COMMITTEE WORKSHOP

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
2008 Rulemaking on Appliance Efficiency Regulations	)	
	)	Docket No.
Implementation of California Code of Regulations, Title 20, Section 1601 through Section 1608	)	07-AAER-3
	)	

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, JULY 16, 2008

2:05 P.M.

ORIGINAL

Reported by:
Peter Petty
Contract No. 150-07-001

COMMITTEE MEMBERS

Jackalyne Pfannenstiel, Presiding Member

Arthur Rosenfeld, Associate Member

ADVISORS and STAFF PRESENT

Tim Tutt

David Hungerford

Melinda Merritt

ALSO PRESENT

Alex Chase
Energy Solutions
on behalf of Pacific Gas and Electric Company

Gary Fernstrom
Tim Michel
Pacific Gas and Electric Company

Mark J. Sharp
Panasonic

Noah Horowitz
Natural Resources Defense Council

Jon Fairhurst
DR Labs of America
International Electrotechnical Commission

Douglas Johnson
William "Bill" Belt
Consumer Electronics Association

David Klein
JVC

Jerine Ahmed
San Diego Gas and Electric Company
Sempra Energy

Randall Higa
Southern California Edison Company

I N D E X

P R O C E E D I N G S

2:05 p.m.

PRESIDING MEMBER PFANNENSTIEL: I'm sorry we're a few minutes late, but I think we can get moving. This is the Efficiency Committee workshop on energy efficiency standards, specifically for televisions, that we will address today.

And we have an agenda that's been circulated and do some technical discussion at the outset. So, why don't I turn it over to Melinda to get us started.

MS. MERRITT: Okay. Good afternoon, everybody; I'm Melinda Merritt with the appliance efficiency program staff. And I'm the Project Manager for the 2008 appliance efficiency rulemaking.

First and foremost, I guess I need to go over the standard housekeeping items for everybody. For those of you not familiar with the building, the closest restrooms are located out the door and to the left. There's a snack bar on the second floor.

Lastly, in the event of an emergency and the building is evacuated, please follow our

employees to the appropriate exits. We would reconvene at Roosevelt Park, which is kitty-corner to our building. And please proceed calmly and quickly, again following the employees with whom you are meeting, to safely exit the building.

So, with that requirement handled, there are copies of the agenda and the workshop notice for today in the foyer, and a limited number of copies of the documents that have been posted to date, and some copies of the presentations that we have received this afternoon.

All comments on this subject that we've received so far have been docketed on our website, and we will be posting the slide packs used in today's presentations, along with any additional comments received following today's workshop.

This workshop is being recorded and a transcript will be posted within the next two weeks. This meeting is being broadcast over the internet, and anyone wishing to participate by phone may call in the following number: 1-888-283-3870; the passcode is appliance; call leader Melinda Merritt.

Without further ado, this workshop is considering possible appliance efficiency

standards for televisions in the active mode. And the agenda I have up here on the screen for reference. Our first presentation this afternoon will be from PG&E and Energy Solutions on their analysis of standard options for televisions.

With that, Alex Chase.

MR. FERNSTROM: So before Alex starts, if I may, I'd like to give a brief introduction. This is Gary Fernstrom representing PG&E. And we all know that California has ambitious environmental and energy efficiency goals for the state.

We also know that consumer electronics, particularly televisions, are representing a growing end use in the state of increasing electrical demand and relatively long hours per day of usage resulting in considerable energy use.

So, PG&E, the Sempra Companies, San Diego Gas and Electric, NRDC are advocating collectively for what we believe are some modest appliance efficiency expectations for these products. And Alex is going to talk about this in detail.

MR. CHASE: Thanks, Gary; and thanks for the opportunity to present today. I have a number

of slides today. We're going to officially submit them so they're on the docket. Due to time constraints I won't be able to get into every single one of them. So, for some of them I'll spend some time on. For others, I will simply flash, but they will be available online.

What I'd like to do is to give a quick background on the PG&E proposal and endorsed by the other IOUs, provides -- spend some time on the market and energy trends for televisions.

Then I'd like to get in specifically talk about some efficiency developments, both for LCD and plasma tvs currently on the market.

The next section focusing on LCDs and plasmas, talk about some of the efficiency developments that are being showcased today that as trends continue, it seems will be available on the market within the next couple years to months.

Then I'll spend a little bit of time on retail programs and incentive programs. Won't spend a whole lot of time on that because Tim Michel from PG&E will be giving a presentation after me giving some details on the utility-sponsored incentive programs for televisions and other consumer electronics.

Then, time considering, we will -- I'll step back and kind of give a broader motivation, as Gary mentioned, the California energy efficiency goals and the greenhouse reduction goals, and try to provide some context for this television standard.

Then we'll have some conclusions. I have a full appendix with additional slides that will be available online, as well.

Starting out with the television proposal background, PG&E first indicated that it was working on a television case report at the January 15th workshop. Submitted a formal proposal, case report, April 1st of 2008.

July 3rd we submitted a revised proposal that is endorsed by all the IOUs. The case report focuses solely on mode power since California already has a standard for maximum standby at 3 watts.

Just to give a broader sense of what data we relied on to inform our analysis, initially for the April 2008 case report, we were primarily relying on two sets of tv test results. One from the EnergyStar and another set of tests that were performed by ECOS Consulting for the CEC

PIER project.

Between those two datasets there's about 245 datapoints. Since then we've gotten additional datapoints from CNET and then of some datasets from Europe. All total, there's about 762 datapoints.

Now, I think it's important to note that all the datasets are different. They all have different distribution technologies between LCD, plasma, rear projection, CRTs. The screen sizes are different between all the different datasets.

For the most part they all have used the internationally accepted IEC test procedure, with the exception of CNET. The manufacturing date and the availability date, there's a difference between all the different data sets probably ranging anywhere from 2005 all the way to models that aren't available on the market right now.

So, all attempts have been made to represent what's available on the market now, and what's available in the near future We're using these datasets plus some of the efficiency developments that are being showcased by many of the major brands and manufacturers to inform the analysis.

The revised proposal is a two-tier standard. We're recommending that tier one is effective January 1, 2011; and tier two is effective January 1, 2013.

It is based on the screen area of the television, and it's separated into non-high-definition televisions and high-definition and full-high-definition tvs. The breakpoint there is 480 native vertical resolution.

With the exception of these proposed levels all the other recommendations in the April case report stand, and continue to make -- to support those recommendations, specifically for using EnergyStar's guidelines for testing and certifying tvs with automatic brightness control and its guidance for testing tvs at factory default settings.

This is a graphical representation of the proposal. It also includes the EnergyStar specification which is finalized and will become effective November 1, 2008. So I'll spend a bit of time on this.

On the vertical axis is maximum on-mode power. And on the horizontal axis is screen area in square inches. The green line is the

EnergyStar line. And you'll see it's kind of a lightning-bolt shape. It starts up, and once it hits about roughly 40 inches, there's a step up in power. And then it's another straight line. And then a greater-than-50-inches, there's another step up.

What we've done for tier one is to take kind of the segment for the smaller screen sizes and have continued that slope all the way up.

For tier two, again this is just for high-definition televisions. For tier two it's a bit advanced and we're recommending that it becomes effective January 1, 2013.

Getting to some market trends, primarily line from a leading market research firm, Display Search. This graph here shows 2006 through 2012, and then unit share is the vertical axis.

The green line here that kind of ramps up and then levels off is Display Search estimates for LCD televisions. They show that it's rapidly growing and they estimate that it will flatten out roughly below 90 percent. Plasma displays are showing a relatively flat market share at roughly 10 percent. CRTs and rear-projection televisions have been declining and their market shares are

minimal. OLEDs are showing opposite trend. Their marketshare is growing, but it's still at a relatively small percentage.

So, therefore, when we were assessing energy savings we primarily looked at LCD and plasma televisions since they represent, you know, close to, by Display Search estimates, you know, roughly 97 percent or more of the market specifically when our proposed standards were taking effect 2011 or beyond.

The screen size projections, this again is from Display Search, for different regions across the world, North American is the top blue line showing from 2006 to 2012. Display Search estimates that the average screen size is roughly 35 inches today.

There's some competing views on this. The figure on the left shows a press release from Sharp. They said that they anticipate the average tv size would be up to 60 inches by 2015. The figure on the right is a press release from LG, and they see strong demand for smaller tvs, particularly for second tvs that would kind of fit in places that CRTs normally would not. But now that they have the smaller form factor that, you

know, you can put these in the kitchen or in a secondary room.

Won't spend a whole lot of time on this graph. This shows television end use growth rate, its various residential end uses. The size of the bubble indicates the relative portion of the end use in a residential application. This is all for the United States based off of EIA 2008 data.

The horizontal axis is kind of the average annual growth rate for the last three years, 2005 to 2008. The vertical axis shows projected growth rate between 2008 and 2030.

So, generally, the further it gets in the upper right-hand quadrant, shows larger growth. I've highlighted -- the red segments here are largely dominated by consumer electronics, televisions is this dot here. You'll notice that lighting is showing a negative growth between 2008 and 2030, largely due to the impacts of the 2007 EISA federal energy bill.

Based off of an analysis of the dataset, we tried to choose televisions that were available in 2007 or later. This is a linear regression of LCDs in blue, and plasma in red. The yellow dotted line is the proposed tier one level.

You'll see the plasmas appears in the red here, generally trending as a much larger band in terms of spread of efficiencies between various models. Of course, plasmas generally tend to be larger size televisions. And the dataset trends show that on average the on mode power is greater than LCDs.

LCDs are shown here in the blue. They tend to be a bit more tighter in terms of the spread of offload power as a given screen area. And, again, this is just for plasma and LCDs that do not meet the tier one standard. So we used this as the basis for calculating energy savings.

This shows the opposite. This shows televisions that qualify for the proposed tier one level. Right now just LCDs are shown. You can see that there's a number of LCDs that fall below the tier one line. And we use this, again, to estimate savings for LCDs in tier one.

Now, I have in bold and red, the figure does not fully reflect the energy efficient tvs, specifically both for LCD and plasma technologies that are currently entering the market and/or being publicly promoted and showcased by several major manufacturers, which is what I want to get

into next.

There's a balance between assessing the dataset that we have, which relies on tvs that were tested. The tvs were available in 2007 or later. But it doesn't reflect some of the tvs that are entering the market now, and some of the more efficient technologies being promoted.

So, this particular section, I want to just briefly touch on just a couple examples of LCDs entering the market now. Philips, the EcoTV. This was awarded the best in show at the January consumer electronics show.

They currently estimate a 90 watt on-mode power, which is roughly 56 percent better than EnergyStar and 50 percent better than the original -- or 50 percent, that should say, better than the tier one Title 20 level.

Philips -- this EcoTV is now available in three modes -- three models in 42 inch televisions. It's also available in 47 inch and 52 inch.

Sony released a 32-inch tv that it says achieves industry's highest energy efficiency in the Japanese market. I believe it's referring to the Top Runner program. They claim that it's 89

watts power consumption, which is roughly 25 percent beyond the tier one level.

The plasmas on the market today, I want to spend some time on this section because it's important for some of the recommendations that we're making. Particularly on screen setting impacts of plasmas.

So, again, I want to reiterate, these are -- the next couple slides will show plasma tvs that are currently available on the market today.

Typically the default screen setting for tvs, also knows as kind of the out-of-the-box setting, is set to have a high light output which generally results in a correspondingly high power consumption.

Informally, sometimes, this mode is referred to as torch mode. Different manufacturers have names for this. They may refer to it as vivid or dynamic. It's generally ideal for a retail shop setting because it needs to compete with the other tvs in the shop. But it's not necessarily calibrated for the optimal home viewing.

So, if you look at specific tvs on the market today, and the difference between kind of

this quote-unquote torch settings and some of the better calibrated settings for home use, the difference is significant. It can range anywhere from 27 to 65 percent for the nine plasma tvs that I'm going to show.

This is one pathway that plasma tvs on the market today can meet tier one. It's a zero dollar hardware cost pathway. The televisions that I want to show are available from all the leading manufacturers, Panasonic, Samsung, LG, Hitachi, Pioneer, Vizio, Insignia. I'm going to show a couple of them in this presentation, and the rest are shown in the appendix slides.

The slides are based off of CNET test results in about 100 or so tests that they've been doing, tv power consumption tests, all the way back to 2006. They started about mid 2007 testing at various screen settings. Right now they call it default-calibrated power save, if there is a specific power save screen setting available on the television.

As I noted before, CNET didn't use the IEC test procedure. Primarily because they started testing before it was finalized. But the results are valuable primarily because it's one of

the few datasets that we can look at to make some assumptions in terms of what tvs are on the market today. The majority of the datasets we don't know the brand name or model number because that has been scrubbed, particularly for the EnergyStar dataset.

So this is useful information. We recognize that the test results haven't been -- the tests haven't been collected using the IEC test method. So what we did is we went to CNET and asked them if we could test some of the same televisions using the IEC test method. And we just did that on Monday, and we confirmed that there is a difference.

For the plasmas, the trends that we're seeing is generally, if anything, the CNET test results overstate power consumption relative to IEC if they were tested in the IEC test procedure. So these results may overstate, which is generally a good assessment in terms of making some assumptions about whether plasma tvs on the market can meet the tier one levels.

As I mentioned, CNET tested about 104 tvs. Fifteen plasmas have been tested in these various screen settings, and that's what we based

the results off of.

Nine of those, 60 percent, would be able to meet the EnergyStar level in a kind of a lower power picture mode, or kind of a better calibrated picture mode. Roughly half, 47 percent, seven out of the 15, would be able to meet the tier one proposed level for Title 20.

I won't spend a whole lot of time on this, but if you want to get the specific details in terms of how we're drawing our conclusions, we have it in table form here.

A quick example. This is a 50-inch plasma from Hitachi. I should note all the slides I've tried to provide links to where I got the data, so folks can double check.

But this is just screen shots from CNET. Shows the product review and then what they've labeled their juice box. At the bottom of each review is the picture setting. So in this particular one you can see on the right there's the onmode watts for default calibrated power mode.

