



## **NRDC COMMENTS ON Nov. 26<sup>th</sup> Draft 3 TV SPECIFICATION**

**December 7, 2007**

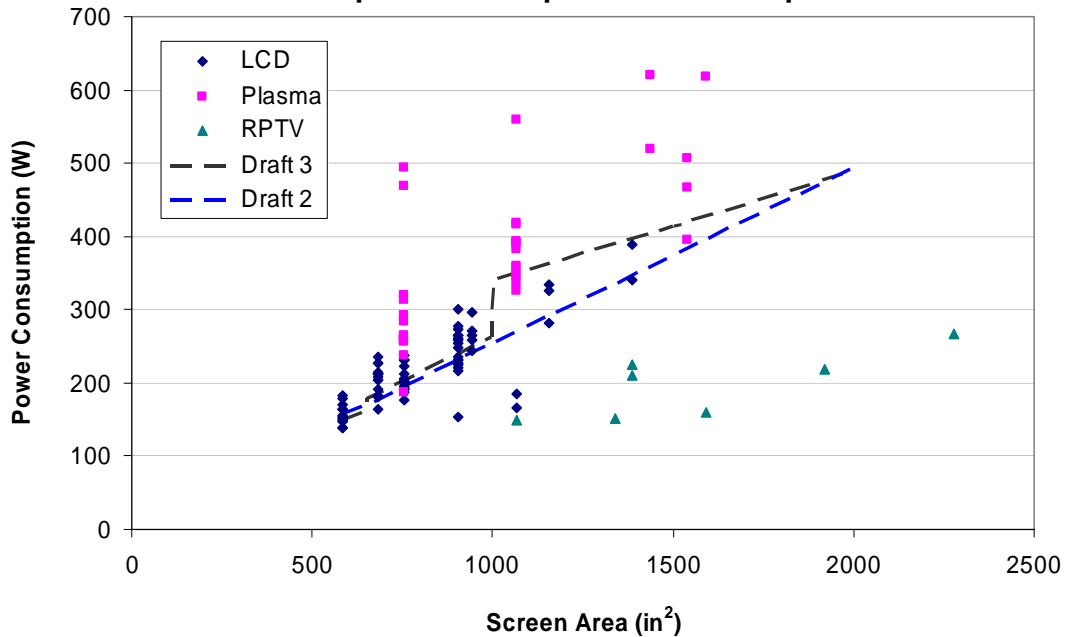
On behalf of the Natural Resources Defense Council (NRDC) and its more than 1 million members and e-activists, we respectfully submit the comments below in response to the EPA's November 26<sup>th</sup> proposal to modify its prior draft TV specification. Our comments supplement those previously submitted by NRDC and are focused exclusively on the on mode energy use portion of the specification.

### **Background**

Over the past 6 months, EPA has worked very closely with stakeholders to collect current "on mode" power consumption data and to develop proposed specs based on this data set. At the November meeting in San Diego, EPA issued its "draft 2" specification and with the exception of the plasma TV industry, which represents just under 10% of the overall market by unit sales, there seemed to be growing consensus with the specification.

In its "draft 3" specification issued on November 26<sup>th</sup>, EPA's new proposal included a significant rollback from the prior draft. In lay terms the stringency of the new specification was significantly weakened for TVs 47 inches and greater in size. At the just over 1,000 in<sup>2</sup> portion of the spec, the maximum allowable wattage is increased by approximately 85W. (See Figure 1 below.) Assuming a 5 hour viewing period, this translates to lost savings of more than 155 kWh/yr. This amount of savings is larger than the incremental savings EPA and DOE work so hard to obtain in other products in its portfolio such as ENERGY STAR refrigerators which deliver around 75 kWh/yr savings.

## Energy Star TV Power Consumption Data Set and Comparison of Specification Proposals



Over a 10 year TV life, this translates to approximately 1,500 kWh in lost savings, which is equal to the annual energy used by three refrigerators or a hidden energy surcharge to the unsuspecting ENERGY STAR consumer of more than \$150 due to the higher electric bills they will be paying. As many of the very large screen TVs often appear in institutional settings like bars, hotel lobbies, restaurants, and health clubs that have extended operating hours (e.g. TV is on 10 to 15 hours/day), one could easily multiply the above numbers by a factor of 2 to 3 for many of these units.

