

November 8, 2007

Ms. Katharine Kaplan
Program Manager, ENERGY STAR Program Development
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW (6202J)
Washington, DC 20450

[Sent via e-mail to: Kaplan.Katharine@epamail.epa.gov]

Re: Comments on TV ENERGY STAR Draft 2 Specification (Version 3.0)

Dear Ms. Kaplan:

Panasonic Corporation of North America (“Panasonic”), a leader in the manufacture and sale of flat panel and other television technologies, appreciates the opportunity to comment on the document entitled, “ENERGY STAR Version 3.0, Draft 2, Eligibility Criteria for Televisions.”

While we note that some improvements have been made from Draft 1, we wish to reiterate that Panasonic is still deeply concerned with the EPA’s overarching approach toward the specification, namely including all (and very different) TV technologies into a single qualification formula. We disagree with EPA’s continued insistence that a single qualification formula apply to all TVs; and we believe doing so would diminish consumer acceptance and limit retailer promotion of the ENERGY STAR label, while simultaneously lock in less energy savings than would be possible under the alternate approach we have recommended.

Panasonic believes strongly that EPA’s goals—indeed the interests of all stakeholders—would be better served by adoption of a new on-mode TV specification which establishes separate categories by technology type. This is because the tremendous differences in TV design, functionality, performance, and price cannot all be equitably distilled into a single ENERGY STAR qualification threshold, and certainly not by the highly compressed target implementation date of only nine months hence.

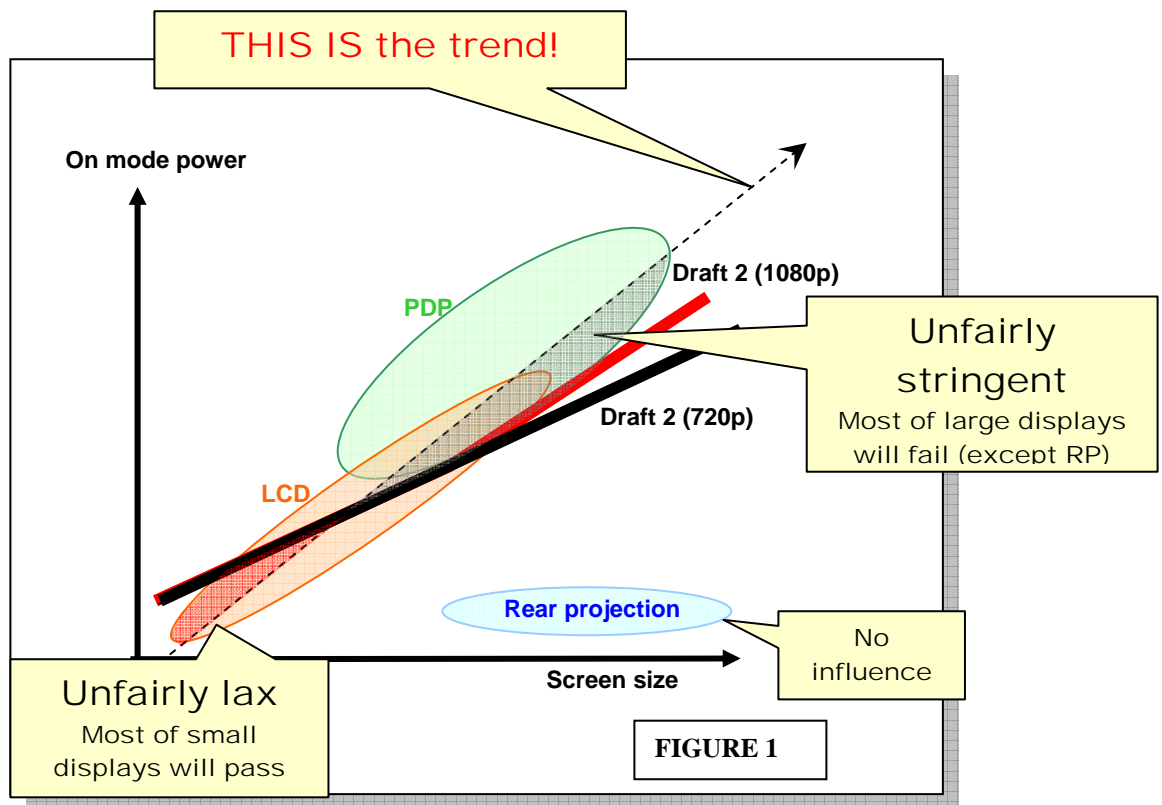
Throughout the on-mode specification modification process for ENERGY STAR TVs, Panasonic has proactively and continually worked to offer constructive proposals aimed at achieving a mutually beneficial result—one that achieves the Agency’s stated program goals and our company’s strong desire to maintain its role as a leading corporate proponent of the program. We believe Panasonic’s earlier recommended specification revision proposals—provided in our several meetings and discussions, and most recently at the October 18 stakeholders meeting—will help EPA and consumers understand and realize significant energy savings. For example, our recommended “forced menu” setup option alone, assuming its adoption by EPA, would generate 2.66 billion kilowatt hours savings of electricity in 2011.*