And CNET has indicated -- they test roughly between 60 and 80 televisions per year. They've indicated they're going to start using the

IEC test procedure going forward. So that will be beneficial in terms of customers understanding power consumption of televisions.

I spend a couple -- on this graph so you can kind of get a framework of what we're trying to show here. Again, this is similar to the levels that I showed before. Again, screen area on the horizontal axis, and on-mode power on the vertical axis.

I show the EnergyStar tier one level in the blue line; the yellow dotted line is the Title 20 tier one. In essence, any television that falls below these lines would qualify for those corresponding levels. If it falls above that line, it would not meet that specific level.

So show you the range of how the screen setting impacts on some plasmas. This Hitachi in default mode, the brightest mode or the torch settings, kind of falls just above the EnergyStar level. At a calibrated mode, you know, CNET tried to calibrate this for optimal home viewing. It falls below the EnergyStar level and below the tier one level. At a power-save mode it's significantly less than the tier one mode.

This is a 50-inch plasma from Vizio.

This one doesn't have a power-save mode, so it's just the default and the calibrated. You'll see in the default mode it falls right on the EnergyStar line. In the calibrated mode it falls a fair amount below the tier one line.

And, again, as I mentioned earlier, preliminary results using the IEC test method would probably drop these points even further below the lines.

Panasonic has released a 50-inch television in May of this year, I believe. And this is one of the first televisions that's kind of addressing the screen-settings mode. And I think they can be commended for it.

When you first plug it in, you know, as a typical user if I went out and bought this television I'd plug it in. And the first screen shot that would come on would ask if I'm in a store or home environment.

If I choose a home setting then it puts it in a calibrated mode that's best for home settings. If I choose a store setting it would default to this vivid preset, which would be the brightest mode.

So, here's the difference now. Now that

it has this forced menu, this home settings kind of becomes the default settings. And clearly it's well below the tier one level. Even at the vivid settings it's below the EnergyStar, but doesn't quite meet the tier one level.

So this is, as I mentioned, kind of a zero dollar pathway to meeting tier one levels for plasmas. It's not the only way they can get there, of course, but I just wanted to highlight some of the plasma tvs currently on the market that are starting to do this. As I mentioned earlier there's, I think, six other examples that we show in the appendix.

The LCD efficiency developments, I want to showcase some products from major brands. Largely this is taken from the Display Week 2008 Conference that was held in L.A. back in May of this year. Manufacturers were proudly displaying their latest televisions and promoting the energy efficiency in those.

Here's a couple photos from the conference. And generally, you know, these were prominently displayed right when you walked in. In general, what the manufacturers did was show kind of their conventional television compared to

their more advanced energy efficient television.

And typically they would show the on-mode watts. And it was a dynamic display. So, depending on the content on the screen, this would adjust. They're showing the same settings. So this isn't necessarily indicative of the test results for if it was tested in the IEC test procedure, but it does show you the dramatic advances in energy efficiency.

This is a Samsung 52-inch LCD green tv. You can see the conventional, at this moment in time it was 210 watts compared to 122 watts in the advanced. AUO is a panel maker. They had a 46-inch ecofriendly LCD tv; 252 watts compared to 122 watts. Showing the same content.

Samsung had a 46-inch LCD with three-way dimming. In this particular content it was 184 compared to 48 watts. This is the same tv showing, you know, 184 compared to 109 watts.

So the content certainly does impact the onload power, but the relative difference is significant.

Upper right is a 40-inch LCD using the 3M Vikuity display enhancement. On the left it's showing 195 watts, both -- on the right it's

showing 92 watts. On this particular one the brightness remains the same at 350 nits. This is, again, a 32-inch using the same 3M technology showing 60 watts for a 32-inch panel. CMO had a non-high-definition 31.5-inch LCD. Again, about a 50 percent reduction, 106 watts for the conventional and 52 watts for the more advanced.

Here's another slide of the Vikuity showing kind of what the technology is aiming to do. It's a brightness enhancement film that allows more light out of the LCD and can, in essence, eliminate some of the backlights, and subsequently reduce the power supply power.

This is a press release from AUO promoting the ecofriendly LCD tv panel. Due to time I won't get into all the specifics on this, but you can go back and read this.

Some folks may not recognize some of these names. AUO is a panel maker. You know, some of their top customers are a bit more familiar to the average person out there. You know, they sell the Sony, Samsung, Philips, LG.

CMO was highlighted. Samsungs. These are definitely some of the major panel makers out there and the major brands are buying panels from

these folks.

So I wanted to show roughly how these televisions would compare to our proposed tier one and tier two levels. These next generation LCDs exceed the tier one level by roughly 28 to 58 percent. So, in essence, they're more efficient. And they exceed our tier two levels by 8 to 33 percent.

So, again, a similar graphic with the EnergyStar level, the tier one level and the tier two level. The small dots are LCD tvs. You see there's a range of them that fall above and below the tier one level, and some below the tier two level. These are all tvs on the market today.

These large green dots all represent the televisions that I just showed. So, again, roughly anywhere from 28 -- I'm sorry, for the 28 to 58 percent improvements beyond tier one, and anywhere from about 8 to 30 percent improvements beyond tier two.

The next section I want to get into some of the showcase products and efficiency developments on the plasma side. Again, we focused primarily on LCD and plasma, as I mentioned earlier, because they definitely are the

dominant players with LCD approaching 90 percent market share, and plasma stands steady around 10 percent.

So then the slides I want to show in particular are the double efficiency technology, also known as the neo PDP, being promoted by Panasonic, the leading plasma brand.

Shows similar comparisons of how it would match up with EnergyStar and the proposed Title 20 levels. And then some additional plasma efficiency developments.

In the January consumer electronics show Panasonic introduced their next generation plasma displays. In this particular press release it says, the 42-inch prototype has twice the luminance efficiency and provides the same brightness as the existing 42-inch -- full high-definition plasma display panel while cutting the power consumption by half.

This is available on the Panasonic website. This is a reference year to 2004. They said, you know, in roughly 2007 they've reduced it almost to a half. And eventually the reduction will reach about one-fourth.

Again, this is from the Panasonic

website. The footnote says these are expected to be available after the new plasma display panel factory is completed in 2009.

So, we did an assessment assuming that the manufacturer claim is correct, that they can reduce the power by 50 percent compared to their current models, we plotted that. So, again, since CNET is really the only dataset that we have that we can particularly pick out a specific brand and model number, we picked out the three 42-inch plasmas that have been tested from Panasonic. They all fall above the EnergyStar and tier one lines today.

If you plot a 50 percent power reduction, as they claim, all of them would fall below the tier one level easily.

MR. FERNSTROM: Alex, this is Gary from PG&E. Just a clarification question on that last slide.

That would mean that in addition to this inherent energy savings, if these sets were factory default to home environment, rather than store environment, the power demand would be even lower?

MR. CHASE: That's my understanding. If

a representative from Panasonic wants to clarify that, that'd be helpful.

There's been certain claims, I'm trying to get a better understanding in terms of what the true reference is. They've made some claims that it's 50 percent beyond current models. So, presuming it's 50 percent, from 2007, another slide I'll show that, you know, 50 percent improvement from 2008 models.

So the combination of this technology that they're promoting, with the more calibrated screen settings, you're correct that it probably would drop these results even lower.

This is, you know, one of the points that I just showed here, you'll see that, presuming it can get a 50 percent improvement compared to models on the market today. And again, this is potentially over-stated, because as I mentioned earlier, these are CNET test results. And the trend is it's a little bit higher than what you would get using the IEC test procedure.

So they're basically sitting right on the tier two level And this is four and a half years before the proposed effective date for tier two of January 1, 2013. So we thought carefully

about this, and we recognized the great improvements of efficiency, but wanted to, you know, give adequate time to industry to meet this level. Which is why we chose 4.5 years from now.

This is the panasonic television being displayed about two months ago during the CHI-Tech (phonetic) 2008, which is the international high tech expo in China.

Similar to some of the previous photos I showed, although the only thing you can read is the 42-inch here. But the conventional on the right, and the more efficient model on the left.

The CNET released a story saying, you know, you may have read about Panasonic's Neo-PDP plasma technology, may even have caught a glimpse of the prototypes at January's consumer electronics show in Las Vegas. Well, we now have news that they could be coming to an electronics store near you as early as June 2009, according to a spokesperson at the recent Panasonic Tokyo/Osaka tour that CNET-Asia was invited to.

Again, if anyone's from Panasonic here that wants to correct that, that would be helpful. But again, indications are that these new efficient panels will be available basically next

year. Several years before tier two would become effective, as we're recommending.

This is a slide from a President of Panasonic, given in February 2006, highlighting the same technologies I just showed. A couple things I just want to mention is they're promoting that this, you know, they're using new materials, new processes, new design and new drive. And, you know, they're claiming that it results in energy savings, higher image quality, ultra-large screen, thin profile and lower cost.

Pioneer and Panasonic just merged a couple months ago. And in this particular article the partners hope to create, by 2010, a large-screen, PDP tv whose power consumption will be slashed by two-thirds, compared to PDP's tvs of 2007. While infinitely increasing contrast and reducing thickness to less than an inch.

So, again, this is, you know, some press releases say 50 percent beyond 2007. This particular one says slashed by two-thirds compared to 2007. So, it's not complete clear what the baseline is, but it's pretty evident that they have some pretty commendable efficiency developments that they're showcasing.

There's more slides in the appendix showing efficiency developments across the industry, as well, if you're interested in seeing those.

So, how do retailers fit into this? You know, our sense, looking at the trends, is some will use their purchasing power to move the market towards higher efficiency. And others will be incentivized to sell these energy efficient televisions by participating in incentive programs, which will be discussed in the next presentation by PG&E Program Manager Tim Michel.

One example is WalMart. This is taken from the CEO of WalMart, Lee Scott, in his address to the company in early 2008. They've announced some pretty dramatic goals in terms of where they want their suppliers to be by 2010.

One of those they specifically mentioned that they want by 2010, the flat panel televisions will be 30 percent more efficient. So, again, some of the major retailers are pulling the market this way, as well, which will kind of pave the way, so to speak, for industry to meet these proposed tier one and tier two levels.

Stepping back to provide some kind of

higher level motivation in regards to the California efficiency goals, and the greenhouse reduction goals. Wanted to provide some context of where this television standard could help the State of California to meet those goals.

As a lot of folks know, and, of course, the Commissioners know, AB-32 established that California would need to be at 1990 levels by 2020 in terms of emission levels. The electricity sector is going to be responsible for about a quarter of those goals.

Interesting fact that I pulled out of a recent report, on a per capita basis this would basically mean we're generally around 14 tons of carbon dioxide per person right now. To meet this goal we'd need to get down to about 10 tons per person by 2020. Fairly ambitious.

Again, a lot of folks know, CARB is responsible, the California Air Resources Board is responsible for developing a plan of how California's going to get to AB-32 goals. This was released in June 2008. It's the discussion draft. It's called The Climate Change Draft Scoping Plan, pursuant to AB-32.

In the executive summary they list some

of the key elements of the plan to reach 1990 levels by 2020. It's notable that the first bullet point is the expansion and strengthening of existing energy efficiency programs and building and appliance standards.

Getting a bit more detailed, they lay out on a sector-by-sector basis what the reduction goals are. Total across California there needs to be 169 million metric tons of CO2 equivalent by 2020.

26.4 or 15.2 percent of that total goal is roughly slated from energy efficiency, including appliance standards. Doing some potential statewide energy savings from this recommended tier 1 and tier 2 levels. If tier 1 and tier 2 become effective, there's a potential to get about 3.5 million metric tons of CO2 equivalent reduction.

This 3.5 is roughly 2 percent of the total AB-32 goal, and about 13 percent of the energy efficiency component of that total.

Some folks have seen this slide, as well. This is a study conducted by McKinsey in 2007. This is particular for the U.S., but it, you know, certainly applies to California.

They did an assessment of all different strategies to reduce greenhouse gases. And they did it based off of total potential in terms of CO2 reductions. And then the actual cost to achieve that.

Anything that falls below the horizontal line they indicate could be achieved at a negative cost to society. Residential electronics and commercial electronics are notably on the very far left there. So, McKinsey is recognizing this as one of the most cost effective pathways to greenhouse gas reductions.

The California long-term energy efficiency strategic plan which was finalized just recently in July, they lay out a vision for codes and standards providing a broad range of aggressive and continually improving energy codes and standards.

They lay out some goals to achieve that. One of the near-term goals in 2009 through '11 specifically is to expand Title 20 to cover additional plug loads such as copy machines, printers, battery chargers and televisions. So, again, this falls in line with some of the statewide goals here.

Some of the broader goals. They have a three-part vision, all cost effective, reliable and feasible energy efficiency measures and actions are implemented in integrated systems, the whole-building approach.

Strategies, programs, measures, institutional structures must provide long-term energy savings and energy efficiency will generate significant reductions in greenhouse gases.

We feel the television standard addresses all three of these strategic visions laid out by the state. There's --

PRESIDING MEMBER PFANNENSTIEL: May I just check something?

MR. CHASE: Yes.

PRESIDING MEMBER PFANNENSTIEL: On this slide, before you say the energy efficiency strategic plan is final. I thought it was just a draft; I thought it came out in draft yesterday. Or a couple days ago.

MR. CHASE: You're probably correct. On the website it says final.

PRESIDING MEMBER PFANNENSTIEL: Oh, okay, thank you.

MR. CHASE: Part of that plan, there's

four big bold initiatives. Two of them, I think, tie into this proposed tv standard. One is that all new residential construction in California will be zero net energy by 2020. And all new commercial construction in California will be zero net energy by 2030.

A majority of these savings will be in residential applications, but the trend is, as most people probably know, is more and more commercial applications, bars, hotels, are buying televisions. Usually they're the larger size televisions, and they're operated for longer.

Just some quick conclusions. Televisions represent prominent and growing source of end-use energy consumption. Current growth rates indicate that televisions are on a trajectory to become a dominant, and in some cases, the leading residential end use.

Addressing this load growth with performance standards is a necessary approach for California to achieve its ambitious energy efficiency and greenhouse goals.

