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Karen Douglas
David Hochschild
Andrew McAllister
Janea Scott

Staff Present:

Rob Oglesby, Executive Director
Kourtney Vaccaro, Chief Counsel
Alana Mathews, Public Adviser
Tiffani Winter, Secretariat

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Also Present

Interested Parties (* Via WebEx)

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1 P R O C E E D I N G S

2 JANUARY 27, 2016

10:04 a.m.

3 CHAIR WEISENMILLER: Let's get started with the
4 Pledge of Allegiance.

5 (Whereupon, the Pledge of Allegiance was
6 recited in unison.)

7 CHAIR WEISENMILLER: So, let's start out the
8 Business Meeting with a resolution for one of our staff and
9 then we'll go onto the items. Okay.

10 COMMISSIONER MC ALLISTER: Well, great. So, this
11 is a -- I always like to acknowledge staff. And we have
12 someone who's retiring, who really deserves the resolution
13 that we're going to go through today, and present to her.

14 This resolution is for Eurlyne Geiszler. Eurlyne
15 has been with the Commission since 1977. I see her back
16 there. You should be nervous.

17 (Laughter)

18 COMMISSIONER MC ALLISTER: As an office
19 assistant. What's that? Yeah, there's a -- I think
20 there's a party later, if people want to find out about the
21 details. Maybe it's a roast, I'm not sure.

22 But she started in 1977 as an office assistant in
23 the Buildings and Appliances Office. I think the Chair
24 remembers that. That's really back in the day, right.

25 CHAIR WEISENMILLER: Yeah.

1 COMMISSIONER MC ALLISTER: In what was then
2 called the Conservation Division, with one of her initial
3 tasks being to type. Type, okay, the first residential
4 compliance manual on a typewriter.

5 During her time at the CEC she's worked in the
6 Hearing Advisor's Office, the Personnel Office, in the
7 Administrative Services Division, and the Office of
8 Commissioner Geoff Commons.

9 But much of her time has been with the Efficiency
10 Division. And she has made a huge impact. We'll go
11 through all the "whereas'". And it's gone through various
12 incarnations, including the Building and Appliances Office
13 of the Conservation Division, the Public Programs Office,
14 the Buildings and Appliances Office in the then -- in the,
15 now, Energy Efficiency Division, and the Standards
16 Implementation Office, Energy Efficiency and Renewable
17 Energy Division, when they were merged.

18 And ending it with her current position in the
19 Building Standards Office. Now, again, the Energy
20 Efficiency Division.

21 So, Eurlyne's career really is a testament to the
22 value of service, hard work, of a public-minded mindset,
23 and experience.

24 She steadily worked her way up during her 38
25 years with the CEC to eventually become Manager of the

1 Building Standards Office, which is really one of the key
2 offices within the CEC, with the biggest impact on the
3 public and the State.

4 In her current position she oversees 21 staff,
5 responsible for conducting the rulemaking for the
6 development and adoption of the residential and
7 nonresidential Building Efficiency Standards.

8 As well as developing and maintaining the
9 residential and nonresidential public domain building
10 simulation software that's used to show compliance with the
11 standards.

12 Eurlyne's management skills are tremendous and
13 her leadership is crucial to moving the State closer to
14 achieving its zero net energy goals, and residential by
15 2020, commercial by 2030, respectively.

16 She really hits the challenges head on and
17 manages staff to look deeply at the issues. And we all
18 really benefit from that.

19 The Building Efficiency Standards save consumers,
20 literally, billions of dollars by lowering electricity
21 bills, reducing energy use, and greenhouse gas emissions,
22 and creating clean energy jobs in California.

23 She has built so many coalitions about this,
24 around the standards, that have really allowed it all to
25 happen with something like consensus, you know, working

1 through the tough issues.

2 "One of Eurlyne's most memorable moments", I'm
3 going to read this," was when the CEC was located at 1111
4 Howe Avenue. At that time, the CEC prepared a Biannual
5 Report, every two years, with comprehensive discussions of
6 current energy issues, similar to the Integrated Energy
7 Policy Report that the CEC currently does, today.

8 However, this particular BR, Biannual Report, was
9 so comprehensive that the floor of a second story room in
10 the building, where the reports were stored, collapsed
11 because of the weight of the documents, leading to jokes in
12 the media about State government collapsing under its own
13 weight".

14 (Laughter)

15 COMMISSIONER MC ALLISTER: So, you know, now,
16 luckily we don't have those constraints, now, we have a
17 digital world. You know, we have stacks of CDs, maybe, and
18 links to the web, but we don't have to produce the printed
19 volumes.

20 Eurlyne received superior accomplishment awards
21 in 2001 and 2007. I understand she feels her most
22 important contribution has been recruiting talented
23 individuals to work at the CEC, who have made incredible
24 contributions of their own to increasing efficiency in
25 buildings through the use of new technologies, and have

1 improved construction practices. And that last bit was a
2 quote from her.

3 Her favorite project was working with the
4 Electricity Crisis Team to manage \$385 million allocated to
5 the CEC for projects to reduce peak electricity demand and
6 increase energy efficiency in buildings, which involved
7 working with technical project managers to provide up-to-
8 date accounting of the funds, providing daily briefings to
9 the management team and reporting to the Governor's Office.

10 As a crowning accomplishment, and I have worked
11 really hand-in-hand with her, and her team, throughout my
12 time with the Energy Commission on this, Eurlyne was
13 manager of the team that developed the 2016 Building Energy
14 Efficiency Standards, and the compliance manuals and
15 software one year ahead of the effective date. I think
16 that's earlier than it's ever been done.

17 And they were approved at the, let's see, the --
18 what day in January was it? Was it just last week?

19 MS. GEISZLER: The 19th.

20 COMMISSIONER MC ALLISTER: Yeah, last Tuesday, I
21 believe, the Buildings Standards Commission approved those
22 and they were full steam ahead to implement them on January
23 1, 2017, as necessary.

24 So, I want -- let's see, should we read the
25 whereas'?

1 Okay, let's see, so congratulations, Eurlyne,
2 really incredible. First of all, let's give Eurlyne a
3 hand.

4 (Applause)

5 COMMISSIONER MC ALLISTER: We have to be careful
6 because Eurlyne takes her -- she really has a personal
7 commitment to this. And I'm going to -- she's going to
8 tear up, eventually, and we're going to see how long we --
9 I might, too. But we can see how long we can keep it
10 together.

11 (Laughter)

12 "So, whereas Eurlyne Geiszler is retiring as
13 Manager of the Building Standards Development Office at the
14 California Energy Commission, after a stellar career in
15 energy efficiency standards, policy and program developing
16 spanning more than 39 years. And it is appropriate at this
17 time to highlight her many achievements and to extend
18 special recognition and commendations to her for her
19 professional accomplishments;

20 And, whereas Eurlyne has faithfully served the
21 State of California by joining the staff of the Energy
22 Commission in 1977, and beginning her career in the
23 Efficiency Division;

24 And, whereas Eurlyne's career is a testament to
25 the value of hard work, commitment and experience, she

1 steadily worked her way up, through her career with the
2 Energy Commission, to become Manager of the Building
3 Standards Office;

4 And, whereas Eurlyne, through the successful
5 passage of the 2016 Building Efficiency Standards and tools
6 development from more than one year in advance of the
7 implementation date, for the first time ever in the Energy
8 Commission's history;

9 Whereas under Eurlyne's management and leadership
10 the Energy Commission's developed public domain software to
11 demonstrate compliance of the 2013 Building Energy
12 Efficiency Standards, for the first time bringing
13 compliance consistency to the marketplace;

14 Whereas Eurlyne's management skills and
15 leadership are crucial elements of moving the State closer
16 to its zero net energy goals, the Building Energy Standards
17 continue to save consumers billions by lowering electricity
18 bills, reducing energy use and greenhouse gas emission, and
19 creating clean energy jobs in California;

20 Whereas Eurlyne's contributions are many to the
21 processes, procedures and relationships built with the
22 building departments in local jurisdictions;

23 And, finally, whereas Eurlyne's contribution as a
24 manager has been passing along her expertise and passion by
25 recruiting talented individuals to work at the Commission,

1 who have 'made incredible contributions of their own' to
2 increasing energy efficiency in buildings through these new
3 technologies and improved construction practices;

4 Therefore, be it resolved that the California
5 Energy Commission thanks Eurlyne Geiszler for her
6 distinguished record and professional contributions to the
7 wellbeing of the citizens of California, energy efficiency
8 policy in the environment, and for her superb
9 accomplishments throughout the many years of service that
10 she has given to the Energy Commission and to the people of
11 the State of California;

12 And be it further resolved that the Energy
13 Commission congratulates Eurlyne Geiszler on her retirement
14 and wishes her good health and happiness, and all the best
15 in her future endeavors."

16 (Applause and cheers)

17 COMMISSIONER MC ALLISTER: Maybe, do you want to
18 say a couple words, Eurlyne? Anything you want to say, you
19 know.

20 MS. GEISZLER: I would like to say thank you.

21 COMMISSIONER MC ALLISTER: Absolutely.

22 MS. GEISZLER: I did not expect this and I really
23 appreciate it. It's been, like you said, a long road from
24 1977 to today, and a lot of changes in the industry. And
25 I've really appreciated the creativeness, and knowledge,

1 and committed folks that we have here at the Energy
2 Commission. It's probably one of the reasons that I've
3 stayed here as long as I have is we've got, you know, just
4 terrific people that we hire and retain, or who return,
5 such as the Chair, and come back.

6 And when I was growing up in Tahoe Park, as a
7 child, never did I think that my neighbor, Rob Oglesby,
8 would end up being my boss later in my career.

9 (Laughter)

10 MS. GEISZLER: So, it brings everybody to the
11 Energy Commission. So, I do really appreciate it. And
12 thank you for your support with the 2016 Standards. We
13 couldn't have brought it to where it is without that, so
14 thank you.

15 COMMISSIONER MC ALLISTER: Thank you.

16 CHAIR WEISENMILLER: You bet.

17 COMMISSIONER MC ALLISTER: All right, well,
18 anybody, any Commissioners want to say anything or should
19 we move on to getting -- let's do a photograph. Let's
20 present the -- I think we have a big one, don't we, or no?

21 Oh, you have it. Oh, they already presented it
22 to you.

23 (Laughter)

24 (Photographs taken and applause)

25 CHAIR WEISENMILLER: We have no -- Item 1 will be

1 held for the next meeting. So, let's go on to Item 2.

2 Chris Kavalec, please.

3 MR. KAVALEC: Good morning. I am Chris Kavalec,
4 from the Energy Assessments Division at the Commission.
5 I'm here to propose adoption of the Revised California
6 Energy Demand 2016-2026 Electricity Forecast for
7 California, or CED 2015 for short.

8 I'm going to give a brief presentation today and
9 talk about the process we went through to get here, a high
10 level summary of results, our choice of managed forecast
11 for resource planning, and a little bit about where we go
12 from here.

13 First, a little bit about the uses of the
14 forecast. Most of us are familiar with the CPUC's long-
15 term procurement process, the California ISO's transmission
16 planning process, shorter-term resource adequacy analysis
17 done at the CPUC and California ISO.

18 Energy, our forecast feeds into energy efficiency
19 potential studies done at the CPUC which, in turn, provide
20 us with estimates of additional achievable energy
21 efficiency that get incorporated in our forecast.

22 Renewables planning here at the Commission, and
23 elsewhere. And other, including, for example, the
24 California Air Resources Board, when they do their analyses
25 for AB 32, use our forecast as a benchmark.

1 We started out the process at the end of 2014
2 with a workshop for forms and instructions, where we
3 request data and other information from the utilities. And
4 five workshops since then, including two for
5 transportation. Discussions with our Demand Analysis
6 Working Group, or DAWG. We use the DAWG to vet the results
7 of analyses and to get certain information from the
8 utilities and from others.

9 We are guided by the Joint Agency Steering
10 Committee, which is made up of upper management from the
11 three agencies, the Commission, the CPUC, and the
12 California ISO.

13 And we continue to have process alignment
14 discussions with the other two agencies so that we can
15 develop a seamless transition from one process to the
16 other. For example, from our demand forecast to the LTTP,
17 or from the efficiency potential studies to our forecast.
18 Other stakeholder discussions, including one-on-one
19 discussions with the utilities.

20 When we do a forecast, we attempt to build in all
21 of the important policies and initiatives that affect the
22 energy sector. Including our own building codes and
23 appliance standards, efficiency programs, incentive
24 programs for distributed generation, particularly for
25 photovoltaics.

1 Demand response programs, there's a portion of
2 demand response that we refer to as load-modifying demand
3 response that gets handled on -- within our forecast. It's
4 a smaller chunk. The rest of it is handled on the supply
5 side for resource planning.

6 We incorporate a likely compliance scenario,
7 brought to us by the Air Resources Board for the Zero
8 Emission Vehicle Mandate.

9 We incorporate additional electrification
10 estimates for additional electricity use for the ports and
11 the airports, as well as high-speed rail.

12 And we always like to point out that we see our
13 forecast as an assessment of progress, our prediction for
14 the future, rather than a rubberstamp for policy goals.

15 As we go from forecast to forecast we attempt to
16 improve our methods and update our inputs. Probably the
17 biggest difference for this forecast, relative to our last
18 adopted forecast, which we refer to as CEDU 2014 or
19 California Energy Demand Update for 2014, is we revised the
20 geography for our planning areas and forecast zones to be
21 more consistent with the Balancing Authority areas in
22 California. The Balancing Authority areas being geographic
23 areas where supply has to be balanced with demand.

24 And for our forecast zones, we attempted to be
25 consistent with California ISOs, what they call their

1 transmission zones. So, we revised our geography to make
2 the forecast more useful for planners.

3 Updates to efficiency programs and standards,
4 including new estimates of additional achievable energy
5 efficiency for both the IOUs and the POUs. We estimated
6 additional achievable energy efficiency for the two biggest
7 POUs in this forecast, LADWP and SMUD. And we will attempt
8 to expand that coverage in future forecasts to cover more
9 of the POUs.

10 And as I mentioned, a new electric vehicle
11 forecast and additional electrification.

12 A high level summary of the results. First, a
13 couple things about the forecast. In general, growth is
14 faster in the Northern California planning areas compared
15 to Southern California because the economy is projected to
16 be a little bit more robust in Northern California.

17 Actually, the fastest growth of any of the
18 planning areas is in the Imperial Irrigation District
19 because of proposed or projected population growth,
20 migration out to the desert. But that's a small planning
21 area, overall. Northern California is projected to have
22 faster growth in electricity demand.

23 The other thing is that we're really starting to
24 see a flattening out of our forecasts, particularly for
25 peak demand and sales, because of the continued addition of

1 preferred resources. And that's even before we incorporate
2 additional achievable energy efficiency. So, the effects
3 are becoming more and more noticeable from these demand
4 modifiers.

5 Okay, first to look at statewide baseline
6 electricity consumption. Baseline is in there because that
7 means this does not incorporate additional achievable
8 energy efficiency.

9 So, this shows low-demand, mid-demand and high-
10 demand forecasts. We do three separate, full forecasts
11 that differ in terms of rate of growth, and we call them
12 low, mid and high. And you can compare the growth in our
13 new mid case, for CED 2015, in dark blue, with the
14 triangles there. Compared to the red, which is the mid
15 case from our last adopted forecast.

16 And there's a difference in growth of around .2
17 percent. Growth in the mid case, in the last forecast, was
18 around 1.2 percent per year, on average. And in this
19 forecast it's just a little bit under 1 percent per year.

20 Reductions in consumption, along with a
21 significant increase in projections for photovoltaics,
22 reduces peak demand even more than consumption, compared to
23 the last forecast.

24 You see, again, the three scenarios there. The
25 dark blue, our new mid case, and the red our previous

1 forecast. You see a shift downward there and that comes
2 from a revision of history for the peak.

3 So, growth in the previous forecast, a little bit
4 more than 1 percent. In this forecast, for the mid case,
5 the baseline case, we're just a little bit under half-a-
6 percent growth per year. Quite a big difference.

7 Roughly, the same thing for sales. Growth in the
8 new mid case of a little bit less than half a percent,
9 compared to about 1.1 percent in the previous forecast, in
10 the mid case. Electricity sales, like peak, is affected by
11 additional or much higher projections for photovoltaics.

12 Now, to develop our managed forecast for resource
13 planning, we need to incorporate additional achievable
14 energy efficiency for the IOUs. And these are defined as
15 efficiency savings that are incremental to those that are
16 already in the baseline forecast. And we developed these
17 estimates based on the 2015 Potential Study for the CPUC.

18 So, our job is to take the Potential Study
19 results and determine which savings from the Potential
20 Study are already incorporated in our baseline forecast.
21 The incremental portion becoming additional achievable
22 energy efficiency.

23 We started out with nine scenarios for additional
24 achievable energy efficiency, developed by us and Navigant,
25 and through discussions with the DAWG and the Joint Agency

1 Steering Committee, we pared those down to five final
2 scenarios. And applying these scenarios gives us choices
3 or options for a managed forecast for planning purposes.

4 And here is a listing of the five final
5 scenarios. The first part of the hyphenated term refers to
6 assumptions for the relevant baseline forecast for
7 electricity rates and economic growth. And the second part
8 of the hyphenated term refers to a variation within those
9 assumptions for things like incentive levels.

10 So, for example, the second bullet there, mid-
11 baseline demand, low AAEE or the mid-low case means we're
12 using assumptions for economic growth and projections for
13 rates that are consistent with our mid-baseline forecast.
14 And within those assumptions, a relatively low level of
15 additional achievable energy efficiency.

16 So, this graph shows the impact on our managed
17 baseline forecast of applying the three mid-AAEE scenarios.
18 You see we go from slightly upward sloping forecast in the
19 baseline to three forecasts that are declining throughout
20 the forecast period. This is for peak megawatts for the
21 combined IOU service territories.

22 And this graph shows the results of applying the
23 AAEE scenarios to our three baseline cases, high, mid and
24 low, applying the appropriate AAEE case.

25 So, for the high demand we're applying a

1 relatively low level of AAEE and vice-versa for our low-
2 demand case.

3 And you see the mid case and the low-demand case
4 for both declining for peak megawatts, for the combined
5 IOUs throughout the forecast period.

6 And then we, the three agencies, have to decide
7 on a choice of managed forecasts for planning. And our
8 choice this time is a set of two forecasts which combine a
9 baseline case with an AAEE case. For system and
10 flexibility planning, the choice is the mid-baseline
11 combined with a mid-level of AAEE savings.

12 And then, for localized planning the choice is a
13 mid-baseline case combined with low additional achievable
14 energy efficiency.

15 That second case is an acknowledgement of the
16 uncertainty regarding efficiency impacts when you get to
17 more granular levels of geography.

18 So, we have a pretty good handle on, for example,
19 efficiency impacts for the entire PG&E service territory,
20 but not such a good handle on impacts for, say, the Bay
21 Area within the service territory.

22 And this shows, this graph shows the two managed
23 forecasts plus the baseline for peak. And as you can see,
24 both of these forecasts, these managed forecasts are
25 declining throughout the forecast period to the tune of 5

1 to 7 percent.

2 And I don't show sales here, but it's basically
3 the same picture, declining forecasts throughout the
4 forecast period.

