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CALIFORNIA ENERGY COMMISSION

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WEDNESDAY, AUGUST 20, 2014

10:00 A.M.

Reported by:

Martha L. Nelson

APPEARANCES

CALIFORNIA ENERGY COMMISSION

Robert Weisenmiller, Commissioner

Janea Scott, Commissioner

Heather Raitt, IEPR Lead

PRESENTERS

Michael Jaske, California Energy Commission

Cynthia Walker, California Public Utilities Commission

James Avery, San Diego Gas and Electric

Ron Nichols, Southern California Edison

Roger Johnson, California Energy Commission

Phil Pettingill, California Independent Systems Operator

Dana Cabbell, Southern California Edison

Mohsen Nazemi, SCAQMD

Tom Weeks, San Diego Air Pollution Control District

Tung Le, California Air Resources Board

APPEARANCES

PUBLIC SPEAKERS

Michael Peter Floria, California Public Utilities
Commission

Michael Picker, California Public Utilities Commission

Jonathan Bishop, State Water Board

Barry Wallerstein, SCAQMD

Mary Nichols, Air Resources Board

Steve Berberich, California Independent System Operator

APPEARANCES CONT'D

PUBLIC SPEAKERS CONT'D

Michael Hadley, Assembly Member Rocky Chavez's Office

Jan Smutny-Jones, Independent Energy Producers

Mike Levin, FuelCell Energy

Aura Vasquez, Sierra Club

Sarah Matsumoto, Sierra Club

Adrian Martinez, Earth Justice

Maya Golden-Krasner, Communities for a Better Environment

Tom Lemmon, San Diego Building & Construction Trades
Council

Efren Brycer, San Diego Regional Economic Development Corp.

Ted Owen, Carlsbad Chamber of Commerce

Peter McLaggan, Poseidon Water and Carlsbad Desal Project

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10:00 a.m.

PROCEEDINGS BEGIN AT 10:00 A.M.

(The meeting was called to order at 10:00 A.M.)

LOS ANGELES, CALIFORNIA, WEDNESDAY, AUGUST 20, 2014

MEETING BEGINS AT 10:00 A.M.

MS. RAITT: Good morning, and welcome to this morning's workshop on Southern California Electricity Reliability. This workshop is part of the Energy Commission's 2014 Integrated Energy Policy Report update, or the 2014 IEPR for short. I'm Heather Raitt and I manage the IEPR.

I'll begin by going over a few housekeeping items. Restrooms are just out the door, down the hall and to your right.

Today's workshop is being broadcast through our WebEx conferencing system, and parties should be aware that you're being recorded. We'll post an audio recording in about a week, and a written transcript in about four weeks.

I'll basically go over the agenda. This morning we have opening comments from Commissioners and executives on the dais, and then a presentation from Energy Commission staff to set the stage for the day. And we'll go into the first panel and break for lunch at about noon, returning at

1 approximately 1:15. And then we'll have two additional
2 panels and an opportunity for public comments at the end of
3 the day. For lunch or coffee there's a food court directly
4 out the doors and to your left.

5 And since we have a full agenda today we request
6 that the presenters please limit your comments to the time
7 allotted to ensure that all have the time needed for their
8 presentations.

9 And during the public comment period we're asking
10 parties to limit comments to three minutes. For those in
11 the room who would like to make comments please fill out a
12 blue card and go ahead and give it to me. Blue cards are
13 available at the entrance to the auditorium. When you're
14 called upon to speak please come to the microphone to make
15 your comments. And if you have a business card, that's
16 helpful for our court reporter.

17 For our WebEx participants, you can use the Q and
18 A function to tell our WebEx coordinator that you'd like to
19 make a comment during the public comment period. And we'll
20 either open your line or relay your comment at the
21 appropriate time. For phone-in only participants, we'll
22 open your lines after we've taken comments from in-person
23 and WebEx participants.

24 Materials for the meeting are available at the

1 Energy Commission's website, and hard copies are available
2 as you enter. And if you got here early we've since added
3 the CAISO presentation, so you might want to pick that up.

4 We encourage written comments on today's topics,
5 and they're due on close of business September 3rd. The
6 workshop notice explains the process for submitting
7 comments.

8 And with that, I'll turn it over to Commissioner
9 Scott. Thanks.

10 COMMISSIONER SCOTT: Thank you, Heather, and good
11 morning, everyone. I am Janea Scott from the California
12 Energy Commission, and I'd like to welcome you to our
13 workshop here today which is part, as Heather mentioned, of
14 the Energy Commission's 2014 Integrated Energy Policy
15 Report update. I am the Lead Commissioner for the update,
16 and I also serve as the Commission's public member.

17 This year's update is focused mainly on
18 transportation issues, but we are also checking in on a
19 handful of other energy-related topics. Last September the
20 joint agency staff presented a preliminary Southern
21 California Reliability Plan as part of the 2013 Integrated
22 Energy Policy Report. Since that time each of the agencies
23 has pursued a number of actions, and I look forward to
24 hearing today's update.

1 I am pleased to be joined today by -- to my left
2 I've got Commissioner Weisenmiller, Chair of the Energy
3 Commission. To his left we have Commissioner Floria. To
4 his left we have -- at the Public Utilities Commission. To
5 his left we have Commission Picker at the Public Utilities
6 Commission. And to his left we have Steve Berberich from
7 the California Independent System Operator. To my right we
8 will be joined shortly with -- by Mary Nichols. And so
9 directly to my right, right now I have Barry Wallerstein
10 from the Southern Coast Air Quality Management District.
11 And to his right I have Jonathan Bishop, the Chief Deputy
12 Director of the State Water Resources Control Board. So
13 welcome. Thank you for joining us today.

14 With that let me turn to Chair Weisenmiller and
15 to my other esteemed colleagues for any opening remarks
16 that they might have.

17 CHAIR WEISENMILLER: Thank you, Commissioner
18 Scott, for organizing this. And I'd also like to thank
19 everyone for their attendance today.

20 Just to put a little context, once it became
21 clear last year that San Onofre was not going to return to
22 service we collectively, the Energy Commission, PUC, CAISO,
23 Air Board, Water Board, South Coast, all got together and
24 came up with an overall plan on how to move forward. And

1 we previewed that plan at an IEPR workshop on the 15th of
2 September in Sacramento. And at that time what we
3 indicated was that the various elements were going to go
4 out into the regulatory forums of the various agencies and
5 be further refined, but that I think the basic message was
6 that it was a pretty heavy lift. We're talking about a
7 fairly complicated set of challenges, you know, basically
8 trying to move forward actions across the various agencies,
9 and trying to do things in a fairly coherent fashion, some
10 such after current sequence.

11 And so at the same time we indicated that we
12 would get together this summer again, so roughly this
13 event, that we were going to try to have it in Southern
14 California. And it was an opportunity for us to review the
15 status to date. So I basically see my role here as
16 listening today on how things are going. I would
17 anticipate that we will have similar events every summer
18 for a while until the various pieces are done or in place.

19
20 And I think part of the message or -- you know,
21 I'll go back to the basic messaging I've been doing
22 generally to try to talk to people to put things in context
23 is that the last two summers we have had a fairly reliable
24 system without San Onofre. We have been very lucky.

1 First, the weather has been very mild. If you go
2 back two summers ago it's a one and two, or average. Last
3 summer was cooler than -- than average. And at the same
4 time, as we were marching forward we collectively all took
5 the approach of not -- of basically worst-case planning. I
6 considered, what if SONGS is not back? And as we were
7 talking through at least the first summer we thought SONGS
8 would be back in another month or so. And we kept saying,
9 well, just in case we're going to start taking action so we
10 can get through this summer.

11 And then last year was -- we got the same message
12 of -- it was the summer before, it's really coming soon,
13 until it died. And then -- but we were always in the mode
14 of saying no for worst-case planning. We weren't going to
15 forecast, but for worst-case planning purposes we were
16 going to assume it wasn't back last summer, indeed it
17 wasn't going to be back this summer, and we were going to
18 take actions to get a more resilient system.

19 And so we had taken -- we have collectively over
20 these couple of years taken a number of actions to get to a
21 more resilient system and, in fact, it helped, it helped
22 significantly. And we will continue doing things although,
23 again, those sort of quick fixes, Band Aids. There's not
24 too many Band Aids left, so we're at the stage now with a

1 more comprehensive program.

2 But the bottom line is this is not a time for
3 complacency this summer. I think everyone should know that
4 so far we're running about two degrees warmer than average,
5 if you look at the National Weather Service. So indeed,
6 instead of a milder than usual summer we've been running
7 hotter than average.

8 At the same time the fire hazards in the state
9 are staggering. We have had about 300 fires a week now.
10 It's running -- it's about 3,000 -- if you look at Office
11 of Emerging Services daily or weekly information, this --
12 we're having the worst drought in our history. Everything
13 right now -- I think the National Weather Service, again,
14 puts
15 90 -- like 96 percent of California at high fire risk. So
16 we are now moving into the -- what I can expect to be the
17 peak season down here with incredibly high fire risk. And
18 I know the emergency services people shudder when they
19 think of what it's going to be like in September or
20 October, the Santa Ana winds and/or heat storms.

21 So again, I think we'll -- we -- I would
22 anticipate we will ask the SC people to help us to conserve
23 energy through Flex Alerts this summer. And certainly
24 anything you can do just generally to use energy more

1 wisely helps. But there's likely to be times where we're
2 really going to need to pinch and need full cooperation.

3 So again, thanks for being here. Don't be
4 complacent and be wise on how you use your energy.

5 COMMISSIONER FLORIO: Well said, Bob.

6 I think we've -- we've accomplished a lot at the
7 Public Utilities Commission in the last year. We've
8 essentially completed the planning phase of -- of what
9 needs to be done. But now it's execution, and in many ways
10 that's the hard part. Having resources online in Southern
11 California is always challenging. We've authorized gas-
12 fired generation, a lot of preferred resource procurement,
13 and now we have to carefully monitor whether the things
14 that we've approved in concept are happening in reality.
15 That's particularly challenging in an area like energy
16 efficiency which we're counting on to meet a lot of our
17 need. But it's very difficult to measure whether --
18 whether we're meeting our goals or not. So it's -- it's a
19 lot of work going forward.

20 I think the nature of the work has changed a
21 little bit. The utilities are out with solicitations to
22 procure resources. And now we've got to follow through and
23 get that done. Also, a lot happening on the transmission
24 side that the ISO will talk about. And, you know, it's

1 really a matter of can we deliver on the things that
2 we've -- we've planned on. So that's going to be our
3 challenge in the next couple of years.

4 COMMISSIONER PICKER: A couple of years ago I was
5 staffing a meeting, the heads of the significant state
6 agencies who participated in the first scoping plan for AB
7 32, greenhouse gas emissions reductions. And it had been
8 several years, and they were meeting again to just start to
9 talk about how agencies would participate in the update.
10 And it was right after San Onofre had closed, and the
11 governor dropped by to talk a little bit about how we were
12 going to make the next steps in terms of greenhouse gas
13 reduction. And he took a little time to reflect on the
14 experience of past governors who had had widespread
15 reliability in the electric grid. And he said, "That was a
16 pilot program, and let's not repeat it." And he looked at
17 us and said, "Don't let the lights go out."

18 And so I think that the agencies here actually
19 did respond within the limits of our authorities and the
20 physics of the grid to actually do what we could do to
21 provide good reliable service in those first summers. And
22 so I'm glad to see that people are back here at the table
23 to continue to talk about these things at a policy level,
24 in the same way that we talked about implementation of --

1 of a series of short-gap measures in that first summer. I
2 think that this is very healthy, and it symbolizes the
3 degree to which
4 the -- the -- all the -- the separate agencies with their
5 different authorities and different requirements are
6 actually part of one single state government that's
7 committed to meeting the needs of our citizens.

8 MR. BERBERICH: Good morning, everyone. I'm
9 Steve Berberich from the California Independent System
10 Operator. And ultimately we're responsible for the
11 reliability of the system. And with the retirement of San
12 Onofre what we all tried to do was make sure that we had a
13 reliable system. But we also were able to integrate some
14 of the same policy objectives into what we were trying to
15 do as the next steps, reducing the amount of gas generation
16 that's going to be needed, and potentially finding a
17 significant amount of preferred resources for the system.

18 I think most importantly -- and I'll talk about
19 what the ISO is doing in a second -- but I think most
20 importantly the agencies, the principal agencies have
21 worked very closely together to come up with a
22 comprehensive plan integrating the transmission plan with
23 the procurement from the PUC with the load forecasting and
24 other work that the Energy Commission does, but also

1 keeping in mind the objectives of the South Coast Air
2 Quality Management District and other important state
3 agencies that we are working with. So highlighting the
4 nature of an integrated plan I think is important.

5 And then finally, Phil Pettingill from the ISO is
6 going to illustrate a number of steps that we've taken to
7 replace some of the resources that we had out at San
8 Onofre, not the power but the voltage support that we had
9 that San Onofre provided. So I'm going to leave that
10 detail to Phil, and I will turn it back over to you.

11 COMMISSIONER WALLERSTEIN: Good morning,
12 everyone. Again, I'm Barry Wallerstein, the Executive
13 Officer of the South Coast Air Quality Management District.

14 On behalf of our governing board I'd like to thank the
15 Energy Commission for the opportunity to participate in
16 today's workshop.

17 As you're hearing from some of the others this
18 morning, and the point I really want to emphasize is that
19 this is all being done in the spirit of partnership between
20 the energy agencies and an air agency such as the South
21 Coast, and that the integrated planning that is now
22 occurring for energy, climate, local air pollution control,
23 water, and so on is unsurpassed when you look back over
24 what was done in the previous decades. And I think it's a

1 real tribute to the governor and the energy agencies for
2 ensuring that this integrated planning occurs and that we
3 meet our multiple objectives of reliable energy, keep
4 energy costs in check, and also address our local and
5 global environmental concerns.

6 And so we're very pleased to be here this morning
7 and look forward to the presentations and questions from
8 the public.

9 COMMISSIONER BISHOP: Good morning. I'm Jonathan
10 Bishop, the Chief Deputy Director of the State Water Board.
11 I have to echo many things that Barry said. The last three
12 years, and I'd like to remember, I spent a lot of effort on
13 understanding what's going on with the grid and how it
14 might be impacted by the retirement of coastal power
15 plants, the once-through cooling program. I am very happy
16 to say that we've been working jointly with the energy
17 agencies, the CAISO, the Air Districts, on how do we
18 address these multiple policy objectives, at the same time
19 while not putting anybody -- anybody's lights at risk. We
20 clearly understand that.

21 We have been a little distracted for the last
22 year, something about no rain and no water. But my board
23 is -- is very committed to continuing this cooperative
24 relationship and to continue moving forward on this. So I

1 appreciate the opportunity to be here today, and I'll look
2 forward to it.

3 COMMISSIONER SCOTT: Terrific. Thank you very
4 much. So I'd like to turn it over now to Mike Jaske from
5 the California Energy Commission, and he's going to get us
6 started today.

7 Welcome, Mike.

8 MR. JASKE: Good morning. Thank you. Mike
9 Jaske, Energy Commission Staff. Really what I want to do
10 is just do a little bit of level setting so that everyone
11 is brought up to the same amount of background. And
12 fortunately, much of what I was going to say has been
13 mentioned by members of the dais, so I can go through my
14 slides quickly and we can get on to the substance of the
15 workshop.

16 So this background slide has pretty much been
17 reiterated. Chairman Weisenmiller mentioned many of these
18 details. I will note that in one of those bullets it says
19 SONGS was shut down in January 2013. That's not correct;
20 2012.

21 And a point perhaps to add is that in addition to
22 the preliminary Reliability Plan for L.A. Basin and San
23 Diego that the staffs of the agencies put together last
24 September, we were sort of expecting perhaps a different

1 end game to that process. We didn't get a finalization of
2 that plan. Rather, the individual agencies have pursued
3 their own particular responsibilities. And both the PUC
4 and the ISO have made major policy decisions back in the
5 March timeframe. And probably that was the way most of the
6 problem of reliability in Southern California will be
7 tackled is through the individual actions of the agencies
8 sort of coordinated in some extracurricular way but not
9 acting in any extracurricular way.

10 Just to remind you where SONGS is and how it fits
11 in the geography of the L.A. Basin and San Diego, it's role
12 is sort of symbolized by this map, really. It's -- it's
13 the interface between those two systems. They're still,
14 after all the years of restructuring, somewhat weakly
15 integrated, only relatively few transmission pathways
16 between them. And in Phil Pettingill's presentation later
17 today he will show a number of much more sophisticated
18 charts that show you where particular transmission upgrades
19 are being located.

20 We really have a multi-layer problem here we're
21 trying to deal with. As a number of the members of the
22 dais have just mentioned, we had the issue of fossil OTC
23 plants, or aging power plants as the Energy Commission used
24 to call them, way back in the early 2000s when we first

1 started raising the question of how we were going to
2 replace these old dogs. Almost all of them are still with
3 us, even though there's the end in sight for many.