We believe the Draft 2 specification, unfortunately, does not provide a blueprint that could generate further energy savings while cutting greenhouse gas emissions. But we feel our proposals, below, do provide a valid and understandable guideline for adjustments to the specification that, if adopted, will both provide for meaningful energy savings and recognize the unique power requirements of differing TV technologies.

* Approximate energy savings calculations based upon all TVs sold in 2011 with the “Home” low power setting enabled. The savings represent the difference in the low power setting versus the energy consumption if every TV remained in its highest power setting. The approximate power for LCDs and PDPs at their high and low power screen settings was derived from a chart presented by an EPA contractor during a November 6, 2007, ENERGY STAR stakeholders conference call.

Panasonic has thoroughly reviewed the EPA’s TV data set for on-mode energy consumption. Based on our analysis, EPA’s proposed single qualification line (in its Draft 2 Specification) is unrealistically and unreasonably stringent, particularly for larger size displays (40 inches and greater). At the same time, the formula allows for the smallest displays to qualify easily.

After plotting the TV data set against Draft 2’s separate lines for display resolution (720p and 1080p), the disparity between the treatment of large flat panel displays versus smaller sizes persists. At the same time, however, there is no impact on the qualification for rear projection displays (see FIGURE 1, below). Therefore, Panasonic strongly encourages EPA to remove rear projection display data from the calculations used in developing qualification formulas. While removing these data from the calculations will enable a more equitable formula to be devised, we do not suggest that rear projection models be ineligible for ENERGY STAR qualification. Instead, we simply propose EPA eliminate their undue influence on the qualification formulas inasmuch as they will qualify 100% regardless of the final formula.



As detailed in Figure 1 (above), the refined data trend clearly shows that a steeper slope is in place, but that inclusion of rear projection models unreasonably and unjustifiably pulls down the qualification line. The result is that one, nearly obsolete technology (*i.e.* rear projection) is given a “pass” in the ENERGY STAR TV specification in that all models will qualify regardless of screen size. Given the near unanimous view among TV market forecasts that show rear projection sales falling precipitously over the next few years and virtually disappearing by 2010, we see no justification to include data from rear projection displays in the TV qualification formulas (see Figure 2, below). Please note the market data below, from independent analysts, is the same we earlier forwarded to you.