Another change made to the specification was the allowance of manufacturers to qualify their TVs based on a lower power “home” screen setting achieved either through a “forced menu” or by simply enabling this setting as the default. NRDC is generally supportive of move to help ensure residential TVs operate in a home setting as opposed to the overly bright retail setting in which most TVs currently ship. Since allowing this shift to a forced menu approach, EPA has NOT adjusted its data set (that consists almost entirely of TVs tested at their brighter, more consumptive “retail” settings) downward to reflect the very likely boost in qualification rates that will occur as a large number of TV manufacturers enable the low power home settings. Recent measurements made by our consultant Ecos show that the home settings (or those with roughly equivalent names) will reduce on mode power on average 10% for plasma TVs and 7 % for LCDs. By itself this will result in a dramatic increase of TVs that will qualify for ENERGY STAR and will be achievable for manufacturers without re-engineering sets.

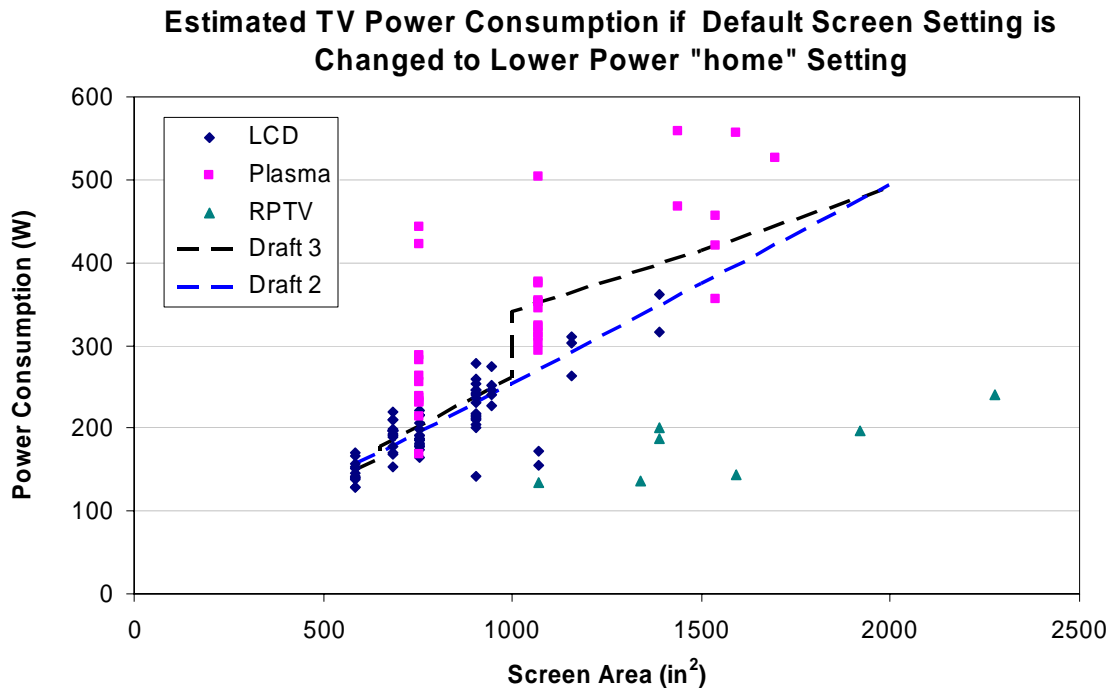
## Reasons to Oppose the Changes Proposed in Draft 3

### 1. Discontinuous Spec Is Not Justified

The creation of a non-smooth performance efficiency specification frequently results in gaming by the manufacturers. This concern is most prevalent at the point on the EPA spec around screen areas just above 1,000 square inches. As mentioned earlier the specification grants an 85W or so adder compared to TVs that are slightly smaller. We do not understand how this breakpoint is justified and are not aware of any reason why TVs of this size warrant such dramatic additional power consumption. TVs within a certain family (e.g. plasma, LCD, etc.) do not suddenly use a different technology or shift to a different class of components in order to operate at these sizes. As the ENERGY STAR specification for TVs gains traction one can easily envision TVs just under the 50" threshold growing slightly as an easy means to game and thereby qualify for the ENERGY STAR specification. This is not the type of behavior that ENERGY STAR specifications should be enabling.