4 SONGS, of course, exposed the vulnerability of
5 the Southern California area to voltage instability. And
6 the extent of -- of the problems created for operating the
7 system without SONGS are still being assessed and
8 discovered. The ISO has made large strides in
9 identifying -- both installing and helping to identify
10 further installations of transmission system upgrades that
11 will provide reactive power support, give us more
12 flexibility about where to locate resources. But as Mr.
13 Berberich said, that doesn't provide real power, it doesn't
14 provide energy. So we have a number of challenges not yet
15 fully examined about how to evolve our resource mix over
16 time to fully satisfy customer needs. And to do so in a
17 way, in particular that deals with the GHG emission goals
18 of the state.

19 As has been said, each of the various agencies is
20 pursuing their own fundamental responsibilities. But it's
21 in the contingency mitigation area that all of us will need
22 to come together, devise a holistic plan, identify the
23 roles that then each individual agency will play in
24 executing that plan. And should there ever be the

1 necessary of triggering mitigation measures, collectively
2 perhaps moving them forward as expeditiously as possible.

3 Very quickly I'll run through some slides that
4 just summarize in more detail -- in less detail than the
5 presenters who will follow directly behind me what's been
6 going on in the individual agencies. So the PUC has made
7 large strides to authorize conventional generating capacity
8 development and to get the two IOUs to develop preferred
9 resources, in addition to those that would have been
10 developed through the normal course of events, the normal
11 energy efficiency programs or other things underway at the
12 PUC. And all those individual program details and the
13 power purchase agreements stemming from them are still
14 evolving, as Commissioner Florio mentioned.

15 At the Energy Commission there's a number of OTC
16 facilities seeking to reinvent themselves, to repower
17 facilities using modern technologies. And, of course, that
18 directly intersects with South Coast and to a lesser extent
19 San Diego APCD air quality permitting process, and now the
20 USEPA-GHG Rules that have been put out in draft form.
21 Roger Johnson will get into this more later this morning.

22 As Chair Weisenmiller and Mr. Berberich
23 mentioned, a number of things have been done to try to deal
24 with the immediate reactive power consequences of the loss

1 of SONGS. The ISO Board approved a number of projects in
2 both the 2012 and 2012 TPPs. Some of those projects are
3 sufficiently large that CPCNs are required, and those will
4 ultimately require PUC approval. And ISO is continuing to
5 study further transmission expansion projects.

6 Let me wind up just with a little overview of the
7 whole issue of contingency mitigation and what measures we
8 are investigating as a backstop should preferred resource
9 or gas-fired generation or transmission be delayed or not
10 developed at the level that was established as a goal.

11 Within preferred resources and transmission it's
12 possible that any individual project shortfall can be made
13 up by other projects within the family of -- of preferred
14 resources or transmission. So there's many ways in which
15 energy efficiency, demand response or DG can be
16 accomplished. So if an individual program design falls
17 short some substitute program may be able to be developed.

18 But if those things prove insufficient then these
19 three options are being investigated to -- to provide an
20 ultimate backstop and, if necessary, they're actual
21 development, so deferral of OTC compliance dates triggering
22 a targeted renewable DG program that's more oriented to
23 providing the kind of qualities that conventional power
24 plants provide, and then conventional gas-fired projects

1 that are permitted and procured but not developed unless or
2 until they are triggered by contingency events.

3 And given the time horizon of implementing these
4 kind of options, any kind of analysis that identifies that
5 a triggering needs to be done can't be looking only
6 backward or even currently, it needs to look forward. We
7 need to anticipate where we're going to be three, four,
8 five, six years into the future. And it's looking at a
9 potential shortfall that will motivate us to -- to
10 determine that there is a problem and to pursue one or more
11 of these contingencies.

12 So with that I am finished. And if there are any
13 questions from the dais I'd be happy to try to answer them.

14 COMMISSIONER SCOTT: Great. Do we have any
15 questions from the dais? No?

16 MR. JASKE: Very good. Thank you.

17 COMMISSIONER SCOTT: All right. Thank you, Mike.
18 Okay. All right.

19 We will now go on to our first panel. The first
20 panel is an update on activities identified in the Draft
21 Plan. And we will be joined by Cynthia Walker from the
22 California Public Utilities Commission, James Avery from
23 San Diego Gas and Electric, Ron Nichols from Southern
24 California Edison, and Roger Johnson from the Energy

1 Commission. So welcome, Panelists.

2 MS. WALKER: Hello. My name is Cynthia Walker.

3 I am the --

4 CHAIR WEISENMILLER: Before we start I was trying
5 to make sure someone from Edison tracked down Ron.

6 MS. RAITT: They're working on that right now.

7 CHAIR WEISENMILLER: Thanks.

8 MS. WALKER: He's easier to find.

9 CHAIR WEISENMILLER: You never know. Well,
10 actually, he probably ran into Mary Nichols just outside.
11 So anyway --

12 MS. WALKER: Okay. I'm Cynthia Walker. I am the
13 Deputy Director of the Energy Division at the California
14 Public Utilities Commission, and I oversee the branches in
15 the Energy Division that work on procurement and resource
16 adequacy. And so this is a large focus of my oversight
17 work, making sure that we have reliable generation in the
18 Southern California, San Diego and L.A. Basin area.

19 And the overall report card from my perspective
20 is that we've authorized the resources and now, as
21 Commission Florio said, we're implementing. And -- and we
22 feel as if we are addressing this, but we are paying very
23 close attention to how things are performing and the
24 progress that we're making.

1 Let me try this one. There we go. So I'm going
2 to talk today about the Long-Term Procurement Planning
3 process, specifically the 2012 Long-Term Procurement
4 Proceeding as that was the -- the one that authorized the -
5 - the local capacity resources for both Edison and San
6 Diego. And I mention that as you -- many of you are
7 probably familiar, these are -- the decisions that came out
8 of this LTPP did authorize preferred resources specifically
9 in minimum amounts, and that's a unique event. And it's, I
10 think, going to be a challenge to the utilities in terms of
11 their solicitation process.

12 So I'll go over the planning, what was
13 authorized, why resource mix matters, and the status of the
14 SDG&E and SCE procurement from our perspective. But glad
15 to see that we have the utilities here, at least we have
16 San Diego here today to talk about that.

17 So the LTPP is -- is a proceeding that occurs
18 every two years. It came out of the energy crisis and the
19 need to do procurement planning again and have long-term
20 contracts for generation for the utilities. It looks
21 forward ten years and considers all kinds of alternatives
22 in terms of how to meet reliability needs. We coordinate
23 with the CEC and the CAISO, the CEC, in particular on --
24 for the forecast, load forecast, and their IEPR proceeding,

1 and the ISO for their transmission planning.

2 So there were two decisions that came out of the
3 2012 Long-Term Procurement Proceeding. The first one
4 authorized resources for Edison only and did not include
5 the -- a consideration of the SONGS outage, but obviously
6 did factor in the planned retirements for OTC. And then
7 Track 4 did consider the SONGS outage and authorized
8 resources for both Edison and SDG&E. And Tracks 2 and 3, I
9 think one of the tracks was canceled and the other track
10 was to actually focus on procurement roles, so not as
11 significant in terms of the actual resources.

12 So I'm going to skip, actually, to these slides.
13 These are just summaries of what was authorized for both
14 utilities, starting with Edison. As I mentioned, Edison
15 had resources authorized in Track 1. And you can see that
16 there are minimum preferred resources, minimum energy
17 storage, and then also an additional opportunity to procure
18 more preferred resources, up to 400 megawatts. And in
19 Track 4, again, another meeting in the matter of preferred
20 resources. So this shows the commitment to fueling the need
21 with preferred resources.

22 And then for San Diego, though, they -- their
23 authorization in Track 4 was -- was limited to Track 4.
24 The -- San Diego also had -- has an application that's been

1 approved by the Commission for a plant in Pio Pico, 300
2 megawatts. So again, we're -- we're seeing the minimum
3 requirement there for preferred resources and energy
4 storage.

5
6 So let me get back up here. So one of the points
7 we thought was important to make is as we consider and
8 respond to people, why can't we fill all the need with
9 preferred resources, the -- the issue and the challenge
10 there is that no every resource is the same in terms of the
11 quality and the operational characteristics, so looking at
12 the various different types of resources to meet need, meet
13 different capacity factors, different dispatchability, of
14 course different GHG results there, but we have to find a
15 balance in terms of what the grid needs and our commitment
16 to filling the need as much as possible with preferred
17 resources. So just something that we have to keep in mind
18 in our process and rely on others to provide that
19 information to us in terms of how this might work.

20 And then -- let's see. I also wanted to just
21 highlight that in the -- in the -- the 2012 LTPP Track 4
22 decision we did -- the Commission did consider input from
23 other parties in terms of load reduction. And though these
24 various elements that are listed here are -- are possible,

1 announcing megawatts that could come forward, we, in the
2 decision, relied on a small percentage of that and with the
3 argument that if 20 percent of that total materializes we
4 can -- we'll need to procure 1470 megawatts, 30 percent
5 1110 megawatts. And the decision looked at a need of
6 23,900 megawatts based on the -- the CAISO Track 4
7 recommendation.

8 So that matches closely with the overall
9 procurement for -- for Track 4 which was 1,000 to 1,500
10 megawatts. So I just wanted to make sure that that logic
11 is understood and that we're trying, again, in our decision
12 to be -- to bring in the preferred resources, including the
13 statewide programs that -- that are hard to anticipate in
14 terms of the exact megawatts that will be delivered. The
15 RFOs themselves, which show up here, these -- the megawatt
16 amounts here for preferred resources are actually part of
17 an RFO process that San Diego and Edison have currently --
18 are currently implementing. So those will be easier in
19 terms of knowing what's under contract. The others -- the
20 other programs, we have to wait and do our assessment, and
21 also do our local capacity requirement studies.

22 So just quickly, because I think it might be
23 better to hear directly from the utilities, but we are
24 tracking the progress being made implementing the LTPP

1 decision. For Edison, their -- their plan was approved
2 initially. There's was earlier because we started with
3 Track 1. And they issued their RFO September 2013. And
4 basically we are expecting applications from them. Some or
5 all PPAs November 2014. And we could at the Commission
6 issue a decision on those PPAs between May and August 2015.
7 And these are dates that I'm putting out there but they are
8 estimates, and we're running by the process people, the
9 judges and our agency. And it's fine to put them out as
10 estimates but a lot can happen, obviously. And this is
11 looking at getting these resources online beginning 2018
12 through 2021.

13 And then one other thing I just wanted to mention
14 was the Commission back in June adopted a decision that
15 authorized up to two solar PV program RFOs in the SONGS-
16 affected area. And this is part of the utilities' solar
17 programs that have been in place for some time now. But
18 this is the first time that we're -- we're allowing
19 preference for projects that will meet the -- the SONGS-
20 affected area. So that's another opportunity to address
21 need for Edison with preferred resources.

22 And then San Diego, the Energy Division approved
23 their plan on July 22nd, 2014. I understand -- it says
24 here that the RFO may be issued this month, but I

1 understand it's probably going to be early September.
2 SDG&E also filed an application for approval of their
3 Carlsbad Energy Center agreement, and that's 600 megawatts.

4 And it's anticipated that this will be online in time for
5 the retirement of Encina. That's, fingers crossed, what
6 we're hoping.

7 I also want to mention that because we've
8 identified 300 megawatts for SDG&E service territory from
9 Pio Pico, there is a petition that was filed in court, in
10 the Court of Appeals, seeking to overturn the Commission's
11 decision. And at this time, of course, we don't know what
12 that decision will be. But assuming that the decision is
13 upheld that we -- the delay there probably won't impact the
14 need in terms of Pio Pico. But we will be tracking that
15 very closely and actively talking with SDG&E about how
16 that's going. But so far we don't think it's going to have
17 a significant impact.

18 And so I guess just in closing I would say that
19 we are actively and spending a lot of time and effort in
20 the Energy Division coordinating amongst all the programs,
21 including our statewide programs, energy efficiency, demand
22 response, distributed generation, and then specifics RFOs
23 coming out of the LTPP. And we're -- we're confident
24 things are going well, but we're also making sure that

1 we're alerting everyone to any issues or concerns that come
2 up.

3 So thank you for your time. And I'll answer any
4 questions after.

5 COMMISSIONER SCOTT: Thank you very much,
6 Cynthia. I wanted to welcome Chairwoman Mary Nichols from
7 the California Air Resources Board. She just joined us.

8 COMMISSIONER NICHOLS: I did.

9 COMMISSIONER SCOTT: Would you like to make any
10 opening remarks?

11 COMMISSIONER NICHOLS: No.

12 COMMISSIONER SCOTT: Okay. And also recognize
13 Ron Nichols who has joined the -- the panel.

14 So we'll do our -- do we have questions for
15 Cynthia or do we want to do questions at the end of the
16 panel?

17 CHAIR WEISENMILLER: At the end.

18 COMMISSIONER SCOTT: Okay. Let's go on to our
19 next panelist who is James Avery from San Diego Gas and
20 Electricity.

21 Welcome, James.

22 MR. AVERY: Good morning, Commissioners. And
23 thank you for providing me the opportunity to come in and
24 talk a little bit about what's happening in San Diego.

1 For San Diego Gas and Electric Company, we have
2 been trying to plan for the last ten-plus years for the
3 ultimate retirement of the old once-through cooling
4 facilities. So from our vantage point we have been
5 thinking about some of these issues for quite some time,
6 although they didn't play out quite the way we anticipated,
7 I think that's fair to say. For us probably the saving
8 grace was the fact that when we proposed the Sunrise Power
9 Link it was intended to provide access to a wealth of
10 renewable resources, perhaps one of the richest regions in
11 the country for diversity of resources, and it's just a
12 close proximity to San Diego.

13 And when I think about the Sunrise Power Link one
14 of the big questions that we were asked is it is too big,
15 too large, and it's not needed for many years. Well, as it
16 turns out it came into service in 2012, and it's very first
17 year it was pretty much full filled up. So from our
18 vantage point that reduced the amount of in-basin
19 generation that's required in San Diego. And so that has
20 made things for us perhaps somewhat, in a traditional
21 planning horizon, something that we could manage and
22 something that we could plan for.

23 Within our area since 2012 we have added in
24 energy efficiency almost 100 megawatts of new energy

1 efficiency programs. We have 155 megawatts of new rooftop,
2 and that number is growing every single day, all since
3 2012. In -- in renewable resources we have over 1,200
4 megawatts already connecting to and delivering into the
5 Sunrise Power Link the capacity made available from
6 Sunrise. We've had one re-power of an old peaker which has
7 increased the amount of capacity in the basin.

8 And you've all heard a little bit about the Pio
9 Pico contract. That has been moving forward. One thing
10 that's important to note in the Pio Pico, though, is it
11 really facilitates the retirement of some of the -- the
12 oldest peakers in our region. And those units were
13 scheduled, actually, to be taken offline, I think it was at
14 the end of 2012. And the ISOs requested they stay on a
15 couple more years to facilitate the time for Pio Pico to
16 come online. But we'll be losing about a 188 megawatts
17 when those 300 megawatts come into our system.

18 We heard a little bit about the all-source RFO.
19 The date I think we're scheduling right now to issue that
20 is September 5th. We were hoping to get it out before the
21 end of August, but we're running a little bit behind in
22 schedule there. From our standpoint, you've heard a little
23 about the all-source or the procurement needs identified in
24 the 500 to 800 megawatt range, that's already taking into

1 consideration some uncommitted additional energy efficiency
2 in the area of over 300 megawatts that will have to
3 materialize just to get down to that 800 megawatt figure.

4 We have received permission and authorization
5 from the California Public Utilities Commission to -- on
6 our plan for conventional resources, as well as preferred
7 resources. And the total resource requirement of 800
8 megawatts is really made up of a maximum, no more than 600
9 megawatts of fossil-based resources, and at minimum no less
10 than 200 megawatts of preferred resources. And that is the
11 structure that is going into our all-source solicitation
12 which will be going out very shortly.

13 We did file an application with the California
14 Public Utilities Commission to deal with the Carlsbad
15 Energy Center. And specifically, we wanted to get
16 something before the Commission as quickly as possible so
17 that we could facilitate the orderly retirement of the
18 Encina Power Plant. And that contract that we have
19 negotiated is for 600 megawatts of new clear peakers on our
20 system that would facilitate the retirement of almost 1,000
21 megawatts of the older coastal once-through cooling power
22 plants. Again, while it's new capacity and it's not as
23 much as the capacity additions that we have been retiring
24 in the region, that's largely due to the fact that Sunrise

1 Power Link has provided a wealth of access to new resources
2 for our area.

3 I've been asked an awful lot about what are we
4 doing to test new technologies, what are doing to pilot new
5 issues, what is out there for us? Well, from our
6 standpoint we don't view these things as pilots, we view
7 them as real-world realities.