Tvs on the market today can meet and exceed the proposed tier one level. This includes tvs at various sizes, functionality and technology

types.

Adopting a two-tier standard enables California to take advantages of the advanced technologies entering the market and currently being promoted, as I showed.

These technologies can meet or exceed tier two levels today. And, as I mentioned earlier, industry would have about 4.5 years to prepare for those effective dates in 2013.

So, in sum, by implementing this two-tier standard, California will certainly lead the nation and the world in advancing market transformation towards the most efficient televisions.

And that concludes my presentation.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Alex. Excellent. Questions?

ASSOCIATE MEMBER ROSENFELD: Excellent presentation. I just wanted to make a philosophical comment. These are very encouraging numbers; the fact that power uses are coming down.

In 1974 when people first started thinking about energy efficiency, a 15-foot refrigerator used 200 watts. The standard that came into effect in the late '90s was 18 cubic

feet and 40 watts. So it came down to a quarter. Let's sort of hope this is a challenge to the manufacturers that we can see the same sort of wonderful progress in tvs.

But it's interesting now we're discussing a field in which refrigerators are almost insignificant compared to tvs.

PRESIDING MEMBER PFANNENSTIEL: Tim.

MR. TUTT: Yeah, Alex, I just had a couple of questions. First, related to the whole concept of changing settings, it's my understanding, can you confirm, that the energy -- the IEC test procedure requires televisions to be tested in the default setting?

MR. CHASE: That's correct. .

MR. TUTT: And who determines the default setting?

MR. CHASE: If anyone in the room or on the phone can correct me, but my understanding is when a television is taken out of the box, that's the default settings.

MR. TUTT: So it's determined by --

MR. CHASE: If the lab technician is using a television that the screen settings have already been adjusted, then they need to put it

into what they determine as most likely the default screen settings.

MR. TUTT: So the --

MR. CHASE: Looks like a gentleman here had a more specific answer on that.

MR. SHARP: My name's Mark Sharp with Panasonic. My understanding is that the IEC test procedure allows you to use, as a default setting, the lower consumptive mode. It doesn't require you to use that, but in order to meet EnergyStar, as a practical matter most manufacturers will opt to use the lower consumptive mode in order to help them achieve that level.

MR. TUTT: Okay. I guess my other question there was how many different settings are there typically. And you mentioned in one slide, you know, calibrated at home.

Is there a bar setting? Or does it vary by manufacturer?

MR. CHASE: It varies by manufacturer. You know, some folks have movie settings, vivid, home, store, standard. I imagine some of the folks from industry here could probably give a better answer in terms of how many different settings there are, and how those are determined.

MR. TUTT: And presumably there is a lowest setting for each television that might correspond to home, or might correspond to power save. Is it PG&E's proposal that the default should be established at that lowest setting? Or is it some other version of the default?

MR. CHASE: Well, you know, we highlighted a couple plasmas on the market today that could meet the tier one level by just simply adjusting those screen settings. We're not saying that's the only pathway that they need to achieve that.

The research, in my understanding, is that in the dynamic or the vivid or the torch settings it might be ideal for retail, but it's generally not ideal for a home setting.

So, I think generally what we would like to see as one of the things that comes out of this is that kind of industry follows Panasonic's lead where when you plug it in it asks you if you're in a home or store environment. And then if you choose home, it puts it in kind of an optimal home requirement. It turns out that it's generally a lower power setting and can achieve the tier one levels.

MR. TUTT: You talked about the settings issue in relation to plasma tvs. Is there a similar kind of setting structure for LCDs, or not?

MR. CHASE: There is. Good point. Based off of the analysis that I've seen is screen settings don't impact LCDs as much as plasmas. Although it certainly could be a pathway, as well, for LCDs to get there.

ASSOCIATE MEMBER ROSENFELD: Can you amplify that? I mean, as much as, doesn't quite tell you whether they're very insensitive, or half or -- I just don't have a clue what you're --

MR. CHASE: Sure. This is a slide that shows on the left-hand column there's clusters, one, two, three, four, five, six, seven. These are all different plasma televisions. These are LCD televisions, and these are rear-projection televisions, tested at factory default, kind of a low power factory preset. And ISF calibrated, that's Imaging Science Foundation, which generally is the experts in calibrating televisions.

Generally see, I believe, with plasmas we were seeing spreads of anywhere from 28 to 65 percent between the higher power mode and the

lower power mode, based off of CNET test results.

For LCDs I think generally in the range of zero to 10 percent. And I can get more specific figures for you.

We didn't highlight the screen setting --

PRESIDING MEMBER PFANNENSTIEL: Excuse me, Noah, did you have a comment on that?

MR. HOROWITZ: Why don't you finish alex. I just wanted to talk about the settings. I've got the EnergyStar spec that talks about that.

PRESIDING MEMBER PFANNENSTIEL: Okay, Alex, why don't you --

MR. CHASE: We didn't highlight the impacts of screen settings on LCDs in this particular presentation. Generally because it's less of an issue in terms of a pathway to achieve to tier one, since a large majority of tvs already in the highest default settings could meet tier one levels.

MR. TUTT: So, Alex, before we get to Noah, it appears on this slide that the changes on most power consumption from changing settings for plasmas aren't as dramatic as the ones you showed

earlier. Is there an explanation for that?

MR. CHASE: This is, again it's model-specific. So I think a large part is these are different plasmas than what I showed earlier.

PRESIDING MEMBER PFANNENSTIEL: Thank you. Noah.

MR. HOROWITZ: Noah Horowitz with NRDC. Real quick, Tim, I think you're right on. The settings is a big deal. The IEC gives some flexibility to the tester.

EnergyStar built from IEC, and I'll read two parts real quickly. It says, tests in measuring the power consumption of the model should be tested as shipped from the factory. TV models that do not make use of a forced menu at startup and are shipped in retail must be tested in the retail mode.

So that would give you a much higher number than the IEC might. So, I encourage people to look at what EnergyStar did; take a look at that and modify it as necessary.

They also say for products shipped with a forced menu where the customer must select, blah, blah, blah, the testing must be conducted in a standard mode, and a standard well enough

defined. These are the issues offline I think we should all take a hard look at.

ASSOCIATE MEMBER ROSENFELD: I'm sorry, Noah, what does standard mean to you?

MR. HOROWITZ: That's the question. So--

THE OPERATOR: This is the operator. If anyone has any questions or comments, please press star one. Star one for questions or comments.

PRESIDING MEMBER PFANNENSTIEL: Go ahead, Noah, were you finished?

MR. HOROWITZ: So we need to dig into this a little more deeply. Because even if Alex's numbers are off by a little bit, the settings makes a huge difference.

PRESIDING MEMBER PFANNENSTIEL: Thank you very much.

MR. TUTT: But, Noah, it sounded like in what you read that unless there was that forced menu at startup that you were forced to test at the retail mode.

MR. HOROWITZ: The out-of-the-box or retail, yes.

MR. TUTT: Okay.

MR. HOROWITZ: Which tend to be the

same.

MR. TUTT: I had one last question for Alex. You can see in your slides and where you derived the tier one standard, based on the EnergyStar IEC specification. How did you derive the tier two standard?

MR. CHASE: Pull up a slide here. If you look at the equations you'll notice that the tier two level is actually, it's tied to the EnergyStar tier one for non-high-definition televisions, which becomes effective in 2008.

And I thought it would be nice to anchor it against that at least for consistency of numbers.

But, in general, looking at the LCDs that I highlighted that were showed at the Display Week Conference in L.A., we said, okay, industry is showing efficiencies in this range. So we know that multiple panel makers would be able to achieve that based on the technology that they're showing today.

So we tried to make sure that the line fell above those. And it generally skirts above the least efficient of the advanced LCD televisions. And it obviously gives them some

room.

For the plasmas, you'll see that it's wanted to pick a point where presuming the 50 percent power reduction claims of Panasonic, the leading plasma maker, were correct, would be able to meet today. Presuming, of course, that they have four and a half years to kind of advance and bring that to the market.

PRESIDING MEMBER PFANNENSTIEL: Thank you very much. Other questions? Okay. Thank you, Alex.

I'm sorry, a question on the phone?

THE OPERATOR: We do have a question from the phone line.

PRESIDING MEMBER PFANNENSTIEL: Go ahead.

THE OPERATOR: Jon Fairhurst, your line is open.

MR. FAIRHURST: Yeah, actually this is Jon Fairhurst; I'm from DR Labs of America (phonetic) and I'm also the IEC Project Leader for the TV power standard.

And I just wanted to confirm that both the IEC standard and the EnergyStar specification are very consistent. Rather than giving

flexibility to the tester, which was the term that Noah had used, it really gives some flexibility to the manufacturers to provide both a retail and home setting. But it's very specific for the tester so that you will get the same results while testing -- flexibility to the tester.

It specifies very clearly that if there's a forced menu to select standard mode or home mode or the first one on the list. And that's consistent with EnergyStar.

So I would expect that the EnergyStar televisions that we're going to see, and that, by the way, goes into effect on November 1st, many of these tvs will be using this forced menu in startup -- by consumers to choose the more effective settings.

And this is really based on the research that was done that found that televisions in homes remain in the setting as they were shipped. And so something like over 80 percent of the televisions at retail -- or excuse me, at repair centers were found to not have been adjusted.

So, once the consumer selects home in startup, then there's a good chance that that energy savings will exist pretty much for the life

of the television.

PRESIDING MEMBER PFANNENSTIEL: Thank you very much.

MR. FAIRHURST: You're welcome.

PRESIDING MEMBER PFANNENSTIEL: Other questions? All right.

THE OPERATOR: There are no more audio questions.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Alex.

Tim Michel from PG&E.

MR. MICHEL: Good afternoon, everyone. Thank you for having me here. As you heard, my name is Tim Michel; I'm a Senior Program Manager with Pacific Gas and Electric Company, representing our customer energy efficiency mass market group.

My specific role is I'm in charge of electronics at PG&E. So, a major component of what I'm going to be looking at is televisions, along with EnergyStar 4.0 computers, monitors, and we see a variety of other categories folding in under this umbrella category as we move forward in the future.

Before I jump into the program design, I

want to recognize and thank a few instrumental parties that have helped us get to where we are today. And first and foremost that's primarily my partners with the other major utilities in California.

The effort that we're about to embark upon this November is going to be an effort where we're combining efforts between Southern California Edison Company, San Diego Gas and Electric Company, and just recently the Sacramento Municipal Utility District.

So, we, as a group of major California utilities, will be among the first in this country to embark and initiate and launch a tv program with an advanced specification on televisions.

I'd also like to recognize Hewan Tomlinson with the national EnergyStar program for helping our group of utilities better understand the markets that we're about to impact; help us with branding issues, as well as program design.

I'd like to also recognize Rebecca Foster and Margie Lynch with the Consortium for Energy Efficiency for their efforts in establishing and hopefully finalizing within the next 30 days, the advanced specification process

for televisions that will serve as a platform for many other utilities around this country and Canada, to adopt and implement their own programs from.

Finally, I'd like to recognize Noah Horowitz who we met with a few times, who's been instrumental in helping us get a better understanding of where we wanted to set our program design. Get his feedback, that has been very helpful in terms of making and fine tuning adjustments. So, thank you, Noah.

As I said, we're looking to and anticipate that we will launch a program this November 1st. We anticipate the program will be in place through the end of 2011, or essentially on the IOU side of the equation, our next regulatory cycle.

This is a program that will feature incentives that go to the retailer, as opposed to a customer or manufacturer. We've chosen the retailer as the target for our incentives because we believe that's where the money is going to be best used to make a change in the energy efficient television market.

Essentially a few other reasons why it

is that. The dollar incentive that we can apply on a per-unit basis is so small that the impact on the customer would be minimal. Also, it would have, we would have significant issues putting forward a nominal dollar fee on a per-unit basis for the customer in terms of getting redemptions to come back, which are our vehicle to claim savings.

So we think that focusing a program at the retailer is really the right choice. And as you can see, we've targeted a number of retailers and there's more than just this list. And I can tell you I've met with all of these folks in the last 90 days.

And there's significant interest by the majority of these players on the screen, and others that you don't see, to support this type of program.

Our biggest issue up to this point is where do we set our incentive level. And just within the past couple weeks we have set the mark for the program at 15 percent above the Energy -- or better than the EnergyStar standard. I sometimes forget if you say above or below. But more efficient than the EnergyStar standard.

So, essentially when you looked at Alex's lines and you saw EnergyStar had the lightning bolt, ours will be a parallel lighting bolt 15 percent more efficient than that standard.

Beyond just from an energy savings standpoint we think that's the right way to go. Using EnergyStar as a platform provides for us some significant branding efforts that can be adopted, not just at the retail side of the equation, but also the manufacturing side of the equation.

And we think it's something -- EnergyStar has significant consumer, I was going to say satisfaction, but recognition. So we think that's an important platform for us to launch the programs with and synergize with EnergyStar at that level.

I think it's also important to note that as we move forward over the course of this program, because technology changed so swiftly within this particular category, that this is something that, as a group of utilities in California, we will continually be looking at.

So, you know, what we don't want to be doing is offering incentives on half the tvs that

are sold through retail.

What we do want is we want to look at a more finite group of those. And that's one of the reasons why we go beyond the EnergyStar standard. Because it represents a smaller market share of the overall tv market.

But because of the technology changes occur so swiftly, it's something that we will need to look at like every three, four, six months out, to say are we at that kind of, you know, optimal band, you know. I think Noah would use the term best in class, within EnergyStar.

And that means that I don't think it's a matter of if; I just think it's a matter of when, over the course of the program, we make adjustments to try to stay within that best of class band. And I would say that's most likely around 20 percent of the qualifying tvs, plus or minus a few percent.

We think, as a group of utilities, we also think that this -- please keep in mind, this is a voluntary program -- as a group of utilities we're going to be putting up major resources to make this program successful. We want to have an impact in this particular area, and it's one of

the prime focus for all of our collective utilities that will be participating in this program.

We think that this voluntary program does one other important thing. And that really helps kind of spur the innovation of the market to synergize with the standard changes that the Energy Commission will be thinking about deploying.