5 Okay, and looking ahead between now and the 2017
6 IEPR forecast, we do a forecast update in the off IEPR
7 years, mainly for transportation planning where the
8 analysis takes place every year.

9 And this is just a really limited update, where
10 all we're updating is the economic and demographic drivers,
11 as well as the historic consumption.

12 A big topic of discussion and analysis,
13 incorporation for SB 350 and AB 802. For us that means
14 analysis, deciding what data we need to acquire to do the
15 analysis, and how we incorporate the results of these
16 analyses into the forecast.

17 We're always trying to improve our forecast
18 methods. And I point out two things here, in particular.
19 We want to make our modeling of photovoltaic adoption a
20 little bit more sophisticated and go beyond the simple cost
21 benefit analysis for the average home or the average
22 business.

23 We want to, as I mentioned before, we want to
24 expand our coverage for additional achievable energy
25 efficiency to include more POUs. The POUs aren't required

1 to use our forecast for planning purposes, but we still
2 want to incorporate additional achievable energy efficiency
3 for our own statewide analysis.

4 And we will continue to consult and align
5 ourselves better with analyses going on in other agencies
6 and with the utilities.

7 So with that, I will turn it over to the dais for
8 questions or comments.

9 CHAIR WEISENMILLER: Thanks, Chris.

10 Let's start with public comment. I think we have
11 at least two in the room. And NRDC?

12 MS. VISWANATHAN: My name is Kala Viswanathan and
13 I'm representing NRDC. We want to thank staff and the
14 Commission for their hard work to produce the Revised
15 Demand Forecast for 2016 through 2026.

16 We support the Commission's efforts to create a
17 more accurate forecast by including more geographic
18 forecasting zones. We recommend that the Commission work
19 with the joint agencies to improve the granularity of the
20 Energy Efficiency Forecast, as well.

21 We recommend that the Commission improve the
22 consistency of energy savings estimates with the CPUC to
23 ensure that best available data is used. Moving forward,
24 increased coordination between the agencies will be
25 important.

1 The AAEE forecast excludes more than a third of
2 efficiency savings from POU's. We recommend that the
3 Commission include savings from all POU energy efficiency
4 programs in future demand forecasts. This will give us a
5 more accurate forecast since it will include all efficiency
6 savings.

7 Finally, over the last four decades California
8 has shown that energy efficiency is a proven resource and
9 has avoided the need for 50 power plants. It is critical
10 that the State agencies continue to rely on a managed
11 forecast that includes additional achievable energy
12 efficiency.

13 Thank you for considering our recommendations.

14 CHAIR WEISENMILLER: Thank you. Thank you for
15 being here.

16 Catherine Hackney, please.

17 MS. HACKNEY: Good morning, Chair Weisenmiller,
18 Lead Commissioner McAllister, Commissioners. Catherine
19 Hackney, Southern California Edison. Thank you very much
20 for the opportunity to be here today.

21 I have three, brief comments to offer. The first
22 and foremost is to express, on behalf of Southern
23 California, our deep thanks and appreciation to you and
24 staff for the preparation of this Revised Demand Forecast.
25 We all understand and appreciate the complexity and the

1 uncertainty, sometimes in equal measure, that goes into
2 these efforts. And it's truly remarkable that your staff
3 is able to do this year after year.

4 We would like to note that in our comments, filed
5 with you on December 31st, we saw a significant difference
6 between the revised forecast and our own. And, clearly,
7 there's a lot of assumptions that go into the forecast but,
8 it was important enough for all of us to get together, in
9 person, on January 7th. And it was the kind of meeting we
10 all hoped for, which it was very collegial, very open. The
11 experts in the room and on the phone offered to share their
12 data assumptions methodology and their creativity.

13 And in the end, we all walked away with a much
14 better understanding of what the main driver was that led
15 to this disparity.

16 And as Chris mentioned, one of the things that
17 you will be doing going forward and, hopefully, we'll be
18 right with you, is looking at the hourly demand forecast a
19 little bit differently.

20 And we very much appreciate the fact that in your
21 Volume 1, page 37, you call out this situation and you even
22 included a footnote that reads; "SCE has developed this
23 capability", which is forecasting on an hourly basis, "and
24 as a result it's latest peak forecast grew at a markedly
25 higher rate than that of the CED 2015 Revised Forecast".

25

1 We so appreciate you listened, you heard us, and
2 you have committed to work collectively to address this
3 very important issue going forward. So, thank you for
4 that.

5 And the last, the last comment I'd like to offer
6 is that given the complexity and the uncertainty going
7 forward, particularly with the overlay of the State's very
8 ambitious policy directives, double down on energy
9 efficiency, increased renewables and an unknown, but very
10 robust, expansion of all things distributed.

11 We'd like to renew our pledge to work with you in
12 a very collegial partnership going forward.

13 So, two big thank yous and a pledge to partner,
14 today. So, thank you.

15 CHAIR WEISENMILLER: Thank you. Thank you.

16 Any other public comment? Please.

17 MR. BENGTSSON: Hi there, good morning,
18 Commissioners. Nathan Bengtsson with PG&E, just two quick
19 points.

20 From our perspective, as well, the first is the
21 same, congratulations to you and staff on an enormous
22 amount of work. And I want to express the sincere thanks
23 from our forecasts and representatives to the Demand
24 Analysis Working Group, who really appreciate the work
25 staff put in to hear them, and work with them in refining

1 this forecast over the last year.

2 The other thing I'll note is, just for the
3 record, and it's something we've gone on record before, in
4 our July and December comments. We still think that
5 there's some further refinement needed on the PV forecast.
6 So, I'm very heartened to hear that Chris has targeted this
7 for further development.

8 And we're standing by to offer whatever support
9 we can in that effort. So, thank you again, and
10 congratulations.

11 CHAIR WEISENMILLER: Thanks for being here.

12 COMMISSIONER MC ALLISTER: Thanks.

13 Oh, sure, okay. So, yeah, I want to pile on with
14 the thanks to staff, Chris and the team. This is a
15 monumental task very time, every two years for sure, and
16 then the update's in the middle.

17 And this next two years is really important. You
18 know, as Catherine said and, you know, we all know, we've
19 been tasked with sort of new, more specific things. We
20 have some goals that we all need to put on our thinking
21 caps and really work together to map out the path to
22 achieve them. And the forecast is really the foundation of
23 that effort in many important ways.

24 I think, you know, being as informed as possible
25 with data, with the available data and making sure that we

1 have the best available data is something that staff really
2 takes as one of their primary operating principles. As
3 well as, you know, and at the same time looking at all that
4 data with a very critical eye. And I think this is the
5 kind of analysis that, really, objectivity, and listening
6 to all the stakeholders, and all of their opinions really
7 makes all the difference in the world. That's the
8 credibility of this effort and I really trust -- I think
9 staff has built that trust that they're actually doing
10 that, and it's that kind of an activity. So, really, it's
11 a great resource for the State.

12 So, and I just want to highlight a couple of
13 issues. On that, could you look at slide 8? You know,
14 really just an optimistic kind of pointing out of the
15 remarkable evolution that we're in the middle of.

16 Let's see, slide 8. So, yeah, there we go. Go
17 up to slide 8, that's good. Really, any of these slides
18 would work.

19 But the red, at the very top, is last year's mid-
20 demand. And even the high demand, going forward, is lower
21 than that, now. And it's just incredible. This is called
22 bending the curve. This is called, you know, moving the
23 needle. And this is at a time where our economy's actually
24 bouncing back.

25 And we have, you know, a lot of reasons to be

1 optimistic. A lot of this is self-generation, solar that's
2 coming online. You know, when we layer in the additional
3 energy efficiency it bends that curve down even more and
4 actually goes negative, the mid-mid goes negative.

5 So, I think this is exactly the kind of
6 incremental momentum we're trying to build each year, in
7 each analysis. And looking forward to, in 2016, having the
8 methodology discussion so that we can lower the boundary,
9 or the error bars, or the uncertainty bars around the local
10 analyses as much as we can, and just try to do that going
11 forward. It's basically math, right. That, you know, it's
12 easier, you have more diversity in a larger area than a
13 local area, you have larger uncertainty. That's just a
14 fact. So, we want to bring in as much data as we can,
15 localize that data, and reduce the uncertainty at the local
16 level so that, truly, the forecast can help plan in such a
17 way that it avoids duplication of resources. And that's
18 really the ultimate goal.

19 Hopefully, the IRPs, that the POUs will be doing,
20 as part of 350, will build -- will be tightly coordinated
21 with the forecast going forward. I think there's a lot of
22 data that they'll need to be using, that we'll need to be
23 using, that overlaps quite a bit. So, and those processes,
24 in any case, need to be pretty integrated.

25 And then, maybe go to number 15, I think it was,

1 your final slide about going forward. So, I think that
2 recaps, really, the points that I've made, and a few
3 others, that SB 350 and AB 802 are challenges to implement,
4 but they also will generate the kind of data that we need
5 to do this work.

6 And, you know, our team, I think it's up for it.
7 I know you're up for it. Building our analytical capacity
8 going forward to deal with the bigger datasets and the more
9 comprehensive analyses, I think it's something that we're
10 all on board with doing.

11 And the hourly, you know, the load shaping and
12 the modifications about going forward, being able to
13 attract trends. That's super, super important to be able
14 to reflect, you know, not only incorporating the analysis,
15 but deep end going forward.

16 So, agree with all the points about the fact this
17 really has to be a joint agency effort, with the PUC and
18 the ISO. Really, we all have to have confidence in this
19 analysis, this new deep-end analysis. And I don't see any
20 reason that's not going to happen, so I'm really excited
21 about it.

22 So, thanks, Chris.

23 CHAIR WEISENMILLER: Yeah, again, I certainly
24 want to thank the staff for their hard work on this. I
25 think part of what I've probably said every year is that

1 this is a process that's really ongoing. I mean, the
2 reality is you look at this, is that at some point you
3 basically push the button and you adopt. And, realizing
4 that, you know, there's areas you would like to spend more
5 time on and, certainly, PV is one of those, the PV
6 modeling. Although, again, the PUC has a major decision,
7 potentially tomorrow.

8 You know, at the same time, certainly, the time-
9 of-use rate design issues are still being looked at. You
10 know, I mean, again, and the bottom line is we'll do a
11 better job next year on that area. And at some point we
12 just push the button, you know.

13 Now, having said that, just in terms of, again,
14 high level on things. First, I want to emphasize that,
15 indeed, this is multi-agency. And, in fact, the Air Board
16 will use this forecast in the Scoping Plan. So, basically,
17 it's not just the three agencies that Commissioner
18 McAllister mentioned, but now there's a fourth. And that's
19 certainly a critical document for the State.

20 So, ignoring this work would be -- anyway, it
21 would be tragic. So, that's number one.

22 Number two, certainly President Picker, as we go
23 towards more disaggregated, more granularity, President
24 Picker really wants to use this in the distribution
25 planning process. You know, so again, as we go forward,

1 this whole thing has certainly got to keep evolving.

2 And the one thing I probably would note, for the
3 NRDC to think about a little bit, is that we have 44 POUs.
4 And, you know, I think I'm going to say the smallest one is
5 Kirkwood Ski Resort. So, in terms of how much energy
6 efficiency studies you want to do there, have a great trip.

7 And I think once you use the break point in the
8 IR -- it was at 350 on the IRPs, there's like 20 POUs left
9 out of the top category that contribute about five percent
10 of sales among the POUs.

11 So, the notion that somehow we -- basically, we
12 have to differentiate between the level of effort between
13 the larger POUs and the smaller POUs.

14 Now, obviously, we're going to do a more
15 comprehensive POU effort the next time, but we're certainly
16 not committing to do all 44 is the bottom line. But again,
17 trying to deal with the ones that really have the bulk of
18 the sales.

19 So, again with that, certainly looking forward.
20 But I think we're making real progress on the alignment,
21 granularity, and certainly we have to keep working on the
22 forecast. This is one of the more critical things we do is
23 adopting this, particularly if it's wide usage. So, we got
24 to get it right. You know, realizing again there's lots of
25 complexity and lots of uncertainty.

1 Go ahead.

2 COMMISSIONER HOCHSCHILD: I just want to say,
3 acknowledge the Chair's work. It's not just happening on
4 its own that other agencies are adopting it, it's really a
5 tribute to your efforts in that area. I want to
6 acknowledge that.

7 And, actually, we're down to 43 POUs, now,
8 because Hercules got subsumed by PG&E.

9 But I did want, Chris, if you could just comment
10 briefly on your thinking about POU efficiency programs,
11 what we know about that. And, I mean, your thoughts going
12 forward on that issue.

13 MR. KAVALEC: Yeah, so the reason that we --
14 we're only able to do the two biggest POUs this time is,
15 number one, lack of more time. But second is they have
16 dedicated EE experts that really know the efficiency field.
17 And they develop efficiency program forecasts that go into
18 their actual planning forecasts.

19 So for us, that's a pretty good forecast and we
20 worked with them to develop and ascertain what part of that
21 forecast was incremental to what was already in the
22 baseline.

23 And I think, I believe that will be true of at
24 least ten more POUs, they have a pretty good knowledge of
25 efficiency and they have people that work on efficiency.

33

1 Beyond that it gets a little bit sketchier in
2 terms of -- but I think we will be able to get at least,
3 for the next forecast, a majority of POU's, or at least the
4 larger POU's incorporated in the forecast.

5 COMMISSIONER HOCHSCHILD: Great, thank you.

6 COMMISSIONER MC ALLISTER: Yes, I want to just
7 pile on there, too, because as we do the IRP process
8 presumably they're going to be presenting, and we need to
9 scope this out in the rulemakings that we opened last
10 meeting, presumably they're going to be presenting full-on
11 IRPs or something, you know, approaching that. At least
12 more than we get today and sort of being more explicit
13 about where they're going. And, hopefully, that's going to
14 generate the kind of data that we need to do that. And I
15 think that's the plan, right.

16 So, yeah, it's a bit of a challenge for them, but
17 that's why the line, I think, is in 350. The big ones will
18 be able to do it and the smaller ones aren't, you know,
19 that much of the overall sales and also have less
20 capability.

21 COMMISSIONER SCOTT: I wanted to make a general
22 observation, as the public member on the Commission, that I
23 really appreciate the process we have here in place to
24 understand and to respond to you, all of the stakeholder
25 comments.

1 And thank you, Catherine, for your compliment to
2 our team and also PG&E, for your compliment to our team on
3 that. I think they worked really hard to do that, to make
4 sure that we get the best forecast that we can have.

5 I appreciate very much the good working
6 relationship that we have with our sister agencies, as
7 well, that really help to make this possible.

8 And I wanted to say thank you to the staff, for
9 the periodic briefings, keeping me up to speed on what's
10 going on here. And thank you to them for, also, they're
11 really good work. Thanks, Chris.

12 And just say thank you, Chair Weisenmiller and
13 Commissioner McAllister for your leadership in this area.

14 COMMISSIONER MC ALLISTER: Okay, I'll move the
15 forecast, Item 2.

16 COMMISSIONER HOCHSCHILD: Second.

17 CHAIR WEISENMILLER: All those in favor?

18 (Ayes)

19 CHAIR WEISENMILLER: Item 2 passes five to zero.

20 Great, let's go on to Item Number 3. Staff.

21 MR. RIDER: All right, good morning,
22 Commissioners. I'm Ken Rider, Adviser to Commissioner
23 Hochschild, and presenting today as an Electrical
24 Engineer with the Energy Commission's Appliance Efficiency
25 Program.

1 Also joining me here, today, is Harinder Singh,
2 Senior Electrical Engineer with the Appliances Efficiency
3 Program, Gabe Taylor, Mechanical Engineer with the
4 Buildings Standards Office, and Mike Murza, with the Chief
5 Counsel's Office.

6 I'm here to present to you on Item 3, which is
7 the possible adoption of new standards for general service
8 LED lamps and small diameter directional lamps.

9 The next slide, please. The Warren Alquist Act
10 gives the Energy Commission to set minimum levels of
11 operating efficiency for appliances sold and offered for
12 sale in the State.

13 Starting with the refrigerator standards, in
14 1976, California has addressed a portion of its demand with
15 appliance efficiency. You just saw that in the last item.

16 The California State Legislature, through AB
17 1109, mandates significant reductions in residential,
18 commercial, and outdoor lighting use. The proposed
19 regulations are a component of meeting the bill's
20 requirement, as well as California's greenhouse gas
21 reduction goals.

22 The proposed set of regulations are projected to
23 reduce electricity usage in commercial and residential
24 buildings by 32,000 gigawatt hours, for a utility bill
25 savings of more than \$4 billion from the years 2018 to

1 2029.

2 Lower electricity consumption is expected to
3 reduce greenhouse gas emissions by 10.3 million metric tons
4 of CO2 equivalent during that same time period.

5 The savings are worth the displacement of one
6 500-megawatt power plant. And the standard levels proposed
7 today are cost effective and feasible with today's
8 technology.

9 The next slide, please. The environmental
10 impacts of the proposed regulations have been considered,
11 consistent with the requirements of CEQA, or the California
12 Environmental Quality Act.

13 Staff issued an initial study, which found no
14 significant adverse environmental impacts to the proposed
15 regulation. The study found positive effects from a
16 reduction of the number of disposed lamps from improved
17 product lifetime, as well as reduced emissions related to
18 lower electricity production. The Commission has not
19 received any comments on these findings.

20 The next slide, please. The proposed regulations
21 contain potential standards for two product types. The
22 first are small-diameter directional lamps and the other
23 are LED lamps. And on this slide there are some pictures
24 of some small-diameter directional lamps.

25 These lamps are commonly found in track lighting

1 systems and are generally used or used more often in
2 commercial settings. There are about 15 million of these
3 lamps in California.

4 Traditionally, this market has been served by
5 incandescent and halogen filament-based technology.
6 Unfortunately, these lamps are fairly inefficient, emitting
7 more heat than light.

8 The resulting products also have a fairly short
9 lifespan. Fortunately, innovative LED products are now
10 available as substitutes that use substantially lower
11 energy and last much longer.

12 The next slide, please. The proposed regulation
13 would set a minimum lamp life of 25,000 hours, an efficacy
14 level of 80 lumens per watt, effective January 1, 2018.
15 Currently, only achievable by LED technologies.

16 The proposed regulations also allow small-
17 diameter directional lamps to have lower efficiency, as low
18 as 70 lumens per watt, if it provides enhanced color
19 rendering. This will cause a reduction in electricity
20 demand by transitioning less efficient, incandescent,
21 small-diameter directional lamps to more efficient
22 equivalents.

23 The next slide, please. This chart shows the
24 proposed levels of efficiency, the black line on the chart,
25 against a blue circle and red triangle points that

1 represent LED performance data from Energy Star and DOE
2 lighting facts. Products that are to the right and above
3 the line would comply and others would not.

4 The chart shows feasibility in products on the
5 market today, as well as incremental and efficiency savings
6 in LEDs, even when compared to other LEDs.

7 The next slide, please. The estimated cost of
8 going from a typical filament lamp to a compliant LED lamp
9 is \$4, yielding a lifecycle cost savings of \$248.80, and
10 the payback of less than one year. The proposed standards
11 are, therefore, very cost effective to consumers.