8 The Borrego Springs Micro Grid Project is a great
9 demonstration of that. It's the integration of almost 5
10 megawatt hours of batteries right into an area where we
11 have a wealth of new solar resources coming in and an area
12 that is literally the end of the world for our electric
13 system. Borrego Springs is served by a radial transmission
14 line that extends quite a distance from the bulk of -- or
15 the back of our system. It has a peak area load of roughly
16 12 to 14 megawatts, and it's load in the wintertime is 4 to
17 5 megawatts. So the ability to have a resource at the tail
18 end of our system assures us the ability to provide a much
19 higher degree of reliability in this remote area, test the
20 integration of how we can truly look at solar in
21 conjunction with energy storage, and the ability to show a
22 real live living pilot or real live living reality of a
23 micro grid in work. And it has already proven out on a
24 number of occasions to help in that region.

1 We're also working with the Port of San Diego,
2 the Climate Action Plan, to look at what we can do for
3 integration of more energy efficiency demand response to
4 distributed energy resources, clean transportation, as well
5 as the potential for energy storage, all with the aim of
6 reducing greenhouse gases in that area well ahead of other
7 targets and other initiatives and programs that are out
8 there. And this is not a small area. It's again a
9 relatively sizeable area within our -- within our system
10 that we can demonstrate how all of this comes together to -
11 - to serve and solve real-world problems.

12 One of the things I get asked all the time is,
13 well, why don't we just deal with more rooftop and more
14 solar in our basin to deal with the preferred resources
15 need in San Diego? Well, San Diego, and you hear this all
16 too often and I apologize for that, but it's different than
17 the rest of the state. I do not have industrial load of
18 size. I do not have factories of size. I do not have
19 refineries that creates the base load capability in the
20 area that quite often drives the peak within our region.
21 San Diego Gas and Electric Company is predominantly a
22 residential area.

23 When I think of it I often say that when I think
24 of industrial load I think of Sea World as being my

1 industrial load. I'm not sitting here in a situation where
2 my system peaks are one or two o'clock in the afternoon
3 where solar and other types of similar distributed
4 resources can provide a resource to solve that need. And
5 our residential loads have peaked at 8:00 p.m. They've
6 peaked at 8:00 p.m. for 30 years, 365 days a year. That is
7 the nature of residential load in our area. So when I look
8 at the concept of rooftop solar, what can it do to solve my
9 residential load problem, it doesn't do anything. I still
10 need capacity to serve that -- that type of load in my
11 area.

12 Our overall system peak is really in the 2:00 to
13 9:00 p.m. window of time. The absolutely peak occurs in
14 the middle of that, 5:00. And in fact, I think we peaked
15 this year at 5:00 p.m. We're peaked -- and that peak is
16 relatively flat over the 4:00, 5:00, 6:00 p.m. time
17 periods, and then tails off a little bit through that 9:00
18 p.m. window. And unfortunately solar drops down to zero
19 when we get down into the 7:00 p.m. window of time. So it
20 doesn't provide the capacity we need to serve our area.

21 Another area I wanted to point is we have done a
22 number of projects to demonstrate the integration of energy
23 storage with rooftop solar canopies, with electric vehicle
24 charging, and show how all of this can play together. This

1 chart is a little bit busy but I absolutely love it from an
2 engineering perspective. Essentially, just walking you
3 through this, at the beginning -- at the beginning of the
4 batteries are charging off the grid and we end up with a
5 full charge in our batteries by sunlight in the morning.
6 Then through the day we have electric vehicles connecting
7 to the system, and that's the ripple you see in light blue
8 at the bottom of the graph, electric vehicles connecting to
9 the system and charging off and on through the day at the
10 zoo.

11 Then as the -- as the solar comes online in the
12 morning it follows up, and the batteries follow that solar
13 production to mitigate disturbances that occur because of
14 cloud cover, or to deal with disturbances that occur
15 because of fog burn off or other issues with just sunlight
16 and solar production. So the battery does a lot to deal
17 with some of those interruptions that you've heard me talk
18 about all too often as being problems on our system.

19 Then through the end of the day as the solar is
20 tailing off we take the residual energy out of that battery
21 and it is put on the system to effectively provide some
22 capacity at the end of the day as the system is starting to
23 peak, all aimed at trying to mitigate some of the ramping
24 issues that I'm sure we've all heard a number of times

1 about the ISO being deeply concerned about. This is a way
2 to demonstrate that you can fully integrate these
3 resources, mitigate some of the problems that distributed
4 generation resources create, and at the same time provide
5 some of the solutions to the grid, as well, all with the
6 aim of creating real-world situations on our system.

7 We have a number of these projects. I like this
8 one because this is an area that's very visible to the
9 public. The San Diego Zoo, as everybody knows, is a
10 wonderful tourist attraction. It is something that there
11 are kiosks set up in the zoo to explain what we're doing
12 outside. And we're finding that every single day the
13 utilization of the energy storage and the utilization of
14 electric vehicles plugging in here is growing and growing,
15 so much so that the city is now looking at expanding access
16 to electric vehicle charging in this area to deal with --
17 there are many hours in the day where there's just not
18 enough charging capability for electric vehicles on our
19 system.

20 With that I'll turn it over to any questions.

21 COMMISSIONER SCOTT: Thank you very much, Jim.
22 We're going to -- we'll do questions at the end of the
23 panel.

24 So I would like to welcome Ron Nichols. Welcome.

1 MR. NICHOLS: I appreciate it. Well, with
2 Cynthia's comments and, you know, with Jim's comments, any
3 questions? A lot -- a lot of similar issues. But I'm
4 going to cover a couple of different programs that we have
5 here. We have our own global capacity resource
6 solicitation. Similar but with a very different objective
7 is our Preferred Resources Pilot.

8 First, let's talk about the -- the LCR. This
9 plan is focused somewhat similarly to the types of issues
10 that -- that Jim was speaking to. We're -- we're dealing
11 with the same issue on a much larger scale in terms of the
12 -- the exit of San Onofre, and then the prospect of the
13 loss of mostly cooling resources down at the coast, as
14 well.

15 We're looking at this overall, we're looking at
16 between 1,900 and 2,500 megawatts that are necessary in
17 the -- the Western Los Angeles Basin. And this is again an
18 all-source solicitation that we've done. It is the first
19 time that we've done an all-source solicitation where we
20 have head-to-head competition between conventional gas-
21 fired generation, distributed resources namely being
22 principally solar, some perspective combined heat and
23 power, energy efficiency, demand response, and energy
24 storage.

1 We went through that process and about -- as we
2 were going through the plans for that LCR we also then kind
3 of tagged on to the end of that trying to use existing
4 processes as much as possible, added solicitation focused
5 specifically in the Preferred Resources Pilot area, and
6 I'll get to that in a minute. We're looking at about a
7 target of somewhere around 400 megawatts-plus, ideally, of
8 preferred resources in this broader LCR.

9 And then separate and distinct from that we've
10 got the Moorpark subarea which is a region up to -- up to
11 the north going up towards Goleta area where we have system
12 constraints up there, where there's transmission
13 constraints up in that region. And as that region
14 continues to grow we have -- we have reliability concerns
15 going forward up there and a more limited set of
16 opportunities to be able to do siting up there. In that
17 specific instance, given the fact that it is
18 extraordinarily reliability driven, there isn't a minimum
19 requirement for any specific technology in that area. We
20 are going to make certain that we -- that we meet our
21 reliability requirements.

22 But doing this in this fashion is the first time
23 that we've done a head-on-head type -- type of comparison.
24 And through that I think we're learning a great deal. I

1 think we're all going to learn a great deal in terms of
2 what comes out of that, and how we make those ultimate
3 decisions between the different technologies.

4 The timeline on that, this kicked off essentially
5 the last quarter of last year. We have a short list
6 notification at the end of January. Moving forward, now
7 we're in negotiations with parties. We had to move out the
8 timeline a little bit to deal with some contractual issues
9 that we -- that we needed to clear up. We think we've got
10 that cleared up now and anticipate having a final selection
11 notification about mid -- mid-October to get it all wrapped
12 up for a final approval. But we would then submit to the
13 Commission in about the third week of November, just --
14 just in time for your Thanksgiving.

15 I'll talk a bit now about a concurrent kind of
16 effort, but really quite different. In the Preferred
17 Resources Pilot we started looking at how can we replace --
18 particularly replacing San Onofre. When you look at this,
19 Southern Orange County, and I'll show you a map here in a
20 minute, Southern Orange County is an area that we had
21 concern about from the perspective of its growth. It's
22 about a 1,200 megawatt peak load area right now. And we're
23 looking -- absent kind of business as usual there, it's
24 experiencing a lot of growth and it's looking at about --

1 two-and-a-half percent per year growth in that area is what
2 are. And, of course, we're always constantly updating
3 that, but that's kind of our latest -- latest look at it.
4 So that means about 30 megawatts a year. If we did nothing
5 to change it that's what we would be dealing with.

6 So what we're trying to do is say of -- of the
7 areas that we're looking at in our -- in our system that
8 are most affected by the lack of SONGS, that was one that
9 we needed to focus in on. So when we were looking at that
10 we wanted to see what can we do -- the whole purpose here
11 is -- is how can we minimize and hopefully maybe even
12 eliminate the need for gas-fired resources to serve that
13 area and to use that.

14 And if you look at the -- the decision that came
15 forward on that, it was referred to as a living pilot, and
16 indeed it is. We're -- we're looking to measure local grid
17 impact of preferred resources, of more depth in energy
18 efficiency, demand response, energy storage, and
19 distributed gen which we anticipate is going to be
20 principally distributed solar, and to look at how that --
21 how that performs on an hour-by-hour basis. And I would
22 agree with Jim that generally speaking, with the possible
23 exception
24 of -- of what we -- how storage performs, because I think

1 that's going to be something important to evaluate, these
2 are generally known technologies.

3 And the issue, however, that's different is
4 putting them in the combined fashion. And not only from
5 the -- from combining the different mix of the resources,
6 but we're also looking at new contractual relationships
7 between us as the -- as the utility and the providers of
8 those. And some of the most particular of those are in
9 energy efficiency. We're not just looking for reducing a
10 certain amount of gigawatt hours per year over the year.
11 We need to have a much better understanding of how that's
12 going to perform within some bandwidth any hour of the day
13 so we can determine how that impacts reliability. Well,
14 they don't contract for -- or measure energy efficiency
15 essentially in that forum right now. So we're going to
16 have to deal with the issue of what are the performance
17 obligations of the providers of that? How do we monitor
18 that? Hopefully how we do monitor that in a manner that is
19 workable and efficient?

20 And those of you who sat in on the en blanc
21 meeting up in San Francisco about a month ago, we talked a
22 lot about energy efficiency and the -- the monitoring
23 measurement verification of that is some of the issues that
24 we've had with respect to that. Well, we're going to have

1 more of that that we're going to have to sort through when
2 we look at this. And demand response. Typically demand
3 response has been a program, frankly, that -- that there
4 hasn't been great expectation of the customer who's under
5 that DR program getting called. Well, we're expecting
6 we're going to get called through this, particularly as we
7 get later on into the period of time. So that's kind of
8 the scope of -- of this whole process.

9 The area here is when you look up to the kind of
10 far northeast corner there and it gets up into the Santa
11 Ana area and comes down along -- diving down along Laguna
12 Beach, Laguna Niguel, up over the Mission Viejo area, kind
13 of that right lower-hand corner, that's the general area
14 we're looking at. Today it has about 70 megawatts of
15 preferred resources, and it depends what -- whose
16 definition you prefer. For us that's -- we're including in
17 this existing 15 megawatts of combined heat and power.
18 That is a gas-fired resource, so there's probably going to
19 be some more discussion that we're going to have with
20 respect to going forward. How are we going to treat
21 combined heat and power CHP as -- as part of this
22 solicitation?

23 So we're really looking at about 300 to 310
24 megawatts of incremental growth that -- that we're looking

1 to ideally simply not have it appear. That's our -- that's
2 our overall desire. Or to the extent that it does that
3 we're taking care of it with -- meaning distributed
4 resources and energy storage to deal with some of those
5 issues that -- that -- that Jim was talking about in terms
6 of time of day.

7 In this particular area the load is not terribly
8 dissimilar in characteristics from what San Diego sees.
9 You don't have much industry in this area. It is largely
10 residential and commercial buildings, a smaller commercial
11 building load. So we're dealing with a lot of those
12 issues. But there is a fair amount of smaller commercial in
13 there. And we've got about 30,000 commercial accounts in
14 that area. And we anticipate that we'll focus probably
15 pretty extensively on -- on those commercial counts in --
16 in the region.

17 This might be the end of an eye chart for those
18 of you in the back, but the whole milestone of this is to
19 come together with a plan that has kind of two pieces to
20 it. We don't anticipate that we're looking at reliability
21 issues here in the near term. So we have the ability to
22 get -- start getting some of these resources.

23 This isn't a one and done kind of solicitations.
24 We can work through this, get a portion of it installed,

1 working to get that mixture of resources that we're
2 talking, preferred resources, start getting those in place
3 in a kind of 2017-2018 timeframe so that we're learning on
4 how they're performing. And we're going to learn through
5 that process how that solicitation process works. We
6 talked earlier about how we need to change how we deal
7 commercially and the contractual relationships,
8 particularly on -- on energy efficiency and on demand
9 response, probably on energy storage as well. And then as
10 we learn with that then we'll expand that further. But as
11 we get closer out to this 2022 period time, if we are not
12 successful in reducing the load in the way we desire to
13 with preferred resources then we're going to be having to
14 look at how we deal more on a generation side.

15 So we have time to work it through. That's why
16 it is a living pilot. We can work through this -- through
17 this period of time, design it and test it first, and then
18 determine what's the residual that we need to get at -- at
19 the very end of that -- end of that process. So it may be
20 a learning experience for all of us. The benefit of this
21 is it will be very transparent. We'll be able to lay out
22 what the -- what the results are as we work through it.
23 We'll have -- we know there's going to be some learning
24 curve. There will be some growing pains as we go through

1 it. But ideally when we get done with this we determine
2 what are the costs of this? How does this compare to a
3 more business-as-usual type of circumstance so that we can
4 see that on a pretty decent scale when you're talking about
5 trying to deal with meeting a 300 megawatt potential
6 incremental need? It's a scale that we get our arms around
7 and think of something that provides some -- some
8 reasonable proxy for what the barter system might look like
9 going forward.

10 So with that I'll turn it over -- is Roger up
11 next?

12 COMMISSIONER SCOTT: Do you have any questions or
13 wait?

14 CHAIR WEISENMILLER: I say wait. Go ahead,
15 Roger.

16 COMMISSIONER SCOTT: Okay. Thank you very much,
17 Ron.

18 And I'd like to welcome Roger Johnson from the
19 Energy Commission. Welcome, Roger.

20 MR. JOHNSON: Good morning. Thank you members on
21 the dais. And my name is Roger Johnson. I'm the Deputy
22 Director for Siting, Transmission and Environmental
23 Protection at the California Energy Commission. Today I'm
24 here to talk to you about some of the power plants that we

1 have under review or have recently permitted.

2 And just for a little bit of background, the
3 Energy Commission has the permitting authority for thermal
4 power plants 50 megawatts and larger, so that includes
5 geothermal, solar thermal and biomass. But today all the
6 projects we're talking about are gas fired. And several of
7 these projects have already been discussed, so maybe we can
8 get through this fairly quickly.

9 I provided a map here to show the location of
10 these projects and where they are with relation to San
11 Onofre. I'm not going to speak about that project, but
12 just to show you. And we'll -- there's eight projects here
13 that I'd like to share with you.

14 A summary table, we'll start with El Segundo.
15 This -- El Segundo has four units; two of them have already
16 been replaced. And so 560 megawatts of new air-cooled
17 rapid start combined cycle were operational in August of --
18 of 2013, last year. At that same location there's --
19 there's two additional units that are being permitted right
20 now through an amendment process to replace those two with
21 -- with a new 449 megawatts combination combined cycle and
22 -- and peaker projects. We're expecting a Commission
23 decision on that amendment later this year. And the OTC
24 compliance date is 12/31 of 2015, just so you guys can

1 understand what these projects are working towards.

2 The next project, going down the coast, is the
3 Watson Cogeneration project. That was a fifth train of a
4 cogen, 85 megawatts. It was approved by the Commission in
5 April of -- of 2012. That project is on hold. They are
6 still having discussions with the Tesoro Refinery about
7 the -- the need for that project and when they would put it
8 forward, but they said it's a real project. And there is
9 no OTC on that project.