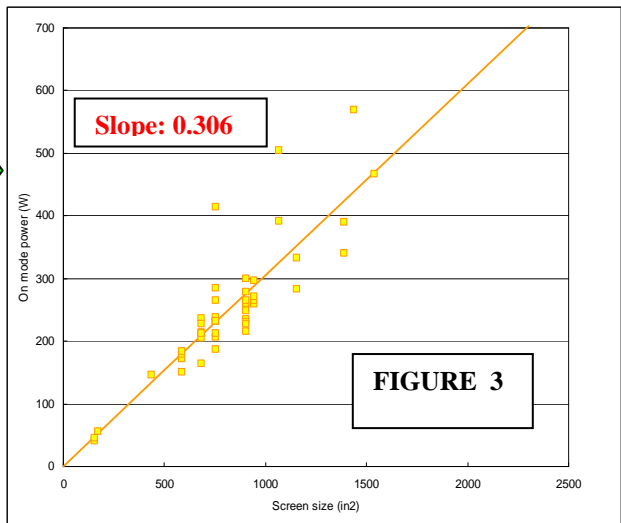
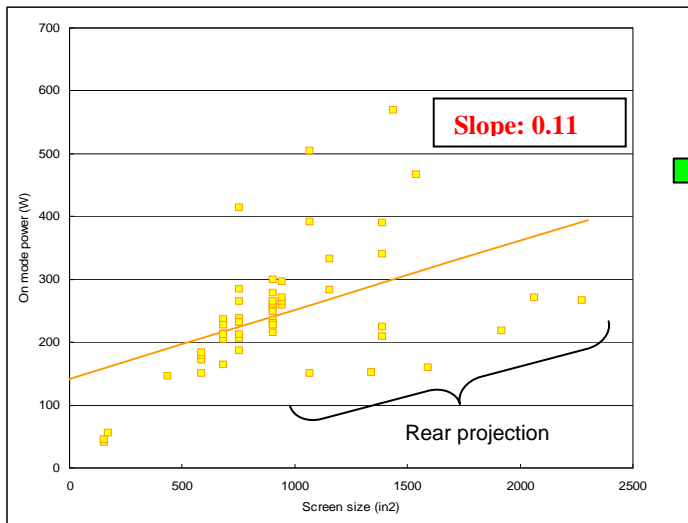
Market Decline of Rear Projection Technologies **FIGURE 2**

North America Total TV Unit Shipment by Technology						
(Percentage of Total Shipments)						
Actual Unit Data Source: DisplaySearch, Oct. 2007 (percentages calculated by Panasonic from DisplaySearch Unit Data)						
Note: The total rear projection market drops to 0.3% of the total market in 2011.						
Note: The direct viewable CRT market disappears by 2011.						
	2006	2007	2008	2009	2010	2011
MD RP	6.7%	4.0%	2.5%	1.3%	0.5%	0.3%
CRT RP	1.9%	0.3%	0.0%	0.0%	0.0%	0.0%
PDP	9.7%	11.4%	12.1%	12.7%	13.2%	13.4%
OLED			0.0%	0.3%	0.8%	2.3%
LCD	38.2%	62.2%	79.1%	83.8%	85.0%	84.1%
CRT	43.5%	22.2%	6.3%	1.9%	0.5%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

After a refinement of the EPA data set to remove, as we recommend, rear projection and CRT models along with several other data points (e.g, older 2004-05 models, computer monitors, 1080i panels listed as 1080p), Panasonic urges creation of an ENERGY STAR TVs Tier 1 that would now more accurately represent actual TVs that will be available in the market for consumers in 2009. Figure 3 (below) is a linear regression line that depicts the slope with rear projection models, and then the slope with those models removed.