12 The next slide, please. The other product type
13 are LED lamps. The scope of the proposed regulations
14 include most screw-based LED lamps, including common
15 omnidirectional and directional lamps, as seen on this
16 slide.

17 The proposed regulations would only affect LED versions of
18 these lamps.

19 The next slide, please. In all, there are over
20 600 million screw-based bulbs in California. And a
21 diversity of technologies, such as incandescent, compact
22 fluorescent, and light-emitting diode, or LED.

23 The lighting market is undergoing rapid market
24 transformation as a result of State and Federal policy and
25 programs. The most recent transformation began in 2011, as

1 minimum standards pushed traditional incandescent lamps
2 towards higher efficiency halogen lamps.

3 The next major transformation will be in 2018, as
4 a result of AB 1109, which requires an aggressive reduction
5 of lighting energy use. Halogen lamps will have to either
6 significantly increase efficiency or give way to
7 fluorescent and LED technologies.

8 LED lamps are expected to be the bulb that
9 consumers will turn to in that transition, making LED
10 performance critical in the near future.

11 The next slide, please. The primary function of
12 these lamps is to both illuminate a space, as well as
13 provide the ability to differentiate colors.

14 The proposed standards set power usage levels
15 based both on a lamp's brightness, as well as its color
16 accuracy through a tradeoff equation, shown on this slide.

17 In other words, the proposed standards would
18 allow a compliant lamp to use more power, if it provides
19 higher function. In this way, the proposed regulations
20 create a fair efficiency metric by evaluating performance
21 per unit of input power.

22 This provides manufacturers with flexibility to
23 design across various light output and color accuracy
24 levels.

25 The resulting equations can be seen on this slide

1 and the standards are also broken into two tiers. The
2 first is a less-stringent tier, which would be effective on
3 January 1, of 2018. And the second tier, 18 months later,
4 on July 1, 2019. This achieves a large amount of savings
5 in 2018, but gives manufacturers more time to reach the
6 higher levels of efficiency that are feasible, but rarer
7 today.

8 The next slide, please. This chart shows the
9 performance of LED lamps as it appears in the Energy Star
10 and Lighting Fact databases, versus the proposed tradeoff
11 equations.

12 The Tier 1 standard is shown by the left word
13 line in blue and the Tier 2 standards by the right word
14 line, the line more to the right and in green. The X axis
15 shows the efficacy in lumens per watt and the Y axis shows
16 the CRI. The line is bent at the left as the tradeoff
17 equation meets an absolute minimum efficacy level. The
18 line is bent at the bottom as the tradeoff equation meets
19 the absolute minimum for CRI.

20 The products that are to the right and above the
21 line would comply with the equations and the remainder
22 would not. The products shown in this slide are medium
23 screw-based omnidirectional lamps such as A lamps. So, 349
24 would meet the Tier 1 tradeoff equation and 113 would meet
25 the Tier 2 tradeoff equation. As demonstrating technical

1 feasibility.

2 The next slide, please. This chart is similar to
3 the previous one but, instead, shows medium screw-based
4 directional lamps rather than omnidirectional ones. In
5 this case there are 280 models that would meet Tier 1 and
6 18 for Tier 2.

7 The next slide, please. Lastly, this chart shows
8 the performance data for candelabra-based decorative lamps.
9 Here, you see 73 models that would meet Tier 1 and 42 that
10 would meet Tier 2. Note that there seem to be fewer points
11 on this chart and that's because multiple models are shown
12 at the exact same performance point.

13 The next slide, please. To help consumers avoid
14 poor and unexpected experiences, the proposed regulations
15 limit the ability for manufacturers to make certain claims
16 before demonstrating a reasonable amount of performance.

17 For example, for a lamp to claim that it's a 60-
18 watt equivalent, it must demonstrate a minimum amount of
19 brightness measured in lumens.

20 The proposed standards also set minimums for
21 light distribution, power factor, standby power, lamp life,
22 color consistency and color rendition. These factors all
23 tie into the lifecycle cost and benefit of energy-efficient
24 lamps and the ease of their use in retrofit.

25 Rather than walk through the details and merits

1 of all of these levels, which are available in the
2 rulemaking record, I'd like to concentrate on two topics,
3 standby power and color rendition.

4 The standby power regulations apply to connected
5 lamps. And connected lamps are those capable of being
6 controlled, often wirelessly, through radio protocols such
7 as WiFi, ZigBee, Bluetooth. This allows consumers to turn
8 on and off a lamp through their smart phone, amongst other
9 features. To achieve this function the lamp must be
10 listening and available to receive commands, even when it's
11 not producing any light.

12 Lower power consumption in this mode of operation
13 is critical as the lamp will be listening for commands 24/7
14 and, if the power levels are high, that will dominate the
15 energy use of the lamp.

16 The proposed levels are cost effective, feasible,
17 and already attained in some connected standby -- in
18 standby mode in connected lamps, today.

19 The next slide, please. The other aspect of the
20 regulation I would like to take some time to explain is the
21 Color Rendering Index, commonly referred to as CRI. The
22 Color Rendering Index is a measurement of color accuracy
23 relative to natural light, where a higher score means
24 higher accuracy, with the maximum being 100.

25 Eight color samples are measured to derive CRI,

1 meant to cover much of the visible spectrum, like reds, and
2 blues and greens. The scores of each of these samples is
3 averaged and the result is the CRI score.

4 However, much as a student can get all As and one
5 F, and still achieve a B average, a good CRI score can be
6 achieved by having most of the error in a single color.
7 This is, in fact, the characteristic in many LED lamps,
8 today. With error concentrated in sample 8, referred to as
9 R-8 and which is a pinkish, purple color strongly linked
10 with red.

11 The proposed regulations set two standards for
12 color rendering to prevent particularly poor single color
13 scores. The Commission proposes -- or the Commission staff
14 proposes an average score of 82 CRI, as well as a score no
15 lower than 72 for each individual color.

16 The next slide, please. The chart on this slide
17 is a bit complex, but shows some key aspects to the
18 proposed CRI levels. The Y axis is the individual color
19 score for sample 8, which is the one I just mentioned that
20 typically shows the highest level of error in LEDs, today.
21 And the X axis is the overall or averaged CRI score.

22 These data points are real performance points for
23 lamps commercially available on the market, today. The
24 upper right quadrant, shaded in yellow, shows the set of
25 products that would meet both the average CRI levels and

1 the individual color requirements. Products that are below
2 90 CRI exist that would meet these proposed levels of CRI.

3 I would also like to point out that there's a
4 large variance in R-8 at any given CRI level,
5 highlighted -- you can see the bands over there, on the 80
6 CRI. And this shows that one 80-CRI bulb is not equivalent
7 to another, showing the difficulty of setting just a CRI
8 level by itself, without -- it shows the need to set an
9 individual color score.

10 The next slide, please. The proposed
11 regulations, in whole, are cost effective and feasible.
12 The incremental costs of the most common lamp type is \$.50,
13 with a savings of \$7.80 and a payback of less than one
14 year.

15 Other lamp types within the scope are similarly
16 cost effective. While there are products that would comply
17 with the standard on the market today, many lamps only fail
18 to meet the standard on a few points, but otherwise would
19 comply. So, there are many products that are close.

20 The incremental cost characterizes the expected
21 increase in cost for reengineering versions of lamps by
22 2018 and 2019, not simply an increase of production of
23 lamps on the market, today, that entirely comply.

24 While many lamps were analyzed in 2014 and 2015
25 to develop the standard, it is expected that most of these

1 will be revised or entirely replaced by new models, with or
2 without the standard by 2018.

3 The next slide, please. In addition to the
4 minimum standards for small-diameter directional lamps and
5 LED lamps, the proposed regulations include changes that
6 support other standards and programs. The Commission
7 adopted regulations for portable luminaires that require
8 screw-based table and desk lamps to come with energy-
9 efficient LED or CFL bulbs.

10 The proposed regulations clarified that when
11 choosing the LED option bulb, it should be an LED that
12 complies with the proposed standards. The proposed
13 regulations also support Title 24 Building Codes, as well
14 as the voluntary California Quality LED specifications by
15 providing a way to certify compliance with those
16 specifications.

17 The next slide, please. The Energy Commission
18 developed the proposed standards through a public and
19 inclusive process. Today's adoption hearing is one of many
20 public forums or written comment periods provided to
21 stakeholders to provide feedback to the process.

22 In fact, staff adjusted the proposal multiple
23 times as a result of feedback, including in this rulemaking
24 process. Most recently, we made changes in response to new
25 comments to narrow the scope of small-diameter directional

1 lamps to help ensure some specialty lamps are not included.
2 We also adjusted our color consistency requirements to
3 match industry requests. We extended the timeline for
4 compliance to account for comments we received regarding
5 the changes that might be needed in the manufacturing
6 process.

7 We also reduced the CRI products from the pre-
8 rulemaking to the formal rulemaking to enhance the
9 feasibility of manufacturing lower CRI lamps for the
10 standard.

11 The next slide, please. I would like to take
12 this time to discuss some common misconceptions regarding
13 the proposed regulations.

14 Firstly, the proposed standards do not lead to a
15 de factor CRI standard of 90. The proposed regulations are
16 intentionally set at a level of 82. And staff expects that
17 given the two-year lead time sub-90 CRI lamps will be
18 available on the market.

19 In addition, the proposed CRI levels set a
20 minimum level of color accuracy, a fundamental function of
21 general service lighting, and are not based on subjective
22 consumer preferences for one color versus another.

23 The next slide, please. Staff has reviewed the
24 comments, data, and information filed in this proceeding
25 and recommends no additional changes to the proposed

1 regulations. In consideration of the entire record and of
2 the potential to save over \$4 billion, 32,000 gigawatt
3 hours over the next 10 years, as well as associated
4 emissions and environmental benefits, staff recommends the
5 Commission adopt the resolution before you, approving the
6 initial study and negative declaration, and amendments to
7 the Commission's regulations.

8 They're cost effective, feasible, and will
9 support the transition to higher efficiency lighting.

10 CHAIR WEISENMILLER: Thank you. We have many
11 public comments, so we're going to go through those.

12 The one thing I would urge everyone, there are a
13 couple -- some entities who actually have filed two blue
14 cards. And the bottom line is each -- one card, one
15 speaker per entity, although if you want to consolidate and
16 do a two-person panel, that's fine. But, basically, no
17 representatives of two people -- two persons from a single
18 organization.

19 So with that, as I said, let's start with Michael
20 Siminovitch of UC Davis.

21 MR. SIMINOVITCH: Commissioners, thank you very
22 much. My name is Michael Siminovitch. I'm a Professor at
23 UC Davis. I'm the Director of the Lighting Center. And
24 I'm also the Rosenfeld Chair on Energy Efficiency, so I'm
25 in the right room.

1 We support the Energy Commission's goal for
2 energy efficiency and believe that the ultimate market
3 transformation in California can be best achieved by
4 developing and delivering lighting products that have
5 outstanding performance characteristics, including color,
6 dimming, and longevity.

7 The Lighting Center has one of the largest
8 maintained database on lamp photometrics, including both
9 Energy Star lamps and California quality lamps. Typically,
10 we see the small efficacy differences between low CRI 82
11 lamps, 80 CRI lamps and 90 CRI lamps largely paid for by
12 depleting the red end of the spectrum. Concentrating
13 radiation in the yellow and the green boosts lumens, but
14 not color experience. Radiation in the red end of the
15 spectrum is very important for our visual experience.

16 We do have examples of 90 CRI product lamps that
17 actually exceed many of the Energy Star lamps in terms of
18 efficacy, indicating that it's possible today to produce
19 comparable efficiency products.

20 It's important to note, and as was summarized by
21 the previous presentation, that you can't use lumens in an
22 isolated manner without considering the color
23 characteristics of that lamp. In order to establish
24 equivalency, you must look at other characteristics besides
25 lumens.

1 The Color Rendering Index is one method that can
2 be used to help speak to an additional performance
3 characteristic, including lumens, in order to establish
4 true equivalency.

5 Cost is often entered into this argument and many
6 of the lamps that we have tested, that meet the California
7 quality specification, are under \$10, making it a highly
8 cost-effective investment for California.

9 We have the capability, today, to produce high
10 color rendering light sources cost effectively and
11 efficiently, and it will provide the kinds of color
12 experiences that we'd like to see in our homes.

13 And I thank the Commission for allowing me to
14 speak.

15 CHAIR WEISENMILLER: Great, thank you.

16 Let's go to Francis Rubenstein.

17 MR. RUBENSTEIN: Yeah, hi, my name is Francis
18 Rubenstein and I'm rising to speak against the proposed
19 appliance standard.

20 I submit my comments as an environmentalist and
21 as a California taxpayer. I do not purport to speak for
22 the Lawrence Berkeley Lab. However, my comments are
23 informed by some 34 years of experience as a staff
24 scientist in the lighting group, at Lawrence Berkeley Lab,
25 as well as an individual who has worked in the past, on a

50

1 pro bono basis, with the CEC on rulemaking, particularly
2 Title 24. Also, somebody who truly believes in the mission
3 that you guys are doing.

4 I'd like to speak just briefly to three points.
5 First, because a high CRI lamp is, in general, going to use
6 a few more watts than, say, an Energy Star LED, the
7 lighting footprint of California households will end up
8 being somewhat higher than typical households elsewhere,
9 who don't have the same rulemaking to deal with.

10 Admittedly, it's not a lot of extra energy, maybe
11 about 150 kilowatt hours per household, per year.
12 Hopefully, there aren't too many households who can't
13 afford an additional \$15 or \$20 on their annual PG&E bill.

14 But if you consider that there's some 11 million
15 households in California, this actually does add up to a
16 fair amount of energy. It's about enough energy to power,
17 maybe, 300 homes.

18 And as an environmentalist, I've got real issues
19 with an additional -- with this additional energy use, when
20 it's a direct consequence of an appliance standard which is
21 intended to diminish energy use.

22 Secondly, California is not an economic island.
23 If California consumers can't get the LEDs they want at the
24 right price, they'll just turn right around and go online.
25 I would hate to see this regulation effectively take money

1 out of California retailers, like independent hardware
2 stores, Ace, Home Depot, et cetera, and have it all go to
3 Amazon, instead. I think Amazon makes enough money as it
4 is, without profiting from our situation here.

5 And, third, and this is where I'm kind of wearing
6 a scientist hat here, by eliminating 80 CRI LEDs and
7 promulgating high CRI lamps, the rule would significantly
8 add to the amount of blue light that we have in our homes.

9 Now, I know I'm bringing up another issue that
10 you guys probably don't want to deal with right now, but
11 I've got to talk about this a little bit. It turns out
12 there are only about 8 percent of the energy from an
13 incandescent that's below 500 nanometers is there.

14 But a high CRI lamp has actually about twice that
15 amount, by more like 17 percent, so it's significantly
16 more.

17 Now, the effects of blue light on health, both
18 bad and good, is a real hot topic button issue, which you
19 don't want to talk about here, today. Very briefly, I was
20 at an IS conference a few years ago, and during a forum
21 discussion one of the members of the audience shouted out
22 that blue light was the next asbestos. And I wanted to
23 tear my hair out. But, anyway, the issue is that it's a
24 very big issue, the blue light, and more of it, less and so
25 forth.

1 The potential for possible harm due to blue light
2 at night is going to become much more important, now.
3 Apple has done a new operating system, 9.3, is going to
4 have the ability to be able to change the amount of blue
5 light that you get from your phone at nighttime, in order
6 to reduce the amount of blue light that we have at
7 nighttime.

8 But if you think about what Apple is doing,
9 Apple's giving their consumers a choice to implement a
10 feature they didn't have before.

11 But the staff recommendations sort of have the
12 opposite effect. They reduce people's choice by making it
13 harder for Californians to get LED bulbs that might have
14 less blue light. And it turns out that those 80 CRI lamps
15 don't emit as much blue as the 90 CRI lamps. I'd like to
16 see more information on this.

17 But, anyway, I think you can see this is going to
18 represent a pretty obvious legal exposure, having State
19 regulation that precludes consumers from buying lower LED
20 content -- sorry, lower blue content --

21 CHAIR WEISENMILLER: Could you wrap up?

22 MR. RUBENSTEIN: I'm going to wrap up right now.

23 CHAIR WEISENMILLER: Yeah. No, you're a
24 scientist, not an attorney, so your legal opinion will be
25 given due weight.

1 MR. RUBENSTEIN: Okay, very good. Okay, I
2 appreciate that. I was just going to say that basically,
3 for the reasons I've outlined and others, I recommend that
4 the California Energy Commission not implement staff's
5 proposals.

6 CHAIR WEISENMILLER: Okay, thanks for being here.
7 Let's go to NEMA.

8 MR. BOESENBERG: I'm Alex Boesenberg. I'm the
9 Manager of Regulatory Affairs for the National Electrical
10 Manufacturers Association. I represent members of the
11 lighting manufacturing community, both LEDs and lightbulbs,
12 such as we're talking about today.

13 And many of my members remain concerned about the
14 Commission pushing toward a standard that defines a very
15 narrow band of products. You know, echo Dr. Rubenstein's
16 comment about choice being reduced in the marketplace, and
17 the concerns about light and health is still being studied.

18 We sympathize with consumers who want product
19 choice, particularly if they're budget-minded. When I
20 refit my home, I chose 80 CRI products because I could put
21 more of them in sooner and, thus, begin saving energy
22 sooner. And like many people, as is noted in the
23 International Standard for Color Rendering, I don't see a
24 lot of difference between 80 and 90, myself. So for me,
25 it's not a big deal, and so budget was more important. So,

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1 I refit my house and I'm satisfied.

2 But to those who claim that LEDs are not being
3 adopted, NEMA's sales figures, particularly for the last
4 year, contradict that sharply. That is a geometric curve
5 you see on that slide up there. The rate over the third
6 quarter of 2014 and the third quarter of 2015 increased by
7 237 percent. That's not just a positive slope on a curve,
8 but a geometric rate if you look at the curve overall.

9 That is because of the innovations particularly
10 in the manufacture of 80 CRI products.

11 If the Commission goes to this proposal and
12 resets the clock back to recycling and going to the 90 CRI,
13 and what can we do to drive these down, can industry do
14 that? I think, given enough time progress could be made.
15 Will it ever catch back up to 80? Probably not, because
16 the rest of the world -- and LEDs are made and sourced
17 globally, the rest of the world is focused on 80 because
18 that's where the sweet spot between the balance of price
19 and performance has occurred. And that is what has driven
20 that particular adoption.

21 The Commission set out to address the adoption
22 challenges they felt in the proposal -- in the market, in
23 2013, when this proposal development began. That problem
24 is solved. That's what that slide says, that we've figured
25 it out in the meanwhile.

1 And so, to adopt a standard that causes a reset
2 is potentially harmful. I personally believe it is
3 harmful, will be harmful to the market. And as was
4 mentioned, California is not an economic island.

5 Pushing toward a standard that chooses what is
6 the best appearance for someone, to me, oddly enough
7 reminds me of the flak Mattel corporation caught in the
8 1980s over Barbie Dolls, and how Barbie set an unfair
9 standard for beauty because you had to be blond-haired,
10 blue-eyed and tall.

11 And so, if you want a Barbie bulb, you can do
12 that. She's got an R-8 color dress, by the way. I had to
13 look for that. Barbie has a place, people like Barbie.
14 Some people want this, let their kids play with it.