10 The next project, Redondo Beach, a 496 megawatt
11 repower. They -- the staff filed this preliminary staff
12 assessment just July 28th of this year. The schedule is
13 undetermined right now. There's been a slight pause in
14 that project. The developer AES has proposed to perhaps
15 redevelop the site with some other project rather than the
16 repower, and so they're going forward with that. They're
17 going to do a ballot initiative with the public to see what
18 the public wants to do there, So we're not sure about the
19 schedule at this time.

20 Alamitos, another AES --

21 MR. BERBERICH: Roger, if I could -- over here.

22 MR. JOHNSON: Yes?

23 MR. BERBERICH: I have a quick comment on
24 Redondo. There's probably going to be an intersection of

1 that in getting the Mesa Loop-In done. So we'll be working
2 with AES on the timing of what they plan to do there.

3 MR. JOHNSON: Very good. Thank you for that
4 information.

5 Alamitos, a larger power by AES, 1,950 megawatts.
6 The staff is working on its preliminary staff assessment,
7 and we expect to file that in October of this year. And
8 we're looking forward to a Commission decision in 2015.
9 And that OTC date is December of 2020.

10 Huntington Beach, another AES project, 939
11 megawatt repower. We have finished evidentiary hearings on
12 that and we're expecting a proposed decision next month, a
13 Commission decision following that in October. And the
14 compliance date is December of 2020.

15 Carlsbad, it was mentioned today, 632 megawatts
16 is the net capacity of that project with those six LMS100s.
17 The staff is working on -- this is an amendment to the
18 earlier Commission decision. The Commission had -- had
19 licensed a combined-cycle project, and it's being proposed
20 now to convert to the simple cycle. The Commission hopes
21 to have a decision on that in 2015. That compliance dates
22 is 2017 in December.

23 Quail Brush, 100 megawatts. That project is in
24 suspension. They requested an additional suspension while

1 they evaluate whether or not to go forward with that
2 project.

3 And the Pio Pico project was mentioned a couple
4 times this morning, 300 megawatts. They are ready to start
5 construction as soon as they can get through this appeal on
6 their PPA.

7 So we're just -- I'd like to just quickly go
8 through the projects and give you a little more information
9 about -- this is the El Segundo project. And what can I
10 add to this? Just that we're -- we're -- the final staff
11 assessment is -- the staff will finish its analysis of the
12 project and we'll publish that 30 days after we receive the
13 determination compliance from the Air District for that
14 project.

15 The Watson Cogen, just as I mentioned, there's
16 the -- the pin shows the -- the location for the fifth
17 turbine. There are four projects -- four turbines
18 originally permitted, and they -- they did an AFC to add a
19 fifth turbine there. That project is fully permitted and
20 ready to go to construction.

21 Redondo Beach, we just talked about that one, and
22 just a picture of the project there.

23 Huntington Beach, this is the existing facility
24 across the street from the beach. Hearings were completed,

1 and we're expecting the Commission decision in October.
2 One thing that is interesting, there's -- there's a good
3 chance that if the project does get built there will be
4 some very large surfboards leaning up against the stacks of
5 the new project. That's the -- what the city thinks would
6 -- would look good on that project, and the staff agrees.

7 Alamitos, we mentioned that one. The City of
8 Long Beach AFC was filed last December. We're working on
9 the preliminary staff assessment, and that will come out 45
10 days after the determination compliance from the district.

11 Carlsbad, again, it was -- it was mentioned this
12 morning, petitioned to change it from combined cycle to
13 simple cycle. And we had an information hearing last --
14 two weeks ago in Carlsbad. The staff is working on its
15 analysis and we hope to get that decision mid next year, I
16 think, based upon the schedule we're looking at.

17 Quail Brush, this is the 100 megawatt 11 natural
18 gas-fired reciprocating engines proposed to be located in
19 the City of San Diego out at the landfill. The AFC was
20 filed in 2011, and that project is in suspension for now.

21 And finally, the Pio Pico project, the three
22 IMS100s out there in Otay Mesa in San Diego County, right -
23 - right adjacent to the Otay Mesa project, a 510 combined
24 cycle that's -- that's running right now. And again, I put

1 on my slide that the -- the start of construction should be
2 effective, and actually it will be effective by the PO
3 (phonetic).

4 And that's the information I have. Thank you.

5 COMMISSIONER SCOTT: Okay. Thank you very much,
6 Roger.

7 Let's turn to the folks here on the dais to see
8 if we have questions for our panelists.

9 COMMISSIONER SCOTT: Yeah. I'd like -- let's
10 start out with the basic. Last time Commission McAllister
11 was the Lead Commissioner on the IEPR and was involved in
12 these hearings. And he's tied up today, so he sent both
13 Commissioner Scott and I a note saying that he regrets he
14 can't be here. And at the same time he was pretty emphatic
15 about, as he was last year, his commitment and interest in
16 energy efficiency, and certainly encouraged me to encourage
17 the panel to -- to really get serious and get it done.

18 And so in that context, I guess I'd just sort of
19 like to step back and say that in the '70s, you know, Lenny
20 Vosk (phonetic) was the originator of the energy efficiency
21 programs at the PUC. Lenny put in place a target in the
22 '70s for all cost-effective conservation to be done. He
23 also put in place a policy that the creativity and
24 imagination of the utilities in energy efficiency would

1 determine our rates of return.

2 We're almost 40 years later. You know, and
3 having been at the en banc I would say that it was not
4 precisely drilling (phonetic) in terms of where we are on
5 the status quo. And so part of the question is: How do we
6 move forward with these new programs in a way to get the
7 job done, get it done fast, but get it done well,
8 particularly in the preferred technology energy?

9 So part of it is looking at -- particularly Ron
10 and Jim, do you have specifics on what we can do to really
11 jump start the energy efficiency programs in the area?

12 MR. AVERY: Thank you. That's a spectacular
13 question. One of the things that we face is that we're
14 sitting in a situation where there is actually a perverse
15 incentive in place today that encourages customers to use
16 energy unwisely. And -- and what that has created is
17 really the legacy or what created it is the legacy out of
18 AB1X at the time of the energy crisis, and that was
19 essentially creating the break or -- or instituting the
20 break between the two or four tiers that existed in the
21 rate making process in the residential side.

22 So what's happened is we have a perverse
23 incentive for customers to perhaps use less energy but the
24 -- to take the energy they use and use it inefficiently.

1 For example, if a customer has a very high tier, in the
2 fourth tier block, and they're paying \$.38 cents per
3 kilowatt hour, there's an incentive to not use that energy.

4 However, the real-world reality is when they get home from
5 work they turn their air conditioner on. And when they
6 turn their air conditioner on, instead of a house that has
7 some pre-cooling already taking place that air conditioner
8 runs full board through our entire peak period. And so
9 that -- that rate design has created part of the problem
10 that we are in today.

11 And what we have seen since 2001 is our capacity
12 factor on our system has gone down virtually every single
13 year, with the exception, I think, of one year where have -
14 - now a system has a capacity factor that's 12 to 13
15 percentage points below where it was at the time that we
16 were in the energy crisis. And then what we see is
17 traditionally a growth in demand that is higher than the
18 growth in -- in energy consumption. And while that sounds
19 good it forces the -- the generation fleet to operate less
20 efficiently, increasing greenhouse gases out of generation
21 that's sitting there because it's forced to run, especially
22 when you think of the older once-through cooling power
23 plants, at -- at a very inefficient state just to be
24 available for the short period of time that they're

1 required. And a lot of that can change through rate
2 design, incenting proper behavior.

3 We're also seeing a problem that the NEM
4 (phonetic) structure that we have today creates a terrible
5 incentive for customers to use energy unwisely. What we're
6 seeing is the situation where if somebody was a net-zero
7 customer essentially doesn't care about what demand they
8 impose on the system. Now, they may be net-zero in energy,
9 but we're seeing increases in demand that that customer
10 would otherwise see because they have a total disregard for
11 when the capacity is being used, again, increasing the
12 capacity, the peak on our system.

13 And rate design I think is the best opportunity
14 to influence better behavior, where customers can actually
15 be concerned about the peak exposure they're putting on our
16 system. If we lessened the demand for -- for new gas
17 turbines then we would be in a much better state to utilize
18 a lot of the renewable resources that are coming in.

19 Some of the things that we are also doing -- and
20 I can't talk about some of them because there are
21 applications before the Commission -- is looking at some
22 innovative ways to incent charging behavior for electric
23 vehicles. But when we have a situation of somebody buying
24 an electric vehicle and not caring when they charge,

1 they're hitting us with basically the equivalent or more of
2 a new house if they're charging at the end of the day. And
3 we're very proud of the success we've had in some of the --
4 the pilot programs we've put out there to get new vehicles
5 to charge on a time-of-day basis. But we've only been
6 successful because of some of these problems, the net
7 metering and so on, where the customers basically, they
8 don't see that incentive because they're blocked from it
9 because they're under the legacy rate design that we have
10 right now.

11 So I'd say that's the biggest obstacle we get to
12 having real energy efficiency in the state, at least in San
13 Diego.

14 MR. NICHOLS: Well, I like to look at that just
15 with a little bit more from the glass half full
16 perspective. I don't disagree with some of the -- the
17 issues that Jim has raised. But I guess I'm hopeful from
18 the perspective that we do have a rate reform YRI
19 (phonetic) and we are looking at this as -- as utilities
20 and regulators on how -- how to address the issues with
21 respect to the top tier problems that are -- that clearly,
22 you have rough numbers, Edison's all-in cost of -- of
23 energy to serve our customers on average is about eight-
24 and-a-half cents a kilowatt hour. So you have a customer

1 that's in tiers three and four and they're backing off of
2 20s to high 30 cents per kilowatt hour, obviously they're -
3 - they're only saving that eight-and-a-half cents. The
4 rest of that is a cost shift up to other customers. And we
5 all know that, and it's some of
6 the -- one of the things that we're trying -- that we're
7 trying to address.

8 One of the concerns that gets raised in -- in
9 flattening those tiers out is, well, what will that do in
10 terms of impact on the viability of distributed solar, and
11 what will it do to energy efficiency? I think when you
12 look at flattening that out you're also having a milder
13 increase in tier two across there. That is a larger number
14 of customers, so hence it can be a milder -- milder
15 increase. There's some incremental and I think affordable
16 rate effect that comes out of that and increases the -- the
17 ability for price signals, for broader range energy
18 efficiency across a group of customers that may not see
19 that -- that opportunity today.

20 And I think that as we normalize the rates and we
21 get the right balance between some levels of fixed charges
22 to deal with the problems that -- that occurs with -- with
23 the shoot in solar at the customer level and still
24 maintaining a variable price that's high enough that makes

1 that -- that possible. I think -- I think we can sort out
2 dealing with these issues. There's -- and we'll never get
3 it perfect. But I think that we can make -- make energy
4 efficiency work better, and I think that we can get better
5 response out of customers.

6 But the one area that I think is still a
7 challenge for us is when we're trying to deal -- to go to
8 your
9 point -- if you don't want to -- if you want to have energy
10 efficiency, help curb a peak. And our peaks can change as
11 we get more and more solar influence to occur. We're
12 already seeing over-generation today before we have growth
13 even further and additional solar on the system. We're
14 going to have periods of time, increased periods of time
15 when we're being to be long on generation during some of
16 those peak hours. So we would like to be able and hope to
17 be able to -- to prove some of this out in the preferred
18 resources pilot as if how can -- and to go to my earlier
19 comments, how can we contract with customers to not have
20 that kind of -- kind of hitting the -- hitting the peak of
21 the -- of the AC right at the -- right at the wrong time of
22 the day, or how to be able to deal with incenting something
23 that we didn't think we would be talking about, and that is
24 how can we incent electric vehicle charges potentially with

1 a signal to come on and charge during a certain few hours
2 on peak when we're long on solar?

3 And I'm saying three or four years ago I don't
4 think we'd be having that conversation here. The idea --
5 the idea was all EVs will be plugged at home, charged at
6 home. We'll have incentives to make sure that they -- they
7 charge in the dead of the night. And wouldn't that be a
8 great way to level out our -- our load factor on our system
9 that Jim was speaking to? Well, we're still going to need
10 some of that. But we're still going to need some directed
11 load at certain periods of time to -- to deal with -- with
12 our increased penetration of solar in the system. I think
13 we can get all of that done, but it's going to require a
14 lot of dialogue back and forth between -- between the
15 utilities and -- and the Commission as we -- as we work
16 forward on that.

17 Like I say, I look at it from a glass half full
18 perspective, that I think we have the proceedings before
19 the Commission that are there to address that, we've got a
20 lot of education with stakeholders on some of these issues,
21 and I'm hopeful that we'll come out on something that at
22 least evens that out a bit in a way that -- that works
23 better than the conditions that -- that Jim, you know,
24 rightfully recognizes the problem today.

1 COMMISSIONER SCOTT: No, that's good. I get -- I
2 think the question also for both of you is, you know, if
3 you remember at the en banc I said basically, you know,
4 what we're looking for is megawatts and not mega warts, you
5 know, reaction. And I want to know if a year from now if
6 we all get together what -- where -- what's your -- what do
7 you hope to be able to be presenting at that time?

8 MR. NICHOLS: Well, one, I think we'll be
9 presenting the results of what we've seen in some of the
10 solicitations, both the LCR solicitation, and we anticipate
11 we're going to have subsequent targeted solicitations in --
12 in our preferred resources pilot area to -- to push forward
13 on it. So I think we'll have better market information
14 with respect to -- to how -- how these contractual
15 relations go and how we can work on -- on getting some peak
16 control, I'll call it, not necessarily reduction because
17 sometimes it's the other way.

18 And -- and laying out, I didn't respond earlier
19 to a question because it's another thing, I think, that
20 we'll be talking with you about. And you mentioned the --
21 I mentioned the en banc, and you've mentioned as well, some
22 of the concerns about -- about the energy efficiency
23 programs in the past. And I don't think it's been a
24 program issue so much as we have many decades now going

1 through and reviewing, and the reviewers reviewing the
2 reviewers, of -- of the performance of these programs to
3 the point where I think it's -- you know, and we talked
4 about it at the en banc, and it's excessive. We're getting
5 -- if you want to get deeper penetration of energy
6 efficiency I think we need to learn through that and let's
7 -- let's get different measures out there, let's get
8 different contractual and performance requirements tested
9 out there, and let's not
10 be -- have perfect be the enemy of the good.

11 So I think one of the things that we -- I would
12 expect that we'll be addressing is how can we have
13 verification programs that are not so extraordinarily
14 detailed that we're putting the utility at risk and,
15 frankly, potentially putting a customer at risk. If we're
16 going to be putting more performance requirements on either
17 a customer or a third-party provider now that's going to
18 come out and provide energy storage to function a certain
19 way, demand response to function a certain way, and energy
20 efficiency to hopefully perform at certain times of day in
21 a more reliable or predictable fashion, if we're going into
22 those kinds of programs, who do you lay the risk off onto?

23 If it's two years or three years later that
24 there's still discussions going on as to what actually

1 happened and what amount of that was appropriately incurred
2 and what -- what wasn't, I think we have to get much
3 simpler in those evaluations, and to get some of these
4 types of programs ramped out, get that deeper performance
5 of energy efficiency in the system, and get enough
6 experience. And then we can turn around and if there's
7 problems with it, then you go back after the fact, not
8 prospectively dinging somebody over it, but prospectively
9 saying we learned from it, here's what -- here's how it
10 performed, here's how it didn't perform, and now here's
11 what tweaks we should make going forward. It's a living
12 pilot. Let's use it as a living pilot to get that kind of
13 experience.

14 So I think, you know, those are some of the types
15 of things that I expect that we're going to be coming
16 forward with you next year.

17 Jim?

18 MR. AVERY: First off, I don't want to lose sight
19 of the wonderful things we have done here in the state. I
20 mean, I've had the good fortune to work in utilities in a
21 number of the states across this -- this country. And I
22 used to look at California from the outside and sit here
23 and marvel at the things that they have been able to do,
24 largely because of some of the regulatory policy that's

1 been adopted in the state. The concept of decoupling still
2 does not exist in the rest of this country, which baffles
3 my mind. And you still hear CEOs of other utilities in
4 other states saying that we're going to do everything we
5 can to grow energy consumption, and we've gotten away from
6 that.

7 So I don't want to lose sight of all the
8 wonderful things we've done here, and we shouldn't do that.

9 I think to the extent that there's more that we can do,
10 it's absolutely. But as I mentioned, there are some things
11 we need to tackle, and there's no doubt about that.

12 There's more that we need to continue to do in the way of
13 education. It still baffles my mind when you go into Home
14 Depot and you see people buying incandescent light bulbs.
15 You know, I saw a person sitting next to me who was buying
16 a bunch of these spotlights which, by the way, looked like
17 they were 150 watt light bulbs sitting up here right now.

18 And I sit here and I say, look, just a very simple
19 mathematic show this light bulb pays in a short period of
20 time. And more needs to be done in education of our
21 consumers so that they can be part of the equation.