### 2. The Draft 3 Spec Will Have Unacceptably High Compliance Rates

The overall pass rate for TVs is already 30% for TVs prior to the effective date of its new specification. This is higher than EPA's target of 25%. Of greater concern is the fact that the on mode pass rate and overall pass rate will increase dramatically once default screen settings are changed to lower power home settings (see figure 2 below).



In reviewing this data, the “draft 3” pass rate for 50 inch TVs increases dramatically. **All but two of the TVs in this class would now qualify, almost a year before the specification goes into effect.**

### 3. The Specification Has Higher Pass Rates for the Biggest TVs

As representatives from Sharp TV and others indicated on a recent conference call, the pass rate for TVs increases with screen size. In other words, those TVs with a higher annual energy use have a higher percent of models complying. This is inconsistent with ENERGY STAR’s mission to reduce overall energy use. We would instead expect EPA to set increasingly stringent requirements for the most energy consuming models, in this case the biggest ones.

### 4. The Technology Neutral Basis of This Specification Is Being Eroded

With the possible exception of some plasma TV makers, there is general consensus among the stakeholders that the specification should be technology neutral, consistent with the ENERGY STAR program’s normal practice. Unfortunately the specification seems to discount the most efficient models in its database, the rear projection TVs (RPTVs).

As a financially disinterested participant in this spec setting process, it appears to us that the specification drafters are being overly responsive to the complaints of the plasma TV industry, whose models currently have lower qualification rates than other technologies, due to their much higher power consumption. This special treatment does not seem warranted as the market shares of these two technologies are fairly close with RPTVs at 7% and plasmas at 10%.

If recent trends continue we can also expect LCD models to become available in larger screen sizes with energy use that increases proportionately with screen area.

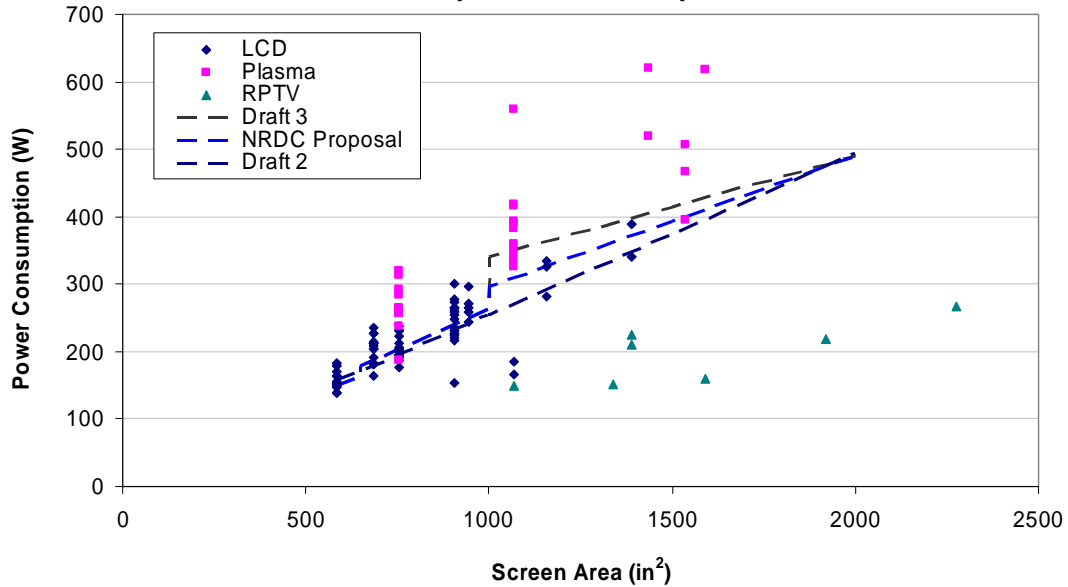
If draft 3 moves ahead unchanged, one can easily envision a landscape in the next year or two where well over 50% of TV models in the very large TV space qualify for the ENERGY STAR spec and the value of the ENERGY STAR brand is brought into question by utilities, energy advocates, and the media.