All models included

Rear projection & CRT models removed



Without rear projection & CRT, the slope for the qualification line becomes more reasonable

Panasonic Tier 1 Proposal (To be effective January 1, 2009)

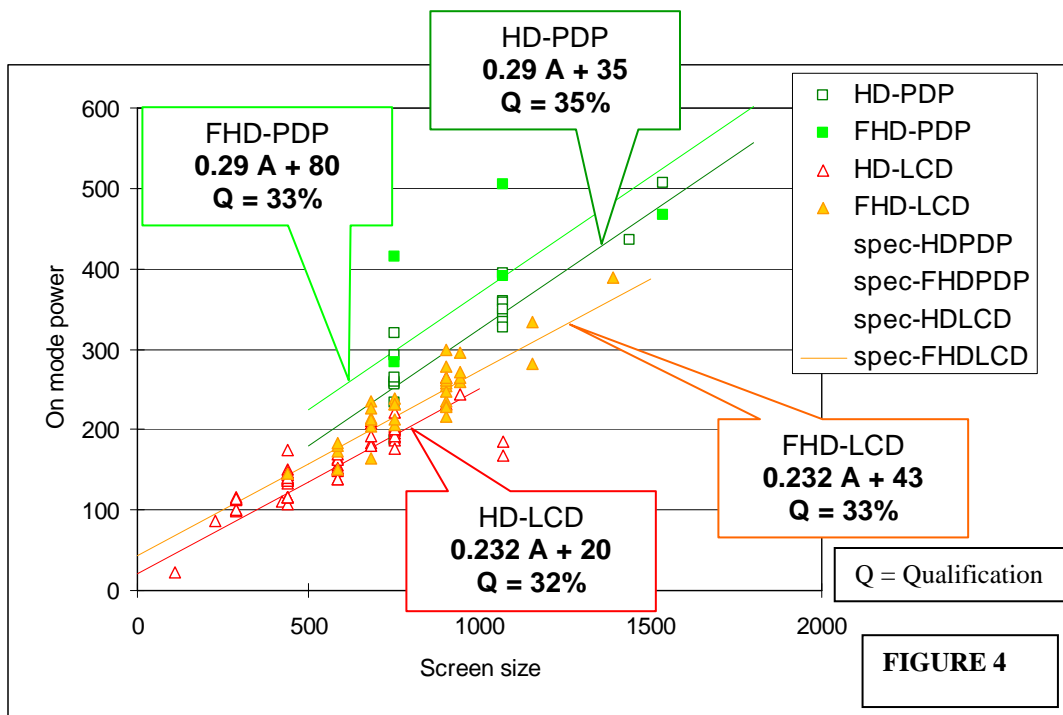
As we have consistently maintained, Panasonic believes that ENERGY STAR’s optimal approach to recognizing a TV technology’s energy efficiency is through adoption of a specification that establishes separate categories by technology type. Because of the anticipated near term disappearance of rear projection and CRT TV technologies from the marketplace, Panasonic proposes a Tier 1 specification achieved through formulas covering the two primary flat panel display technologies—plasma (PDP) and liquid crystal (LCD). For an explanation of how the formulas were created for Tiers 1 and 2, please see the note following the Tier 2 proposal section, below.

TIER 1 PROPOSAL FORMULA

PDP	HD (720p) : $P_{max}=0.29A+35$ FHD (1080p): $P_{max}=0.29A+80$
LCD	HD: (720p) : $P_{max}=0.232A+20$ FHD: (1080p): $P_{max}=0.232A+43$

In the Tier 1 Proposal chart below (Figure 4), the EPA data set models were divided by flat panel technology and resolution, and then plotted on the chart. The slope of the line was adjusted in order to “qualify” a given percentage of TV models from the data set. The qualification rate ranges between 32 and 35 percent. This formula yielded robust, and we believe reasonable, qualification levels for both PDP and LCD technologies, while factoring in the increased power needs associated with the higher 1080p resolution in the FHD line. In the accompanying chart on the next page, we have detailed the qualification levels in watts for the most popular sizes of flat panel display TVs.