22 And I'd like to sit here and tell you a year from
23 now and in two years from now we can eliminate a lot of
24 these problems. We have some ways to go there, but I think

1 we're heading in the right direction. I think we still
2 have a lot more to do though.

3 COMMISSIONER FLORIO: Just to stick with the
4 energy efficiency topic for a moment, you know, one of the
5 challenges has always been, you know, the but-for issue,
6 what would have happened if not for energy efficiency or a
7 particular measure or action? And, you know, it seems like
8 we're moving into a different era with smart-meter data
9 available and data analytics that allow us to, you know,
10 figure out things that were just speculation in the past.
11 Does either company have any activity underway to try to
12 test out the use of actual meter data to -- to measure the
13 effects of energy efficiency and, if so, how is that going?

14 MR. AVERY: We have a number of programs going on
15 within the company, but I'll focus on one just for the
16 moment. We're working with a new developer who is putting
17 in, I think it was 117 unit apartment complex, and bringing
18 together the appliance manufacturers with the developer to
19 look at getting energy efficiency appliances in the door to
20 begin with.

21 The second thing was putting devices in every
22 single apartment so that the customer can see in real time
23 what energy is being consumed. And as you said, and
24 rightfully so, the -- the access to the information leads

1 to an opportunity for some change, and -- and that's
2 critically important in here.

3 We also, with this same developer, looked at the
4 integration of solar for each of the apartment units, as
5 well. And with the notion of electric vehicle charging
6 that can actually be somewhat controllable.

7 So all of those things are a prospect -- or a
8 project that we've undertaken and have implemented, and
9 we're seeing some real-world situations as customers are
10 moving in and seeing how they're -- they're utilizing
11 energy. And we're just starting now to go back and
12 actually test how those customers are using energy
13 differently than the apartment complex right next door that
14 doesn't have the technology.

15 We're also looking at other devices that can go
16 in the home so that every consumer can see this in real
17 time. And on our websites we do have, I think most -- I
18 think all of the utilities have the ability to see in real
19 time or in a short time afterwards what their energy
20 consumption has done.

21 And, Commissioner, you may remember I presented
22 one of the slides at -- I think it was a CP (phonetic)
23 conference or something else, where I showed myself and my
24 neighbor side by side, very similar homes, and just with

1 the application of simple technologies, reducing peak
2 demand by 80 percent from my home to my neighbor's home
3 just in the utilization of some technologies, whereas the
4 energy consumption was roughly the same.

5 So we are doing this. I think the application
6 and the ability to gain access to the information has been
7 the first step. And -- but, as I said earlier, the
8 communication and getting more customers to accept that is
9 going to be and will be critically important.

10 I had the opportunity to sit on a panel with a
11 number of CEOs from across the country a short while ago.
12 And I will mention the CEO who was sitting next to me after
13 I gave a wonderful speech with the things we are doing here
14 in California, and he talked about the notion of how he had
15 built this wonderful house and he had it wired for this and
16 did this and did all these wonderful things so he can
17 control his demand. And after I spoke about this he got up
18 and talked about the notion of he's ready to rip it all out
19 because it's too complicated, it's too hard, and it's
20 stupid.

21 And I got asked to come back up and respond to
22 that. And my response was, "I'm not so much worried about
23 him. He's going to be dead shortly. It's his children I'm
24 worried about." And I believe that is so critically true.

1 I know my children are so much smarter than I am in the
2 adoption of technology, and we're seeing that just in our
3 own customer base as well.

4 MR. NICHOLS: We have a similar program in our
5 Irvine Smart Grid Initiative and we're testing the same
6 types of things. I think you're -- I think you're familiar
7 with that -- with that program. So through that all of us
8 are going to have better information that -- that we can
9 have in a real-world circumstance.

10 Above and beyond energy efficiency, though, one
11 of the things that we're looking at, and I'm probably a
12 little bit ahead of my headlights here right now because
13 we're not there yet, but one of the things that we're doing
14 in the preferred resources pilot or are pondering doing is
15 we talked about just coming up with 300 megawatts of -- of
16 alternative preferred resources so we didn't -- could avoid
17 gas-fired resources, meaning at least that portion of it.
18 But as we've looked it one of the things that we want to do
19 to test the integration of energy efficiency, demand
20 response, storage, and distributed gen, we're looking at
21 the prospect right now, spending a fair amount of
22 engineering time on it and seeing if we can pick a subset
23 of the area, pick some of the feeder circuits where we
24 anticipate there most likely could be growth that we can,

1 for lack of a better term, kind of load up all those mixes
2 of resources, not to the point of threatening reliability,
3 but getting to the point where we get better real-time
4 information, not just of how the energy efficiency works
5 but how demand response works in conjunction with that and
6 -- and storage and -- and distributed solar at the same
7 time in a much more concentrated way than you would across
8 an area that is presently 1,200 megawatts worth.

9 So we're not there yet, and more to come on -- on
10 that. That isn't the only part of the preferred resources
11 pilot. But it's -- we're contemplating a pilot within a
12 pilot that would expand on exactly some of the types of
13 things that -- that Jim spoke to and things that we're
14 doing, as well, in our other -- but doing it in a broader
15 real-world integrated circumstance. So more to come on
16 that. But that's -- it's a piece that we're -- we're
17 trying to define better right now.

18 MS. NICHOLS: This is a slight shift but somewhat
19 along the same vein, turning to other kinds of preferred
20 resources, I would be pretty distressed if I thought that
21 relying on turnover and death alone was what was going to
22 get us to the kinds of technologies that we're looking to
23 advance here. And in my world of AB 32 and the scoping
24 plan, in our recent update we put a lot of emphasis on some

1 of these resources, including pushing for more distributed
2 generation and use of fuel cells and so forth. And we're
3 hearing that the timeframes to get these projects online
4 are so long that too many of them are just falling by the
5 wayside, that financing doesn't -- doesn't appear or is
6 withdrawn because the projects are taking too long.

7 And actually the -- the finger of blame generally
8 points more in the direction of the regulatory agencies
9 than it does towards the utilities, but I'm inviting you to
10 give us your views about what we should be thinking about
11 here
12 as -- as part of the effort to make sure that some of these
13 deadlines that we're talking about are -- are real and that
14 we're not deluding ourselves about the role that the
15 preferred resources will play because of the fact that the
16 scales are tipped against them.

17 MR. AVERY: I think what's perhaps the most
18 important in the notion of what can regulators do is just -
19 - about the worst thing we can have happen is the
20 suggestion that we need more programs. I think the -- the
21 -- this solicitation that both utilities will be doing,
22 looking at all sources, I'm cautiously optimistic that we
23 will have things presented to us that we haven't dreamt of
24 yet. And that's where the innovation is going to provide a

1 significant opportunity, whereas if we have the
2 continuation of let's do another program, let's do another
3 program, it blocks out the ability to take some of these
4 other initiatives into place. And so I think that's
5 critically important.

6 Another thing I would encourage is, to the extent
7 that you can at the state level, is we need to get our
8 counties onboard. I mean, here in San Diego we have a
9 significant amount, I think it's 275 megawatts of -- of
10 distributed rooftop solar in our region, yet trying to get
11 some little bit larger projects in the regions of our
12 county that could actually provide some benefits in the
13 area, we have a county that has not been very supportive of
14 the development of the distributed resources. And -- and
15 fortunately we sit relatively close to Imperial County
16 where they have been a leader in promoting the development
17 of these resources.

18 We -- I'm proud to say, by the way, from the
19 standpoint of our renewable goals, we established some
20 goals in our company that far exceeded and far earlier than
21 the state did, we will be by the end of this year at 33
22 percent renewable. That's six years ahead of the state's
23 goal. And we were able to do that because of some of the
24 things that the state has done to help facilitate in

1 getting the transmission infrastructure in place, and also
2 the Imperial County area that has been a leader at
3 promoting the development of wind resources, as well as
4 supporting solar resources onto our system.

5 And other areas you mentioned is the notion of
6 finding opportunities to streamline and to facilitate new
7 developments in -- in all of our areas is clearly helpful
8 to all of us. And I think certainty, if you think of a
9 developer, the one thing that can destroy the development
10 of a project faster than anything else is regulatory
11 uncertainty. And the not knowing, you think about the time
12 that these developers who have capital at risk, not knowing
13 what's going to happen, it keeps new developers from
14 wanting to enter into these markets.

15 MR. NICHOLS: Just to amplify on a couple of
16 points there, and that is when we -- we look at the same
17 sort of problems in terms of distributed solar in the South
18 Orange County area, it's -- it's been a problem. I can't
19 speak to what has or hasn't come in in our -- in our LCR
20 request for offers in that area. But it's -- just suffice
21 it to say it's a whole bunch less than we would have liked.
22 So we are looking at, you know, at some potential of what
23 we might have to do going forward. And we -- as I
24 indicated, we've got -- we've got time to -- to do some of

1 those things.

2 But one of the problems is concern about local,
3 you know, cities and county and home owner associations and
4 things that are short on solar. We'd like to see that we
5 can take a look at -- again, I spoke to the fact that we
6 would be looking particularly with a focus on commercial
7 buildings. With all those commercial buildings, almost all
8 of them, especially in South Orange County, have parking
9 lots. Great opportunities for a solar shade kind of
10 approach, but there is going to -- there is going to be
11 esthetic permitting issues that go around that. So that's
12 something I think we -- you know, it's a tough one for the
13 state to deal with.

14 Education could be a part of that. So if there's
15 an opportunity along the line to get some education as to
16 how designs can work and what they might look like, and so
17 it isn't just coming from Edison, there might be -- I'd
18 like -- you know, there are probably those that say do
19 people feel more comfortable with the state than Edison
20 telling them what's right, I'm not certain of that, but it
21 depends. Those are some of the types of things that we
22 could deal with.

23 I'd go back to kind of the regulatory side in
24 terms, again, Jim mentioned that we don't need more

1 programs and we don't need more, I assume you meant
2 prescriptive --

3 MR. AVERY: Prescriptive.

4 MR. NICHOLS: -- programs, and I agree. I
5 totally agree with that. The whole concept here is let's
6 let all these different types of resources compete with one
7 another. They have different performances. They have
8 different timelines for coming online. They have different
9 costs; let's work through on that.

10 One of those, going back to the energy efficiency
11 issue again, is something that still has to get sorted out
12 is I've heard some cooling -- some water cooler discussion
13 in certain places in San Francisco about the notion that --
14 that we shouldn't be looking at adding more energy
15 efficiency in accounting more of use of our existing
16 programs, that we need to do all new and different, and I
17 don't -- I don't think that's appropriate. I think to the
18 extent that we can use some of those existing programs and
19 find a way to get better penetration of those, and maybe
20 tweak them a bit per some performance requirements, as I --
21 per my earlier conversation, I think we ought to be open to
22 that. And so there's -- there's some things that -- that
23 clearly the Commission can have some influence over that
24 isn't a local siting concern.

1 MR. BISHOP: Just wondering if there's been any
2 effort to reach out to water distributors, water suppliers
3 who tend to do their pumping and energy use at night when
4 it's cheaper, but not when you have your peak of solar?

5 MR. AVERY: I'll touch on San Diego, and you may
6 want to add as well. Actually, the water agencies in San
7 Diego has been spectacular partners with us. And I can
8 give you a couple of hard -- real hard examples of things
9 that we're willing to do. One is the installation where
10 we're kind of putting down-drop hydro (phonetic) into the
11 systems, introduce hydro into those three areas has been
12 very helpful. And the San Diego County Water Authority has
13 been very helpful in that regard.

14 We actually have a micro-pump storage facility
15 that came on just a couple of years ago that we worked very
16 closely with the County Water Authority to do, and it's a
17 40 megawatt 2-unit, 20 megawatts each unit, right in the
18 heart of San Diego. And the Water Authority is working
19 with us on other similar types of opportunities to the
20 extent we can.

21 Also, I've been in discussions with them as their
22 looking at their desalinization facility, what we can do so
23 that the salinization does not create a peak or problems in
24 the service on our system so they can do more in the time

1 periods when there's an abundance of energy in the off-peak
2 periods as well. And they've been very collaborative in
3 trying to work at some of the solutions in that area. So,
4 yes, these are critically important.

5 I think one of the other things that deals with
6 some of the smaller pumps, it's going to be critically
7 important that we reform some of our tariffs. Because,
8 again, some of our tariffs provide some perverse incentives
9 to do the wrong thing. And some of the legacy problems
10 where tariffs were designed based upon the way the system
11 operated 20 and 30 years ago don't even have the right time
12 of day periods in them anymore. So we need to correct
13 those and fix those. And -- and the water agencies have
14 been cooperative in trying to work with us to allow us to
15 move forward in those areas.

16 MR. NICHOLS: SCE has had some interactions
17 with -- with the many water districts and utilities in our
18 service territory. I think there's more to be done on
19 that. One of the kind of constant refrains we get is that
20 the systems are aged. They built -- they built out to a
21 certain level and they generally need to pump pretty
22 consistently around the clock, simply to maintain pressure
23 zones for fire requirements that are -- that are required
24 by fire code. That's not universally the case but it's one

1 that hear -- hear a lot of.

2 So one of the things that -- where I think there
3 could -- something could bear some fruit would be finding
4 an opportunity for, not huge, but some reasonable level of
5 storage that provides a few hours of flex so you've got
6 that -- you've got to have the circumstances, you have to
7 the topography for it or else you're -- you potentially
8 have a situation where you're -- you're pumping up
9 something
10 that -- that overall is less energy efficient, but I think
11 there are opportunities to get that done.

12 The difficulty you find is just there's a lot of
13 districts. Who bears the cost? How do we price that out
14 when you're looking at potential of changes in rate design,
15 what are those incentives to them? How might that change?

16 If we make an investment now is that going to change two
17 years from now. So there -- there are -- there are a
18 number of hurdles towards that. But I don't believe we've
19 actually tested that broadly enough, and I think there's
20 some opportunities.

21 The issue, like so many things you find, is
22 there's no silver bullet for that, Jonathan. And it's --
23 they all do tend to be very one-off types of opportunities.
24 That said, I think it's something we should do. There was

1 the -- there was the water energy nexus proceeding just
2 recently up in San Francisco, and I think there were some
3 good discussions on that.

4 One of the things that I think, and this harkens
5 back to a prior role I used to have, is -- is what can we
6 do collaboratively between the customers in Metropolitan
7 Water District to find universal across the board reduction
8 in water use -- clearly, this is a great year to be paying
9 attention to that -- and in that process reduce overall
10 pumping energy requirements to deliver water into the Los
11 Angeles Basin.

12 There are a lot of problems with that because
13 right now, today, the way it's structured, if you're a
14 customer with MWD and one customer says I'll cut back, I'll
15 reduce some so, you know, there's less water that has to
16 get pumped -- pumped over to get -- Tehachapi or through
17 the Colorado River Aqueduct, that's all well and good, but
18 you have potentially another customer who says I'm really
19 glad you made that water available to me. I'll take it, so
20 there's no net -- net loss in pumping requirements.

21 So it's, again, something that requires a pretty
22 universal type of program that -- that would take a lot of
23 attention. Just because it's difficult, though, doesn't
24 mean we shouldn't try to do something.

1 MR. WALLERSTEIN: Ron, I'm wondering if you could
2 comment on rooftop solar for high cubed warehouses, which
3 we're still great expansion in that sector. Many of those
4 buildings or most of those buildings are a million square
5 feet and above. And so what sort of additional incentives
6 or changes in the current framework is needed to ensure
7 that we're fully utilizing that space for solar generation?

8 MR. NICHOLS: Well, one, let's just assume for a
9 moment that we're talking about roofs that can handle the
10 extra load of weight loads, so particularly, if you're
11 looking at new builds, right, and building so that you
12 design in the prospect of being able to carry the
13 additional weight of -- of solar. And I would like to
14 think that everybody who is building that in Southern
15 California has that in mind, but that probably isn't the
16 case. So setting that really important issue aside, for --
17 for a net-metered solar, that doesn't -- that doesn't
18 pencil out. You have way more roof than you have load;
19 right? And the last thing we want to do is say we'll just
20 go ahead and increase your load and try to match that up.

21 Going back -- going back to Jim's earlier point,
22 you know, things such as feed-in tariffs, obviously,
23 disconnect between the load in a building and solar on the
24 roof. So those are types of opportunities, types of things

1 that we could -- could do. If there were more rooftop
2 types like that in South Orange County, those could be
3 types of distributed solar that -- that we could contract
4 for. And indeed, we are looking at those types -- types of
5 opportunities as well.

6 So there's -- there's different ways to -- to get
7 there. I think -- I think that first and foremost is --
8 and I believe the Energy Commission, I think, has pretty
9 good information on it. Correct me if I'm wrong, Bob, that
10 you've got information with respect to roof loadings and --
11 and spans and such that what is necessary on a kind of
12 generic basis to -- to carry the incremental weight of --
13 of solar invertors, don't you?