15 But there also should be opportunity for
16 diversity, the diversity that Dr. Rubenstein mentioned,
17 diversity in the marketplace. You can have your Moxie,
18 your Cindy, your Ida. I like Ida best, personally.

19 Today's diversity and choice has caused that
20 curve. But we're very worried that if you go to Barbie,
21 well, there's only one choice. It happens to be more
22 expensive. I got a Moxie and an Ida for the cost of a
23 Barbie, yesterday at Target. And some people, that's a
24 more important choice parameter for them. And they're just
25 as efficient.

1 So, Barbie costs more to bring home. She costs
2 more to feed. The girl next door, Ida, cheaper to bring
3 home, cheaper to feed. I like Ida best, personally, and
4 some people should be allowed that choice, and that's what
5 we're asking.

6 So, please disapprove the proposal. We know we
7 can improve it. And you're not going to lose any energy
8 because they're just as efficient. Thank you.

9 CHAIR WEISENMILLER: Thank you.

10 Let's go to Noah Horowitz, NRDC.

11 MR. HOROWITZ: Commissioners, staff and
12 colleagues, good morning. I'm Noah Horowitz and I'm the
13 Director of NRDC's Center for Energy Efficiency Standards.
14 And we've been an active participant throughout this multi-
15 year proceeding. And I do not have any dolls to use,
16 today.

17 We're here, today, to express our strong support
18 for the proposed standards for the small-diameter
19 directional lamps. We believe there are very few
20 opportunities like this that exist in the energy-efficiency
21 world, where one can simply unscrew a product and instantly
22 replace one that used 50 watts, such as the old
23 incandescent and halogen directional lamps under
24 consideration here, and replace them with one that only
25 uses 10 watts. So, greater than 80 percent savings.

1 And due to the LED's much longer life, the
2 proposed standards are widely cost effective. The savings
3 will really add up in many locations as well, as the bulbs
4 might be on for eight hours or more per day, such as those
5 used at retail, and hotels, and other outlets.

6 In fact, once all the State's small-diameter
7 directional sockets contain a Title 20-compliant lamp,
8 we're looking at annual savings that are greater than twice
9 the amount of electricity consumed by all the homes in
10 Oakland, which is California's eighth largest city. And,
11 I'd like to point out, the home of the World Champion
12 Golden State Warriors. And I know I'm in Sacramento, so
13 maybe I should have tempered that.

14 We urge the CEC to adopt the standard today,
15 which will be the most stringent in the world and serve as
16 a model for future adoption in other states and
17 jurisdictions.

18 We're also supportive of the CEC's proposal to
19 set minimum energy efficiency and performance standards for
20 the everyday LED light bulbs. This will ensure that the
21 LEDs that California consumers buy will not only save
22 energy, but perform well, too.

23 The CEC standards include important requirements,
24 besides just efficiency, for things like low standby power,
25 light quality, and making sure that the lamps that are sold

1 are not likely to fail prematurely.

2 Throughout this proceeding we've urged the CEC to
3 be careful not to set overly stringent requirements for
4 color rendering, as consumers are very satisfied with
5 today's offerings, which typically have a CRI with 80, and
6 because the lamps with higher CRI will use more power and
7 be more expensive to produce.

8 Hopefully, the incremental cost in power penalty
9 in the CEC's proposal will provide -- will be modest, as
10 manufacturers modify their products to comply with the
11 standards.

12 In summary, we believe the CEC's proposed
13 standards for general service LED lamps have a lot of
14 merits and we support their adoption today, as well. Thank
15 you very much.

16 CHAIR WEISENMILLER: Thank you.

17 Next, actually, it gets back to the question.
18 So, we have a representative from GE in the room and a
19 representative on the line. And so, trying not to have GE
20 give two identical talks but, certainly, if you want to,
21 within your time, allocate between the two of you, that's
22 fine. You know, and make different points.

23 MS. MATHEWS: And for clarification, I just
24 wanted the Chair to make that clear. That anyone from the
25 same organization, as long as they have a different comment

1 than they can have, they can make it, that they can still
2 speak.

3 CHAIR WEISENMILLER: Yeah.

4 MR. SICKENGER: Thank you, Mr. Chairman, for the
5 dispensation. Jeff Sickenger on behalf of General Electric
6 Lighting. First of all, I'm going to apologize in advance
7 for not being as entertaining as my colleague, Alex
8 Boesenberg.

9 And I'd like to express appreciation to
10 Commissioner McAllister and to staff. They've entertained
11 us, over the course of the last several months, in a number
12 of conversations to try and resolve the many issues that
13 we've raised with the regulation. We appreciate some of
14 the changes that staff alluded to, earlier. Of course, we
15 still have a number of outstanding concerns with the
16 regulation.

17 Mr. Boesenberg and Francis Rubenstein spoke
18 eloquently to the color issues. There's only one other
19 issue that I wanted to add into the mix of that
20 conversation, and it pertains to this notion of an energy
21 efficiency penalty of going from 80 to 90 CRI.

22 Whether that penalty is one watt per lamp, or
23 four watts per lamp, or something in between, you multiply
24 it by tens, or hundreds of millions of sockets that we're
25 trying to convert in California, it adds up to real energy.

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1 Of course, the prior presentation, on Agenda Item
2 Number 2, alluded to the fact that this administration has
3 established very aggressive targets for greenhouse gas
4 emission reductions post-2020. So, we don't see how the
5 Commission can afford to leave significant energy savings
6 on the table.

7 The second comment of three, the proposed
8 regulations also prohibit the sale of lamps that operate in
9 the white color space. Now, GE submitted research to the
10 docket which shows that there is consumer interest in these
11 lamps. So, we would submit that providing for their
12 continued sale should help facilitate the transition to LED
13 lighting.

14 And, indeed, the staff report on the 45-day
15 package, at page 58, indicates that that is the
16 Commission's intent. The problem is we've got a
17 requirement for chromaticity that references an ANSI
18 Standard in the regulation that is too narrow to
19 accommodate the design of these lamps. They're actually
20 designed to operate outside of the prescribed color space.

21 We think that's an unintended consequence of the
22 first round of 15-day changes. We've offered language to
23 staff and Commissioner McAllister that we hope will address
24 that issue.

25 And then finally, with regard to small-diameter

1 directional MR-16 lamps, we believe the proposed 80 lumen
2 per watt minimum belies the market data, which indicates
3 that the rate of efficiency gain is starting to flatten as
4 the technology matures. An ambitious efficiency projection
5 for 2018, for this lamp category, would be in the low 70
6 lumens per watt. Again, looking at the data, that's about
7 15 percent per year from where we are today, at roughly 55,
8 56 lumens per watt.

9 Since today's MR-16 halogen lamps are going to be
10 wiped out of the market by this regulation, we think it's
11 incumbent on the Commission to ensure that there's
12 sufficient product out there for various applications at
13 the range of wattages, the color temperatures and beam
14 spreads necessary to meet market demand. We think the
15 standard should be set at 70 lumens per watt.

16 And I'll end there. Appreciate that it's late in
17 the process, but we would like another shot at 15-day
18 amendments to address these and other concerns. So, we
19 would encourage you not to adopt today. Thank you.

20 CHAIR WEISENMILLER: Okay, thank you.

21 Now, again, is there another representative from
22 GE on the line? Are there any other points? And realizing
23 that --

24 MR. HOWLEY: This is -- can you hear me?

25 CHAIR WEISENMILLER: Yes, we can.

1 MR. HOWLEY: Okay. Yes, this is Joe Howley from
2 GE. And, yes, the points that Jeff raised were our primary
3 points. That we are very concerned about the allusion that
4 it appears as if 80 CRI lamps or 82 CRI lamps would be
5 allowed. But the fact, given the nature of how these come
6 together, it really forces the manufacturer into 90 CRI
7 chips.

8 And as you heard from many folks, we do not
9 believe that is a good outcome for the citizens of
10 California. We believe they should be allowed to purchase
11 the 80 CRI A line products. And that the R-8, in
12 particular, that particular specification needs to be
13 adjusted downward.

14 Also, the other two points about the white light
15 space, products that we call GE Reveal, will not meet the
16 current regulations.

17 And then, finally, just to echo the concerns
18 about the very high LPW for MR-16 lamps. And we do not
19 believe that that is necessary. Most of the savings are
20 going to be achieved by wiping out the halogen MR-16 lamps,
21 and that level doesn't have to need to be set at a level
22 that will only allow a very limited number of specialty,
23 very high-efficiency MR-16s.

24 We believe it needs to be lower to allow a wider
25 array of choice in this space.

1 CHAIR WEISENMILLER: Okay, again, not
2 duplicative. So, thank you.

3 MR. HOWLEY: Okay, thank you.

4 CHAIR WEISENMILLER: Okay, thank you.

5 We have a representative from Feit Electric
6 Company. Feit, please.

7 MR. JACOBSON: Good morning, Commissioners. My
8 name is Joel Jacobson and I'm here, today, representing
9 Feit Electric Company.

10 Feit Electric was established in 1978, in
11 California, and is a leading manufacturer of high quality,
12 high efficiency lamps. We share and support the
13 Commission's goal to save energy in the State of
14 California.

15 We have long supported the efforts of the CEC to
16 tighten and strengthen regulations on lamps sold in the
17 State. We participated in the development of California's
18 Voluntary Quality LED Lamp Specification, and subsequently
19 designed and produced lamps to meet it.

20 Currently, we offer both 80 and 90 CRI lamps at
21 comparable prices. Not only here, in California, but also
22 throughout the United States.

23 Feit Electric is generally supportive of the
24 proposed 15-day language for general purpose LED lamps.

25 We believe that setting a minimum CRI of 82 and

1 the two-tiered implementation of efficacy requirements is
2 obtainable in the established time frame.

3 Today, I wish to address two items of concern.
4 First off, after extensive testing and evaluation, we have
5 concluded an R-8 individual color score of 72 or greater is
6 not possible for mass production lamps with a CRI less than
7 90. We have found only 90 CRI lamps are reaching this high
8 benchmark.

9 We do not believe an R-8 score of 72 is currently
10 obtainable for an 82 CRI lamp. We strongly recommend
11 setting an R-8 minimum color score of 50.

12 As most people in this room understand, 90 CRI
13 lamps are less efficacious than lamps of CRIs in the 80s.
14 There's an approximately 10 percent or higher reduction in
15 efficiency or efficacy between the two.

16 To achieve the Commission's primary goal of
17 saving energy, together with establishing better color
18 quality, it makes a great deal of sense to reduce the R-8
19 value as we are suggesting.

20 To adopt a minimum R-8 value of 72 or greater
21 would signal the Commission's desire to effectively adopt a
22 90 CRI specification. If this is the case, we believe the
23 Commission is overestimating the value of color quality
24 metrics at the expense of lost energy savings and the
25 related costs to Californians.

1 On the matter of standby power, for connected
2 lamps, we believe that a .2 maximum is overly restrictive
3 for this emerging technology. We have tested many
4 different types of connected smart lamps, and varying
5 technologies, and do not find lamps that pass this
6 requirement.

7 The new Energy Star Version 2.0 sets the maximum
8 standby power at 0.5 watts, and we believe this is an
9 obtainable level. We are concerned that by setting a 0.2
10 maximum, California may hinder adoption of this dynamic and
11 evolving technology within the State. We believe it is
12 premature to establish such a low standby power level.

13 Thank you for your time and consideration of our
14 comments.

15 CHAIR WEISENMILLER: Thank you. Thank you.

16 Tim Tutt, SMUD.

17 MR. TUTT: Good morning, Chair, Commissioners.

18 I'm here representing the Sacramento Municipal Utility
19 District. And I just wanted to express support for the
20 standards and, in particular, for your attention to high
21 quality lighting in the standards process.

22 I was here ten years ago, when we started the
23 lighting revolution and it's been an exciting time. I know
24 that in my house lighting quality apparently doesn't matter
25 that much. Because I've gone and most of my house is

1 either LEDs or compact fluorescents these days. I have a
2 few pin halogen-based lamps that I can't replace, yet. But
3 I did replace two MR-16s with LED puck lights. And I took
4 all of my old incandescent bulbs that I still had around,
5 and brought them into SMUD, recently, where we now have a
6 display case of incandescent lamps that we're building as
7 part of our customer service center. And you can bring
8 your own in, if you wish, or send them over to SMUD.

9 I do have one pin-based compact fluorescent in a
10 bathroom that you guys forced me to put in when I remodeled
11 my house ten years ago. And I'm excited, now, to see some
12 LED pin-based products that I hope we will be able to
13 replace that next time that compact fluorescent burns out.

14 I just, again, wanted to express my support.
15 Lighting quality may not matter in my house, but I talk to
16 many people who say I will not -- my house, my wife hates
17 those compact fluorescents. It's important to get that
18 right this time around so that we don't have those kinds of
19 stories running around.

20 I remember being in this room years ago, and
21 Commissioner Geesman asking a stakeholder if he'd been able
22 to get his wife to accept compact fluorescents in his
23 house. And the man said, no, I haven't been able to do
24 that, yet. But you know what they say, a man who says he's
25 in charge at home will lie about other things, too. Thank

1 you.

2 (Laughter)

3 COMMISSIONER MC ALLISTER: Thanks.

4 CHAIR WEISENMILLER: Thanks.

5 Cree.

6 MR. MERRITT: Is it still morning? So, good
7 morning. And thank you for the opportunity to comment
8 today.

9 Cree is supportive of the proposed regulations.
10 We are committed to the full adoption of LED lighting and
11 we believe that full adoption requires better light. For
12 someone who's been involved in technology adoption for over
13 30 years, I've seen that the only way you get everybody to
14 adopt something is to make it better than what they had
15 before.

16 And we're convinced that light quality and the
17 experience that consumers will have with the light is
18 critical to that happening.

19 Compromise light and hoping people won't notice
20 is not a path to success. I think we've seen that with the
21 CFLs that were just mentioned. Good enough isn't good
22 enough.

23 I would like to thank the Commission for
24 considering the many comments that were made on the
25 previous language and making some very valuable, and

1 important changes.

2 I would also like to comment on the fact that the
3 current standards do provide some flexibility to meet
4 customers' preferences. One example of that is the fact
5 that, contrary to some comments, it actually doesn't
6 mandate 90 CRI. You can meet an R-8 of 72 with less than
7 90 CRI.

8 We believe these requirements will help
9 Californians get the quality of light they deserve and will
10 help drive adoption. And, in fact, one point on that
11 topic, you know, there have been some comments made on the
12 need to maximize energy savings. And one of the easiest
13 ways to do that is to incent people to adopt faster, than
14 they otherwise would.

15 So, one consideration we would ask the Commission
16 is to consider aligning the voluntary lighting spec with
17 the Title 20 requirements. We believe that will incent
18 manufacturers to do this more quickly, which will
19 accelerate adoption and will accelerate savings.

20 Thank you very much.

21 COMMISSIONER MC ALLISTER: Thank you.

22 CHAIR WEISENMILLER: Thank you.

23 I was going to invite Lorne Whitehead, from the
24 University of British Columbia, next.

25 MR. WHITEHEAD: Thank you very much. My name is

1 Lorne Whitehead. I'm a Professor at the University of
2 British Columbia.

3 And I think, I had a remark prepared, but I'm
4 going to change it a little bit just in response to some of
5 the comments that we've already had.

6 I think a really important point needs to be made
7 about light and vision. We know it, but I think we should
8 think about it, again. It's an extremely complex topic.
9 It spans the realm from the generation of light to the
10 method by which light gets to our eye, which lighting
11 scientists are experts on.

12 And then it involves the experience that occurs
13 in our brains as a result of visual processing from the
14 retina to the brain, which is a vision science question. A
15 huge question.

16 And, you know, the fact is, in today's world of
17 science nobody can be an expert in all those areas. So,
18 mistakes are going to happen.

19 You know, you, for example, are considering
20 issues here that span all of those areas and you'll hear
21 things that really don't hang together, quite bluntly. And
22 it's not because people aren't smart and it's not because
23 they aren't well-intentioned. It's just too big a field.

24 So, we have to constructively compare different
25 points of view. And, of course, you have to try to sort it

1 out.

2 So, I think I would like to comment, again, on
3 the efficiency question. It keeps coming up. You hear it
4 again, and again, and again. There's a very simple fact
5 when it comes to the use of power. If you use less power,
6 you use less power.

7 So, the fact that a particular product might be
8 less efficient in some definition that has very little to
9 do with human perception or human value is irrelevant.
10 It's all about what's valuable to people.

11 Now, it's simply true that higher CRI light
12 provides more value per watt for people. If you want to
13 see well, you spend money on electricity to see better.
14 And high CRI light, even though that efficacy word that
15 gets used is slightly lower, very slightly lower, the
16 result is better light, so you get more.

17 Let me turn that argument around a different way.
18 Now, if you take the -- if you accept the point of view
19 that we have a moral obligation to have the highest
20 possible efficacy of light, well, that takes you to low-
21 pressure sodium. Or, if you want to stay white, it takes
22 you down to at least CRI 60 light, light that's been
23 optimized for efficacy and not for adequate color vision.

24 And nobody in this room, I believe, is suggesting
25 that we do that. Why not? Because that more efficient

1 light would not provide the value for people. So, if you
2 want to know what provides the best value for people, you
3 have to turn to scientific experts on that field. And
4 you're hearing them say, these standards, these improved
5 CRI standards provide that value for consumers.

6 So, I realize I'm repeating things I've already
7 said. But I think it's -- I think we should be forgiving
8 of the misunderstanding that does exist out there, in that
9 regard.

10 The other issue, there was an issue brought up
11 earlier today, that I heard --

12 CHAIR WEISENMILLER: You need to wrap up.

13 MR. WHITEHEAD: I'll wrap up.

14 CHAIR WEISENMILLER: Okay.

15 MR. WHITEHEAD: By saying -- is Francis still
16 here? Francis, do you have a paper you can refer to on the
17 blue hazard? Could you provide that to the Commission?
18 Because I don't think there is such a thing, to be
19 perfectly honest.

20 What is true is higher CCT has more blue light
21 per lumen. But I'm not aware of any such data for CRI.

22 Thank you.

23 CHAIR WEISENMILLER: Thank you.

24 Let's go to, I was going to say Alex Baker from
25 Luminous [sic].

1 MR. BAKER: Lumileds.

2 CHAIR WEISENMILLER: Lumileds, yes, sorry.

3 MR. BAKER: Good morning, Alex Baker from
4 Lumileds, in San Jose, headquartered in San Jose. We make
5 the LEDs that go into the LED bulbs that are proposed to be
6 regulated.

7 For five years, starting in 2007, I worked at the
8 USEPA managing the Energy Star Lighting Program, and I have
9 an appreciation for where you find yourselves because my
10 job there was to make decisions wedged between manufacturer
11 interest, utility interest, consumer interest, retail
12 interest.

13 So, in that role it was my responsibility to
14 finalize a spec when everyone was equally angry with me.

15 This is my first time with the CEC regulatory
16 process. What I've observed is that the Commission and the
17 electric utilities view the market data and see plentiful
18 product already meeting the proposed regulation.

19 On the other hand, manufacturers, including our
20 customers, believe, when all the requirements are
21 considered together, that maybe a handful of existing
22 products will meet it.