We think, as we put forward voluntary programs, retailers adopt these and stock, promote and sell these products, that it will bring on more innovation in terms of energy efficiency within the tv category. And we're excited about what we think we can accomplish in this particular area.

So, California utilities, as we've embarked on this process to engage retailers to discuss what we want to do at the end of the year, we really think that we're well positioned to collaborate not just with the national EnergyStar groups or the CEAs, but have stronger collaboration with folks like the Consumer Electronics Association.

In fact, a couple months ago, see Bill

Belt with the group here, we reached out to Bill and his organization to discuss what we're doing. And we hope to have ongoing dialogue and to garner the support of their important group and their constituency. Because I think without them we're not going to be as successful as we otherwise could. So it's important to involve them in this equation.

Because this program is a retail- or incentive-focused program, we can't leave out maybe the most important part of this equation, that we're all trying to impact. Either through voluntary programs or through the standards that you're going to consider for adoption. And that's the customer.

The customer either being the residential or business customer that would be purchasing these televisions, that would qualify in our program.

So, what we're going to be doing, as a group of utilities, and we're going to use our resources to help achieve this goal, is that we think customer education is a prime component of what we need to be looking at here.

So, we want to make the customers in

both segments, aware of these more efficient televisions; promote it to the point where we're getting them to go into the stores and ask for these particular products from the retailers.

We think in the absence of doing that we're not really closing the loop on the matter. Because, you know, in the end we really want the customers to make the right type of purchase; the purchase that we will provide the retailer the incentive on. So education is going to be key in this particular area.

We also think that the education goes beyond that of the customer, and that the education needs to go actually to the retailer, themselves. And promote what this program is, what it's trying to accomplish for the salespeople that would be selling these products. And we recognize that there's high turnover in many of the retailers in these particular areas. And that's why our efforts will be ongoing at the retail front through the course of the program.

As the last bullet says, you know, the incentives will be available for any television regardless of its particular category or classification within the tv category. So DLP,

rear-project or LCD, plasma, if any of those technologies can get to that 15 percent mark they will qualify -- the retailer will qualify for the incentives that they sell through their stores.

And just to sum it up, -- I'm sorry, is there a question? No. Okay.

We think -- we don't think, we're pretty confident that what we're setting up here in California is going to serve as a model for other utilities in the country.

On a weekly basis I get multiple calls from utilities, not just within the United States, but also Canada, wanting to know what we're setting up, why we're setting it up in the fashion that we're doing, so that they can either band with, you know, come into our program, or set up a program that will synergize along with the same efforts that we're putting forward.

So, we're really excited about what's going to happen here. In fact, EnergyStar is anticipating in September that they're going to have a national workshop around electronics where we're going to be working with other major utilities in the United States and Canada around this area.

What is the program design; why did it get set up this particular way; how do we hope to impact it; what are the engineering calculations connected up with this program?

How are you going to market and advertise this program; how are you going to engage the education components of your program; how are you working with retailers; how are you working with industry to make this thing successful?

We think that that is really important for this particular reason, that if you think about it, if you're a major national retailer and you're selling appliances, there are hundreds and hundreds of utility programs for appliances out there.

But there aren't too many synergized efforts that that retailer can get, you know, stand behind and promote on a national scale. Because we all administer the program differently. There's different rules, different requirements, different rebate amounts.

So, it's very hard for national players to get behind those very fragmented efforts that go on around the country.

So we're really hoping to set up a platform that will allow for more significant and greater engagement for national players in the electronics game.

So, to accomplish that our goal is to work with groups like NRDC, the national EnergyStar program, the Consortium for Energy Efficiency, CEA and others so that we can really have -- so that it isn't a fantasy kind of thing. We want to see a harmonized, synergized program so that we can develop the scale and commonality necessary to really drive the results that we think can be achieved through this particular category of programs.

So, really, for me the bottomline is I think California is really well positioned to do a couple of important things to transform the tv marketplace.

One, through the use of utility incentives and a voluntary program will help, you know, essentially prime the pump for future standards that could take hold here in California. And we think both the customer and retailer education components are equally important in this process to really achieve the results that can be

accomplished through this type of effort.

So, I appreciate everybody's time, and I'm happy to take any questions.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Tim. Are there questions?

ASSOCIATE MEMBER ROSENFELD: Yeah. What sort of size of your rebate? Is it going to be 20 percent of the sales price or --

MR. MICHEL: No.

(Laughter.)

MR. MICHEL: Industry would love that. No, the reason that we're going at the retail level is that the dollar value is nominal. We haven't set the amount. It will be somewhere in the $10 to $20 per-qualifying-unit range.

And that's why we're not going to the customer to do this, because rebate breakage levels or the redemptions at that value would be in the 90-plus percent category, meaning 90 percent of the customers might do what we want them to do, but they won't submit the rebate application for that low of a dollar value.

PRESIDING MEMBER PFANNENSTIEL: Tim.

MR. TUTT: Yes. You mentioned that you have to look at this on a continual basis, and

also that the anticipated program dates last through 2011.

One reason you might want to look at this is if we, presuming we did adopt a tier one standard effective at the beginning of 2011, that might affect your rebate program in that year.

MR. MICHEL: Without a question, it would. As you may have imagined, I've had several hours of discussions with Alex Chase about this particular issue.

And, by the way, we should thank Alex and Ted Pope from Energy Solutions for their efforts here, because they've been working both with Pat Eilert's codes and standards group, as well as our mass market group for the voluntary program. And they've put in way more hours than you can imagine into this process.

So, for us, if California adopts a standard that takes hold in 2011, we would have to look at moving our program beyond that standard. We couldn't offer it at the same standard because that's what has to happen in California anyway.

So we view the role of the voluntary incentives programs to push beyond whatever standards are in place, either really here in

California, or on a national basis through the EnergyStar program.

PRESIDING MEMBER PFANNENSTIEL: Thank you very much.

MR. MICHEL: Thank you.

PRESIDING MEMBER PFANNENSTIEL: Noah.

MR. HOROWITZ: I'm going to sit down here if that's okay. Is this on?

PRESIDING MEMBER PFANNENSTIEL: If the green light -- should be a green light illuminated.

MR. HOROWITZ: Okay, there we go.

Good afternoon; I'm Noah Horowitz and I'm a Senior Scientist with NRDC, the Natural Resources Defense Council. I want to acknowledge all the hard and excellent work by PG&E and their consultant, Energy Solutions; and for the opportunity to address everybody today, both from the Commission and many of the manufacturers and other stakeholders in the room.

We've been looking at tvs at NRDC probably as long as anyone has. I travel a lot and I kept seeing these flat screen tvs appearing in airports and hotels. And how much power do these use? It's a better tv; it's a bigger tv.

And some of our initial data helped result where we are today.

I'm pleased to say the world is changing. We took our first report to the consumer electronics show. I walked around to every booth with a two-page summary and said, can you tell me how much power your tv uses. Nobody could tell me. A few of them looked at the back of the tv and said, oh, it's 400 watts or something. That was the UL rating of how much power can this tv use without exploding.

(Laughter.)

MR. HOROWITZ: Now, where we are today is Philips proudly announced they were the winner of a competition; they had the most efficient tv at the show. And we're seeing all these major panel producers and tv makers touting their tv as more efficient than the next. And we're seeing savings, 10, 20, 50 percent and beyond.

So I think now we're ready to start to begin to talk about standards, the industry is catching up.

Mainly I'm here to support the proposal that's been put forward by PG&E that does it in a two-step process. The only difference we have,

and we think it's a respectful one, is to consider moving up the timelines. And I'll share some alternates.

I'm going to focus on the big picture, and I'm going to give a couple of different options. And whenever I say picture it's not meant as a pun, but we can't help ourselves here.

Perspective-wise, the savings that Alex showed, once we have a full turnover of the fleet of tvs, we're looking at 600 megawatts. That's a decent sized power plant the way we look at things.

And I'm also very active, as many of you are, in the building code, the energy code, which is Title 24 in California. We worked awfully hard, as they did a great job at the CEC and the builders. We're looking at first-year savings of 120 megawatts from the building code simply by adopting a sufficiently stringent standard for tvs. Look at the equivalent of five years of savings that we get from the building code.

So this is a really big deal, and I encourage everybody to be open minded and let's make sure we get this right.

So, let me go to my formal comments

here. And, Melinda, if you can keep track with me. Next slide, please. One after that.

Okay, tvs from a really high level, it's one of the biggest remaining unregulated electricity uses in the home. As Commissioner Rosenfeld aptly pointed out, if you have a 200, 300 watt tv that's on five-plus hours a day, and the Nielsen data comes in at about seven hours per day, believe it or not, for the main tv in the home, you're easily exceeding today's new refrigerators that peg in at around 450 kWh per year.

And why is tv energy use growing? The screens are getting bigger every year. The 30 inch was the sweet spot, now 42, 47 inches are the sweet spot. And it continues to grow.

They're on more hours per day. You have roughly 100 stations available for you if you have a pay tv. People are watching movies in the form of DVDs or downloaded movies. They're playing video games. So the hours people are in front of tv is growing. We won't talk societally whether that's a good thing. That's not our job today.

There's also the move to high definition tv which results in slightly greater energy use,

as well.

As we've heard, EnergyStar has set their first spec. Their approach, which often makes sense, is they walk before they run. Their spec had a glaring hole in that it didn't include on-mode until this most recent version. And they intend to ratchet it up considerably in a tier two that would go into effect in 2010. So let's keep track of that.

We're looking at EnergyStar today, but the EnergyStar of the future will likely be much more stringent.

Very big picture, why do we care about tvs at NRDC. It's roughly 1 percent of national electricity use, just for this one widget.

There's been a whole lot of interest and study on datacenters. If you add up all the servers that are the backbones, the Googles and the internet and your email and your office intranets, that's a little more than 1 percent, as well. So tvs are a really big deal and we need to get our arms around it.

When are we ready for a standard? I think we would all agree there are four key elements. We need a reliable test method. We

didn't have that till earlier in the year, so it would be premature to have this discussion. I put a checkmark there.

We didn't have data for a new test method due to the EnergyStar process and other things. We have a wide amount of data, both from the U.S., Europe and other sources. Even the CNETs of the world are starting to measure tv energy use.

We also need to see a spread between the best- and worst-performing models. And what we're here advocating today is we should be setting floors that will increase to remove the least efficient models from the market.

You need evidence that you can meet that, either with models that are on the market today, or will be introduced relatively soon. And Alex blew me away with manufacturer after manufacturer's plans to bring models that are 25, 50 percent more energy savings. And that's just today, many years before these standards would go into effect.

ASSOCIATE MEMBER ROSENFELD: In fact, many years before we even discuss labels where the consumer knows that the tv draws power.

MR. HOROWITZ: Exactly. I'll be talking about labeling in a minute, so, thank you.

So, we're talking about on or active mode, depending what term you prefer. This is an old slide I pulled up. So, yes, it's true the tv is probably off or in standby mode the majority of the time, call it 18, 20 hours or so a day. And it's only drawing a couple of watts, and good for everybody for agreeing to that standby standard.

But during those five hours a day it's drawing so much more power than cumulatively this is 85, 90 percent of the annual energy use. And we're not addressing that yet, and we need to, as a state.

Next slide, please. So, real quick, on test methods. There is a DOE test method on the books. It's 30 years old. It uses static black-and-white test patterns that don't sufficiently stress today's digital tvs.

The industry, to their credit, recognized the shortfall with a little prodding. And they worked through the international standard setting body, IEC. And Jon Fairhurst from Sharp, who's on the phone, did an amazing job and in record speed. We now have a test method that the

whole industry has embraced. And it uses a standardized set of clips to replicate the average brightness levels of tv images.

That doesn't have the IEC pedigree. It's a big international institution. It's passed the technical committee, and we understand it's just a question of several weeks, you know, well into the fall or so we should have the final version. That may slip a few weeks based on some of the bureaucracy there. But, consider that done.

EnergyStar has relied on this IEC test method. The Europeans are relying on it. The Australians, and the Chinese might, as well. So we have an international industry consensus test method, and that's essential.

Then we have a whole bunch of data and an increasingly growing dataset based on that test method.

The EnergyStar dataset, a couple of things I want to point out is most of the test data there was using the settings that were retail. So, it's the higher end, and these tvs are capable of drawing a whole lot less power. So that's kind of a worst case dataset. And it

doesn't reflect any of the models that Alex has been talking about.

It's part of a longer conversation, but CEA did a great job polling their members and submitting the data to EnergyStar for the IEC test method. But for reasons unbeknownst to me they refused to include the make and model number. So we have a hard time distinguishing our basecase to where we're moving if this is a representative dataset. So, we'll talk, in a minute, about CEA's offer to provide data which we think is a great idea.

Let's talk about the data spread. There is a wide spread within the plasma-versus-plasma, within LCDs and between the different families of technology.

Go to the next slide. Yellow is what you and I would call an LCD. Green is the plasma. And interestingly enough we haven't spoken bout, but we shouldn't lose sight of, DLPs -- what's the acronym DLP -- digital light processing. Yes. And some rear-projections.

The red is that stairstep line that EnergyStar has. And here's the plotted data. And it's interesting to note, 42 inches, which is a

very common dataset, we've got a plasma that's doing better than some LCDs. This is why we need technology-neutral, performance-based standards. Let all these different technologies fight it out to win the battle here.

Also, there's been a lot of emphasis on, hey, you're going to kill the plasma industry. Well, we heard from Alex that simply by changing the settings they could dramatically reduce their energy use. And sometimes they're the clear winner.

Plasmas are roughly 10-plus percent of the market. Those really low levels that people haven't focused upon, those represent almost a similar sized marketshare. To be fair, though, those are fatter models that you can't hang up on the wall. So it's not apples-and-apples.

ASSOCIATE MEMBER ROSENFELD: To show my confusion on the plasmas, are the plasmas on your plot there at the higher brightness level?

MR. HOROWITZ: Yes. That was the data that was submitted to EnergyStar.

ASSOCIATE MEMBER ROSENFELD: The old EnergyStar.