## **Recommendations**

NRDC offers the following two possible resolutions to these issues:

- 1. Leave the specification unchanged from draft 2 as the draft 3 changes do not appear justified and will result in an unnecessarily weak spec for the largest TV sizes,.*
- 2. Issue a specification that is between draft 2 and draft 3.*

### Energy Star TV Power Consumption Data Set and Comparison of Specification Proposals



NRDC has fashioned a counter-proposal that approximately splits the difference between ENERGY STAR’s draft 2 and draft 3 proposals. The new proposal (called NRDC proposal) is shown above plotted against ENERGY STAR’s public dataset and alongside the existing draft 2 and 3 proposals. We would change the spec equation for HD and FHD TVs with screen sizes larger than 1,000 in<sup>2</sup> to:

$$P_{MAX} = 0.194A + 102$$

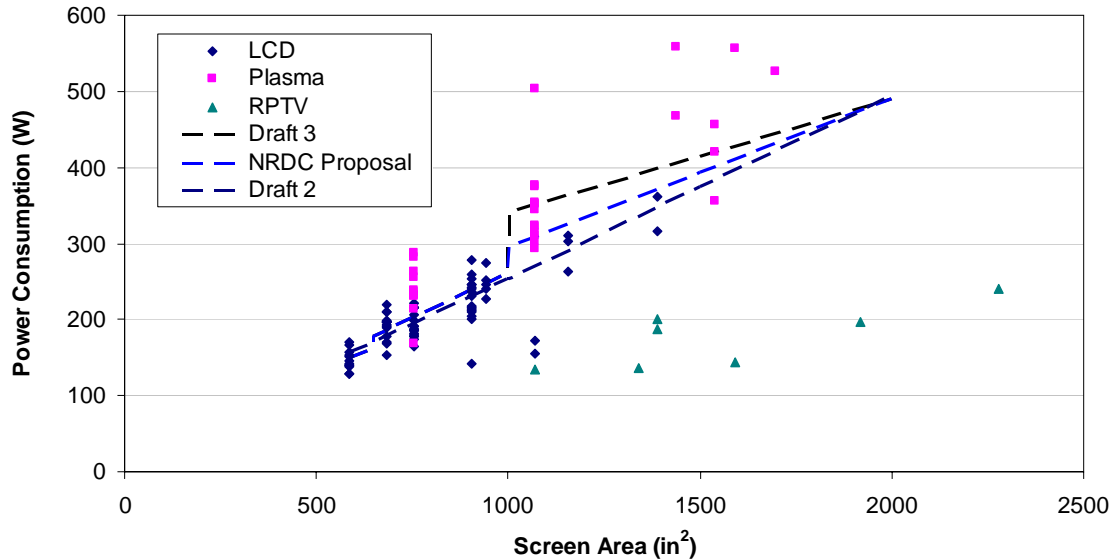
as opposed to ENERGY STAR’s original proposal of:

$$P_{MAX} = 0.15A + 190$$

The overall pass rate of TVs in the ENERGY STAR dataset under this proposal would be 27%.

As we discussed previously, the actual compliance rate will likely be much higher if manufacturers go with the forced menu approach and recommend a lower power “home” setting to consumers. For example, by viewing the data shown below that is adjusted for this change, we expect that a much larger number of plasma TVs in particular will be able to use the lower power “home” settings as a means to comply, enabling a large number of increasingly popular 50” plasmas to earn an ENERGY STAR.

### Estimated TV Power Consumption if Default Screen Setting is Changed to Lower Power "home" Setting



We believe this “compromise” (allowing forced menu user settings to be used for model qualification AND the NRDC Proposal equation) provides something for everyone:

1. Except for the  $>1,600$  in<sup>2</sup> area, which is currently a very rare part of the market, all TV technologies will have at least some qualifying models.
2. The percent of qualifying models just larger than 1,000 in<sup>2</sup> is reduced from the overly generous pass rate under draft 3.
3. The new spec sends the appropriate signal to TV manufacturers planning to introduce TVs 47 inches and greater in size (the next area of growth in this market) that they need to focus on the energy efficiency of their new models.

We appreciate the opportunity to provide these comments and look forward to working with all the stakeholders involved during this process to finalize the ENERGY STAR specification for televisions on a timely basis.

Noah D. Horowitz  
NRDC Sr. Scientist  
[nhorowitz@nrdc.org](mailto:nhorowitz@nrdc.org)