23 This is the reason why NEMA manufacturers are
24 requesting a list of products that the CEC believes will
25 meet the combined requirements.

1 I think it's incumbent upon the Commission to
2 gather all stakeholders together, in one forum, where these
3 differences, and opinions, and perceptions can be ironed
4 out, so the regulation can be based on one set of common
5 facts, however imperfect that set is.

6 I've also observed that in this process that
7 manufacturers, who created the CRI metric and use it daily,
8 seem to be vilified, viewed with contempt and made to look
9 like we don't know what we're talking about.

10 Sierra Club petitions are flooding the docket
11 with statements that simply aren't scientifically true.
12 For instance, that manufacturers want a specification that
13 is less efficient, will cost more money, and generate more
14 greenhouse gas emissions. This is nonsense.

15 Manufacturers have been asking for the option to
16 ship minimum 80 CRI because it's much more energy
17 efficient, on the order of 15 percent more efficient. And
18 consumer adoption of these products, as Alex Boesenberg
19 showed, is already robust. It's dramatic.

20 It's straight forward physics that the proposed
21 regulation will use more energy than the minimum 80 CRI
22 Energy Star-certified products that are rapidly
23 transforming the market.

24 And it's simple economics that if an entire
25 industry is set up to meet one specification and then

1 another specification comes along that's a lower volume,
2 it's going to cost more to comply with.

3 The intent and the will of these petitions should
4 be honored and taken seriously, but the physical and
5 economic arguments that the petitioners have signed on to
6 are demonstrably false.

7 The CEC is creating a regulation that prevents
8 manufacturers, including my customers, from shipping the
9 most efficient products. Meanwhile, manufacturers invested
10 thousands of hours trying to share our knowledge, our
11 experience with this metric to help the CEC use the metric
12 effectively and meaningfully.

13 We were trying to educate the Commission and
14 interested stakeholders that the existing economies of
15 scale the industry has achieved would be abandoned by this
16 regulation, to achieve a 2 point increase in CRI which is,
17 scientifically speaking, has not perceptibility and is
18 statistically insignificant in terms of its benefit to
19 consumers.

20 At a minimum, you need to make normative
21 reference to CIE 13.3, otherwise these terms won't be
22 defined in the regulation.

23 CHAIR WEISENMILLER: Okay, could you wrap things
24 up?

25 MR. BAKER: In summary, Lumileds eagerly wishes

1 to participate in a collaborative, transparent regulatory
2 process. We do not support the adoption of this deeply
3 flawed regulation and we reiterate our request for you to
4 restart this process.

5 CHAIR WEISENMILLER: Okay, thank you.

6 Let's go on to Osram. Again, we have two
7 potential speakers. Yeah, and so why don't you both come
8 up and see if we can coordinate. Again, I'm trying not to
9 have duplicative statements from the same company.

10 MR. LIEN: I'm with Osram. Susan's with Sylvania
11 LEDvance Group.

12 CHAIR WEISENMILLER: Okay.

13 MR. LIEN: I'm with the chip manufacturer.

14 CHAIR WEISENMILLER: Okay, go ahead, then.

15 MR. LIEN: So, a different set of interests.

16 CHAIR WEISENMILLER: Yeah.

17 MR. LIEN: And good morning, and thank you for
18 the invitation to address the Commission. I'm Mark Lien.
19 I'm the Director of Government and Industry Relations for
20 Osram.

21 Osram is the second largest global producer of
22 LEDs, with our Opto Semiconductor Division, located here,
23 in Sunnyvale, California. We support strong energy
24 efficiency goals for general service lamps.

25 Your color preference requirements, however, as

1 we've heard, are counterproductive to this end. What Ken
2 presented sounds as if there are many products available
3 now to meet your proposal. But despite repeated requests,
4 we've never seen a list of these of these products and
5 believe that most do meet some, but not all of the
6 requirements, and at substantially higher costs.

7 The Commission's proposal relies on economies of
8 scale to bring the color performance up, the efficiency up
9 and the price down. Performance is proportional to price.
10 Raise performance and cost goes up.

11 California is 12 percent of the national market,
12 but a single digit percentage of the North American market
13 for these lamps.

14 Global production standards will not change to
15 accommodate this small market. California then becomes a
16 niche market.

17 Multiple CEC and IOU studies confirm that price
18 is the single greatest impediment to adoption. Even if
19 higher rendering products can be delivered by 2018, at a
20 price on par with today's most popular products, those
21 popular products will also continue to innovate and will
22 continue to be more efficient and less costly due to market
23 forces.

24 The economies of scale at work in the North
25 American market have found a balance between cost and

1 performance that, in 2015, spurred a 237 percent increase
2 in LED sales. The curve for this rise in sales is
3 exponential and rising, as you saw in the earlier slide.

4 The problem of LED adoption has been solved. The
5 market shift is well underway. And unlike CFLs, consumer
6 acceptance of current LED products is already very strong.

7 Regarding costs, a good example of one of the
8 many lamp types not considered in your analysis is the PAR
9 38 spot and floodlight category, for which the only post-
10 adoption lamp today is a commercial grade product that
11 costs \$80. With popular LED PAR 38 lamps today selling for
12 under \$20.

13 It defies precedent to expect a niche market to
14 influence a drop in price of 75 percent in a maturing
15 product design for California lamps to be close to
16 competitive with the rest of the country.

17 What the proposal means for Californians is
18 products that are more expensive, with color metrics that
19 make them less efficient, meaning that they are more costly
20 to use. And these products will be purchased in fewer
21 numbers due to the higher prices or sourced online by
22 consumers.

23 The CEC has earned respect for intelligent and
24 progressive energy standards. What is different about this
25 proposal is that you are creating mandatory regulations for

1 LED products, a first in this country. What is
2 conspicuously absent is expertise in manufacturing
3 processes and best practices.

4 During the development of this version it appears
5 that manufacturers, that have the expertise, are at best an
6 inconvenience and, at worse, adversarial. We have shared
7 efficiency goals --

8 CHAIR WEISENMILLER: Could you wrap things up?

9 MR. LIEN: Certainly. We have shared efficiency
10 goals with the CEC in past versions, take no issue with the
11 general service efficiency levels you've suggested in this
12 version.

13 Please do not adopt this proposal. It is a step
14 backwards in terms of price, efficiency, and allowing
15 consumer choice. Thank you.

16 CHAIR WEISENMILLER: Okay, thank you.

17 Susan Callahan, please.

18 MS. CALLAHAN: Susan Callahan, with Sylvania. I
19 wish to share with you a quote from HL Mencken, which I
20 believe reflects the 15-day language you are considering
21 adopting today.

22 "For every complex problem there is an answer
23 that is clear, simple and wrong." And the 15-day language
24 is the wrong answer.

25 The answer that you -- this standard should be

1 about energy efficiency and what can be done to increase
2 the adoption rate of LED lamps and it is not.

3 Omnidirectional LED lamps are not compact
4 fluorescent lamps. They are transforming the market by
5 themselves because of their efficacy and cost. This
6 standard will have Californians paying more for less
7 efficacious lighting because of your insistence on color
8 metrics that the consumer neither values, nor understands.

9 Some applications require high color rendering
10 lamps and we thank staff for recognizing that these special
11 lamps need lower efficacy requirements.

12 But to require that everyone purchase these
13 higher cost, lower efficacy, specialty application lamps is
14 wrong.

15 You complain that consumers are replacing their
16 CFLs with LEDs, rather than replacing their even less
17 efficient halogens. They aren't replacing their halogen
18 lamps because of perceived color issues with LEDs. They
19 aren't replacing them because of the initial cost. And
20 increasing the cost of LEDs will slow adoption.

21 With regard to small-diameter directional lamps,
22 I ask that you reconsider the phrase, "capable of operating
23 at". Exactly what does that mean? That you install the
24 lamp, flip the switch and it will turn on, or that it will
25 operate in the manner for which it was designed at nominal

1 lumens and life.

2 And the very specialty halogen lamps that you
3 will eliminate have no LED counterparts. These lamps are
4 designed with particular focal lengths, for particular
5 optical performance. They are not potential loopholes.

6 In summary, I have a simple request. Please
7 abandon this 15-day language. The haste with which it
8 appears to have been thrown together, without data to
9 substantiate your claims, the mathematical errors we've
10 seen, the greater than/less than mix up, specious
11 correlation of lighting parameters and, most importantly,
12 your unwillingness or inability to provide industry the
13 list of lamps you claim meet this standard indicates a lack
14 of understanding of the technology, and a lack of respect
15 for the people of California. Thank you.

16 CHAIR WEISENMILLER: Thank you.

17 Let's go on to Jim Harkley [sic].

18 MR. HAWLEY: Hawley.

19 CHAIR WEISENMILLER: Hawley, excuse me.

20 MR. HAWLEY: Thank you, Mr. Chairman, members of
21 the Commission. I'm Jim Hawley. I'm here on behalf of
22 Home Energy Analytics, a Bay Area based analytics company
23 that helps customers save energy.

24 And we are here in strong support of the proposed
25 appliance efficiency standards. And we're here because --

1 and we want to see both the energy efficiency aspects of
2 this and the product quality aspects of this proposal.

3 Home Energy Analytics has been supporting
4 residential energy efficiency programs since 2010. Our
5 software uses smart meter data to perform a remote
6 residential energy analysis. And to date, we've analyzed
7 over 3,500 homes in California.

8 The surprising results from our analysis shows
9 that plug loads in lighting now represent the biggest share
10 of the average home's energy consumption, bigger than
11 heating or cooling.

12 In California, we've found that plug loads,
13 alone, consumer more than 30 percent of the total energy
14 used in a home and, in many cases, much more. So,
15 switching to more efficient appliances and low energy
16 lighting is one of the most cost effective ways to reduce
17 energy consumption.

18 To successfully promote a switch from inefficient
19 lighting, like incandescents, the CEC should support high
20 product quality for consumers, as well as high efficiency.

21 Consumers were disappointed by the quality of
22 CFLs, initially. We're all aware of consumers ditching the
23 CFLs based on poor lighting quality or giving them up due
24 to their short lifetimes. And I will say I am one of
25 those.

1 And unlike Tim Tutt, I have a small home, boxy
2 little rooms, and high-quality efficiency lights are very
3 important to me. So, I think it's very important, on a
4 personal level, that we move forward.

5 Let's not make the same -- have the same
6 experience with LEDs that we had with CFLs. Please require
7 high quality standards so that consumers, who attempt to
8 switch with one or two bulbs, stick with it and continue to
9 make the changes that we all need. Thank you.

10 CHAIR WEISENMILLER: Thank you.

11 Next, PG&E.

12 MS. ANDERSON: Good afternoon, Commissioners.
13 Thank you for allowing us this opportunity to speak.

14 PG&E is very supportive of the Commission's
15 proposals to set minimum performance and quality
16 requirements for LED lamps to help ensure consumer
17 satisfaction and, therefore, increase market
18 transformation.

19 We also want to commend the CEC for its work with
20 all the parties at arriving to this point. The CEC has
21 made several compromises throughout this rulemaking in
22 response to stakeholder input and we believe the proposed
23 standards represent a good middle ground that we are
24 willing to support, and happy to support.

25 The CEC has undertaken a data-driven process to

1 establish the current 15-day language. This includes
2 collecting product testing data and has depended on test
3 data to support these standards, including products that
4 meet the .2 watt standby requirement, using multiple
5 communication protocols and product features.

6 The results of this data collection show that
7 there are many products that meet the CEC proposed
8 standard, including affordable options. There's already a
9 product that meets Tier 2 and is selling at less than \$4.

10 Projecting out recent LED pricing trends, the
11 sub-five dollar products should be the norm by 2017 and
12 many products will likely be lower, in the \$2 to \$3 range.

13 This will be accessible for all consumers and
14 this will ensure that all consumers have the opportunity to
15 purchase high quality LED lamps for an affordable cost,
16 rather than limiting a high quality CFL to the wealthy, due
17 to the higher cost premium. And this will be an important
18 step to fully transforming the market.

19 CFLs were able to infiltrate 50 percent of the
20 sockets in California due to the quality issues that have
21 been defined, and they were always relegated to the
22 secondary sockets, with fewer run times, as per studies
23 done by the CPUC.

24 We've seen recently that these sockets, LEDs have
25 replaced the CLFs. Even at the higher cost, people are

1 putting them into the CFLs and not putting them into their
2 primary locations.

3 Consumers have maintained these incandescents or
4 halogen fixtures in their primary living spaces to ensure
5 that those areas are lit with high quality light sources.
6 Dimmable, high CRI, with low flicker and long lives.

7 To transform the market, California must ensure
8 the LED product quality can be trusted by consumers at a
9 reasonable cost. Consumers may not be able to articulate
10 what they would like, in technical terms, but their
11 installation decisions show that they understand a high
12 quality product and do not settle for an inferior product.

13 We believe that the steps that have been taken
14 will go a long way towards preventing poor quality products
15 and negative consumer experience, in reducing consumer
16 confidence in LEDs.

17 And we strongly support your adoption of the 15-
18 day language.

19 CHAIR WEISENMILLER: Okay, thank you. Thanks for
20 being here.

21 Okay, now for Edison we have, again, two cards.
22 So, I was going to ask Mr. Greenberg and Charles Kim to
23 come up, and coordinate or differentiate, but not to repeat
24 or duplicate.

25 MR. GREENBURG: I'm Richard Greenburg and I

1 represent the program side of Southern California Edison.

2 MR. KIM: I'm Charles Kim of Southern California
3 Edison Company and I'm representing coding standards
4 program.

5 MR. GREENBURG: So, on the program side, I'm also
6 the statewide lead of the lighting program for all three
7 IOUs. And I have been heavily involved in the selection of
8 products since 2013, when we went to a high CRI product
9 with the CEC voluntary standard, quality standard.

10 And I've seen the evolution take place. And I'd
11 like to go through it just briefly because it indicates
12 that some of the claims are being over-stated in terms of
13 the efficacy differences and things like that.

14 So, in the beginning we had a 13.5-watt, 800
15 lumen, 60-watt incandescent, 90 CRI product at Home Depot,
16 and the equivalent LED at 80 CRI was 10 watts. So, we had
17 a big gap that was very shocking to everyone, including the
18 people who wrote the voluntary code.

19 However, as time went by, what we now have is a
20 9-watt, 80 CRI, 60-watt equivalent, high CRI, which is the
21 new generation for this year. And it was in the program
22 last year, as well, but it's going to be predominant in the
23 program this year.

24 It is -- the 80-watt equivalent is also nominally
25 9-watt. So, we might have up to 1-watt, where one is eight

1 and a half watt measured and one is nine and half, or less.
2 It has shrunk, okay.

3 So, also, the price difference has shrunk
4 considerably, as well. High-efficacy products go down in
5 price. The higher the efficacy, the fewer chips and the
6 lower the price.

7 And they also continue to improve price in other
8 ways by the economies of scale, and things like that. So,
9 with the economies of scale, as soon as this code is
10 enacted, the economies of scale will cause a price decrease
11 in these higher quality products, such that there will be
12 very little distinguishable price difference between this
13 and the 80 CRI counterparts throughout the country, in my
14 opinion, okay.

15 I want to mention that the -- we put 3.1 million
16 CEC voluntary spec products into the Southern California
17 Edison territory last year, through the Primer Lighting
18 Program. And we have slated, right now, to put 6.1 million
19 in the program, in 2016. And the concept behind that is
20 that for years and years, with various technologies, the
21 utilities have gone before the code to prepare the way for
22 a code change.

23 So, we transform the market to support a coming
24 code change. And that's what we've been doing with these
25 quality products, bringing them more and more in line with

1 what will support the code change. And we do support the
2 entire draft proposal.

3 CHAIR WEISENMILLER: Okay, thank you.

4 Mr. Kim, do you think you have additional points?

5 MR. KIM: I have a different point. First of
6 all, thank you so much. I'm Charles Kim of Southern
7 California Edison Company. I'm here to support the 15-day
8 language.

9 But I want to make a comment about the process
10 that CEC has taken. The 15-day language, it reflects a
11 couple of things. First of all, it reflects the
12 California's leadership in energy efficiency, environmental
13 stewardship, and cost-effective solutions that brings
14 benefits and values to Californians.

15 This measure requires additional cost.
16 Therefore, California demands high quality of their
17 products.

18 The 15-day, also, language it reflects and
19 illuminates results of CEC's staff's extraordinary steps
20 that have been taken since the year 2012.

21 CEC, in listening to staff report in 2014,
22 September of year 2014. Since the year 2014, CEC has
23 listed industries and lowered the CRI requirements.

24 Since the year 2014, CEC has listened to
25 industries and gave one additional year to be ready for

1 Californians.

2 Since the year 2014, CEC has listened to industry
3 and added the extensions to SDLs. All of the process has
4 been taken. It truly shows the CEC's leadership,
5 reconciling all the issues and trying to balance what is
6 the best for the Californians.

7 And 15-day language also reflects the data-driven
8 decisions that California deserves.

9 So, once again, I'm here to highly commend the
10 extraordinary steps that staff has been taken to make this
11 15-day language, and I'm very thankful to have an
12 opportunity to support this effort. Thanks so much.

13 COMMISSIONER MC ALLISTER: Thank you.

14 CHAIR WEISENMILLER: Thanks for being here.

15 Bob Smith.

16 MR. SMITH: Good morning, ladies and gentlemen of
17 the Energy Commission, as well as those that are visiting
18 here, today.

19 My name is Bob Smith. I'm the Director of Energy
20 for Eaton. And on behalf of Eaton Lighting Solutions,
21 formerly known as Cooper Lighting, we appreciate this
22 opportunity to speak to you today.

23 First of all, California is poised to take
24 advantage of the advancements in solid state lighting due
25 to the progressive nature of the energy code development.

1 The definition of lighting systems are dramatically
2 changing with the advent of solid state lighting. And this
3 poses challenges on effective planning, as well as
4 regulatory development.

5 And we appreciate the situation that the Energy
6 Commission is in today, with the rapid changes that are
7 occurring.

8 Give you a little background about Eaton. Eaton
9 is a premier lighting provider globally, about \$2 billion
10 worth of revenue, annually. And in a simple statement,
11 Eaton broadly supports the efforts of the CEC, its staff,
12 and what it's doing on behalf of the State, our country, as
13 well as the world.

14 Eaton applauds the efforts that are being made to
15 prepare for these advancements to save energy for their
16 constituents, as well as reducing greenhouse gas emissions
17 far in advance of the rest of the country.

18 Due to the laws passed in the State of
19 California, the Commission must strike a balance between
20 market availability and predictive improvements that are
21 fairly well understood by those that study the lighting
22 technology and invest in the innovation that you can rely
23 on.

24 Eaton is at the forefront of this innovation
25 through a Halo recessed product line, such as the recessed

1 modules, or retrofit kits that have been mentioned in the
2 standards of the regulations. And it is a clear market
3 level, as evidenced by over almost two decades of builder
4 awards, as well.

5 In addition, Halo brought the first Energy Star
6 recessed downlight module in the marketplace, highly
7 supported by the California Energy Commission through the
8 PIER Program, as well as the support that we got from the
9 California Lighting Technology Center.