MR. HOROWITZ: Those are the datapoints

that EnergyStar chose to use. So I think again we need to circle back after this meeting of what settings are being used and how to base policy around that.

So, for a market background point of view, there's a term of art called the panel maker. So imagine the glass that you see in front, so that's the screen. The backlight units are defusers. That whole package, if you will, is the panel. That's the guts of the tv.

And there are five major panel makers, most of them based in Asia, that are making the vast majority of LCDs. All five of them are developing energy efficient or eco-tvs. They have their own name. And Alex did an amazing job talking about them.

My understanding is they're not represented in this proceeding, and I think we should reach out to them. The tv makers, the Panasonics and Philips and the Sonys, buy panels and then add tuners and the chassis -- or, I'm sorry, the enclosure and the speakers and things like that. And have their name on it.

But it's the AUOs and the CMOs that Alex mentioned, those companies, they're the ones that

are driving this innovation in part. And if there's an incremental cost. We need to hear directly from them, as they seem to be pushing this pretty hard.

As has been shown earlier, Alex had some amazing stuff, so I'm embarrassed by my text-based PowerPoint here, but we're seeing energy and power savings of roughly 30 to 50 percent without any attribution to reduce the picture quality.

There's a big potential to optimize these models. And we're trying to get more direct cost information because we fully understand incremental cost is part of this discussion. But if you can optimize by using a film or some other technique that allows the light to transmit more efficiently, you could eliminate some lamps. That saves some cost.

For each lamp you have an inverter eliminating the need for some of those inverters. Your overall power budget goes down so you can buy a smaller power supply, which means you bought a less expensive power supply.

So, I think, at the end of the day, these incremental costs will be near zero costs. If not today, in the near future, for these LCDs.

Next slide. There's a well-kept secret that's not so secret anymore is manufacturers ship their tvs overly bright, for two reasons. They don't want to have to rely on the technician on the floor at WalMart or BestBuy when they open the box. That's the one people look at in the store.

The stores are overly lit in many cases, so they need the tv to be brighter. And all other things being equal, people buy the brightest tv that's available. So these things are over-tuned-up, Alex used the term of art, torch mode.

So all tvs are shipped historically in that mode, even though we're talking about, you know, a couple of thousand sites retail where these are sold. And we're all being penalized for that. The millions of people at home, some of them may be keeping their tv at that over-bright setting. We need to fix that, and I think we've just started to discuss how to do that. And Panasonic has led the way on the plasma side. We think we should take a hard look at that.

Next slide, please. Alex pointed out the double efficiency that Panasonic and their joint venture, Pioneer, are pursuing. Those are clearly the one and two in the plasma industry.

And it's their words, not mine, that they said in the consumer electronics show over half a year ago, that these new innovations would cut annual power consumption approximately in half. So, this isn't fiction, this is real.

And, again, we should be thoughtful about plasma, but not over react to that because it's currently a relatively small part of the market.

I'm going to quickly go over various policy options that I think many of us are considering, starting with no standard at all, just testing and list, all the way down to a two-tier standard like PG&E has proposed.

Let's take a look at test and list. The CEA, in their letter to the Energy Commission, said let's do test and list and let's begin 2/19/09, which is when the nation is shifting from analog broadcast to digital only.

From our point of view why wait. We think there's going to be a media blitz before then, particularly around the holiday season. Get ahead of this digital transition, buy this new flat panel tv. Let's get that information in the hands of consumers or more available. Let's not

wait till 2/19 is our point of view.

Also, there's this massive EnergyStar database of models provided by CEA members. It's puzzling to us why we can't have the model number and the manufacturer name. That would be a great first start and a good faith effort by the industry well before 2/19. There's nothing confidential in our mind of the energy use of a tv. We're not asking for sales data or price. We understand the sensitivity of those.

Also, if we just stop to test and list, we're going to get that from the Federal Trade Commission anyhow, as one of the requirements of the federal energy bill called EISA. Tvs are going to be required to have a label just like the yellow energy guide that's on a lot of other goods.

Most importantly, while test and list is a valuable thing, and we do need to let consumers know how much energy a tv uses so they can build that into their choice if they'd like to, but we need to remove the least efficient models from the market. We need to set a floor, and that's what standards do. And that's where the CEA proposal falls short, in our opinion.

So, some people may say why don't you just wait a little while and then adopt EnergyStar. Is that good enough? Well, as Alex pointed out, we're going to see very high compliance rates, probably 50 plus percent, simply by changing the settings. So we're well on our way to EnergyStar.

And those stairsteps that you saw in the EnergyStar, that was a concession due to a lot of industry pressure. And that worked for EnergyStar. But the reality is we're adding 50 or so watts to what the data typically follows a straight line. Why are we doing that?

And also those really big tvs, those are the biggest energy consumers. If anything, that line should be flattening, not increasing. And many of these tvs are on 12 hours a day if it's in the hotel lobby or a bar or something like that, where the really large ones tend to wind up.

Next slide. So we agree, as a good first step is to take the up to 40 inches, the part of the EnergyStar line that is straight, and just continue with that. We think that makes a lot of sense.

In terms of an effective date, based on

the anecdotal information Alex has provided, and a lot of the web-based support for that, and the information on the settings, PG&E has proposed an effective date for tier one of 1/1/2011. That's three and a half years from now.

Given the challenges California's facing in terms of meeting its energy and carbon goals, we don't think we need to wait that long. And we respectfully submit an earlier date of November 1, 2009. And we picked that because there's a big spike in tv sales just before the holidays. Let's catch that holiday season.

Next we talked about the tier two, which we recognize is more ambitious than the EnergyStar levels we've been talking about. Given all the information received today, many years before a standard would go into effect, we think we should set a firm line, and set a clear target for the industry, and help solidify these investments.

Also, PG&E and the other statewide utilities, and hopefully other leading utilities in North America and elsewhere will offer rebates at this tier two level to help jump-start this market, and bring those models to the market earlier, and smooth out this transition.

There's some other benefits here. We don't have enough time to talk about them, but more efficient tvs, and I think it was on the Panasonic slide, they're thinner tvs. So what does that mean? You're going to have less packaging materials; you're going to be able to get more on the container coming from Asia; and there will be reduced shipping costs from the manufacturer. So there's some other incremental and environmental benefits here.

Next slide, please. So, to wrap up, being respectful of time here, what if we were to be really creative here. Why don't we adopt both the PG&E and the environmental proposal and CEA's proposal. We say let's do that. Let's do the test and list, and let's adopt the two-tier standard that PG&E's proposing.

I think Tim previewed a very important issue. Getting the settings right is critical. Let's take a harder look at what IEC did, what EnergyStar recommends, and if necessary, we'll have some language, use the IEC test method with an addition, here's what you should do on the settings.

We think Panasonic showed greater

leadership here, the way they set it up, and that's a model to look at.

Why am I so concerned and encourage other people? We heard that tvs often stay as they're shipped. Many tvs today are shipped in this retail mode. We don't want the tvs to stay there.

Also, we want to make sure these savings are real, not just paper savings. Yes, the tv could use this much power, but it also could use this much power. Where is it going to stay a month after it's in the consumer's home.

So, in conclusion, we recommend the two tier standard with the dates that we've shown, 11/1/2009 for tier one, which is a full year after the EnergyStar spec has been in effect. And tier two would be two years later, roughly three years from today, which we think gives plenty of time for these various manufacturing improvements to take hold at the factories.

So, we want a technology-neutral, performance-based standard. We think it would be a big mistake to set a different spec for plasmas, a different spec for LCDs, a different spec for DLPs and so forth.

We think it's crucial to include a tier two spec now. If we just stop at tier one, we're leaving on the table a lot of the savings, and will delay setting that standard in the future.

Again, for the PG&E's consultant's numbers we're looking at 600 megawatts of demand savings. And I was looking at the paper yesterday and on the front page of the San Francisco Chronicle was a big article: Look how great our PV program has done; we've saved 60 megawatts in terms of putting new PVs on people's homes. We're going to deliver ten times that with a standard.

And that program, which is a good one, don't get me wrong, we're investing hundreds of millions and millions of dollars in that. So, here's our way to get close to a free power plant for California.

Last slide. Changes will be needed to meet the tier two, and for some manufacturers tier one. We recognize that and we look forward to a real dialogue with the industry to figure out these dates.

We think roughly three and a half years from today is sufficient to attain those. We're willing to talk to industry about this and the

levels.

And I want to make crystal clear and leave with people, we've heard all sorts of horror stories. If you set a standard there won't be tvs available, or this type of tv won't be available. Whether you want an LCD, a plasma, rear-projection, after tier two goes into effect, there's clear indications there'll be wide choices for everybody.

Thank you.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Noah. Questions? Art.

ASSOCIATE MEMBER ROSENFELD: Yeah. Noah, has there been any discussion with you or within the industry, I'm harking back to this point that the average consumer, I guess, knows that you can dim an incandescent light. And there's some reason, partly money.

Any way of conveying the wattage in the on-mode, in the active mode, as a little decal thing at one corner of the screen saying, this unit is now using 500 watts, or 400 watts? Any discussion of that?

MR. HOROWITZ: I would pose that to the industry, if that's something they will be willing

to entertain. I think it's a great idea, arming people with information. Some sort of slider scale, if I move the brightness or contrast this way, how does my carbon footprint or my operating costs or power change. There are lots of creative ways to do this.

One thing we did talk about, which is another technological innovation, is sometimes you're watching a movie in your house at night. The room is darker, so you're seeking a certain contrast ratio. The tvs have sensors and will dim the picture accordingly and use less power. That capability is in many new tvs.

ASSOCIATE MEMBER ROSENFELD: Well, that's very interesting. Thank you.

PRESIDING MEMBER PFANNENSTIEL: Excellent. Other questions?

MR. TUTT: Just one question, Noah. You mentioned a couple of times that you think we should set standards as floors to remove the least efficient models from the market.

I don't know that we have a complete set of data, but it doesn't -- what do you mean by least efficient? Are you talking 20 percent, 25 percent of the models? Does it differ by

technology?

MR. HOROWITZ: As high as we can go with cost effectiveness and availability of product.

PRESIDING MEMBER PFANNENSTIEL: Thanks, Noah.

MR. HOROWITZ: Thank you.

PRESIDING MEMBER PFANNENSTIEL: Now let's hear from Consumer Electronics Association. Who's going to do that?

Hi, Doug. I think we have given you some -- the prior presenters have given you some good information, and now we'd like to hear how you'd like to approach it.

MR. JOHNSON: Thank you. For the record my name is Doug Johnson; I'm Senior Director of Technology Policy for the Consumer Electronics Association.

And as you acknowledge, Commissioner, we've been set up quite well with some material in a couple of presentations.

First, though, I'd like to reference one of the opening comments made by Mr. Fernstrom of PG&E, characterizing PG&E's proposal as a modest proposal, like the Jonathan Swift essay in the 1700s. This is anything but a modest proposal,

Gary. And we'll get into the details of this shortly.

Next, in acknowledgement to Mr. Chase with Energy Solutions, I'd like to thank him for showcasing in a very good way with a lot of pictures and stories, the fact that industry is already introducing and promoting energy efficient tvs. So as the Commission tries to understand what is going on with televisions, the transition to digital television and energy use, a lot of this explains that the market is transforming even as we speak here this afternoon, and delivering more efficient products one after the other.

So, it is a very good-news story, and it's all the more reason why detrimental approaches, as the one that's being suggested by PG&E, are unnecessary.

Then one reference to the zero dollar cost figure. I've been engaged in discussions with the Commission. As you know, we've worked closely with you to remedy the problems encountered with the regulation for external power supplies.

And I remember, during those discussions, the Commission's consultants said the

solutions are practically free. And subsequently we heard from a number of industries; they were here to explain there are no free solutions. There were costs that were certainly not considered during the regulatory process leading up to the initial external power supply regulations.

So the zero dollar cost, you know, moniker, is really nonsense. There are real and significant dollar investments behind materials and design innovations. And I encourage Mr. Chase to take a careful look at his own presentation, slide number 51, and understand what's behind some of those statements and innovations.

As I open here I'd just like to give a quick background of CEA. Many of you know, some of you may not, we're a high tech trade association representing about 2200 companies across the spectrum of the industry really. All the brands and products you see in your local electronics retailer, including the retailers of those products.

The industry is about $161 billion. Our membership is diverse, as I mentioned. It includes a lot of small- and medium-sized

businesses, as well, in addition to the large brands you've heard about today.

A note for the record, as well. You see a number of empty seats in the room today. And we do want to note that industry takes this proceeding very seriously, however we know that the Commission was quite interested in holding this on July 16th, as we learned about a few days ago.

There are a number of conflicts for industry this particular week. The Commission Staff knows that. So I'd just note for the record that we have a small delegation here, but a great interest in what's transpiring.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Mr. Johnson. And I would say that it is likely that we will hold another workshop on the subject. I think we wanted to kick it off and get it started, but we understand that there's a lot of information here, and we should be scheduling our next one shortly.

MR. JOHNSON: Oh, thank you, Commissioner. Let's work collaboratively and find a date that really works for industry.

PRESIDING MEMBER PFANNENSTIEL: Yes.

MR. JOHNSON: Our contributions are diverse and quite involved. And I just wanted to review how we're approaching energy efficiency in general. We're going to talk about the proposal with regard to tvs and what we're doing, specific to tv energy efficiency.

But in general, we're out there in a very comprehensive way, trying to do the right thing by reducing power consumption, improving efficiency, delivering to consumers the products that they desire.

We are, as you know, very supportive of market-oriented approaches such as EnergyStar. And we'll talk about the merits of what they've recently done for televisions in a moment. And obviously we'll get into the details. My colleague, Bill, will step up shortly to talk about the details of our proposal that we've put on the record.

I would like to explain in a little bit more detail our comprehensive approach to energy efficiency. On the policy side, as you know, we are strong supporters and advocates here and abroad of voluntary market-oriented programs such as EnergyStar.

On the research and analysis side we've made contributions to fill gaps that have existed. From our initial engagement with you, it was very clear that you did not have good data to work with, you and other policymakers in this country and around the world.