TIER 1 PROPOSAL



Tier 1		LCD		PDP	
		HD	FHD	HD	FHD
Slope		0.232	0.232	0.29	0.29
Intercept		20	43	35	80
Qualification (%)		32	33	35	33
Inches	Screen Size	Power Specification			
26	288.9	87	110	119	164
32	437.6	122	145	162	207
37	585.0	156	179	205	250
40	683.7	179	202	233	278
42	753.8	195	218	254	299
46	904.2	230	253	297	342
50	1068.2	268	291	345	390
52	1155.4	288	311	370	415
58	1437.4	353	376	452	497

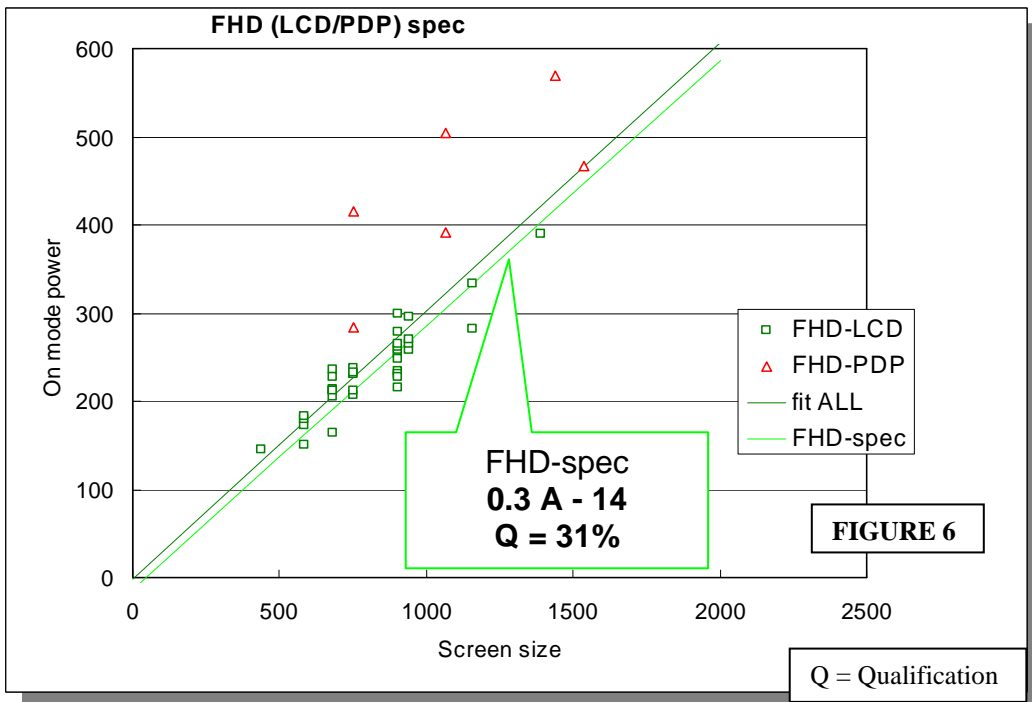
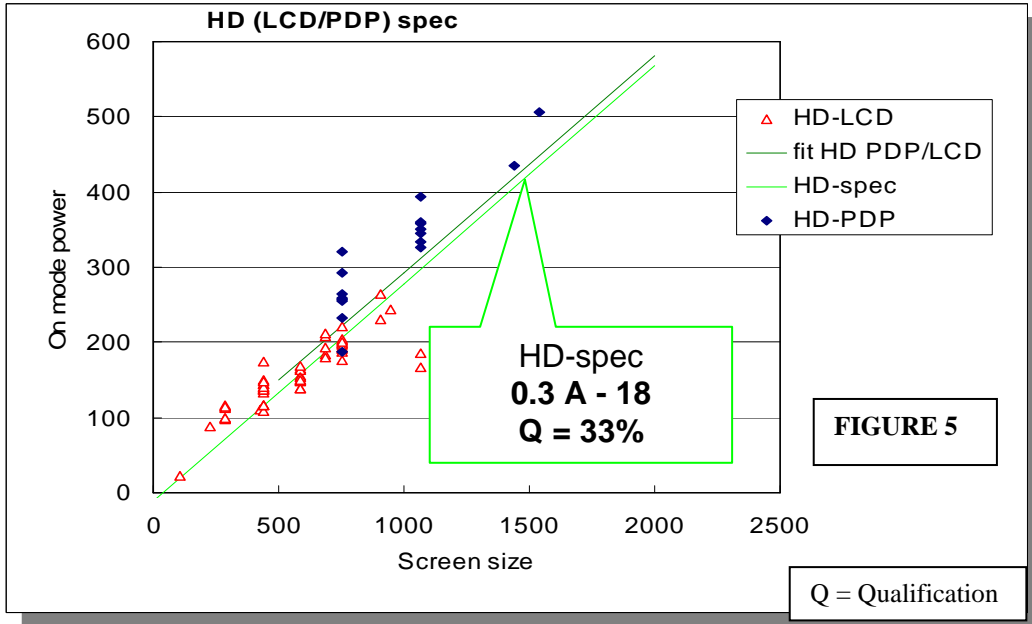
Panasonic Tier 2 Proposal (To be effective January 1, 2011)