10 Most recently, Eaton worked closely with the
11 Commission supporting some combined color quality, energy
12 savings and reliability for recessed modules that are
13 currently, today, meeting the language that you see in the
14 15-day language. That's in every case.

15 On behalf of Eaton, first, I recommend -- there
16 are two things I want to recommend here. First, the CEC
17 continue to include the recessed module retrofit kits as
18 it's currently written in the 15-day language. It is among
19 the first of what the future holds as, really, the next
20 generation lamp.

21 These solutions offer the highest energy savings,
22 with color quality and reliability that minimizes snap back
23 to provide sustained savings.

24 Secondly, while it's logical that the
25 Commissioner desires to take advantage of the most recent

1 standards of LM 84 and TM 21, these standards are new and
2 it will take time to implement these changes, potentially
3 slowing down the process of innovation.

4 We do request, as Eaton, on behalf of the
5 industry, to delay the use of just LM 84 and TM 28, and
6 include the capability of using LM 80 and TM 21 as an
7 alternate to these testing procedures for reporting.

8 CHAIR WEISENMILLER: Okay, could you wrap up?

9 MR. SMITH: In conclusion, as a NEMA member, we
10 fully support the efforts of the California Energy
11 Commission, driven to enable market transformation by
12 combining energy savings, quality, reliability
13 requirements. And once again, on behalf of Eaton I thank
14 you for this opportunity to speak to you, today.

15 CHAIR WEISENMILLER: Thank you.

16 Let's go to Stack Labs.

17 MR. WHITING: Hello, my name is Kent Whiting.
18 I'm with Stack Labs, a lighting startup in California. We
19 make fully functional connected lights. I want to thank
20 you for the opportunity to speak here and work with you.

21 We're in favor of moving forward and continuing
22 California's leadership in energy efficiency. I think, as
23 noted, it's a deceptively complex topic. And I appreciate
24 the CEC staff not trying to apply one or two variable
25 thinking to address it.

1 One thing I want to add, in addition or support,
2 is consider that the overall industry is moving forward as
3 well with higher quality products, but more slowly. And as
4 has been shown, adoption is rapidly increasing in terms of
5 LED lighting.

6 So, since LED's have such a long lifetime,
7 compromising now could push off higher quality lamp
8 installation and adoption that transition by decades, not
9 by years. Otherwise, or I guess the tradeoff there is that
10 in order for consumers to then transition to a higher
11 quality light in the future they would need to replaced
12 their existing LEDs with higher quality LEDS long before
13 the projected lifetime of those lamps.

14 So, thank you.

15 CHAIR WEISENMILLER: Thank you. Thanks for being
16 here.

17 Sierra Club.

18 MR. MORENO: Good afternoon, Commissioners, thank
19 you for the opportunity to comment today. Eddie Moreno, on
20 behalf of Sierra Club California and its 380,000 members
21 and supporters in the State.

22 I urge the Commission to adopt the proposed
23 standards for small-diameter directional LED lamps and
24 general purpose LED lamps today.

25 The Sierra Club has been working to improve air

1 quality and to reduce the greenhouse gas emissions in the
2 State by fighting the construction of new, dirty power
3 plants and fighting to retire others.

4 Over the next 13 years, these standards will
5 support our efforts by avoiding the construction of one
6 500-megawatt power plant, one that will likely be built in
7 one of the State's already over-burdened communities.

8 The Club and its members have also been strong
9 advocates for clean energy and worked very hard to ensure
10 the passage of SB 350 last year. The standards will help
11 Sierra Club and its efforts to help make solar available to
12 all Californians by reducing home energy demand.

13 Aside from all the important and critical
14 environmental benefits, none of this can come to fruition
15 without the help or the action of the consumers. Some are
16 arguing that the CEC wants to promote LED lighting that is
17 more expensive and less efficient. Specifically, opponents
18 of the regulations are arguing that there shouldn't be
19 strong emphasis on color quality in the regulations because
20 the market will ensure that all Californians have access to
21 those products.

22 This is difficult to support as some of the
23 performance metrics, like color rendering, are not apparent
24 at the time of purchase. Customers may not be able to
25 associate a color experience with a CRI score and that's

1 understandable.

2 To standardize the score at a level that will
3 allow us to enjoy the quality of full color lighting, which
4 we have with traditional lighting, is critical for
5 adoption, and the CEC has done that.

6 Opponents of the proposed regulations claim that
7 they will harm low-income customers. This is not true as
8 one of the major requirements of efficiency standards is
9 that they be cost effective and are affordable to
10 customers. Failing to meet this requirement, alone, would
11 have halted the proposal in its infancy.

12 Ironically, the opposition's proposal is to
13 weaken the standard, which would create a two-tiered
14 market, one for the poor and one for those who can afford
15 to enjoy the quality lighting. By creating a two-tiered
16 market, the producers are guaranteeing that their best
17 lighting will never be available to low-income customers.

18 A single standard for color quality will make for
19 a more competitive market, which will ultimately decrease
20 the cost of products with the desired performance, and the
21 CEC has done that.

22 The purpose of the general service LED lamps is
23 to eliminate and to provide the ability to discern colors
24 and efficiency, and there's the ability of the lamp to
25 perform both those functions.

1 Opponents argue that weaker standards will
2 produce a product that uses less energy, but will be at the
3 cost of one of those functions.

4 Let's not harm the reputation of LED lighting. I
5 urge the Commission to adopt the proposed standards. Thank
6 you.

7 CHAIR WEISENMILLER: Thank you.

8 Anyone else in the room that wants to speak?
9 Please come up and identify yourself.

10 MR. SALAS: Hello, Commissioners, and thank you
11 for the opportunity to comment on this topic. My name is
12 Adrian Salas and I am with San Diego Gas & Electric. And
13 we support the adoption of the proposed standards.

14 I also want to support the color rendering
15 requirements, which is important to our customers and to
16 reaching California's lighting energy savings targets, laid
17 out by AB 1109.

18 Lastly, I want to applaud the Commission and
19 staff for making great efforts to involve stakeholders and
20 incorporate their input.

21 The proposed standards are more lenient than the
22 original proposal, submitted by the Investor-Owned
23 Utilities' Statewide Codes and Standards Team. However,
24 SDG&E values the CEC's process and respectfully recommends
25 adoption of the proposed standards today. Thank you.

1 CHAIR WEISENMILLER: Thank you.

2 Anyone else in the room?

3 MR. MC GARAGHAN: Good afternoon. My name is
4 Mike McGaraghan. I'm with Energy Solutions, a consulting
5 company who supports the California Investor-Owned
6 Utilities' Statewide Codes and Standards Team.

7 And I've been supporting this process for the
8 last several years. Thank you for the opportunity to speak
9 today. I wanted to touch on a couple of points and the
10 first one is just to remind folks in the room that what the
11 CEC is proposing to do today is actually not atypical for a
12 standards proceeding. It's really what happens with
13 standards adoption. You don't just focus on energy
14 reduction or wattage reduction. You have to couple that
15 with performance and considerations with poor performance.

16 And it's come up time and time again. But a
17 couple of examples, including recent ones, the Commission
18 passed toilet standards just last year. You can make a
19 toilet use less water by reducing its capacity to flush
20 things well. That's why there's also a map score that goes
21 with toilet efficiency standards. So, it's not just the
22 gallons per flush, there's also a performance score.

23 And the same can be said of virtually any product
24 that goes through a standards process. Clothes washers,
25 dryers, dishwashers, refrigerators, you name it. You can

1 make a refrigerator use less energy by keeping food at 41
2 degrees, instead of 38 degrees. Buy we know that's not
3 good for people. We know consumers are not going to figure
4 out which refrigerator they need to buy in the store, in
5 the aisle.

6 So, this is actually pretty consistent with
7 standard-setting processes. And I've seen a number of them
8 over the years, working here in California.

9 So, the other thing I wanted to do was point out
10 that there are a number of supporters of the standard that
11 couldn't be here today. We've heard from a handful of very
12 supportive manufacturers today and I'm appreciative that
13 they could be here. But there are also a number of smaller
14 manufacturers who don't have staff, they don't have
15 government relations staff to make it out to meetings like
16 this. Comments have been submitted from a handful of those
17 and I'll just name them.

18 OptiLight is a manufacturer based in California
19 that was supportive of the standards in written comments.

20 Sunrise Lighting is another one, based in
21 Arizona.

22 Green Creative, I don't think they're here today.
23 They've managed to come to some of these in the past, but
24 they are a small operation and I don't think they're here
25 today.

1 So, I just wanted to reiterate that there is a
2 lot of support for this and not all of those people could
3 be here today.

4 The last thing I wanted to touch on was just the
5 fact that the proposed standards do not require 90 CRI. I
6 can say that without a doubt because we've tested products
7 that meet all the R-1 through R-8 scores and still have a
8 CRI below 90. We've tested about 25 percent, actually, of
9 the products that met all the R-1 through R-8 scores and
10 actually had a CRI below 90. Some were 84, 85, 86. So,
11 certainly technical feasible.

12 With that, I'll wrap up my comments and just say
13 I strongly support the path the Commission is taking today
14 and urge the Commissioners to adopt. And thank you very
15 much.

16 COMMISSIONER MC ALLISTER: Thank you.

17 Is there anybody else in the room that wants to
18 speak? I think we do have a number of callers, so we'll go
19 to them next. Let's see, it says Don McHugh, but I think
20 it's probably Jon McHugh, McHugh Energy.

21 MR. MC HUGH: Good afternoon, can you hear me?

22 COMMISSIONER MC ALLISTER: Yes, we can hear you.
23 Go ahead.

24 MR. MC HUGH: Hello?

25 COMMISSIONER MC ALLISTER: Yes, we can hear you,

99

1 go ahead.

2 MR. MC HUGH: Great, thank you. Yeah, this is
3 Jon McHugh. I'm calling from the ASHRAE Orlando meeting
4 and I've just met with the ASHRAE 189 Energy Committee, and
5 we're looking at the national energy standard of making the
6 transition to LED lighting in the -- as the basis of that
7 national standard.

8 And one of the big concerns from members of the
9 Committee, and commenters on that standard, had to do with
10 sufficient lighting quality. There was an ongoing concern
11 with the Committee and looking at products, now, many of
12 the products that they were referencing were products that
13 did not have both high efficacy, or at least good efficacy,
14 and high CRI.

15 And these are very knowledgeable folks. And even
16 though there's been a lot of discussion about the value of
17 color quality, almost without exception most of the
18 comments were around issues associated with color quality.

19 The big picture to think about for the end game,
20 in regards to light efficiency, has to do with the AB 1109
21 and whether or not the State is able to hit their goal.

22 It's my belief that the State will not hit their
23 goals unless they are able to enforce the 2018 requirements
24 for high efficacy lighting in 2018. My belief is that
25 unless we have a mature market of High Color Rendering

1 Index lamps that do not reduce the amenity, as compared to
2 the lamps that we replace, that we are going to see a
3 backlash similar to Joe Barton's ball back, which NEMA
4 opposed. But the primary focus of the ball back was around
5 the low color quality of CFLs and that was repeated, even
6 though that particular standard didn't even necessarily
7 require CFLs.

8 So, I think this is a key element to the Energy
9 Commission's strategic plan. Thank you very much.

10 COMMISSIONER MC ALLISTER: Thank you.

11 CHAIR WEISENMILLER: Thank you.

12 Cheryl English, please.

13 MS. ENGLISH: I'm Cheryl English. I'm with
14 Acuity Brands. Thanks for the opportunity to comment by
15 phone, which is open to a member or any individual, large
16 or small companies.

17 We have submitted detailed comments to the docket
18 and I wanted to specifically comment today on LED downlight
19 retrofits and speak against the inclusion of this class of
20 product.

21 I have about four, brief points to make and will
22 summarize. First off, the CEC has included downlights in
23 this lamp standard, but has not provided evidence the
24 downlight retrofit class of products was evaluated, and has
25 not responded to multiple requests for data and analysis.

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1 While a limited set of retrofit downlights may be able to
2 meet the requirements, CEC has focused on color quality and
3 has not evaluated other quality aspects, such as glare or
4 trim style.

5 Despite the extension of the effective date, CEC
6 has not shown that the standards for this class of product
7 are technologically feasible or cost effective, and often
8 reference Energy Star lamp data. However, downlights are
9 not included in that program and have not been -- this has
10 not been a data-driven process for this class of product.

11 Secondly, an LED downlight retrofit is inherently
12 different than other lamps covered in this rulemaking since
13 it incorporates optical control within the downlight. The
14 resulting efficiency loss is not considered in the energy
15 thresholds for a bare lamp, when compared to a retrofit
16 downlight. However, they're held to the same performance
17 standards.

18 Thirdly, this rulemaking will promote a race to
19 the bottom in quality for retrofit downlights because the
20 public will be limited to products that have more glare and
21 fewer trim styles, neither of which are preferred by
22 consumers.

23 Fourth, this rulemaking has resulted in additive
24 requirements for downlights resulting from inconsistencies
25 between the Title 24 JA8 and Title 20. There are several

1 requirements that either do not exist in JA8 or are more
2 stringent than the JA8 requirements. This requires
3 manufacturers to design products that exceed both
4 standards. The impact of this was not considered or
5 evaluated in this rulemaking.

6 So, my recommendations, first off, we expect an
7 answer to the multiple requests for the data analysis
8 specific to the downlight retrofit products.

9 Secondly, we recommend a modification to the
10 definition of the State-regulated LED lamp to either
11 include retrofit -- or exclude a retrofit downlight, with a
12 covered screw base, or limit the scope to the rule to only
13 cover retrofit downlights with a permanently attached
14 screw-based socket. This will prevent the unintended
15 consequence of regulating commercial downlights intended to
16 be hardwired or retrofit with a screw-base adapter.

17 We've provided specific recommendations for this
18 definition in our written comments.

19 Third, we specifically request the Commission to
20 address the inconsistencies and conflicts between Title 20
21 proposed standards and the Title 24 JA8 requirements.

22 So, to summarize, we specifically ask the
23 Commission to exclude this type of product at this time.
24 There's been no procedural support for these products in
25 the rulemaking and data analysis. And we'll be glad to

1 work with the Commission on a comprehensive analysis in the
2 future. Thank you.

3 CHAIR WEISENMILLER: Thank you.

4 Let's go over to Philips. And again, you've got
5 two speakers, let's try to consolidate and be succinct.

6 MR. SERRES: Yes, hi, my name is Anthony Serres.
7 Can you hear me?

8 CHAIR WEISENMILLER: Yes. Please go ahead.

9 MR. SERRES: Good afternoon, Commissioners. My
10 name is Anthony Serres and I'm with Philips Lighting.
11 Thank you for the opportunity to address the Commission,
12 today.

13 Despite what staff presented earlier, most topics
14 have had minimal open discussion between the experts, the
15 IOUs and industry. We intend to change that with the Title
16 24 process, as that moves forward.

17 Now, in straight forward terms, the proposed
18 Title 20 15-day language is about the consumer choice. As
19 written, the 15-day language would, among other things,
20 restrict the sale of general purpose LED lamps sold in
21 California to only those with a CRI greater than 82, in an
22 R-1 to R-8 of at least 72.

23 As shown in our written comments, an R-8 of 72,
24 matched to a CRI of about 84 to 85, like one previous
25 commenter mentioned. The chips at this level are not

1 readily available. Thus, CRI 90 will become a de facto
2 required. And we respectfully disagree with Mr. Rider and
3 others on this point.

4 We also wish to mention or point out that lamps
5 with these color characteristics, i.e. CRI 82, and R-8
6 greater than equal to 72, are currently available in
7 California. Consumers can go out and buy them right now.
8 They will not go away if the 15-day language is approved.
9 Rather, they will become required in the future.

10 Looking at the opposite case, if the 15-day
11 language were not approved they would still be available.
12 Lamps with a CRI of CRI 90 or greater, however, are
13 generally less efficient and more expensive than lamps with
14 a CRI 80, as you have also heard from other commenters.

15 The more efficient CRI 80 lamps are also
16 available right now and will save consumers more energy
17 than a CRI 90 of the same light output. The CRI 80 lamps
18 will disappear in the California market in the next few
19 years, however, if Item 3 is approved today.

20 We also wish to point out that the Illuminating
21 Engineering Society of North America, or IES, has docketed
22 comments which indicate that CRI should not be used in
23 regulations.

24 Commissioners, we think that consumers should
25 have choices and the best way to promote lamps with a CRI

1 90 is to incentivize them, not mandate them. We ask that
2 you vote no on Item 3. Thank you.

3 CHAIR WEISENMILLER: Thank you.

4 Further Philips, do you have any additional
5 comments on additional points?

6 MR. GAINES: Can you hear me?

7 CHAIR WEISENMILLER: Yes.

8 MR. GAINES: Okay. On standby point, while 0.2
9 watts is available in a few lamps and it may appear
10 feasible for standby power limit, an 0.2 watt limit has
11 unintended consequences. It will limit the development of
12 lamps with features such as color changing, or occupancy
13 sensing, and future lighting products that integrate
14 functions other than lighting.

15 We urge the adoption of the limit of a half a
16 watt to leave flexibility for manufacturers in this early
17 stage of the technology.

18 On decorative lamps, efficacy is typically 10
19 lumens per watt lower than omnidirectional lamps, as
20 clearly shown by Ken Rider's analysis. We request that CEC
21 reduce the efficacy spec for decorative lamps by 10 lumens
22 per watt. A too high spec for efficacy will effectively
23 encourage greater use of halogen lamps. On this topic, we
24 agree with Noah of NRDC.

25 And I'd like to make a response to Michael

1 McGaraghan's comments. We are not saying that there should
2 be no performance specs. We're saying that they are set
3 higher than they need to be for most applications. A CRI
4 80 lamp is not the same as a low-pressure sodium lamp.

5 In the end, the CEC --

6 CHAIR WEISENMILLER: Are you there? You just
7 dropped off.

8 MR. GAINES: Where did it drop off?

9 COMMISSIONER MC ALLISTER: About ten seconds ago.

10 MR. GAINES: Did you hear my response to Michael
11 McGaraghan's comments?

12 COMMISSIONER MC ALLISTER: You were right in the
13 middle of it.

14 MR. GAINES: Okay, I'll read that again. In
15 response to Michael McGaraghan's comments, we are not
16 saying there should be no performance specs. We're saying
17 that they are set higher than they need to be for most
18 applications.

19 And then, finally, I said we all want to see the
20 same thing, which is a high adoption of LED lighting.

21 CHAIR WEISENMILLER: Great, thank you.

22 Let's go on to Westinghouse.

23 MR. GATTO: Thank you. Sorry, I had to unmute.
24 Can you hear me?

25 CHAIR WEISENMILLER: Yes.

1 MR. GATTO: Thank you. I'd like to thank the
2 Commission for the opportunity to speak. My name is Dave
3 Gatto and I am with Westinghouse Lighting. We are a lamp
4 and lighting fixture manufacturer. Our corporate office is
5 in PA and local warehouse distribution center servicing all
6 of the U.S. based right here in California.

7 I've got two points. I will try to be brief and
8 not overlap other commenters, as the Commissioner
9 requested.

10 First off, I'd like to thank Ken for providing
11 information. I think it started on slide 16, early in the
12 presentation, showing the analysis of available products
13 that staff believes currently meet Tier 1 and Tier 2
14 proposals.