So we've completed two major studies. The first one did address primary energy use of consumer electronics products. And it was a study completed and disseminated last year.

More recently we have done a study to help policymakers and consumers understand the energy savings and emissions-reducing benefits of using technology products for telecommuting and ecommerce. So, not only do we want to look at prime energy use, we want to look at ways in which energy is saved and emissions are reduced by the use of these products, including televisions and home theater environments.

On the standards side you've heard from Jon Fairhurst in particular about the industry-led effort to develop a new standard for measuring tv power consumption. This is almost complete, actually; in essence it's complete, but near official. And that was a result of a broad effort

at the international level involving a number of industry and nonindustry stakeholders.

Industry also delivered a new specification for measuring set-top box power consumption. Set-tops are another important category with regard to energy consumption.

On the consumer education side, it's very important, as the gentleman from PG&E noted earlier with regard to reaching out to consumers, we launched a website last year based on that energy use study we did to at least give consumers today an understanding of the categorical level how much power is being used by products in the home. And understand terms of watts and dollars, how much it costs to power these things.

Yes, our ultimate goal is to get down to the model level with a figure that we can present to the consumer. And we work closely with policymakers on Capitol Hill to develop that language that was in EISA 2007 last year.

We have used our trade show, the largest gathering of the industry in the world, to promote energy efficient products. Design, we've rewarded products, as you heard referenced earlier. We promote energy efficiency and environmental issues

in general at this trade show. There's a lot going on and the trade show tries to bring that together in a way that's, you know, understandable to media analysts and others who are participating.

Outreach and coordination efforts have included obviously outreach to policymakers, NGOs, researchers, as well as utilities.

So the EnergyStar program for televisions, itself, was a broad-based, collaborative, two-year effort that has resulted in a first-ever specification for televisions that includes active mode in addition to standby power. It's quite an accomplishment. And it was the result of input by a number of many factors, as well as NGOs such as NRDC.

We have regulators at the table and analysts and others. And it was a great outcome. One of the merits of this, of course, are that tvs will be tested in factory default settings, and this will have the impact of encouraging shipment of tvs in lower energy-consuming modes. And so this is a great outcome, a result of this new specification.

As you heard earlier it's effective this

fall. Importantly, a compliant product will be available for the upcoming high-demand sales periods that you heard Mr. Horowitz reference earlier.

We have the holiday selling season; we have the superbowl; we have the transition to digital television broadcasting in February. EnergyStar is ready for those selling periods.

The tier two effective date, or a tier two effective date has been built into this specification. The new specification for tier two, that is a number to be attached to that effective date, will again be vetted through this broad stakeholder forum.

So, EnergyStar has an existing forum in which the Commission Staff has participated, along with all these other stakeholders. So that is the appropriate venue for bringing parties together to take a look at what's happening with the market for tv energies and addressing it in a way that's not detrimental for the market.

The merits of EnergyStar are several. They certainly include it's voluntary market-driven and increasingly international acceptance. It is a partnership, a public/private partnership

which is really important as we address not only energy, but environmental issues in general.

It captures tvs, along with a wide range of other products, as the Commission knows. There is strong participation by manufacturers. It's well recognized by consumers, more than 70 percent, I understand from EPA.

It offers a competitive incentive. In other words, it's transforming this market in a way that's competitive. This industry is inherently very competitive. The EnergyStar program provides one more qualification on which to compete.

And as I mentioned, importantly it's transitioned now to address a more holistic view of energy consumption, active and standby power mode together.

Beyond tvs, EnergyStar has tackled set-top boxes with a new specification, revised specification power supplies. We'll be looking at computers, monitors, and imaging equipment for revised specifications in the near future. So, it's a growing program and it's more active than ever.

It is a success story. And to the

state's goal, to California's goal of reducing carbon emissions, the EnergyStar program offers a comprehensive solution. And within the EnergyStar program, as this slide illustrates, electronics are an EnergyStar success story.

Electronics offer the greatest amount of savings, whether measured in kilowatt hours, or emissions reductions, as indicated here in this chart.

So this program called EnergyStar has, over time, proven to be the best and most effective approach for reducing emissions, saving energy. And it's doing this, and I emphasize, without harming innovation, without sacrificing consumer choice, and without impeding product convergence in a way that artificial limits and regulations would.

Now I'd like to address in the next couple of slides the specifics and some concerns about PG&E's revised proposal. In its opening, in its introduction to its proposal PG&E states that its report is a comprehensive technical, economic, market and infrastructure presentation of comprehensive information on technical issues, economics and market issues.

It, in fact, is not. It's missing a large amount of information which is very relevant to making a decision about this proposal.

Particularly with regard to data there's deficiency. This data that's presented in the PG&E proposal is neither a fair nor an accurate representation of what is on the market now, let alone what will be in the market in the near or medium term.

As PG&E, itself, admits, all of its datasets are different. There are many relevant variables behind this dataset, including display technology, test procedures, test conditions, display resolution, date of manufacture and so forth.

PG&E fairly characterizes the data sources it has cited, but the fact of the matter is there are inconsistencies. And as PG&E again admits, tv models may be represented more than once in this dataset. So you could have duplication or triplication of information. Nobody knows. As they say, it's impossible to distinguish how many unique models there are in this dataset.

Further, PG&E acknowledges that there is

no accounting in their proposal or in their analysis for natural market improvements. And that would be improvements in existing technology as well as the introduction of new technology. We know for a fact that this goes on in our industry constantly. It is part of the energy efficiency story.

Innovation is a driver for energy efficiency. EnergyStar program complements that. Both are working. Both are working now. But, again, the proposal and the analysis offered by PG&E does not account for the dynamic of those approaches.

The proposal obviously mandates an arbitrary power limit for televisions in active mode. In its effect it would ban noncompliant products at the expense of innovation, convergence, consumer choice and consumer preference.

We noted in the revised proposal that the specification line indicating the EnergyStar program was removed from the graphs. I think they meant to include it. I noted that they included it in their presentation materials today.

But the point is, with regard to

EnergyStar in comparison to PG&E's proposal, that the PG&E proposal would undermine the very successful and recently developed EnergyStar specification for televisions with further impacts and implications on the EnergyStar program, in general.

Again, EnergyStar resulted from a broad collaborative stakeholder effort. The PG&E proposal comes from PG&E and its consultants.

I'd like to briefly go over some considerations and issues here and emphasize for the Commission that there are a number of serious issues that are not addressed in this mandatory approach that need to be examined thoroughly.

PG&E's proposal, based on our initial analysis, would include 50 to 65 percent of televisions available to consumers today. It would impact all sizes of televisions. But there's a particularly large impact on two classes of tvs, inexpensive flat panel tvs over 40 inches, as well as feature-rich sets over 40 inches.

Each of these impacts and all impacts pose particular problems for the consumer market. And I'd like to get into some of those issues in particular.

PG&E's proposal does not give thorough analysis or consideration to major issues such as how this would affect consumers, at home, in the store, et cetera. PG&E's proposal does not address potential adverse impacts on retailers, independent dealers, distributors or custom installers whose businesses and livelihood rely on these latest innovations.

There's no analysis of adverse impact on commerce, whether that be interstate trade or overseas trade. There's no analysis of adverse impact on innovation.

There's also no analysis on tax revenue loss impacts that could affect the state. Taking a few figures here in this slide, we estimate that the impact could be very significant, in the hundreds of millions of dollars annually over the next ten years.

If you take the figure of 1.2 million tvs sold in California annually that are over 40 inches, and an average selling price of $1500 for those models over 40 inches, and you apply the sales tax rate of about 7.5 percent, you end up with a figure of $135 million. And this does not include lost sales tax revenue resulting from lost

opportunities to sell accessories for those impacted televisions.

This slide is meant to be illustrative, but this is not what we want to see in the marketplace. This is characterized as the impact of the PG&E proposal. It's a view of the store shelf, if you will, under this rather Draconian way to address energy efficiency.

It's not the outcome that's appropriate. There are better ways. I think all of us in this room, I hope all of us in this room agree that the goal is energy efficiency. There are different paths to get there. For the tech sector we must look at what is the most appropriate path for transforming the market and getting us to that goal.

At this point in the presentation I would like to turn the microphone over to my colleague, Bill Belt, who will review in some detail the proposal that we have put on the record earlier this month. Bill.

PRESIDING MEMBER PFANNENSTIEL: Thanks. Before you do that, let me ask a question. I'm not sure if it's best directed to you or to Bill, so help me with this.

You did mention, in describing the PG&E proposal, you critiqued the data sources and dataset that they were using. And yet, what we heard from Noah a minute ago was that when the data went to EnergyStar it did so without reference to manufacturer and model number.

Now I don't know that those are the same issue, but I do think that I'm really curious about why you took manufacturer and model number off of the data that went into the EnergyStar data.

MR. JOHNSON: Sure. I think we can address that through Bill's presentation in a moment.

PRESIDING MEMBER PFANNENSTIEL: Okay, great.

MR. JOHNSON: I don't want to leave that hanging out there, either. But I think it will come forth in Bill's comments.

PRESIDING MEMBER PFANNENSTIEL: Terrific, thank you.

MR. JOHNSON: Thank you.

MR. BELT: Good afternoon. I'm Bill Belt and I'm Senior Director of Tech Standards at CEA.

Let me go straight to your question, actually, so that I don't --

ASSOCIATE MEMBER ROSENFELD: Could you just spell that, please.

MR. BELT: -- don't forget it.

ASSOCIATE MEMBER ROSENFELD: Could you just spell that, please. I'm trying to write --

MR. BELT: Yeah, Bill Belt, B-e-l-t.

ASSOCIATE MEMBER ROSENFELD: Thank you.

MR. BELT: Thank you.

The data that we collected when first asked by the EnergyStar folks to do that, that was in, I'm going to think it was late 2006, early 2007. We were very pressed for time. Our goal was to get the folks at EPA that data as quickly as possible.

At that point in late 2006 it occurred to us that the quickest way to get that data was to promise manufacturers that we would not release their names and their model numbers.

So the issue that Doug refers to about the dataset, it isn't the missing manufacturer and model numbers that concern us with the dataset. Because, in fact, I have that information in my desk, you know.

It is that there is very little data there relative to what's being sold in the marketplace. It is that much of that data is actually old, the stuff on the market in 2006 is not on the market today. You'd be hard-pressed to find a CRT tv anywhere. There are CRT tvs in there. You'd be very hard-pressed to find the number of DLP tvs that you will see in that dataset. That's a sort of falling segment of the market.

This market is characterized by very very rapid innovation. We'll talk some about that today. And so that dataset, of which a third of which was provided by CEA from our members, is generally old, you know.

What we care about, what you care about, what Noah cares about, what everybody cares about is not what was sold last year or last month or last quarter. What's going to sell tomorrow, next month a quarter from now, next year, that's the information that we care about. So, --

MR. TUTT: So, Bill, --

MR. BELT: Yes.

MR. TUTT: You say that data is generally old.

MR. BELT: That portion of the data provided by CEA.

MR. TUTT: Right.

MR. BELT: Okay.

MR. TUTT: It seemed, from the presentations earlier this afternoon, that the natural trend in the industry was for more efficient televisions to be produced and sold as you move forward in time.

So, if that data is old, would current data actually yield lower points on those charts? I mean that's what I would guess, but --

MR. BELT: That is one trend, Tim, is for the tvs to become more efficient, all other things being equal. But all other things are not equal. One other trend is that the tvs are growing in size. And that that is the consumer choice of the day.

ASSOCIATE MEMBER ROSENFELD: But that's taken care of in the database.

MR. BELT: I'm sorry?

ASSOCIATE MEMBER ROSENFELD: But that's taken care of, all the plots that we saw today were as a function of size.

MR. BELT: They are, of the sizes

selling, let's say for the data that was provided by CEA, for the sizes being sold in 2006. And those sizes are growing, and continue to grow.

ASSOCIATE MEMBER ROSENFELD: But there's a disconnect here because the proposed tier one and tier two do increase with size.

MR. BELT: They do. Tim was asking about a trend, and I'm just addressing a counter-trend to that downward trend. I hope that answered it.

Okay, I do want to say one thing before I actually start on my thing, is that I'm grateful that PG&E did the right thing, you know, by me at least, which is to describe what we are seeing in improvements in energy efficiency, improvements that are coming absent of government mandates.

They're coming because energy efficiency is, in fact, in the interests of this industry. It's in the interest of all electronic products. The less energy you use, the longer your product is going to last. That's how it works. The less hot it's going to be, the longer it's going to last.

And it is a natural trend, natural evolution of products, to become more energy

efficient on their own.

So, as I said, I'm Senior Director of Tech -- at CEA. I wanted to talk to you about CEA's proposal. We haven't spent a lot of time talking about this today, but we know, sort of the 800-pound gorilla is, we're talking about taking tvs off shelves in California. And not much has been said about it at all.

CEA has a completely different proposal. Our plan, which we submitted on July 1st, would do the following three things. It would allow utilities to save energy, that's their goal.

It would allow consumers to be able to go and buy what they want when they want it with the features that they want; that seems like a logical consumer goal.

And finally, it would allow the Commission to be a leader in consumer education and in market analysis. Those are the three goals of the plan that I'm going to describe today.

The plan, itself, has three points. Mandatory reporting of energy use data by manufacturers. And I'll spend most of my time talking about that. Energy use disclosures, which is extremely important for consumers. And then an

educational campaign.

First, and probably most importantly, any manufacturer, our plan is that any manufacturer intending to sell in the State of California a digital tv must submit an energy use declaration for each model prior to sale. That would include the model number, the display technology, the active mode power draw under the IEC standard.

This is going to improve market surveillance; it's going to improve the understanding of energy use trends in this state. And it's not going to be mouse data.

So, one side -- you know, you'll be able to collect data, lots of data about what is being sold here, how many are being sold here, what's going on in the market. We won't have to guess and second guess data going forward.

Disclosure. CEA's already started to work on disclosures. It's in the interest of our industry, we know that, to tell consumers as much as they can about, you know, as much as we can about the product that they want to buy. So we welcome your involvement in letting us know what you think consumers need to know when they go out

and buy sets. And how they need to get that information.