Our Tier 2 proposal, predicated on the EPA’s acceptance of technology-separate formulas in Tier 1 as a “bridge”, is intended to offer a practical compromise that allows Panasonic and other leading flat panel display manufacturers adequate time to pursue achievable, yet still highly challenging, improved energy efficiency targets. Under this proposal, the percentage of qualifying TV models is between 31% and 33% for both HD and FHD models. This range is consistent with EPA’s proposal for on mode power of ENERGY STAR labeled TVs under the Draft 2 specification.

Specifically, the Tier 2 proposal utilizes the following formula to strike this balance. Our Tier 2 charts (Figures 5 and 6) depict the proposal’s impact on TV model qualification to ENERGY STAR.

HD : P max=0.3A-18
FHD : P max=0.3A-14

TIER 2 PROPOSAL



Tier 2		PDP/LCD	
		HD	FHD
Slope		0.3	0.3
Intercept		-18	-14
Qualification (%)		33	31
Inches	Screen Size	Power Specification	
26	288.9	69	73
32	437.6	113	117
37	585.0	157	161
40	683.7	187	191
42	753.8	208	212
46	904.2	253	257
50	1068.2	302	306
52	1155.4	329	333
58	1437.4	413	417

The numbers in the chart above, can be plotted along separate graphs for the HD specification and the FHD specification, as depicted in Figures 5 and 6. The listed power specifications were calculated based on our proposed formulas and applied to the current most popular flat panel display sizes.