15 As Mike McGaraghan noted, this analysis includes
16 a limited number of actual product testing and it indicates
17 that the R-8 value that was used is an estimated or assumed
18 value, not something that's actually been confirmed. Which
19 called into question whether those products are actually
20 available.

21 What I would say is that the products listed that
22 do meet Tier 1 and 2, it's clear that they meet those where
23 the testing is backing it up. Although, to Mike
24 McGaraghan's point, there weren't any at 82. 84, I
25 believe, was the lowest found.

1 However, what's not clear is whether these
2 products would meet the other requirements of the proposal
3 or that they can meet other consumer preferences
4 requirements, such as color texture.

5 So, in addition to our concern that products with
6 a CRI lower than about 84 can't actually meet the 72 R-8
7 requirement, we believe that there are products in the
8 analysis as meeting the efficacy requirements, and also
9 meeting CRI and R-8, which have a CCT value above 3,000 K.

10 We do agree and we also offer products that are
11 above 3,000 K, and we understand consumers do want these
12 products for certain applications, and many consumers
13 prefer them for all applications.

14 However, in the analysis, including items that
15 don't meet the average consumer's expectation that a lamp
16 will be 3,000 K or less, matching the incandescent
17 equivalent that they're replacing, creates a concern that
18 you're going to create the problem that you're trying to
19 address. Which is that there will be products that will
20 meet some of the requirements for color rendering in R-8,
21 but will not meet the incandescent equivalent requirements
22 and will not be at CCT acceptable to consumers.

23 And I guess the other point that I would make is
24 there's an unspoken assumption that comes up here a lot in
25 commenters, including mine earlier, that 90 is high, so 80

1 must be poor or low-quality light. And that's not
2 accurate. 80 CRI is good color quality. Below 80 is where
3 you start to see issues with color emission that consumers
4 would find objectionable, even in general applications.

5 CFLs were a challenge. We did have issues. I
6 think what's being missed here is that the issues were not
7 about CRI. CFL issues that caused the greatest consumer
8 objections were things about warm-up time, start-up time,
9 high color temperature in the early days, when we didn't
10 have 3 and 27 K available. And, then, of course
11 (inaudible) --

12 In closing, I would respectfully ask the
13 Commission to vote no on the current proposal and encourage
14 staff and stakeholders to take the time necessary to find
15 the best medium performance requirements that will make
16 consumers happy and allow the greatest efficiency to be
17 achieved in the State. Thank you.

18 CHAIR WEISENMILLER: Thank you.

19 Green Creative?

20 MR. BLUEVAS: Yeah, can you hear me?

21 CHAIR WEISENMILLER: Yes, go ahead.

22 MR. BLUEVAS: Okay. Yeah, thanks for the
23 opportunity to speak. Apologies, we could not be there in
24 person. We are a smaller manufacturer, so our resources
25 are a bit constrained.

1 But name is Eric Bluevas. I'm the Utility
2 Program Manager with Green Creative. And we're an LED
3 lighting manufacturer based right here, in California.

4 And I want to take this opportunity to express
5 our support for both the small-diameter and the general
6 service LED proposed standards here.

7 As a California-based company, we do pride
8 ourselves in supporting these kind of practical,
9 progressive approaches from the Commission. As an example,
10 our company was one of the first manufacturers to produce
11 the voluntary spec line of products and we continue to do
12 that today.

13 We saw a similar debate when those standards were
14 proposed, that we're seeing today. And, you know, several
15 years now we see a mature, cost-competitive market for
16 those products.

17 So, one overall point we'd like to emphasize is
18 we're not debating a snapshot of what's available on the
19 market today, we're debating what's achievable once these
20 proposed standards would go into place. And it's our
21 belief that these are completely reasonable, technically
22 feasible, and achievable as is, especially within the time
23 frames for implementation.

24 Green Creative, as a manufacturer, we're already
25 there. We have a plethora of products that are becoming

1 more and more cost competitive, that already meet these
2 requirements, now. And as noted earlier, the rest of the
3 market can more than adopt these given the time frames
4 proposed.

5 So, I just want to reiterate that we do support
6 this language and thank you, again, for the opportunity to
7 speak.

8 CHAIR WEISENMILLER: Thank you.

9 Anyone else on the line? Please. Please
10 identify yourself for the court reporter.

11 (Operator comment)

12 CHAIR WEISENMILLER: Please go ahead.

13 MR. GRETKA: Hi there. My name is Voitek Gretka.
14 Can you hear me?

15 CHAIR WEISENMILLER: Yes, we can.

16 MR. GRETKA: My name is Voitek Gretka. I'm from
17 the British Columbia Ministry of Energy and Mines. Thanks
18 for the opportunity to comment to the Commission today.

19 British Columbia, as well as the States of
20 Washington, Oregon and California, as you may know, are
21 part of the Pacific Coast Collaborative, who are poised to
22 adopt leading edge codes and standards.

23 Small-diameter directional lamps have been part
24 of our -- on our agenda for about a few years, now. And we
25 have actually done our own analysis, as well as reading the

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1 Commission staff's analysis, to date, and have concluded,
2 similarly, that it represents a sizeable energy savings and
3 that color rendering especially being one of the most
4 important factors to consider.

5 In British Columbia, in 2011, we looked at
6 regulating incandescent, basically, effectively banning
7 incandescent lamps. And there was a lot of outcry over the
8 replacement product, CFLs, as we've heard today.

9 And so, we believe it's very important to be able
10 to set backstops on color rendering, as the Commission has
11 done or has proposed here. Or, staff has proposed, I
12 should say.

13 So, I won't take too much time here, but I'll
14 just say that we support the adoption of the proposal.
15 Thank you.

16 CHAIR WEISENMILLER: Okay, thank you.

17 Anyone else on the line. Okay, so there's no one
18 else on the line. So, at this point I'm going to ask the
19 staff to briefly respond and then we will transition to the
20 Commissioners' conversation.

21 Go ahead, staff.

22 MR. RIDER: Sure. I would just state, as a
23 general response to a lot of the comments that would oppose
24 that we have products on the market today. We have two
25 years before the larger market would need to comply. And

1 the staff report shows that these transitions are cost
2 effective and feasible. And I haven't heard anything that
3 suggests that the cost estimates are incorrect or that the
4 savings estimates are incorrect.

5 And, therefore, I think we still would suggest
6 moving forward without an amendment.

7 Was there a specific issue that was raised that
8 you would like a response to?

9 COMMISSIONER MC ALLISTER: Let's see, I -- let's
10 see, you know, let me just say a couple things. And I want
11 to -- there are a couple of things I want to ask you about,
12 Ken.

13 But I do want to just make a couple of high level
14 comments. So, I, you know, as lead on efficiency here, and
15 over the general Title 20 activities, and I have been
16 intimately involved in these discussions. I've had a lot
17 of communications with manufacturers, with all positions,
18 and have really tried to keep my door open as much as
19 possible, and participate.

20 You know, staff did an incredible amount of spade
21 work all along the way.

22 But we've heard a few of the sticking points that
23 some of the industry members bring up. And certainly, you
24 know, NEMA has their representative. But within NEMA,
25 there's a lot of diversity of opinion and we've heard some

1 of that today. And I think that sort of panoply of the
2 market positions is something we have to appreciate. We
3 want to leverage the best parts of the market and get to
4 the goals that we have as a State.

5 We stretched out the time because we, you know,
6 saw, we accepted some industry points that they needed more
7 time and that the process manufacturing needed that time,
8 and so we did that.

9 Certainly, this was not thrown together, as
10 someone stated there. And, you know, I'm not going to
11 repeat all of our discussions, but I certainly have had a
12 cordial relationship and cordial discussions with
13 individual manufacturers, and groups of manufacturers, and
14 will continue to do so during the implementation. So, I
15 just want to make that very clear.

16 And the Commission has not been dismissive or
17 disrespectful in any way along that process. And so, I
18 just want to sort of correct a couple of assertions that
19 were made there.

20 Something that hasn't been said, and then I'm
21 going to go to you, Ken, hasn't been said or at least
22 haven't been made sort of very clearly. Is that in two
23 years we won't have incandescents in the marketplace for
24 general service. And the Federal backstop is going to kick
25 in and they're only going to have CFLs and LEDs in the

1 marketplace. And so, that backdrop is really important to
2 understand. There's no other option. I don't like them,
3 I'm going to go back to my incandescent. So, we really
4 need to have that vision of where we're going to be in a
5 couple of years and try and set our path along to meet that
6 vision.

7 And so, I think it's a very important point to
8 make as we think about how to move forward. Anyway, I'm
9 not going to go into all the issues. I think we've heard
10 repeatedly and have taken much of that into account.

11 So, I wanted to ask Ken about the data exchange
12 issue. We've had a couple of industry folks say, you know,
13 the data exchange and what's the decision being made on it,
14 and where does that stand, lately, with the CAN
15 replacements.

16 MR. RIDER: Yeah, so the CAN replacements are
17 included. They're a direct competitor to general screw-
18 base bulbs. That's why they also include a screw-base,
19 themselves. And so, as a competitive product we looked at
20 it. We don't want to regulate one part of the same market
21 and not the other, and create an uneven playing field,
22 particularly on efficiency.

23 So, when we looked at that, we looked at the
24 Energy Star data for lamps. We also took a look at the
25 Energy Star data from luminaires. And when you overlay one

1 set of data on the other, you see that they're very similar
2 in terms of performance, in terms of lumens per watt.

3 And so, we certainly looked at the comment
4 provide by, I believe it was Acuity, that, hey, you know,
5 these are different, take a look at them. We certainly did
6 take a look at them. At the same time, we need to include
7 them. They're a competitive product and they perform very
8 similarly to the medium screw-base.

9 The data that we used to evaluate all of this is
10 publicly available in the staff report. We cite where we
11 got it from and what data we used. The Energy Star data is
12 available to everyone. The Lighting Facts data is
13 available to everyone.

14 So, our sources are not proprietary or internal.
15 So, it would be available to manufacturers, et cetera.

16 COMMISSIONER MC ALLISTER: Okay, let's see, so I
17 think I'm going to leave it there with just a couple of
18 other points.

19 You know, certainly, we have the authority to
20 enforce this, you know, down the road. Right now we're
21 starting to really implement that enforcement. So, we're
22 going to do the same, be vigilant about looking at the
23 marketplace, and really pay attention to where things go.
24 And I think that is going to be a basis for a continued
25 discussion with manufacturers as we approach the effective

1 dates.

2 I also wanted to make the point that the standby
3 stuff is really this Tier 2, if I'm not mistaken, right?

4 MR. RIDER: Yeah, the timeline for standby is not
5 until 2019 and that's to allow the markets to kind of
6 mature a little bit more before having to meet that
7 standard. It's relatively new technology.

8 COMMISSIONER MC ALLISTER: Yeah.

9 MR. RIDER: So, we give them enough time to kind
10 of get to that level, even though they meet it today.

11 COMMISSIONER MC ALLISTER: Okay, so that timing
12 is important for lots of different ways. And I think, I
13 feel, on the one hand some urgency to get this done and
14 move forward, but also give time where time is needed. And
15 I think we've struck a balance there.

16 Let's see, I did want to call out the differences
17 between the voluntary spec and this, and ask you about sort
18 of alignment of those.

19 MR. RIDER: Yeah, so the voluntary spec does
20 require a 90 CRI, explicitly. And I would say that's
21 probably the largest difference. It actually doesn't have
22 an efficiency, lumens-per-watt requirement above Energy
23 Star.

24 Both the voluntary spec and the proposed
25 regulations here align, where they can, with Energy Star or

1 DOE action. So, in that sense they're pretty well aligned.
2 The main difference is color quality. And in addition,
3 there are a few extra aspects. Energy Star and the quality
4 spec cover more than the two dozen different aspects of
5 light, including warranty and other aspects, that this
6 proposed regulation does not touch on. It requires certain
7 aspects that -- there's a lot of metrics that we're not
8 proposing to make mandatory.

9 COMMISSIONER MC ALLISTER: Okay. I want to just
10 encourage us to iron out differences where it's appropriate
11 and we're able to do that, and continue those conversations
12 with industry, as well.

13 MR. RIDER: And just to add a little bit, the
14 data collection that we're doing as part of this standard,
15 will collect all of the data necessary for both the
16 mandatory standards and quality. So, we can see kind of
17 the trends in both.

18 COMMISSIONER MC ALLISTER: Yeah, yeah. I mean
19 there are companies that are tracking marketplaces on this
20 stuff and I hope we can work with them to really do that
21 almost in real time.

22 And, finally, I want to encourage industry to get
23 past CRI. One of the things that I think almost everybody
24 agrees on is that CRI is not the greatest metric. That's
25 why we went back to the R-1 to R-8 discussion, and have

1 sort of been mapping that over to the CRI, and that's sort
2 of fallen out of the discussion. It hasn't been, you know,
3 in that sense a driver of the discussion. So, you know, I
4 think it's kind of on industry to come up with better
5 metrics that we can then take into account in the future.
6 But that's what we have and that's the industry standard,
7 and so it's appropriate to keep using it for now.

8 So, I want to thank staff for all the work. I
9 mean this has been -- I see Gabe and Harinder at the table,
10 as well, and Mike Murza as well on the legal front, and
11 Ken, really, just for incredible work. Pat Saxton, I want
12 to call him out. He's my technical guy on my team, in my
13 office.

14 And again, all industry members who interacted
15 with us, submitted comments. There's a big record on this.
16 And, you know, the various advocates and the folks out
17 there in the marketplace. It's a very exciting time, you
18 know. I think when we have disagreement it's easy to kind
19 of get serious about it, but I think we also need to look
20 at the incredible innovation.

21 I want to congratulate industry, actually, on the
22 innovation in LEDs. It's an incredible market movement, a
23 superior technology that is going to benefit California
24 tremendously. So, I think we all believe that.

25 So with that, I'll wrap up and see if there are

1 any other Commissioner comments.

2 CHAIR WEISENMILLER: Yeah, I have a few comments.
3 Yesterday, I was at Verde Exchange on a panel. Actually,
4 the day before. With Mary Nichols on the one hand and
5 Japanese officials on the other hand.

6 And our standards here or the basis for those are
7 certainly different than the ARB's requirements. I think
8 we actually have more freedom in terms of cost
9 effectiveness, et cetera.

10 And the Japanese official put a picture up, a
11 slide of, you know, the Honda being the first car company.
12 Well, Mary had proposed, you know, in the first Brown
13 administration, basically, catalytic converters on cars.
14 Universally, the auto manufacturers said they could not do
15 it.

16 You know, and suddenly Honda came up and said,
17 well, we can. And everyone else did.

18 And there was a question to Mary of, you know,
19 when she proposes standards isn't that the universal story.
20 That whenever she has proposed, you know, and Mary has been
21 doing standards, again, since the 70s for air quality. And
22 she said, every time she does that industry comes in and
23 says it's impossible, they cannot be met. And that every
24 time the standards are adopted, lo and behold, industry
25 ultimately does.

1 And, you know, again, there might need to be some
2 adjustments going forward, but that she's been able, so
3 well, to catalyze innovation to address air issues. And,
4 you know, when you see in L.A. and realize that you can see
5 the mountains, now, you know, that certainly there's a
6 value from that.

7 And again, the reality is on this question of
8 choices, part of the reason why we have policy is to
9 reflect the consequences of choices. You know, that I'm
10 sure some people would like to drive cars in Los Angeles
11 without catalytic converters.

12 You know, but we, as a society, have determined
13 that the consequences of that are very large, you know, in
14 terms of what that means for asthma. Even today, the
15 statistics are pretty clear that if you live near an L.A.
16 freeway that your children have a 15 percent chance of
17 getting asthma.

18 And so, similarly, when we look at the challenge
19 of climate change, we're -- again, this is not something
20 which will affect your grandchildren. It's not something
21 that only affects Polar Bears. It's affecting all of us
22 right now.

23 It certainly has contributed to California being
24 warmer, a couple of degrees warmer than it was in 1890.
25 That more warmer California results in a lot more demands

1 on water. It certainly has affected our climate. The
2 climate's on steroids, now. You know, it's probably one of
3 the contributors to the severity of the drought. It's
4 certainly a contributor to the wildfires we've had. It's a
5 contributor to the melting snowpack.

6 So, again, these things, you know, our jobs,
7 which are not easy, is to reflect those societal choices
8 and to realize that in some areas people need to step up.
9 And, certainly, energy efficiency is one of those.

10 And I think it's interesting to see the chart on
11 the CFL sales, but that comes -- excuse me, LED sales. But
12 it comes back to the question about how many other bulbs
13 are being sold? I mean, can we talk about, if we can flip
14 all of it from just not that high ramp up, but can we
15 really, which we're trying to do in California, get every
16 bulb to be high efficiency.

17 And we've all been through the CFL debacle. You
18 know, and obviously we spent lots of money on that as
19 incentives, we've done lots of things there. But it was a
20 bad choice.

21 And so, I think all of us are trying to prevent
22 that race to the bottom in terms of quality. So, we want
23 high quality products for our customers so that it sticks.

24 And on this question of California's role, yeah,
25 you know, we're only one percent of the world's greenhouse

1 gas emissions. We know that. But part of what we're
2 trying to do is provide more of the guidepost on how to
3 basically address climate. You know, and I can assure you
4 we certainly -- other states, I'm sure, are looking at our
5 LED standards. Certainly, other countries.

6 You know, as the Governor's point person on
7 international stuff, I've certainly talked to the Chinese
8 and we're coordinating with them on our standards. The
9 Mexicans.

10 Again, we are sort of reaching globally and so
11 we're hoping that, again, this stuff will not just be
12 California, but that it will help transform the LED market
13 worldwide, and lead to much greater savings and help us
14 address climate issues.

15 COMMISSIONER DOUGLAS: I have a few brief
16 comments, as well. Some number of years ago I was actually
17 very involved in the effort to move forward and come up
18 with the voluntary spec on lighting quality for LEDs. And
19 my involvement in that came from many of the same themes
20 that we heard a lot about today. It came from a
21 realization that the market was changing, a realization
22 that we were moving towards a future in which the
23 incandescent bulb was going to be diminished in use and,
24 ultimately, phased out. And that we did not want and could
25 not afford to leave California consumers in a place where

1 the only other option was an actually inferior lighting
2 product. More efficient, but inferior in ways that people
3 care about, and ways that we could see happening with the
4 CFL market.

5 And we've come a long ways since we moved forward
6 with that voluntary spec and it was, as Ken and others well
7 remember, not that easy to do. But the market has moved
8 dramatically since then.

9 And, you know, as I sit here and reflect on some
10 of the themes and some of the things that people have said
11 today, you know, one of the points made that resonated a
12 lot with me is the point that if you really want to drive
13 very high levels of adoption of a product, make it a better
14 product. Make it a better product than the one that you're
15 hoping people will move away from. Because if it's a
16 better product, people will want it.

17 And we're seeing this technology really get there
18 in terms of price point. We're seeing it really get there
19 in terms of quality.

20 In fact, as people have said, you know, you can
21 get this product at a reasonable price at Home Depot today.
22 And that's a really great thing.

23 So, for a lot of these reasons I'm really
24 strongly supportive of the move in this direction.

25 I also want to acknowledge that I do think it was

1 important to make sure that there was enough ramp up time
2 for industry to be able to adapt and adjust to the
3 standards. And so, I think that's a good thing that we
4 moved in that direction, too.