We use disclosures here because there's lot of ways that people can get their information. They might get it from their set; they might get it from the internet; they might get it from Consumers Report; they might get it from a sticky on the back of the tv. I mean there's lots of ways people can get data and information. And we're interested in learning what you guys know about how people want their data, when they want their data, and what it is they want to know so that they can make informed decisions.

And finally, it goes hand-in-hand with education. We want you to partner with us and industry and the rest of the stakeholders on a campaign in California, specific to California, directing consumers at this important and critical time towards EnergyStar-compliant tvs. Especially in advance of the DTV transition.

As Doug noted earlier, the time is right. We're heading quickly into major selling events, and that includes the holiday season. It also includes superbowl, that's always a really big time. And, of course, the transition, itself,

in February of 09. So those are the key main elements, pretty simple, hopefully, to understand.

So, in summary, the key drivers for our market in energy efficiency are innovation and technology advancements that come naturally. Voluntary market-oriented programs and initiatives seem to be the most successful.

Our industry is characterized by rapid innovation, a dynamic marketplace, highly competitive industry, significant time-to-market pressures, significant cost pressures, rapid rates of market penetration and rapid transitions from one technology to another.

I bring this up because I think it points out some of the key differences between us and white goods.

And the problems with regulation of technology is government regulation and mandatory limits can never keep pace with innovation. Product definitions change often. Products converge. New products emerge. Technical complexities, particularly in the consumer electronics industry, makes it harder. And operating modes and functions change often.

That's it for our presentation. We're

happy to answer questions.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Mr. Belt. I just want to say something both to you and to Doug Johnson, and that's that I think it should be real clear that we really support EnergyStar. We are really big believers in EnergyStar; we work with them closely. We think that they have accomplished an enormous amount in brand that works well for American consumers.

And so it's not us or them, in fact. And I think that I further want to say that I support your idea of a market-transforming set of working with customers and working with retailers, I think that's fundamental to anything that we're planning to do.

So your proposal is fine. We're with you. We're just not sure it's enough. And I think maybe Noah said, let's do both. And I think it really is a question of what is the minimum that we want to do in California, that we should be doing from a technology standpoint.

So, with that, I want to thank you.

Are there questions?

ASSOCIATE MEMBER ROSENFELD: Yeah. I

have a very general question for either of you. You may both want to answer. But I'm following up on Commissioner Pfannenstiel's point of view.

I'm used to living in a world in which we have both -- in which we have three things, actually. We have energy guide labels which apply to everything. We have EnergyStar brand. And we have standards.

Over the years, as I said at the beginning, under these conditions with many revisions, I think we're at our probably seventh refrigerator standard, refrigerators have gone from 180 kilowatt hours a year to 400, even though they grew in size.

Lighting comes under standards, so when I got in this business typical commercial lighting was 4 watts a square foot; now it's about .8.

Cars have gone from 14 miles per gallon to 28, leaving out the fact that we invented a loophole for the SUV.

Can you give me a pep talk on why these two concepts are so inconsistent?

MR. JOHNSON: Thank you, Commissioner Rosenfeld. Doug Johnson, again, for the record.

I think what you're addressing is what

we touched on earlier, in that there are different paradigms here that reach toward the same goal.

The Commission's experience, your experience, I believe that you're referring to, has, in large measure, a lot to do with the appliance sector, the white goods sector.

Their paradigm supporting transformation toward more energy efficient products, is one in which government regulators play the significant role. I mean, obviously there's manufacturers innovating in certain ways, but the dynamics of that industry, the products, themselves, in many instances are single-function or -feature type products --

ASSOCIATE MEMBER ROSENFELD: Well, let me just say, I tried to mention a pretty broad spectrum. I mean I went all the way from automobiles to lighting.

MR. JOHNSON: Sure. Then I would expand this to say that for each of these sectors where we need to address energy conservation, energy efficiency, we have to take a careful look at industry dynamics and make a judgment about what paradigm is most appropriate for them.

And our position, our argument, our

contribution is through the EnergyStar program. That has proven, over time, to be the best way of transforming the electronic sector, encouraging energy efficiency improvements over time, without harming, as I mentioned earlier, innovation, consumer choice, product convergence or other characteristics or qualities that are really important to this sector and to the state.

PRESIDING MEMBER PFANNENSTIEL: Do you have a question, Tim?

MR. TUTT: If Art's finished.

ASSOCIATE MEMBER ROSENFELD: I guess I will make one friendly remark. I think, whether it's an exaggeration or not, I think your picture of a store with lots of black screens is compelling.

In the case of automobiles, of course, we have not an individual miles per gallon, but we have a fleet average.

I can conceive of permitting in California a limited number of televisions with any load whatsoever. They would have to be labeled. As long as the volume is kept down to a hundredth of a power plant or something like that.

But, anyway, Tim, go ahead.

MR. TUTT: Thank you, Doug and Bill. May I say I really appreciate you coming. I know that this was not a great day for you guys and it's wonderful to have your participation here.

Doug, you mentioned the EnergyStar specification and how tvs will be shipped at factory default settings. I think we're going to get to that issue as we get written comments and as we think further about this.

But, it sounded like, from the discussion today, that tvs might have to be shipped in the retail setting unless they have this forced menu innovation, is that correct, do you think?

MR. BELT: Tim, I'm going to give what I think is the accurate answer, and then I will go home and double-check it.

Tvs can be shipped in any setting the manufacturer chooses to ship it in. And that setting which it chooses to ship it in is the setting in which you will make measurements, unless it has a forced menu option, which forces the consumer, on its first use, to do something different. And then it's sort of default or the first choice that becomes the one that has to be

fixed.

And if Jon Fairhurst is still on the phone and correct me, that'd be great. Otherwise, Tim, I will double and triple check all this stuff for you.

It's more EnergyStar, your question is more about EnergyStar than it is about the IEC standard.

MR. TUTT: Okay, we will hopefully double check that as we move forward.

Doug, you mentioned the PG&E proposal doesn't take into account issues like a negative impact on consumers. And I think that was right after talking about one of the classes of tvs that are impacted are large-size, inexpensive tvs.

I presume they're impacted because they don't meet the standards, they use more energy. And they're inexpensive in part because of, you know, they haven't taken some of the innovations that cost some money to reduce energy use.

But, given a first-cost versus a full-cost implication for consumers, wouldn't it actually benefit consumers to remove some of those inefficient tvs from the market?

MR. JOHNSON: Let me answer it this way.

The impacts are more than just one. And the impact on large screen televisions is more than just an impact on the less expensive. There is an impact on the more expensive feature-rich sets, as well.

The impact that the missing analysis here does, in fact, have to do with consumers, inasmuch as retailers and other segments of the marketplace. What's in the consumer's best interest is to deliver energy efficient products in such a way as the consumer has a choice at retail; has options for features that they desire; has a chance to receive the latest and greatest innovations from manufacturers.

So that the benefit to the consumers has to do with the delivery of energy efficient products that also meet these other characterizations. There is already a very strong driver in place for reducing costs in our industry, reducing prices for consumers. That is true.

And believe me, we will be doing further analysis along the lines of some of these arguments we've illustrated today. But the consumer does benefit in more than one way by the

delivery of energy efficient products that do meet these other considerations, too.

MR. TUTT: You also then had a slide which indicated you thought there might be some tax revenue impacts. Are you implying from that that there would be less televisions sold in California if we had standards?

MR. JOHNSON: PG&E's proposal is, in its impact, would remove a large number of products from the market. And that has significant consequences, not only for consumers, as we just discussed, but for the distribution chain in our industry; for businesses in California; for the manufacturers who are based and located here.

These are significant costs that need to be considered. And aren't considered in the PG&E's analysis and proposal.

MR. TUTT: Sure, but if those televisions were removed from the market, I mean wouldn't consumers still buy a different television probably --

MR. JOHNSON: Sure --

MR. TUTT: -- that is on the market?

MR. JOHNSON: To your point about tax revenue, if you're reducing the number of sets

sold, setting aside the concerns about consumer choice and preferences, if you're reducing the number of sets sold, you're going to see a dropoff in revenue. Sure, there'll be purchases of a smaller subset, but there'll be a loss to the state of the sales tax revenue associated with those purchases. Larger tvs that are foregone by this proposal, so --

ASSOCIATE MEMBER ROSENFELD: Doug, can you give an idea how big an effect you think this is? That is, let's supposing the consumers were to buy -- tvs. They go out to the supermarket and a few brands are missing.

They went out to buy a tv. My hunch is they're going to buy a tv. And --

MR. TUTT: That's what I was indicating, yeah.

ASSOCIATE MEMBER ROSENFELD: And they --

MR. HUNGERFORD: Using the same budget. They would have the same budget for a tv, spend the same amount of money.

ASSOCIATE MEMBER ROSENFELD: Yeah, they've got money burning a hole in their wallet and my impression is that it's a very small number of people who are going to come home and say,

golly, I just couldn't find what I wanted.

MR. JOHNSON: Well, let me -- at the expense -- I don't want to be repetitious here, but I see a hand in the audience from somebody who can comment on this question. Please.

PRESIDING MEMBER PFANNENSTIEL: Yeah, let's see if we can resolve this --

MR. SHARP: My name is Mark Sharp with Panasonic. To directly address that question, yes, I don't believe there would be fewer tvs sold, but there would be a lot more sold online from neighboring states. And these all would impact negatively the tax revenues.

MR. TUTT: I see. Then returning to your proposal, one part of our proposal is suggesting that we mandate testing and submittal of data by February 17th of next year, which is when the digital transformation happens, right?

MR. JOHNSON: Yes.

MR. TUTT: And Noah mentioned that, you know, there's going to be a lot of tvs purchased prior to that digital transformation. Why don't we get the data before that? Why that date?

MR. JOHNSON: I think that was the initial thought, let's tie it to something that's

major and meaningful, and the transition to digital. So, I think that's why we fixed on the February 17th date.

I think we have an interest in gathering data sooner than that at CEA, in any case. That's something we should further discuss.

MR. TUTT: Okay.

MR. JOHNSON: It was an initial date; it made sense in a couple of ways. We can talk about it further.

MR. TUTT: And then part two of your proposal involved disclosures to consumers of energy use information. But it doesn't sound like there's a standard being proposed there, or a mandate to do that. It's more of the working with industry to find out the way to do it, is that correct?

MR. JOHNSON: Yes. We want, obviously, to give the Commission a seat at the table along with some other parties we're reaching out to now, in the discussions that we're having with regard to a proposed approach.

We're operating under, as you know, the federal energy legislation from last year, which does require energy disclosures, but not labeling,

per se, but energy disclosures for five categories of products and potentially more.

One of those categories is televisions. And so we're suggesting in the second point of our proposal, given your interest in the television category in particular, let's sit down and, you know, get your ideas and thoughts about which direction we should go, based on what you know and the research you've done.

For us there's certain elements that need to be in our recommendation. We'd like to build consensus around an approach and deliver that to the Federal Trade Commission, which has the ultimate authority in this case.

But it is another opportunity for collaboration.

MR. TUTT: Yes.

PRESIDING MEMBER PFANNENSTIEL: Thanks.

MR. TUTT: Do you know when the Federal Trade Commission is expected to adopt the labeling disclosure requirements?

MR. JOHNSON: There's some timelines, but they're a byproduct of taking action in the first place. The Federal Trade Commission has a number of responsibilities coming from the

legislation last year, and I believe it's working through those. But plans to address, in the near term, the beginning stages of this rulemaking on energy disclosures for electronics.

I do not know exactly when they plan to start that, presumably some time soon.

PRESIDING MEMBER PFANNENSTIEL: We have some comments. Noah and Alex.

MR. HOROWITZ: Noah Horowitz with NRDC. Doug or Bill, maybe you could help me. I've got two things I want to talk about.

You mentioned the adverse consequences on the tax revenue for the state. Earlier in your presentation you said, hey, these tvs, it's going to cost more to make them and the tvs would cost more. So that would, as a noneconomist, suggest that we're going to see more tax revenue, not less.

And I agree with Commissioner Rosenfeld, people who are going to buy a tv are going to buy a tv. They're just going to be happening to buy a more efficient one, and per your thesis, that might cost a little more.

I don't see how we're losing money.

MR. JOHNSON: Well, I think the point is

that I thought Mr. Sharp from Panasonic explained that the purchasing patterns may be the same, but the sources for those products could be outside the State of California.

There are, in any case, revenue losses to the state resulting from this extreme proposal that's been put forward by PG&E.

MR. HOROWITZ: Okay. I think we respectfully disagree on that point.

The next one is you have, and kudos to you, you have a very compelling shot of the empty shelves that our consumers will be faced in the state. And I think we've seen from many of your members, whether it's plasma, LCD or these other technologies, they will have a wide range of choices. There will be an efficient alternative for every tv we have today.

So I don't know why consumers won't have a choice and won't be able to buy a tv in any form they want.

MR. JOHNSON: Two televisions is a choice. And you may be comfortable with that, but most consumers want a wide selection. Most consumers have preferences beyond what you and I prefer for our televisions.

So, the important thing is to deliver it to the marketplace, televisions that meet a wide range of preferences, a wide range of household incomes, et cetera.

MR. HOROWITZ: Okay, so, again I think more detail is needed. All five panel makers who make all the tvs being sold in this country are going to have models available. So, let's dive in. I'd like to move beyond he-said/he-said.

And you mentioned incremental cost. If you have any suggestions on what that incremental cost, we'd love to see that introduced into the record.

And similarly, you say feature-rich products won't be available or be able to meet these energy targets. What's the feature and what's the incremental energy use? We'd love to see that so we can have a fact-based discussion.

MR. JOHNSON: I'm glad you agree with us that there is a deficiency in the PG&E proposal when it comes to that analysis, and it's definitely worth looking at.

PRESIDING MEMBER PFANNENSTIEL: Yeah, I think --

MR. HOROWITZ: I didn't say that, but

thank you.

PRESIDING MEMBER PFANNENSTIEL: I think we do need some additional information here on the record.