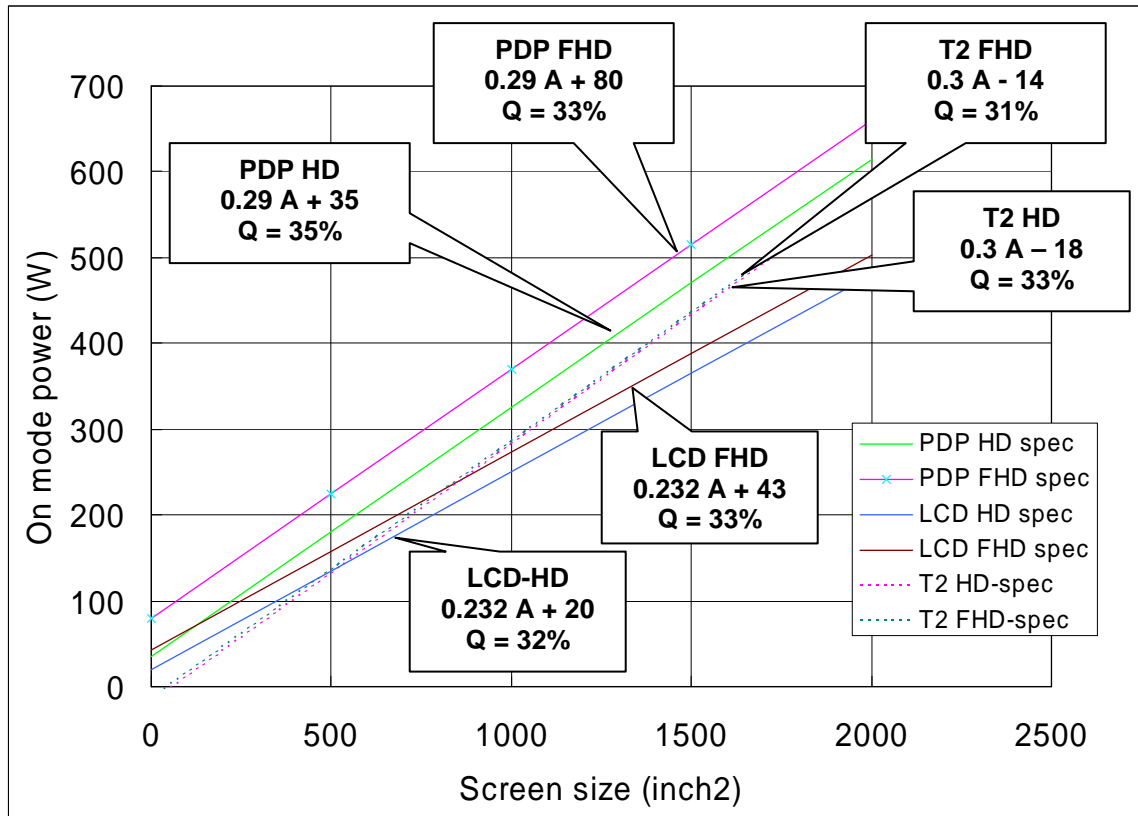
Explanation of Formulas

An identical method was used to calculate all of our proposed qualification line equations for Tiers 1 and 2. For Tier 1, LCDs and PDPs are treated separately with all of the data points (720p and 1080p) combined, and a line fitted mathematically to best approximate the data. The slope of this “best fit” line is then held constant while moved up or down until the desired ENERGY STAR qualification target is achieved. The LCD HD and LCD FHD data points are treated separately while the line is moved up or down, resulting in two individual lines with the same slope: one for HD and one for FHD.

This same process is then repeated for PDPs. The resulting two lines of equal slope (but different from the LCD lines) allow for the desired qualification percentage of their corresponding PDP HD and PDP FHD data sets.

The Tier 2 process is the same except that all LCDs and PDPs are combined (both HD and FHD). During the adjustment process, the HD data points are treated separately from the FHD points while the line is moved up or down, resulting in two individual lines with the same slope, one for HD and one for FHD.

Summary of Tier 1 and Tier 2 Proposals



Implementation Schedule

As we and several other TV manufacturers noted at the October 18, EPA stakeholders meeting in San Diego, the typical TV manufacturer’s production cycle runs roughly concurrent with the calendar year. Consequently, introducing the new, on-mode ENERGY STAR TVs specification in October 2008, will directly conflict with this universal production cycle. As EPA has emphasized that it will not permit any “grandfathering” of products (reflecting the current standby power program), an October implementation date would be highly disruptive for manufacturers, who would need to “un-label” products, and for retailers, who might be expected to remove the ENERGY STAR labels or even pull products from their shelves. Panasonic strongly urges EPA to defer the new specification’s effective date by at least 3 months, to January 2009, to coincide with manufacturers’ actual production cycles and product introduction and all-important promotion schedules.

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We appreciate your consideration of our comments and we would be pleased to discuss them further, at your convenience.

Sincerely,

Peter M. Fannon
Vice President
Technology Policy, Government & Regulation

cc: Mr. Stephen L. Johnson, Administrator, EPA
Mr. Brian J. McLean, Director, Office of Atmospheric Programs, EPA
Ms. Kathleen B. Hogan, Director, Climate Protection Partnership Division, EPA
Ms. Mehernaz Polad, ICF (ENERGY STAR contractor)