14 CHAIR WEISENMILLER: Oh, sure. We have it
15 generically, though. I was going to say other problem, a
16 lot of these people have triple-net leasees.

17 MR. NICHOLS: Right.

18 CHAIR WEISENMILLER: And a triple-net lease
19 arrangement between the owner and the renter --

20 MR. NICHOLS: Right.

21 CHAIR WEISENMILLER: -- there's no incentive.
22 Yeah. There's no incentive. There's no incentive for
23 anybody to do anything --

24 MR. NICHOLS: Right.

1 CHAIR WEISENMILLER: -- really.

2 MR. NICHOLS: Right.

3 CHAIR WEISENMILLER: So, I mean, and that -- that
4 occurs with at least some of the major-major owners who
5 have warehouses I know down here.

6 MR. NICHOLS: Now, Edison International has
7 another subsidiary called So Far (phonetic). And they are
8 focusing on community solar types of opportunities, and
9 particularly dealing with like big-box stores and things
10 like -- things like that where you've got models and things
11 with big roofs and, again, going back to the parking lot
12 situation. But this could equally apply to -- to warehouse
13 roof areas. And in that circumstance you wouldn't need to
14 worry, theoretically, about the net-net. You could have an
15 REIP that owns it, right --

16 CHAIR WEISENMILLER: Right.

17 MR. NICHOLS: -- and -- and could contract out
18 and provide that.

19 So those are the -- those are types of
20 opportunities that I -- that I think -- I know that, that
21 that subsidiary is looking at those options in various
22 locations around the country. And I expect that's a
23 business model that makes sense going forward.

24 CHAIR WEISENMILLER: That would be good. I was

1 also going to mention, Ron, that certainly OPR (inaudible)
2 has a lot of activities on the local permitting.

3 MR. NICHOLS: Uh-huh.

4 CHAIR WEISENMILLER: So if there's any way they
5 can help I'm sure they would be glad to try.

6 MR. NICHOLS: I appreciate that.

7 COMMISSIONER SCOTT: Okay. Well, thank you. I'd
8 like to say thank you to all of our panelists for their
9 thoughtful presentations, and also here for the great,
10 great set of questions for them.

11 We are going to break for lunch. Before we do
12 that I just wanted to remind folks, if you'd like to make a
13 public comment the blue cards are out front on the table
14 where you picked up the handouts. You can either hand it
15 to our public adviser or to Heather who is standing there
16 behind the dais to make sure that we know that you are
17 wanting to make a comment. And we will regroup at 1:15.

18 (Off the record at 11:56 a.m.)

19 (On the record at 1:23 p.m.)

20 COMMISSIONER SCOTT: So thank you very much.
21 Welcome back, everybody. We are getting ready to go on to
22 our second panel. I'd just like to do a reminder for
23 folks. If you are wanting to make a public comment, we
24 have the blue cards there on the table up front. So please

1 feel free to fill one out and give it to our public adviser
2 and shell make sure we get it. That's how we know that you
3 would like to make comments for us.

4 So I would like to welcome our Panel Two. We
5 will do a continued update on activities identified in the
6 draft plan. And we are joined by Phil Pettingill, Jim
7 Avery, Dana Cabbell, and Mike Jaske. So we'll start with
8 Phil.

9 Welcome, Phil.

10 MR. AVERY: Cabbell.

11 COMMISSIONER SCOTT: Cabbell. Sorry.

12 MR. PETTINGILL: Well, good afternoon, everybody.

13 What we were going to do with our panel here is I was
14 going to start off from the ISO transmission planning, and
15 then we'll hand it off to Jim and Dana to talk about what
16 they're doing within our respective utilities to implement
17 their transmission fixes. What I was going to do then in
18 my presentation is really cover three things for you.
19 First is, basically, the ISO's transmission plan and
20 process and how we go about doing that. Then I wanted to
21 just sort of refresh our memory on what was the problem,
22 the challenge that we had with the shutdown of SONGS. And
23 then finally, what are the transmission fixes that at least
24 are in place and are planned to go in place as we look

1 forward over the next few years? So I'll take you through
2 that here in the next few minutes, and then hand it off to
3 Jim.

4 So with that, first of all, the ISO does an
5 annual transmission plan. In each of those plans we're
6 looking ten years forward. It is a rolling process. And
7 so frequently what we're doing is actually identifying what
8 are the input assumptions and requirements in the next plan
9 before we've actually finalized and approved the -- the
10 plan that's in process. And that's what I've tried to
11 highlight here with this -- this graphic for you. The key
12 things for us are to, first of all, get the input
13 assumptions. And this was certainly a challenge for us
14 with the unexpected shutdown of SONGS because we needed to
15 understand, even though we were going through a process at
16 the PUC, and you heard from Cynthia this morning, to
17 identify how to plan the system with the shutdown of the
18 resources in Southern California and for OTC, and then the
19 unexpected shutdown of SONGS, what assumption should we
20 make, and then how should we analyze and determine what the
21 needs and requirements were.

22 So just as an example, we were having to already
23 do those things in anticipation of -- of OTC, and then add
24 SONGS to that. We certainly have a stakeholder process to

1 talk about what are those assumptions, make sure we get
2 inputs, in particular from the utilities and others as we
3 go about the analysis. And then finally the thing I'd
4 highlight for you here on the right-hand side is really the
5 results. And what comes out of the annual plan is three
6 really key results.

7 The first one, the reliability analysis. And
8 you've heard some of the panelists this morning talk about
9 LCR. I just wanted to define that for all of you and make
10 sure we're on the same page. The LCR is the locational
11 capacity requirements. And what we're doing is identifying
12 that in certain portions of the grid we are relying on root
13 generation or other resources to be within that load
14 pocket. And as a result we're trying to identify that with
15 the Locational Capacity Requirement Report that we do every
16 year.

17 We're also looking at what is the renewable
18 resources and what's their delivery? Ideally, we'd like
19 all the renewable energy to be delivered to load, but there
20 certainly are challenges sometimes with the transmission
21 system. We need to identify what those are and make sure
22 that we're building out the transmission grid to make sure
23 that that renewable energy can get to consumers.

24 And then finally, economic analysis where we're

1 actually looking at the system. And to the extent that
2 it's not a reliability problem but there's economic
3 constraints, we tend to refer to that as congestion. But
4 where there are economic constraints on the system that we
5 could more efficiently move energy around, identifying
6 transmission that can help improve that as well.

7 And then ultimately that plan is taken to the ISO
8 Governing Board in March of each year. And what I wanted
9 to share with you is, you know, we had actually done a
10 study in 2012 Transmission Plan that looked at the possible
11 shutdown of SONGS. And as a result the ISO Governing Board
12 had approved some transmission fixes that were anticipating
13 what might happen. And at that point, of course, it wasn't
14 confirmed, but we at least were trying to anticipate what
15 might happen and what are some of the fixes that we could
16 do at the time that would be the least regrets in the -- in
17 the event that SONGS came back.

18 So -- so moving on I've sort of touched on a lot
19 of these things. But I wanted to do is drill down a little
20 bit more in terms of what are those planning input
21 assumptions. And first and foremost is understanding what
22 is the already approved transmission or generation fleet
23 that's going to be out there.

24 Again, I mentioned earlier, it was kind of a

1 challenge when we were doing this in last year's plan
2 because it wasn't certain whether SONGS was going to come
3 back or not and what should go into the study assumptions.

4 But I think the good news was we had seen Track 4 of the
5 LTP start. We already knew that Edison had asked for 500
6 megawatts of additional capacity, and that San Diego had
7 asked for 500 to 550 megawatts of additional capacity. So
8 those kinds of numbers were built into our study
9 assumptions. And ultimately you saw again in the numbers
10 this morning where the Commission authorized those levels,
11 or even slightly higher. And as a result at least our
12 transmission plan is very consistent with what has come out
13 of the LTPP decisions.

14 The last thing I'd do is just sort of highlight
15 the -- the last bullet here in identifying that one of the
16 real key functions that we perform is having to model the
17 transmission that is out there, putting that into our
18 computer model so we know what the facilities are, where
19 they're located and what their capabilities are, and then
20 finally having to actual model what are the resources? And
21 in current years one of the real challenges we've had is
22 trying to figure out what is the expected outcome of the
23 renewable fleet. And so we've actually started to work
24 with national labs, the NREL lab, for example, that's

1 helped us model and shape what are the expected outcomes
2 that will come from solar resources. All of that goes into
3 what the ISO is doing on an annual basis to develop the
4 transmission plan. We're going to touch on it in just a
5 couple of minutes.

6 So if move to the second topic, let's go back to
7 what was happening in Southern California with the
8 unexpected closure of SONGS, and recognizing that there
9 were actually three key challenges that we needed to
10 address. The first and most immediate one was what do we
11 do with the loss of all the megawatts? And you see in the
12 upper right-hand corner of this slide what we realized is
13 we lost over 2,200 megawatts of capacity from San Onofre.
14 The good news was there were generation projects that were
15 already in
16 the -- in the mix and were expected to come on to help --
17 help meet that loss of megawatts.

18 The lower right-hand corner, though, is the other
19 piece that you see. And this is the -- the reactive power
20 that you heard a little bit about earlier this morning.
21 And I want to take a minute and just talk about that
22 because what these VARs or reactive power do for us is help
23 us move the real megawatts through the system. And to the
24 extent we're able to replace the megawatts in the L.A.

1 Basin, the challenge then was to be able to move those
2 megawatts south past SONGS that was no longer providing
3 that reactive supply and be able to provide reliable
4 services in San Diego, or vice versa. But the point was
5 SONGS provided a significant support at its location. And
6 losing the 1,100 megavars of reactive power at the SONGS
7 location made it certainly very difficult to imagine how we
8 remove the megawatts between these two load pockets.

9 And so that's really what this is. Both of these
10 are load pockets that we do our studies, our annual
11 studies, the LCR studies I was referring to. And once we
12 recognized that we had this circumstance we started to
13 realize that there's a strong interplay between the two of
14 them and we really need to start studying them together to
15 make sure that we've got an optimal mix between the
16 pockets.

17 And the third piece you see on this slide is the
18 reality that what we're always trying to plan for is
19 contingencies. And the key contingency that was driving
20 these needs now with the loss of SONGS was actually the
21 loss of the two 500 kV lines to come east to west into San
22 Diego. But more importantly, now what we needed to do is
23 say what could we do to try to reconfigure the system,
24 because in that circumstance we're planning for what we

1 refer to as N minus 1 minus 1, meaning that we lose one
2 major component on the grid, we've got an opportunity to
3 reconfigure, but less than 30 minutes. And then we have to
4 be ready to handle the next loss on the system.

5 So all three of these elements then became the --
6 the criteria that we start to look at to try to determine
7 how do we repair the system? And the reality of it is the
8 transmission grid was built up around the assumption that
9 SONGS was going to be there. Now with the loss of SONGS we
10 need to look at how to reconfigure the grid and optimize
11 what's -- what's left.

12 So with that we took some initial steps. And
13 those initial steps were the -- were the quick ones, the
14 fast ones. Jim already talked about the Sunrise Power
15 Link. Certainly, that was helpful. But then we also looked
16 to Huntington Beach and the AES facilities there and
17 recognized that if we could bring Huntington Beach 3 and 4
18 back initially as a generator, that helped us get to where
19 we finally had those new power plants that were expected to
20 come online. But ultimately in the subsequent year we had
21 to convert Huntington Beach and we worked with them to
22 synchronous condensers, and that gave us the reactive
23 support or at least a portion of it.

24 Now ultimately you can see throughout the rest of

1 this what ended up happening was other quick fixes that
2 could all be done in preparation for summer operations of
3 2013. And those were things like working with Southern Cal
4 Edison to reconfigure the transmission system around --
5 between the two substations of Barre and Ellis, installing
6 capacitors at some of their stations in South Orange
7 County, and then ultimately trying to make sure that all
8 the generation we had was maintained and ready to operate
9 through another summer's operations, because margins were
10 so tight. So all that happened really through 2012 and
11 '13.

12 And what I wanted to share with you now is what's
13 coming. Well, in our 2013-14 Transmission Plan we
14 identified a number of additional upgrades that are needed
15 on the transmission system. And so what you can see is
16 most of those upgrades are still trying to get most of that
17 reactive supply back, and even more than the 1,100
18 megawatts we lost at SONGS. The purpose here is, again,
19 trying to optimize the grid so we can move the energy
20 around. So in multiple substations we're looking at adding
21 the synchronous condenser.

22 And I wanted to just take a second and make sure
23 that we understand what the synchronous condenser does for
24 the system, and I'm sure Jim can talk some more about this,

1 but it allows us to have a very highly adjustable quantity
2 of VARs. Depending on system conditions we can get more or
3 less of that reactive supply. So the synchronous
4 condensers really help us as a system operator to try to
5 optimize flows on the -- on the grid. And the key, though,
6 is that reactive power doesn't really travel across the
7 electric system very well. So we need to have them in
8 exactly the right places that the physics are requiring.

9 You see then, so 2015 is the new synchronous
10 condenser in Talega, 2016 in San Luis Rey, 2017, trying to
11 get some synchronous condensers either at the SONGS site or
12 electrically as close to the SONGS location as we can, and
13 then finally additionally reactive support coming in at
14 Miguel and Suncrest stations, and I know Jim will talk
15 about those later.

16 The key things that are happening on transmission
17 fixes, though, are really trying to now add new wires to
18 the grid. And these, again, are really the least regrets
19 type of projects. We know we need them, they help reduce
20 the -- the stress on the system, but it's going to take a
21 few more years in order to get them, so Sycamore-
22 Penasquitos. And then it was mentioned earlier the Mesa
23 Loop-In project, and I know Dana can talk about that some
24 more, but what the Mesa project did is it helped us

1 optimize flows through the L.A. Basin.

2 So then I thought what I'd do is just give you a
3 sense, now that we've talked about all this transmission
4 stuff and what it's doing, I wanted to give you a sense of
5 really where it's at and the breadth of the work that's had
6 to happen over the last couple of years and that will need
7 to happen over the next few years.

8 So if you take a look, sort of generally what the
9 system looked like, and you see this graphic a lot.
10 Obviously, it gives you a good sense of information of
11 locationally where we are at, the challenges we have with
12 the L.A. Basin and the San Diego load centers, and then
13 the -- it's a simplified presentation of the transmission
14 grid. And you see that with the loss of SONGS there were a
15 number of substations around SONGS, but we needed to
16 actually go after those and see what we could do to do some
17 of those early fixes.

18 And so you'll notice what I have here in the --
19 in the orange dots is to identify where those fixes happen.

20 And I had mentioned earlier about capacitor banks and so
21 forth going in, in South Orange County, and those were at
22 the Johanna and Santiago Stations, also some help at Viejo,
23 and then finally the Huntington Beach synchronous
24 condensers as well. So that helps us focus on where is the

1 low voltage region there in that South Orange County.

2 But then ultimately, when we start looking at the
3 rest of the fixes that I mentioned that are coming you can
4 see now we start to move a little bit further south. We're
5 still looking at SONGS, what can happen at Talega. You can
6 see then also up in the top middle of this picture the Mesa
7 Loop-In to try to help to bring in a 500 kV source into
8 portions of the -- of the L.A. Basin. Okay.

9 So a breadth of work that's happening, the only
10 other thing I'll mention down here is on the resource side
11 you heard about Pio Pico. I've tried to give you a sense
12 of where's that's at in San Diego. And then the Carlsbad
13 project, while it's not approved it's been filed, but that
14 project would basically be located where Encina is. And
15 Encina is certainly a pretty significant project that's
16 going to have to be in compliance with OTC by December of
17 2017, so very few years from now, in order to be able to
18 try to make sure we've -- we've built up the system in
19 anticipation of that first OTC compliance in that region.

20 So that's all I had. I'll stop there, and I
21 think I'll hand it to -- to Jim.

22 COMMISSIONER SCOTT: Thank you, Phil.

23 Welcome, Jim.

24 MR. AVERY: It's an operating issue. Good

1 afternoon and, once again, thank you for the opportunity to
2 come talk to you a little bit about what's going on in San
3 Diego. I'm going to try to deal with absolutely a higher
4 level and -- and just paint the picture in San Diego.

5 We sit in a situation where, again, fortunately
6 we're -- we're very lucky that Sunrise Power Link came --
7 when it came online, provided us a wealth of access to
8 renewable energy to displace our overall needs. In our
9 case we have been working on a number of improvements to
10 the system grid, primarily aimed around the ability to
11 integrate more renewables into the system. And in order to
12 do that we identified the need for a number of synchronous
13 condensers on our system. Well, lo' and behold we find
14 that those same installations actually provided significant
15 opportunity to displace the need for some of the reactive
16 support that was actually being provided by San Onofre.

