV's "smart wake" features are enabled. When enabled, a consumer can turn on their TV by a voice command to a connected smart speaker device like Amazon's "Alexa" and similar devices, or can quickly wake a TV and "cast" content from a nearby cell phone, tablet or computer. These are compelling features and we expect a growing percentage of TV owners to take advantage of them in the future.

While at least two manufacturers already provide this functionality for under 0.5 watts in standby, most of other TVs on the market consume a lot more. Per recent testing done by NRDC and its consultant Pacific Crest Labs we saw average measured Standby-Active Low power levels of between 5 and 14 watts. It's essential that this extra amount of potential energy use be captured during the test and driven down by ENERGY STAR. This will prevent the situation whereby TVs

can earn the ENERGY STAR label even though they are capable of wasting around 50 to just under 100 kWh/yr when they are NOT in use and the user believes they are turned off.

We support EPA's proposed limit of 1 Watt for Standby-Active Low mode average power use While there are TVs on the market that already provide this functionality for under 0.5 Watt, we are comfortable with the 1 Watt limit and believe it provides a clear and reasonable design target for those brands whose standby active low power levels are currently much higher.

NRDC is actively participating in the Consumer Technology Association's (CTA's) test method update (CTA 2037C) for TVs that is near finalization. The test method addresses all the key issues and ensures: a) the TV is connected to a live internet signal during testing, b) there is traffic on the network that the TV is connected to and multicast DNS requests are occurring during the test and c) testing is done over a sufficiently long time period to capture the variations in standby power use that occur over time in many models and the average measured power during the test is reported.

II. Due to the scarcity of testing data, we encourage ENERGY STAR to remove 8K TVs from the scope of Version 9.0 and to include them once sufficient power use data per the updated test method becomes available.

Draft 2 contains a functional power adder for 8K TVs. Unfortunately, no testing data using the new test method has been generated for the power use of these TVs. Absent that data it's hard to assess the appropriateness of the proposed level. The data EPA used to inform this decision is from the CEC data base, which only tests TVs in the standard mode and does not capture the higher energy use levels from the tests done with the TV in the brightest preset and HDR picture settings are selected.

We recommend EPA include a placeholder in Version 9.0 of the specification for 8K TVs and to update the spec and add a power adder for these models once sufficient data becomes available through a Version 9.1 update. We are hopeful that the TV manufacturers will want efficient 8K TV models to be eligible for ENERGY STAR qualification, as well as any rebates that utility programs might offer, and will be motivated to provide testing data to EPA on 8K TVs per the new test method ASAP.

III. EPA should look to increase the stringency of the proposed levels for On mode in Version 9 to ensure its specification helps drive efficiency improvements and is more in line with the ENERGY STAR program's high level goal of representing the top 25% of the market. We believe EPA should target a 25% or lower pass rate for active mode as of the time the specification is finalized.

In the comment bar in Draft 2, EPA stated: *Analyzing the current dataset, approximately 39% of TVs meet these On Mode Power requirements.*

This level seems unacceptably high, especially since its about a year before most 2022 models will be on the market and whereby further efficient improvements are likely resulting in possibly a 50% or higher pass rate right after the specification goes live. Manufacturers whose TVs are currently unable to meet the updated levels and want to earn the ENERGY STAR label would be motivated to add drop in efficiency improvements such as DBEF (Display Brightness Enhancement Films) filters that transfer light more efficiently, reduce TV power consumption and can be incorporated relatively quickly.

We think its completely appropriate for EPA to shoot for a 25% (or lower) pass rate for TVs based **solely** on its On mode power requirements. We think it's a given to expect new TVs to meet the 1 W Active-Standby Low mode requirement to qualify for ENERGY STAR and that EPA should calculate its pass rates based on meeting the On mode requirements. Stated another way, we don't think the high percentage of TVs that have elevated standby power levels today should dampen EPA's level of ambition and justify only modest requirements for On mode power limits.

We greatly appreciate the opportunity to provide this input to EPA's specification revision process and are available to discuss any questions you might have.