Alex, you had a comment?

MR. CHASE: Alex Chase, Energy Solutions, representing PG&E. I wanted to just address a couple clarifying issues, and then we will provide written responses after this.

But the question came up of us relying on old data. And I think I showed an initial slide showing that we were pulling data from about 760 datapoints; made all attempts to collect data from EnergyStar, CEA; around the world, Australia, Europe.

We did not use all of those datapoints, as Mr. Belt mentioned, some of that data is old, including models from 2006. I think as we mentioned in the revised proposal, we made an attempt to pick models that were available in 2007 or later.

As was mentioned by both gentlemen, and as I mentioned earlier, we're seeing general trends with each model year across the board, we're seeing more efficiency improvements.

A slide I did not show but is provided in the appendix shows kind of an analysis of all the datapoints showing how the efficiency improvements change from 2006, 2007, 2008 model year.

Generally the trend is, in terms of percentage of televisions that meet a certain level, whether it be EnergyStar, tier one, of the proposed level increases as you look at the newer and newer model years.

So, again, we would be happy to include the net datasets. My sense is, based off the projections, and I haven't seen anything to disagree with this, and if we did, of course, we would consider it, is that when you did a linear progression of the existing tv models, it would show that the models on the market today are more efficient. And generally showing that the market is going to be prepared to meet the tier one levels.

The other comment was that the old dataset included CRTs and DLPs. We recognize that, as well. That's in the revised proposal showing projected marketshare of different technologies. We take that into account, and

accordingly weight the savings estimates.

So the savings estimate of a DLP is going to be different from an LCD, and it's going to be different from a plasma. Since LCDs are roughly, you know, approaching 90 percent of the market, we weight those accordingly.

In terms of duplicate tvs, I'd be happy to work with the CEA to scrub those from our dataset provided that we have some sort of way of doing that. If we need to keep it confidential, you know, I'm fully prepared to send our Excel dataset that has each specific television.

EnergyStar doesn't tell you the model name or model brand, but it does have an index number for those. So, we could provide that, and show the rest of the dataset. And we'd be more than happy to get rid of any duplicates.

But, as I mentioned earlier, some of those duplicates may be the less efficient televisions, as well. So that may be pulling up the dataset.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Alex. Gary, then behind you.

MR. FERNSTROM: Gary Fernstrom speaking for PG&E. I'd just like to say, spinning off

Commissioner Rosenfeld's comments, that PG&E and the other California investor-owned utilities are charged by the Public Utilities Commission to achieve energy efficiency in the state.

And we strongly believe that voluntary incentive programs and codes and standards advocacy are both a cost effective part of that program portfolio.

Our program manager, Pat Eilert, has written several papers on this issue that have been published by ACEEE attempting to show the relationship and the effective use of both of these strategies.

And I'd like to note that CEA's presentation, talking about the PG&E proposal, is only talking about the standards part of our presentation today.

We also presented information on a voluntary program that we're planning to undertake. And CEA simply seemed to ignore that part of the presentation.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Gary. Yes.

MR. SHARP: Mark Sharp with Panasonic. I wanted to make a few points. I'm a little

reluctant standing up here at the moment. I feel like no good deed goes unpunished.

You've heard the name Panasonic mentioned several times in a very flattering light, and we're very appreciative and acknowledgement from PG&E and NRDC and others about some of our efforts to design more efficient products.

I do want to clarify a few points and address a couple of questions that PG&E raised about our products.

First of all, the data on the Panasonic models that I saw on the screen, and admittedly it's the first time I've seen the presentation from PG&E, so it's hard to verify, but it does look essentially correct.

However, I should point out that the savings projected includes testing being done at the less-consumptive power modes. So I want to make that point clear. I think that addressed one of your direct questions from PG&E.

Secondly, there seems to be a battle, if you will, of press releases and exactly where Panasonic's efficiency levels will be at. And I want to try to clarify that to the extent I can.

There were several citations, and they weren't all apples-to-apples. There was a couple stories, I think, PG&E cited that were trade press accounts. There were a couple quotes from executives with the company. And a couple citations from press releases. These are all different sources.

My understanding and my knowledge, for us, we've announced publicly it's our intention to get through our double efficiency technology for plasma to cut energy costs or consumption, if you will, not costs, by 50 percent. That is our target goal. We haven't set a date specific when we expect to get there.

We have stated clearly that we cannot get there until our new state of the art factory is complete. And that's scheduled to be online and in full production approximately May of 2009.

Typically it takes anywhere from two to four or five months for products to get from a factory over in Asia to the store shelves. So you have that sort of window or timeframe between when the product is first made and when consumers can actually purchase the product.

The reference to the two-thirds cut of

energy consumption was specifically a trade press quote, as I looked in the presentation. I've not heard that figure before. I'm not sure that it's ever been made public. I'm not clear in my mind that that's an accurate statement.

ASSOCIATE MEMBER ROSENFELD: You just said something about -- also, and I didn't follow that. Now you're saying you're not sure about that two-thirds. But about two minutes ago you mentioned 50 percent, also. What was that? That was a goal?

MR. SHARP: What I'm saying is our publicly stated goal is a 50 percent reduction.

ASSOCIATE MEMBER ROSENFELD: Okay.

MR. SHARP: One of the slides that PG&E showed referenced two-thirds reduction. And obviously you're trying to reconcile which is it. And suggesting that I've not seen that two-thirds figure before. Its citation was from a trade press article, so I'm not sure that it's accurate.

ASSOCIATE MEMBER ROSENFELD: Thank you.

MR. SHARP: Couple other quick points. This double efficiency technology that we're very proud of, it's predicated on a list of design advances. And they were detailed on one of the

slides by PG&E. I believe it was slide 51 if you want to look it up.

All these design changes come at a cost. This idea or notion of a zero cost pathway to energy efficiency, it doesn't exist. Everything comes at some cost. And it's up to society to determine what is the appropriate level of cost, in my view.

So, I'd like to just kind of take a step back that the zero-cost option is not really an option whatsoever.

Another point I want to make is I see --

MR. TUTT: Mark, can I stop you a second?

MR. SHARP: Sorry, yes.

MR. TUTT: Specifically here, I mean we understand there's costs to developing new efficiency technologies and new efficiency methods and so forth.

Specifically here I think what they were talking about was a compliance method where you simply change the factory setting, the default setting, from one to another; ship it that way.

And I'm struggling to understand what the cost of that is.

MR. SHARP: Well, the immediate cost is rather nominal; it's a software change. However, in order to even get close, no matter which measurement level you use, if you use a brightest torch setting, which I hate the phrase, or if you use a less consumptive mode setting, you have to make design changes to your product to achieve efficiency gains.

And that's what I'm referring to, this evolution of design changes, new components, circuits, these all come at a cost.

A couple other quick points. There's been several references, and I'm not sure why it keeps coming up, there's references to non-high-definition tvs. And I'm really not understanding why we're talking about that.

Because as of March 2007, under federal law, every single tv sold, I think above 13 inches, has to have a digital or HD tuner. So, I think that's correct. So, you know, why we're talking about non-HD tvs is a mystery to me, quite frankly.

Couple other quick points. Noah from NRDC made a comment or a suggestion, you know, why don't we start up in November of -- was it 2009, I

believe, as the startup for the effective date of standards?

MR. SPEAKER: For tier one.

MR. SHARP: For tier one, okay. Noah should be aware of this, and I know he is, the manufacturer production schedule couldn't be further from a November date. Typically new models are showcased, as PG&E pointed out, in January at our trade show. You have all your press releases and everything comes out February or so.

The actual production of new models usually comes out in March/April timeframe and is staggered throughout the year.

So, if you do insist on a November date, the problem you create is you end up testing models that are just about ready to be replaced by new models and new designs, which presumably would be more efficient. And you'd rather capture the more efficient data, I would think. So, I don't see the value of a November date, quite honestly.

And a final point I wanted to make, Tim from PG&E made a comment -- well, he gave a presentation obviously about the rebate program for televisions. It was very interesting to me

because I was contacted by PG&E, myself, about three months ago, saying would Panasonic be interested in this type of rebate program as a manufacturer.

And I said, yes, we would. I'd like to know more about it, let's talk about it. I haven't heard a word in three months. I walk in today, I see a presentation, we have eight or nine retailers that apparently are interested in participating. That's to PG&E's credit for recruiting them.

But, you know, I'm really curious, the statement was made, I believe, that by giving retailers these rebate dollars, that will spark innovation. And I'm struggling to understand how retailers spark innovation. I really think it's the manufacturer that sparks the innovation in product design. So I don't quite understand that.

But those are just a few points that I wanted to make. I appreciate your --

PRESIDING MEMBER PFANNENSTIEL: On that last point I'd suggest that you talk to PG&E. That program is not under the auspices of this Commission, so. Thank you.

MR. SHARP: Thank you.

PRESIDING MEMBER PFANNENSTIEL: There's another question right here. No? Somebody on the phone?

MR. SPEAKER: Yeah.

THE OPERATOR: We do have a question from David Klein. Your line is open.

MR. KLEIN: Thank you. This is Dave Klein from JVC. I have two points. First about the database. The television industry is incredibly diverse. There are between 40 and 60 manufacturers of televisions sold in the United States today.

Each one of those manufacturers has, on average, approximately 20 skews or models. Some have larger. My company, JVC, a small- to medium-sized company, has 20 skews in our product line. Due to that, that's 12 to 1600 skews for just one year.

We have 3 to 500 in the database. Technically, the database is a self-selected database. The EnergyStar database was comprised of manufacturers who voluntarily submitted data from their televisions. My company was one of those.

Those are the companies who are proudest

of their products. Where are the companies that are not the good performers, the folks who are selling the less-than-efficient set? They didn't report to that EnergyStar database. So the database is not only inadequate in size, but it is skewed towards, or is not an accurate representation of the overall industry.

I appreciate your letting me talk. I'm phoning in, I wish I could have been there in person. I normally am part of these meetings, and thanks for letting me phone in.

PRESIDING MEMBER PFANNENSTIEL: Thank you for participating. Other comments? Somebody else on the phone?

THE OPERATOR: No more questions or comments from the phone.

PRESIDING MEMBER PFANNENSTIEL: Okay.

ASSOCIATE MEMBER ROSENFELD: One in the back there.

PRESIDING MEMBER PFANNENSTIEL: Yeah, Noah, one last -- we want to try to wrap this up.

MR. HOROWITZ: Yes, Noah Horowitz. Mark, I appreciate your comments. I'd be curious to know with the 50 percent savings would your model be able to meet the tier two standard.

Because that's one of the leading plasma makers.

If it doesn't, then that line may arguably be adjusted accordingly. We'd love to know where you come in relative to the PG&E proposal. And if there is an incremental cost, we understand the sensitivity.

If there can be some dialogue, is that the zero to 10, 10 to 50, 50 to 100, or $500 increment. Because at the end of the day, cost effectiveness is the measure here, and we're unable to assess that.

PRESIDING MEMBER PFANNENSTIEL: And I think what we're going to need is a fair amount more hard information. I think, Noah, you're the one who pointed that out. A lot of what we're hearing is anecdotal and it is helpful to sort of assess this at a very large picture, but I think we really need to drill down on many of these, which is the opportunity that we're going to have in written comments.

We have asked for written comments by the end of July. And we need some real specificity in them, in terms of what is going to happen.

We have one other comment? Yes.

THE OPERATOR: Excuse me, there is one on the phone.

PRESIDING MEMBER PFANNENSTIEL: Okay, well, excuse me, there's somebody in the room first. And then we'll take the phone comment.

MR. AHMED: Jerine Ahmed with San Diego Gas and Electric and Southern California Gas Company. I'm with the Codes and Standards Program.

I just wanted to make a comment in supporting PG&E's efforts and the proposal. That's all.

PRESIDING MEMBER PFANNENSTIEL: Thank you very much. Okay, on the phone.

THE OPERATOR: Randall, your line is open.

MR. HIGA: Thank you. My name is Randall Higa with Southern California Edison. I manage the Codes and Standards Program for SCE. I'll also make my comments brief.

First, I'm sorry I wasn't able to make it in person, but I would definitely like to express Southern California Edison's support for the PG&E and Energy Solutions television proposal.

Although I missed the earlier

presentations, I did hear Noah Horowitz and CEA's presentation. And we have seen the data that Energy Solutions and PG&E have pulled together. We feel that the data consistently supports the proposal.

And we certainly appreciate the manufacturers advancement of television efficiency, response to the interest in the market. And I also appreciate the proposal for additional consumer and retailer education. I think that will go a long way to meeting our goals.

However, I do agree with Commissioner Pfannenstiel's comments that we do need to go beyond that and have standards for televisions.

So, that's all I have to say. Thank you very much.

PRESIDING MEMBER PFANNENSTIEL: Thank you, Randall.

Back to next steps here. We are going to look for another date for the next workshop. But I'd like that to be informed by the comments that are forthcoming.

I think we really need to see if there are data issues that we need to address and how we

can address them.

We need to look at some of the cost consequences and the product, the expectation of product costs and other items that people have raised today that are clearly of great concern to us.

But we need to keep moving this forward, to think about what is the program that makes the most sense to the State of California to adopt.

Any final comments on what's going on? Art?

ASSOCIATE MEMBER ROSENFELD: No.

PRESIDING MEMBER PFANNENSTIEL: Tim?

ASSOCIATE MEMBER ROSENFELD: Very nice afternoon.

MR. TUTT: I guess I just have one final comment, and that's related to the effective dates of standards as we're talking about manufacturing times when it makes sense to set a standard.

I think we also need to keep in mind that our standards allow for inventory clearance. So they don't prohibit the sale of televisions above a certain efficiency after that date. They prohibit the sale of televisions manufactured after that date. And you still are allowed to

sell some of the televisions that are not as efficient after the effective date. It just has to be, it's the manufacture date that counts.

PRESIDING MEMBER PFANNENSTIEL: Anything further? Thank you, all. We'll be adjourned.

(Whereupon, at 4:53 p.m., the Committee workshop was adjourned.)

--o0o--

CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Committee Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 31st day of July, 2008.