17 And now for the layperson who sits in the room,
18 because like us individuals sitting up here are Kiki
19 engineers and we talk in VARs and megawatts and not
20 everybody always understands us. But electrically there is
21 a transmission link between Southern California Edison and
22 San Diego Gas and Electric that originates at the -- the
23 very northwest part of the County of San Diego, extends
24 through Camp Pendleton, and then goes into Southern

1 California Edison's grid.

2 And if you think of this as a massive suspension
3 bridge, sitting right in the middle of that suspension
4 bridge was San Onofre. And San Onofre provided two things
5 to the grid. It provided energy, but it also provided
6 inertia. And that inertia is essentially, I'll say the
7 buttresses that hold that bridge up in the air. And that
8 is essentially the major thing that we lost in San Diego
9 when San Onofre went down. We lost the ability to
10 basically maintain the -- the voltage between the two
11 interconnected systems. And there's a significant amount
12 of power that moves between these two grids.

13 When the system was first built in the 1980s and
14 expanded to accommodate San Onofre for the most part power
15 flowed into San Diego, flowed across the transmission
16 corridor, came from San Onofre and served loads in the San
17 Diego region.

18 Well, today the way they operate it -- the grid
19 is operated is dramatically different than was contemplated
20 at that time. In fact, shortly after that or right about
21 the same time we extended the first 500 kV link into San
22 Diego, the Southwest Power link which connected southern --
23 Southwest Arizona into Southern California. And that
24 provided a wealth of access to some renewable resources at

1 the time, but also access to additional energy to serve the
2 greater San Diego region.

3 Today, with the addition of the Sunrise Power
4 Link essentially San Diego has become a thoroughfare.
5 Energy flows in through us and through all of Southern
6 California. And what the San Onofre lost into us was the
7 ability to move that energy efficiently through the
8 southern part of the state. And it's actually created some
9 major challenges for the ISO who has had a wealth of
10 resources to draw upon could not necessarily move that
11 energy around efficiently.

12 So in working with the ISO we've identified a
13 number of improvements to our grid that would help buttress
14 the system up so that we could start moving energy more
15 efficiently again and with that, as you heard Phil say, the
16 notion of where those facilities were located. And when we
17 call these synchronous condensers or reactive support to
18 the grid, where they are located is critically important.
19 Just think of any bridge, where you put the buttress is
20 important to how much power or cars can flow over that
21 bridge.

22 So in our case the identification of the San
23 Onofre region is important, the substations directly north
24 and directly south are critically important, as well as the

1 major locations where power is important to our region,
2 again, the ability to push energy in through the system.
3 And some of these, as I mentioned, had originally been
4 identified primarily towards dealing with integration of
5 more renewables. Now they'll serve multiple purposes and
6 also buttress the system and provide reactive support so
7 energy can be moved.

8 Here we have a number of those installations.
9 The (inaudible) synchronous condenser is actually under
10 construction already, 230 kV lines that Phil mentioned
11 connecting the eastern part of our system back to the --
12 the western part of our system. Essentially, think of it
13 as a big donut that served the county electrically. This
14 provide a line through the center of that donut so energy
15 can be brought to the coast where the vast majority of our
16 loads are located in addition to that, synchronous
17 condensers locating those at San Onofre, essentially in the
18 existing substation that's there today. We've also gone
19 out for a number of other projects, synchronous condensers
20 in the substations directly north and south of the San
21 Onofre location, as well as putting some other support out
22 on the outskirts of our system where energy has moved in
23 so, again, energy can be moved in efficiently into the
24 grid. And that deals with reactive support at the Suncrest

1 where the Sunrise Power Link 500 kV line terminates in San
2 Diego, and to the Miguel Substation where the 500 Southwest
3 Power Link terminates in San Diego.

4 So with that I'll turn it over to Edison.

5 MS. CABELL: Good afternoon. Thank you for
6 inviting Edison to be here and part of this discussion. My
7 name is Dana Cabbell. I'm Principal Manager of
8 Transmission Planning at Southern California Edison. And
9 so I have just a few slides to go through. And I
10 appreciate Jim's introduction to this whole complex issue
11 of the SONGS out and OTC plants on the verge of retirement.

12 Edison has been involved in a real transmission
13 construction program in the last few years. We've -- last
14 year we just completed two major transmission projects, the
15 Devers-Colorado River Project out in the Riverside-Palm
16 Springs area, and then also El Dorado Ivanpah Transmission
17 Project up out of the Southern Nevada into the Mojave
18 Desert. So those were two significant transmission
19 projects that were built to help integrate and deliver
20 renewable which -- into the L.A. Basin and into the service
21 area.

22
23 So what I thought I would do, too, is start off
24 with some other major transmission that we are embarking

1 on, and then get into some of the specific projects that we
2 are going to be involved in, specifically for SONGS and the
3 OTC retirement, and then give a little update on the
4 Tehachapi transmission project. There we go.

5 This is a list of some of the other major
6 transmission projects that Edison is going to be involved
7 in. But first two, again, are related to integrating
8 renewables from outside the L.A. Basin. Coolwater-Lugo
9 will provide up to about 1,000 megawatts of transmission
10 capacity to bring in renewables from the Mojave Desert down
11 into the basin. And also it will provide for future
12 expansion of load growth and reliability in that area, the
13 Lucerne Valley area. We expect an online date of about
14 2018 for that. We're going to -- we've initiated the
15 licensing at the PUC.

16 West of Devers upgrade, the first ever
17 substation, is in the Palm Springs area. Again, this
18 brings in the renewables from the Colorado River area. It
19 has 3,200 megawatts at capacity. It will also help to
20 bring in renewables from the Imperial County area. So this
21 is a very significant project for that integration of
22 renewables from the east, and from Imperial County. That
23 application has been filed and we expect that to come in
24 about 2019 and '20.

1 The next three projects really relate to more of
2 a system reliability, trying to maintain service to load in
3 these specific areas. Alberhill is a new substation down
4 in the Menafee-Riverside County area. It adds transfer --
5 transfer capacity to continued service to load down in that
6 area.

7 Santa Barbara County Reliability Project, I think
8 Ron this morning had mentioned some of the issues out in
9 the Santa Barbara-Goleta area. Some reliability concerns
10 today, there's only two 230 lines that feed from the basin
11 out to Santa Barbara. So this 66 kV line is going to
12 provide some capacity, particularly when under the
13 unfortunate situation of losing those 230 lines we were
14 able to again support the load out in the Santa Barbara-
15 Goleta area. So that project has been being worked on for
16 quite a few years. We're hoping to have it completed and
17 constructed in 2016.

18 And then San Joaquin Cross Valley Loop, that
19 should be completed this year. We are hoping that will be
20 completed before summer. Unfortunately, we did have a bird
21 nesting situation which delayed the construction of that
22 project. Some -- a couple Golden Eagles decided to nest
23 near the line so we had to delay the -- the actual
24 completion of that, but it will come in the end of this

1 year which is -- you know, unfortunately, we were hoping we
2 would have it by the summer because now with the drought
3 and some of the -- not as much water in our V-creek
4 (phonetic) system, our hydro system, so we had to extend,
5 unfortunately, some load -- costly load-shedding remedial
6 action schemes in that area. But fortunately we haven't
7 had an issues. We haven't had any contingencies in that
8 area. So we'll keep our fingers crossed and we'll get
9 through this summer.

10 The first project then, as Phil mentioned, for --
11 to meet the needs of SONGS out and the OTC potential
12 retirements, the Mesa 500 kV Substation Project was
13 identified. It was identified in the Track 4 proceedings,
14 but also was approved in the latest California ISO
15 Transmission Plan. And what this project is, and it's --
16 it's a little -- what I need to explain is Mesa Substation
17 right now is a 230/66 kV substation. And what this project
18 is going to do is essentially create a whole new substation
19 and add a 500 kV source.

20 Fortunately, when the Tehachapi Reliability
21 Transmission Project was planned and designed we actually
22 brought the new Vincent-Mira Loma line right into the
23 substation area. So this project is not going to require
24 any major transmission. The line essentially comes to Mesa

1 and does a U-turn at this point and goes right back out.
2 So for this project we'll be expanding the substation to
3 add the 500 kV portion. It's major construction. We'll
4 essentially have a brand new substation once done. It --
5 it's going to be all reconstructed. We're going to have to
6 do -- stage it to make it happen and keep the -- the
7 substation in service as we do it. So it's going to be a
8 very interesting engineering type project to get it all
9 done.

10 The significance of this is to have it done by
11 2020. It is -- what this project does it is allows the
12 expansion of the integration or the delivery of renewables
13 into the basin or resources into the basin. And it does
14 help me meet the local capacity requirements identified in
15 the LTPP proceedings. So this is -- right now we're doing
16 all the engineering and environmental assessments. And
17 again, it's very critical that we meet the 2020 date since
18 that is a time that some of the significant coastal plants
19 will be retired.

20 The other project, as Jim was mentioning, with
21 SONGS out it did create a very -- it created a void of
22 reactive support for the orange -- Southern Orange County
23 and the Northern San Diego County system to be able to --
24 to move the power around the system and -- and really to

1 respond to disturbances within the system.

2 And so part of what the ISO identified, too, is
3 the reactive support in the San Onofre area, that 500
4 megawatts. We're going to be pursuing 225 megavars of
5 synchronous condensers as part of that need in our Santiago
6 Substation. So it will be -- be able to fit right into our
7 substation site. There will be -- within the fence we'll
8 have to moving around some of the existing equipment. But
9 we feel that we can do that and get the device in place and
10 meet the 2017 need date that the ISO has identified in
11 their Transmission Plan.

12 So right now I'm just doing all the engineering.

13 And we're talking with the different various vendors for
14 the synchronous condensers. It's been many a year since
15 we've had synchronous condensers on our system. They were
16 very prevalent back in the '40s and '50s, way before my
17 time. And so they -- you know, we -- they've been in our
18 system, they -- they served a good use. They do provide
19 that real dynamic reactive support, which is what you want
20 when you have a system that's relying on a lot of imports,
21 bringing power in from the outside. And you want to be
22 able to have that reactive support, that buttress as Jim
23 was calling it, especially under system disturbances.

24 And lastly, for the Tehachapi Renewable

1 Transmission Project, I just wanted to give a quick status
2 update. And, of course, this has been a very significant
3 project, as I'm sure all of you are aware. Essentially,
4 this -- the status is north of Vincent Substation that's a
5 substation kind of right in the middle of that map, all the
6 work related to Tehachapi north of Vincent has been
7 completed and online. The other segment south of Vincent
8 are at various stages. Most significantly, the underground
9 piece, the 500 kV underground piece through Chino Hills,
10 that is kind of delaying or kind of putting on hold
11 completion of some of the other segments because we need to
12 have that completed to complete the Vincent-Mira Loma line
13 before we can complete all the other segments.

14 So the underground, it is moving forward. The
15 engineering is -- is happening. The discussion of the
16 procurement, the different manufacturers for the cables,
17 the civil construction, that's all moving forward and we
18 feel that we can still meet the date of 2015.

19 So with that I think it's Mike's turn.

20 COMMISSIONER SCOTT: Great. Thank you very much,
21 Dana.

22 We will go now to Mike Jaske who is going to talk
23 about contingency mitigation planning. And then we'll go
24 to questions from the dais.

1 MR. JASKE: Good afternoon. Mike Jaske, Energy
2 Commission staff. So I talked very briefly about this
3 subject this morning and my background. And this
4 presentation will get into it in considerably greater
5 depth.

6 This slide really is just an overview of what I'm
7 going to cover in this presentation. And let me sort of
8 orally add to the monitoring the monitoring systems'
9 bullet. These are very critical activities. You've heard
10 described today the status of the preferred resources and
11 the authorized generation from Cynthia Wright [sic], and
12 just now from Phil, and two PTOs, the status of the various
13 transmission upgrade projects. Those are -- the generation
14 projects and the transmission ones are projects. They're
15 easy to identify and track and sort of keep -- you can
16 touch and feel them. You can sort of put them on lists and
17 track them.

18 Preferred resources are a different matter.
19 They're programs. They're dependent upon customer
20 participation. They're dependent upon measurements. There
21 are a host of things that make the estimate of their impact
22 softer. And to some degree that was highlighted in the
23 presentations, especially that Ron Nichols made this
24 morning.

1 So -- but monitoring isn't simply measuring what
2 has happened. The way we're using the word monitoring
3 we're thinking also of the translation of those here's
4 where we are into this is what we now expect to have
5 happen. It's that forward expectation that's an especially
6 important dimension of monitoring. And I'll build on that
7 point later on in this presentation.

8 So they're diving into the mitigation measures
9 themselves. So this slide is essentially the same as what
10 I said this morning. These measures are a backstop to
11 assure that we have reliability if preferred resources or
12 authorized generation or transmission are either delayed or
13 can't be acquired at all in some -- in these instances.
14 And at the bottom here there are three things that I will
15 get into in greater depth that are the actual options, and
16 I'll give you that order.

17 First is a targeted renewable DG program. Here
18 what we're thinking of is not just a program like RAM but a
19 tighter program that necessitates that these installations
20 have some kind of reactive power capabilities, that there's
21 telemetry to either allow that to be controlled directly,
22 or at least to allow some sort of voltage schedule to be
23 updated. And this isn't a program that would be initiated
24 now, next year. It's a program that would be designed in

1 the sense of a contingency, namely that there are potential
2 projects that would be identified.

3 Developers of those projects submit, you know,
4 all the various particulars. It's selected, but it's on a
5 shelf. It's not triggered unless this is needed. And in
6 part that's because of these functional requirements that
7 are going to be more costly than an ordinary DG program.
8 So this is now being developed and in sort of the initial
9 sense, and more details will be flushed out over time.

10 We've talked about OTC deferral from time to
11 time. It was featured in the preliminary plan that the
12 interagency team developed last September. Mr. Bishop has
13 referred to it from time to time in his presentations in
14 these forums. Generally what we're talking about is
15 deferring the OTC compliance date for a year or two or
16 three. We're not talking about a long term amass deferral.

17 We're talking about individual facilities where something
18 has gone wrong but which can be overcome. So there's a
19 permanent solution, a new generator, for example, that's in
20 the pipeline but it's a year late compared to original
21 expectations. We may find that the most expeditious way to
22 solve that problem is to continue to run an OTC facility
23 for that one additional year, rather than trying to trigger
24 some other things that have permanent consequences that

1 aren't really necessary if we can just get by that little
2 gap.

3 The obvious example that we've all referred to
4 from time to time is Encina and Carlsbad. Not really
5 enough time right now to think of a brand new plan
6 substituting for Carlsbad if for some reason it doesn't
7 appear on -- in time to satisfy Encina's deferral date.
8 The logical conclusion is to ask the Water Board to defer
9 Encina's compliance date for a year or two while that plan
10 actually does come online.

11 There are a number of ways in which one could
12 design a generator mitigation measures, and here are two
13 options that are being investigated now. They have
14 different characteristics. And so in this slide I'm going
15 to sort of lay out how we've (inaudible) them from a design
16 perspective, and I'll get into some of the details about
17 them in another couple slides.

18 The first option is sort of intended to minimize
19 the amount of elapsed time, should you ever want to trigger
20 this option, the amount of elapsed time from the triggering
21 date to when it's online. So you do as much in advance as
22 possible. You permit it as much as you can and, if not all
23 the way, as -- as far as you can. It achieves some degree
24 of power purchase agreement review, and if not

1 authorization, some steps that don't need to be repeated if
2 and when it's triggered. So there's a lot of up-front
3 project definition permitting procurement activities. And
4 there's a cost to that, of course. There may be that you
5 never trigger this contingency, and so there are time,
6 effort, and maybe even material expenses that are lost. So
7 it's kind of like insurance. You pay everybody and you may
8 never get the benefit.

9 Option two is different. It relies upon the IOU
10 doing sort of a generic permit for a generic project, again
11 not clear how far down the path one can go. But clearly a
12 generic project is not going to be something that the Air
13 Districts or even the Energy Commission are likely to give
14 a final permit to. So these -- this option, a hypothetical
15 generator project, can't go as far down that path.
16 Therefore, there is a longer amount of elapsed time from
17 the point at which you do trigger it to the point it's
18 actually fully permitted, fully procured, constructed and
19 online. The tradeoff, of course, is that by less up-front
20 effort there are less up-front costs. So a cheaper form of
21 insurance for a less valuable product.

22 So getting into a little more of those details of
23 the first option, here we're imagining that the IOU chooses
24 a developer through some process, perhaps an RFO process,

1 perhaps other means. The developer designs a real project,
2 maybe even options, key equipment to get in line. It
3 secures a permit from the Energy Commission or the Air
4 Quality Districts, or goes as far down that permitting path
5 as possible. The IOU has to reimburse the developer for
6 all these up-front costs and the project just sits there,
7 waiting to be triggered. It may never be triggered.