5 COMMISSIONER HOCHSCHILD: First, I want to thank
6 the Chair, actually, for your comments and the analogy on
7 the catalytic converter, which I think is very apt.

8 And, Commissioner McAllister, for your careful
9 and diligent oversight for this very lengthy and thorough
10 process.

11 And, Commissioner Douglas, for your early work on
12 getting the ball rolling here.

13 I think the stakes are very high today. I regard
14 LEDs as a foundational technology for the clean energy
15 future. And with all due respect to the Barbie analogy --
16 by the way, very creative. I have two daughters that have
17 a lot of Barbies at home. This is the first time I've seen
18 them at the Energy Commission.

19 But, actually, the main question to me is not one
20 of choice. I think there's going to be ample choice in the
21 market, you know, and it's going to get more and more
22 competitive, even above this new standard.

23 The main question is really one of whether LEDs
24 are going to be a niche technology or be mainstream. And
25 so, I absolutely believe, fundamentally, in what we're

1 doing here. We have to learn from history and not repeat
2 the mistake that was made, and it was a mistake, about how
3 CFLs were introduced to the market at very low cost and low
4 quality. And I personally saw this in my family, you know,
5 trying a bulb and then it doesn't meet the test of your
6 family and you have to take it out.

7 And so, we don't want to do that again and we
8 really want to set the bar at an appropriate level.

9 And I especially want to thank, actually,
10 everybody who spoke, both here and on the phone, from the
11 LED industry, for all of your contributions. Both those
12 who support the standard, like Cree Opto Light, and Green
13 Creative, and others, but also those who are not in
14 support.

15 Philips, in particular, you know, I have
16 personally visited your factory, done the tour, met with
17 your team. But I know you can do it, too. I have a bulb
18 here, made by Philips, that's got a 90 CRI and meets the
19 standard we're talking about today. It's possible.

20 And I know there will be some adjustment. But
21 the decision we're going to make today is the right one, in
22 my view, and I believe it's absolutely achievable.

23 So, I especially also want to just close by
24 thanking Ken Rider, and all your colleagues in the
25 Efficiency Team, Title 20, who have been working on this.

1 And I'm in strong support of Commissioner McAllister on
2 this issue.

3 COMMISSIONER SCOTT: I also wanted to take a
4 moment to thank the staff. They gave me an excellent
5 briefing on this topic. And to all of the stakeholders for
6 their very valuable comments to us here, today.

7 I agree, I'll just -- I echo many of the things
8 that my fellow Commissioners said and will just underscore
9 the importance of having a variety of high quality products
10 in the marketplace for people to choose from. And I think
11 that that's where we're headed.

12 And a point that also resonated very strongly
13 with me, as Commissioner Douglas stated, was the making a
14 better product. And that's what we are striving to do
15 here.

16 I am also in strong support. Thank you, very
17 much, Commissioner McAllister, for your leadership.

18 COMMISSIONER MC ALLISTER: You bet.

19 Great. All right, I'll move Item 3.

20 COMMISSIONER DOUGLAS: Second.

21 CHAIR WEISENMILLER: All those in favor?

22 (Ayes)

23 CHAIR WEISENMILLER: Item 3 passed unanimously.

24 Thank you. Thanks, staff.

25 Thank everyone, again, for what's been a very

1 helpful conversation on this.

2 COMMISSIONER MC ALLISTER: Thank you all for
3 being here. We really appreciate it.

4 CHAIR WEISENMILLER: Yeah, let's move forward.

5 So with that, we're going to move to the next
6 item, which is Lead Commissioner or Presiding Member
7 Report.

8 COMMISSIONER MC ALLISTER: So, I am going to
9 pass. Apologies to the rest of you, I have to go catch a
10 plane. But, yeah, I'll be interested next meeting.

11 CHAIR WEISENMILLER: Okay.

12 COMMISSIONER MC ALLISTER: Thanks a lot.

13 COMMISSIONER SCOTT: Safe travels.

14 CHAIR WEISENMILLER: Safe travel.

15 Go ahead, Commissioner Scott.

16 COMMISSIONER SCOTT: I have just three highlights
17 that I will share with all of you. Starting with, last
18 week I had an opportunity to attend the launch of the
19 Department of the Navy's Great Green Fleet. That was an
20 incredibly exciting event. It felt very patriotic. It was
21 delightful to be there.

22 And what I'll highlight for you all is that the
23 reason that this is the launch of the Great Green Fleet is
24 because Department of Navy made a commitment to have 50
25 percent alternative and renewable fuels and 50 percent

1 conventional fuels. And that is what those ships that
2 launched out of San Diego were fueled with. And so, that
3 was very exciting. And 77.7 million gallons of fuel that
4 they were able to purchase at a price of, I believe
5 Secretary Mabus said, about \$2.05. So, that was just
6 fantastic. It's really neat. And that is something that
7 Department of Navy is planning to do throughout their
8 fleet.

9 I also just want to update you on the Alternative
10 and Renewable Fuel and Vehicle Technology Program's
11 Investment Plan. We had our second meeting on that, last
12 week, down in Long Beach. So, it was a great opportunity
13 to hear from some of our Southern California counterparts
14 in person.

15 And I think that went really well. Folks are
16 supportive of the allocations that we have in place. And
17 so, you will see a final version of that coming to us for
18 adoption in -- or consideration of adoption in the April
19 time frame.

20 And then, last, I'll just highlight, the Chair
21 mentioned this as well, Verde Exchange. We were there on
22 Monday -- well, Sunday night, Monday and Tuesday. It was
23 an excellent conference. It was a terrific opportunity to
24 connect with folks in Southern California who are working
25 very diligently on many of the issues that we care about.

1 And I did a presentation on the ports efforts
2 that the Energy Commission has, and also a little bit on EV
3 infrastructure. And I won't go into detail on those. We
4 can talk about that later, potentially, if you want more
5 details.

6 But I will note that both Chair Weisenmiller, on
7 Monday, it was during the plenary session during lunch, and
8 gave excellent, inspiring remarks, as did Commissioner
9 McAllister, during his plenary session which was during
10 lunch on Tuesday.

11 CHAIR WEISENMILLER: Commissioner Douglas?

12 COMMISSIONER DOUGLAS: I don't have any reports,
13 thanks.

14 COMMISSIONER HOCHSCHILD: Yeah, just briefly, we
15 finished our comments and reply comments for the New Solar
16 Homes Programs this week. And I have to report all of the
17 stakeholders who participate in the program, CBIA, CIA,
18 Solar City, KB Homes, and SunPower, and others are
19 supporting our position and our continued administration of
20 the program. So, that's -- I think it's a sign we're on a
21 good track there.

22 I guess the only other substantive update I had,
23 we had a meeting with -- a roundtable with all the top
24 clean tech investors in California, the Governor's Office,
25 the ISO, PUC, and others. And a very fruitful discussion

1 last week.

2 And I'm happy to report that now, after a dip,
3 clean tech investments back up and going the right
4 direction. I think that's a consequence of all of our
5 policy work. So, that was encouraging.

6 You know, I pay attention to that trend a lot
7 because that's what drives innovation and the cost
8 reductions we're after.

9 Other than that, no other news to report.

10 COMMISSIONER SCOTT: Can I add one more thing I
11 forgot to mention on the Department of Navy and one of the
12 other reasons it's so exciting. The Department of Navy
13 is -- the Department of Defense is the largest user of fuel
14 in the world. And the Department of Navy uses a third of
15 that. So, the fact that they're making this commitment to
16 go to 50 percent renewable and alternatives is just huge
17 for market pull and that part of the market. So, I just
18 wanted to put that context there for you.

19 CHAIR WEISENMILLER: That's great. Yeah, I'll
20 try to be brief, too.

21 A couple of things. So, first of all, we had a
22 meeting last week with RPE. And at this point we have a --
23 we've had an MOU with RPE for a couple of years. RPE has
24 gone through a leadership change. But it was really good
25 to continue and deepen the relationship with RPE.

1 And the interesting story was that when Ellen
2 went out to meet with NYSERDA and, you know, one of the
3 items on her agenda was to try to figure out how to talk to
4 them about an MOU. And she said, five minutes into the
5 conversation, before she said anything, we want the exact
6 same MOU as you have with California.

7 So, again, it's that -- you know, they're trying
8 to drive innovation. They're a little bit, I was going to
9 say more in the space -- you know, obviously, they're
10 looking for more high leverage, riskier projects, you know,
11 so they're a little bit further upstream. But we find that
12 as they get projects through, and have done the vetting,
13 and a lot of that is being done by California companies,
14 that it's sort of a natural, then, for them to be showing
15 up as winners in EPIC.

16 And also, we've sort of worked out an arrangement
17 on Federal cost shares, you know, where basically we
18 have -- you know, they're doing stuff -- typically, people
19 look for some degree of cost sharing commitment. And what
20 we try to do is build, generally, in this one solicitation,
21 something where we allow the opportunity for people, who
22 are going to bid on those, to come in and bid with us. So
23 that we have a competitive process to then select people
24 for the cost share. Which, again, we've certainly had a
25 lot of interest on that and a lot of success, then, of

1 getting California companies to win.

2 I was also at Verde Exchange and, you know, I
3 think probably, again, the main message to people is that
4 given that, at this stage, more than half of Californians
5 lives south of Wilshire Boulevard that, you know, we've
6 had -- we had a pretty substantial presence there.

7 But again, in terms of reaching out, it's really
8 important that we connect more and more to Southern
9 California. And that's -- I'd have to say that's a very
10 good opportunity to do that.

11 And, you know, a good opportunity for sessions,
12 side meetings, et cetera, and it was fairly good on that
13 front.

14 And then, finally, just back to Aliso Canyon
15 where a lot's going on. And to some extent, I'm going to
16 try to hit high points, although I don't necessarily know
17 at this stage if I actually know all of them.

18 But, you know, recently, the PUC and DOGGR have
19 set out an order starting the investigation of other
20 storage projects in the State. I mean, how unique is this
21 problem.

22 And at this point, on the reliability side what's
23 happened is it's been cold in Southern California. Again,
24 the bulk of the gas in that field is used during the winter
25 for residential. So, the amount of gas in the field has

1 been drawn down dramatically, you know. And, basically,
2 the Governor has directed all of us to maximize withdrawals
3 and, at the same time, we were looking at what was the risk
4 of doing that. You know, what was the risk.

5 And at this point, the PUC has sent out a
6 directive saying stop at 15 Bcf in storage. And with 15
7 Bcf in storage, I mean I guess the good news is at least
8 for the winter you normally -- and that was drawn down
9 dealing with loads, residential loads in Southern
10 California.

11 And as we go into February, you know, we're at
12 least hoping that we don't suddenly have the coldest
13 February on record and start scrambling, that it's normal
14 weather.

15 And then, we're obviously starting to think more
16 about the summer because it also plays a role, Aliso also
17 plays a role in terms of power. And, you know, certainly
18 I've seen charts from SoCal Gas that show you during the
19 summer you can see power plant loads go up, and you can see
20 withdrawals from Aliso Canyon go up. If you see the power
21 plant loads go down, you see withdrawals go down.

22 So, it's sort of that backup. Part of that is
23 you have the L.A. Basin, itself, these plants are in the
24 L.A. Basin.

25 Gas and -- you know, electricity moves at the

1 speed of light, gas moves at 35 miles an hour. So, I mean
2 that's just the physics of it. So, if you have this huge
3 ramp up in Los Angeles, those little gas molecules have to
4 sort of trudge the way from wherever, Texas or the
5 California border, into L.A. And they don't move that
6 fast. You know, it's not the speed of light.

7 So that, and storage, by being there, you know,
8 you've got something local and you can pull it out.

9 So, we're pressing through a lot of analysis to
10 try to understand. This could affect some of the ramping
11 on some of the power plants because at some point, you
12 know, you look at historically what's been the level of
13 withdrawals. As you get less gas in the field, because
14 it's all natural withdrawals, I mean there's no
15 compression. So, the more gas you have, then the more you
16 can withdraw, you know, Bcf or whatever. So, as you have
17 15 or less, then you're going to have less capability to
18 withdraw.

19 So, if you have a real swing, then you may not.
20 So, then we start looking at what are some of the power
21 options at that stage. This is obviously complicated
22 because the major power plants there are Edison and LAWP.
23 And LAWP, in a way, has a moat around itself in terms of
24 interconnection or operations with others, so we don't have
25 the same degree of understanding of what their needs could

1 be this summer, as we do with Edison.

2 Although, obviously, Marcy Edwards is working
3 with us pretty closely at this point so we can make
4 progress on that.

5 So, again, we're sort of looking at what this
6 means otherwise. I think in terms of field, SoCal Gas has
7 announced they think that by the end of the month they'll
8 be stopped. I mean, again, what they've been doing,
9 they're drilling down 8,000 feet. And it's more -- you
10 know, so the well goes down 8,000, they're coming this way,
11 so just triangular it's going to be more than 8,000.
12 They're getting close, but then they have to connect.

13 And so, they go from rapid drilling to inch by
14 inch as they try to connect. But, hopefully, that will
15 be -- and so, they will plug things at the bottom.
16 Although, yeah, at 8,000 feet, though the leak is about 500
17 feet.

18 And, you know, then so that will happen. We then
19 have to look at the other wells. There's a whole series of
20 things that will kick off. But certainly, the community
21 down there will be much happier once the leak is stopped.

22 And SoCal, I guess the other thing, again, this
23 is jumping around somewhat. But they had talked, at one
24 point, of trying to come up with a -- the leak is not from
25 just the pipe, it's the hill, itself. And so, they have

1 been talking at one point about trying to figure out a way
2 to capture the gas, pipe it somewhere and just burn it.

3 And eventually the conclusion was it's too
4 dangerous, you know, to do it that way. And so at some
5 point they scrapped that notion.

6 But, you know, I think when they started that we
7 always saw that as more of the blue sky, could you make it
8 work. And they invested at least a significant amount of
9 money, you know, two major engineering firms to see if
10 there's a way to do it. But at the end, the conclusion was
11 it just wasn't going to be safe.

12 So, obviously, a lot of attention in Los Angeles
13 on this issue. A lot of attention, you know, more and more
14 in the Legislature and in Congress, yeah.

15 So, it's certainly keeping everyone pretty busy,
16 yeah.

17 COMMISSIONER HOCHSCHILD: Did you say that you
18 thought it would be stopped by the end of this month? Or,
19 I'd heard March was the --

20 CHAIR WEISENMILLER: Yeah, they moved it up to --
21 well, this month. I should be clear, the end of February.

22 COMMISSIONER HOCHSCHILD: Next month, okay.

23 CHAIR WEISENMILLER: As opposed to -- but, yeah,
24 you were right, originally they were thinking it was going
25 to be Marchish. But you know, again, we have to see how

1 that well works out.

2 Chief Counsel's Report?

3 MS. VACCARO: Nothing to report.

4 CHAIR WEISENMILLER: Executive Director Report?

5 MR. OGLESBY: Really quickly, there was an
6 oversight hearing in the Senate Energy Committee of the
7 Proposition 39 Program. We participate, along with our
8 sister agencies, and provided an update. That was last
9 week.

10 This week we had an oversight hearing in the
11 Assembly Transportation Committee of the Sustainable
12 Freight Action Plan. The Energy Commission participated,
13 along with the other State agencies. It was really more of
14 an overview and update type of hearing. And that's it.

15 CHAIR WEISENMILLER: Great.

16 Public Adviser?

17 MS. MATHEWS: I don't have a report, but I was
18 handed a general public comment that I'd like to read at
19 this time.

20 CHAIR WEISENMILLER: Sure.

21 MS. MATHEWS: "Many of us have assumed that the
22 many years of natural gas preference has been Governor
23 Brown's temporary efficiency patch of holes in the too-slow
24 transition to clean, safe, free source renewables. But we
25 learned last week that the files are regularly cleaned out,

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1 rendering our thousands of hours in testimony wasted.

2 We appeal for a stay on any life/death decisions
3 of energy planning. A fast survey of leaders has shown
4 desperate determination to focus our efforts on immediate
5 close down of the forced extrusion of Porter Ranch gas
6 geyser. The urgent shut down order of the South Coast Air
7 Quality Management District to prevent further devastation
8 by thousands of tons of methane and other gases.

9 The frantic effort to evacuate the geyser victims
10 has been unsuccessful since October 23rd. About 3,000
11 households, of approximately 9,000 residents, have been
12 evacuated, along with the neighborhood school. There is no
13 jurisdiction given for the evacuation boundaries, nor any
14 indication that owner, International Sempra, has intent to
15 protect the residents from the other 115 wells.

16 The CEC is their protective agency. The
17 residents trust you to act now and use your funds to
18 conduct a comprehensive health study of the area, families
19 and environment.

20 Our Local Soroptimist Solar Energy Program,
21 stopped more than a decade by the Federal Government,
22 Freddie Mac Mortgage Insurance, is not feasible because it
23 might cause some difficulties when they had to foreclose
24 buildings, has been dissolved. We can now proceed to the
25 achievement of former Governor Schwarzenegger's million

1 solar roofs.

2 We are creating collaborative organizations,
3 aggregations to be announced in the Soroptimist Heart to
4 Hands Program in February.

5 Signed, Lyn Harris Hicks, Honorary Life Member,
6 Soroptimist of the Capistrano Bay Area."

7 CHAIR WEISENMILLER: Yeah. I was going to say, I
8 should have noted, and for the record just make sure, on
9 the RES website there is a collection of what the State's
10 doing, including a substantial FAQ that was put together
11 following up on our meeting that was at Porter Ranch, with
12 a number of State officials.

13 But anyway, certainly, those of you following
14 that issue should look there.

15 Obviously, the Department of Public Health
16 Service is part of the State team and they, obviously, have
17 substantial more expertise than we do in those types of
18 issues. But they have been very active on the ground. At
19 least, again, on the health issues.

20 MS. MATHEWS: And we have one, the Public
21 Adviser's Office received the inquiry. We did share those
22 resources with this particular commenter. And then the
23 comment was actually sent to another -- the request was
24 sent to another division.

25 CHAIR WEISENMILLER: Okay. Well, again, I

1 think --

2 MS. MATHEWS: Writing those --

3 CHAIR WEISENMILLER: No, but I appreciate you
4 following up on that. And just as I said, I should have
5 made it clearer that everything we're doing is really
6 ending up on the OES website.

7 MS. MATHEWS: Right.

8 CHAIR WEISENMILLER: You know, so if you wanted
9 to know what were the results of the last fly-over, you
10 know, as we've pulled methane out and pressure's gone down,
11 the emissions have dropped. But anyway, you can see the
12 week's monitoring on that.

13 Certainly, the Health Services has done
14 monitoring there on Benzene and other things. And again,
15 that's general on that -- everything we've done, I know
16 OSHA has put on their website to make it publicly
17 available. So, thank you.

18 Any public comment?

19 This meeting's adjourned.

20 (Whereupon, at 1:13 p.m., the business
21 meeting was adjourned.)

22 --o0o--

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24

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I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

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A handwritten signature in black ink, appearing to read "Barbara Little", is written over a horizontal line.

Barbara Little
Certified Transcriber
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