8 So that's why unlike the usual developer response
9 to a solicitation, there's a good chance this project will
10 never be actually turned in -- converted into a real
11 generator on the ground. And therefore the developer won't
12 recover all these up-front costs through the life of a
13 contract, therefore be reimbursed.

14 And then an important point that I purposely
15 skipped, we don't do this sort of thing in a vacuum. The
16 PUC and the Energy Commission both probably are going to
17 need to tweak or modify their processes to enable this kind
18 of approach to be pursued. The Energy Commission doesn't
19 normally go halfway through a permitting process and just
20 stop there. The PUC doesn't normally do -- split a PPA
21 into two parts and only do the sort of up-front cost
22 authorization part and then wait for something to happen.
23 So those processes need to be modified and they need --
24 that takes time and energy itself to accomplish.

1 Option two, so here the IOU plays a bigger role
2 up front. They acquire a site, submit a generic project of
3 some sort to the Energy Commission, unclear exactly how
4 generic that can be. Is it, you know, an LMS100 at
5 Santiago Substation? Well, maybe that's sufficiently
6 precise that allows generator permitting process to begin
7 and go part of the way along the path.

8 A key dimension to this, of course, is the Air
9 Quality District requirements and how they will evaluate
10 such a generic project. And we're only at the very
11 beginning stages of talking to the -- to districts
12 involved. It may be that there are rule barriers, or if
13 they're willing to be -- consider changes, you know,
14 processes that have to be modified to allow -- allow this
15 kind of option.

16 Then, of course, the project sits and waits to be
17 triggered. If it's triggered then all these other steps
18 are to be accomplished. The IOU has got to actually
19 transfer the rights and the permit to the individual
20 developer through some RFO or some other process. The
21 developer, of course, has got to spec out a real live
22 project. The developer has got to come back to Energy
23 Commission and -- and the Air Districts and get that
24 specific project permitted. The IOU has got to negotiate

1 and submit a PPA to the PUC. The PUC has got to approve
2 that. And then only once it's fully permitted and the PPA
3 approved would the project move forward into construction.

4 So that's the mitigation measures. How are we
5 thinking about them being triggered and implemented?

6 So first of all, as I said at the very beginning,
7 monitoring data is critical. We're working through, in
8 interagency discussions, what kind of data exists through
9 existing processes, what additional kinds of data need to
10 be collected, and how do we share that among the agencies.

11 We at the Energy Commission are taking a lead in
12 developing a tool that will take in-depth ISO power flow
13 study results, these LCR studies that Phil referred to
14 earlier, and try to translate them into annual values.

15 Of course, the piece of information we've most
16 desirous of are these sort of year-by-year scheduling
17 details. And the ISO does these very in-depth power flow
18 studies only for particular snapshot years. As the
19 individual projects that Phil and the two utilities
20 described come online at their dates that are in between
21 these snapshot LCR studies, they obviously have impacts
22 that can be predicted. And building the tool, accounting
23 tool that tries to reveal those year-by-year changes in LCR
24 requirements is the intent of this tool.

1 Once the tool is developed and vetted we would
2 periodically exercise it. We would present any shortfalls
3 to agency executives. Once they see these results they
4 need to decide how it is that we react to them. Does the
5 tool itself seem plausible enough that action can be taken
6 directly or does it require further confirmation through,
7 for example, the ISO taking on doing some expedited
8 analyses?

9 So just to say a little bit more about the tool,
10 as I said, it's in development. It's going to generate
11 analyses for at least these three areas, L.A. Basin, San
12 Diego and the combined area affected by SONGS. It would
13 draw upon ISO snapshot power flow study results. The
14 transmission upgrade impacts on these individual areas,
15 which isn't all the same -- aren't all the same, excuse me,
16 and the schedule by which we get the impacts for preferred
17 resources in conventional power plant development.

18 And then off to the side, the Energy Commission
19 is acquiring load bus data from San Diego and Edison. And
20 we are going to be using this data to compare to our
21 adopted load forecast as just another check on whether both
22 the combination of Energy Commission's based demand
23 forecasts and the modifiers for that, like additional
24 energy achievable, are really having the impacts that we

1 anticipated. And if these load data at the -- at the bus
2 level show some departure from expectations, then that
3 itself is a worrisome piece of information that needs to be
4 tracked down and -- and considered.

5 So to translate all that sort of narrative
6 description into the graph to give you an idea of what
7 we're really talking about here, so on the left-hand side
8 is a chart that has two cases on it. On the horizontal
9 access is time going forward, and on the vertical access is
10 capacity. This is for a -- first of all, this is
11 illustrative data made -- made up to make a point. It's
12 not the results of this tool. We're not at that point yet
13 of wanting to share results.

14 The solid -- the dark green line that's pretty
15 much flat are LCR requirements as they come out of ISO
16 formal studies. The light green line is the impact on
17 those LCR requirements if the various transmission system
18 projects come to fruition on the schedule that Phil and the
19 utilities were outlining earlier, so then there's clearly a
20 reduction in what those requirements are.

21 The blue line is the tabulation of resources that
22 are able to satisfy those requirements. So in this
23 prepared chart, out to about 2020 the blue line is well
24 above the light green line and -- and there is no issue.

1 But you can see the big drop off in the blue line in and
2 around 2020 when the OTC plants go away, and there's a
3 little dip below the light green line and then a bounce
4 back. So that's a case where there's a shortfall, but it's
5 only a single year and it's not very large. And so that
6 might be a circumstance where an OTC referral makes sense,
7 where you're only overcoming a timing issue.

8 In contrast, the red line shows a more worrisome
9 problem. You're systematically racking up fewer resources
10 over time. So we're not developing preferred resource
11 impacts to the degree that we originally anticipated, or DG
12 is not developing as was anticipated in the study
13 assumptions that the ISO got from the PUC and the Energy
14 Commission to analyze the LCR studies, or a combination of
15 various things. There are just fewer resources available
16 to satisfy LCR. When the same OTC plant closure happens at
17 the end of 2020 and that big drop-off happens there's a
18 substantial shortfall and it persists over time. That
19 would be the kind of pattern where some new resources would
20 need to be triggered to mitigate the problem.

21 So let me close here with these thoughts about
22 where we are and what comes next. The agencies are sharing
23 information about how to do tracking or trying to assess
24 where existing monitoring evaluation processes work fast,

1 or we can tweak them a little bit and get results more
2 quickly. For the resources coming out the PUC's big
3 decision of March of this year we're -- the preferred
4 resources are not being operated in normal contract --
5 excuse me, programs, but rather through contracts, clearly
6 there is different kinds of monitoring that are necessary
7 for those. And for both we need to create these ways of
8 taking relatively recent actual measurement data and
9 translate that into expectations of future (inaudible).

10 More simple is the tracking of the progress that
11 individual power plants and transmission system upgrades
12 are making. We have to refine this tool and get it
13 operational and vetted. And then, as I have said earlier
14 on describing the major mitigation options, we need to
15 flush those out, get those agreed to, and deal with the
16 modification to Energy Commission permitting process or
17 PUC's power procurement authorization process, oversight
18 process, so as to have these -- this expedited treatment
19 available if and when we ever need to trigger these
20 mitigation measures.

21 And with that I am finished.

22 COMMISSIONER SCOTT: Thank you very much, Mike.
23 So we will turn to the dais to see if there are any
24 questions for our panel.

1 CHAIR WEISENMILLER: Yeah. I have a few. The
2 first question is primarily Edison and San Diego, although
3 Phil may be able to speak to it. In -- in the lease
4 agreement for the San Onofre Power Plant there's a
5 requirement that when it's done operating that the site is
6 returned to its original condition. The original
7 condition, obviously, was without all the transmission
8 infrastructure we now have in place there which is, shall
9 we say, pretty useful in this kind of context.

10 So the issue is where are the discussion with the
11 Marines on that issue? And does this giant headache now
12 become much worse if you guys can't reach a resolution with
13 the Marines? Obviously, the Marines just want that -- need
14 that area for training, period. You know, that -- that's
15 their goal in life. So what's the current update?

16 MR. AVERY: Let me touch on the two parts
17 separately, the transmission, transmission lines, and then
18 the underlying land in the San Onofre. You are correct
19 that the lease for the San Onofre facility envisions the
20 restoration of the land back to its original state. And
21 that lease also incorporates some portion of the
22 transmission facilities that serve the San Onofre site,
23 which obviously are now an integral part of the
24 transmission grid.

1 Southern California Edison and the joint owners
2 at San Onofre are and have been in discussion with the
3 military as to what facilities they would actually like to
4 see retained. And in fact, a portion of the lease that
5 deals with what I'll call the Mesa area, that portion of
6 land
7 that -- or piece of that portion of land that's east of
8 Interstate 5 is going to be surrendered back to the
9 military relatively early. In other words, it's not
10 required for the full decommissioning of that site. And
11 that piece of property incorporated a number of buildings,
12 probably a dozen or so buildings. And the military
13 surveyed that land. There are certain facilities they want
14 removed and certain facilities they want to retain because
15 it's not inexpensive to build a new building, and the
16 military does have use for that portion.

17 With respect to the land that's west of the --
18 the Interstate 5 there is -- there is multiple components
19 to that. There is a portion of the land that deals with
20 the location with the independent spent fuel storage
21 facilities. At this point in time -- well, historically we
22 used to think that the Department of Energy would be taking
23 our nuclear waste; that has not happened, so that the spent
24 fuel has been stored on site. That portion, until there is

1 a federal answer to where that fuel will go, that fuel will
2 have to stay on site for an extended period of time. And
3 it will stay in these giant concrete casks over that period
4 of time. So that portion of the lease will have to be
5 carved out and extended to accommodate that.

6 That portion of the lease that deals with
7 substation facilities will have to be carved out as well.
8 And then the residual, the balance, will be broken up into
9 pieces to accommodate decommissioning. And exactly what
10 ultimately gets removed will ultimately be the decision, I
11 think, of the military to a very large extent. In other
12 words, if there are buildings they want retained or
13 foundations they want retained it's in all of our best
14 interest to work them to accomplish that.

15 Now I'll deal with the specifics of the
16 substation and the transmission lines. We have had a
17 number of discussions and meetings with the military,
18 actually over the last four years, on the subject of these
19 transmission easements. And in looking at the substations
20 themselves, they're an actual part of the transmission link
21 and will have to stay for an extended period of time. And
22 in fact, we're envisioning incorporating a synchronous
23 condenser within that substation of the San Diego portion.
24 And in our working with the military we -- we have the

1 right to actually modify that substation to accommodate our
2 needs today.

3 But then we're also following a parallel path
4 towards how do we break out that portion of the -- the
5 easements so that it can be maintained for an extended
6 period of time, even after the rest of the facilities have
7 been removed from that site. And we're following basically
8 a two-pronged approach. One is to just carve out and deal
9 with an extension of those facilities that exist there
10 today for an extended period of time. And then the
11 parallel approach is to look at a master lease times
12 arrangement with the military.

13 As you can imagine, Camp Pendleton is a massive
14 piece of land. I don't know, it's 125,000 square acres of
15 land in the northern part of San Diego. And we have
16 probably well over 100 miles, in fact, well over 100 miles
17 of transmission and distribution and rights of way that
18 crisscross through the military base and have been added
19 over the years to accommodate of the military base and the
20 expansion of San Diego at large. And to a large extent a
21 lot of those rights of way are one-off rights of way. In
22 other words, we extended this line, we got a right away, we
23 built a new line, we got a right of way.

24 So we've been working with the military as to the

1 notion of creating a master lease arrangement, having one
2 arrangement so that we don't have one easement come up
3 every single year for renewal, that we'd have one master
4 arrangement and try to incorporate all of those in there.
5 And the military has been very supportive of that approach.
6 It makes it easier for them to keep track of all of it, it
7 makes it easier for us to keep track of all of it, and it
8 simplifies the overall process. And so we're following an
9 extension of the existing lease to deal with the substation
10 and lines in parallel with the notion of creating a master
11 lease arrangement to cover all of our (inaudible) military
12 base.

13 CHAIR WEISENMILLER: Edison, anything to add?

14 MS. CABELL: I think that covered it --

15 CHAIR WEISENMILLER: Okay.

16 MS. CABELL: -- very thoroughly.

17 CHAIR WEISENMILLER: Okay.

18 MS. CABELL: Of course, we do have our
19 transmission lines that come down into the switchyard. So
20 we're obviously working on the same end to make sure that
21 that's maintained.

22 CHAIR WEISENMILLER: Okay. Jim, I think two
23 years ago when we had this conversation at that point you
24 had -- were already ready to trip like 800 megawatts after

1 -- and I think last year it was 1,100 megawatts you're
2 ready to trip. What's the current number?

3 MR. AVERY: As I'm sitting here, I do not know.
4 Essentially what you're referring to is the -- the backstop
5 ability that if we have a contingency the systems would --
6 would shed load in that area to protect the rest of the
7 grid, and I don't know the number offhand.

8 I don't know, Dana, if you do.

9 MS. CABELL: No.

10 CHAIR WEISENMILLER: But is it -- obviously, I
11 always keep hoping you get substantially lower. And --

12 MR. AVERY: It's in the range.

13 CHAIR WEISENMILLER: Yeah.

14 MR. AVERY: We don't think it's changed
15 dramatically. But if it is I will be happy to get back to
16 you with that.

17 CHAIR WEISENMILLER: Yeah. Again, obviously, I
18 think from the state perspective anything that can be done
19 so we don't have that size of load trip, I mean, it's so
20 staggering to put through your system.

21 MR. AVERY: Yes. But I think it's important to
22 note, that it not the first line of defense. That is after
23 the criteria that the ISO follows for the -- for the
24 maintenance of the integrity of the grid. After the N

1 minus 1 minus 1, this is the failsafe, if all else is
2 needed. This is not in the normal course of business.

3 CHAIR WEISENMILLER: Yeah. And I think -- I
4 think it was last summer, at that point Edison was
5 carefully monitoring the frequency at the various subs in
6 Orange County, ready to drop. Now, I guess I'm asking,
7 have we at least past that situation?

8 MS. CABELL: Yes. What we were monitoring, not
9 particularly frequency but the voltage, and also monitoring
10 the power flow down into the San Diego system, too, because
11 that would play into potential for voltage collapse in the
12 South Orange County area. So we did have a safety net, as
13 we call it, that would drop a significant amount of load.
14 Fortunately, with the improvements that have gone on the
15 last two summers we've been able to remove that, so that is
16 disabled. So we don't have that in place anymore. So --
17 but as we go forward that's why it's still important to
18 have the voltage or reactive support moving forward because
19 we don't want to get in that situation again.

20 CHAIR WEISENMILLER: So, Jim, last summer we
21 talked about issues with gas deliverability into San Diego.
22 What's the current situation?

23 MR. AVERY: Well, as -- as you're aware there's
24 really only one gas transmission corridor that extends into

1 the San Diego region, and it comes down the eastern
2 corridor. And all of that gas originates at one location
3 on the So Cal Gas network. There have been some, I'll say
4 adjustments into the way the overall gas infrastructure in
5 the state have operated post San Bruno. In other words, to
6 the extent that pipes have to go through a rigorous testing
7 to ensure that they meeting all of the state safety
8 requirements, that is a process that takes some time to go
9 through. And not -- and some of the remediation that's
10 done is the -- is a reduction in pressure that's operating
11 on those pipes. So it reduces the -- I'll say the safety
12 margin that we had in the amount of gas that can serve in
13 the area.

14 We have had some problems over the last year
15 where we have had some curtailment of generation in the San
16 Diego-Greater L.A. area. But some of those areas actually
17 have been issues that have originated outside of California
18 and have rippling effects in through California, as well.
19 I know So Cal Gas is working on a number of improvement
20 plans to ensure that their infrastructure has the
21 capability to deal with all of the things we've been
22 talking about here today, as well as enhancements on their
23 system so that they can ensure the -- the safety of their -
24 - their gas transmission infrastructure.

1 CHAIR WEISENMILLER: So the last thing I wanted
2 to raise is in the last year we've had at least -- it's
3 become more publicly known that we've had sort of the
4 terrorism incident in the U.S. at Metcalf on taking out a
5 substation. And I guess recently we've had the first
6 nuclear plant overtaken by cyber security in a raid there.

7 So I guess what I'm -- without getting into
8 details what I'm looking for is the sense that SDG&E and
9 Edison are both taking pretty proactive moves dealing with
10 hardening their systems, and also cyber security.

11 MS. CABELL: Absolutely is kind of the simple
12 answer. We're obviously very concerned about those
13 situations. There are, as we all know, NERC reliability
14 standards that kind of speak to cyber security, and now a
15 new one about physical security. We are working very
16 diligently to meet all our requirements, especially with
17 cyber security. And now with the new physical security we
18 do have a real focus on which facilities are our critical
19 substations, which ones do we need to staff up security,
20 actually having security personnel on site at the critical
21 substations that we feel if there is an issue at those
22 substations could really result in a widespread reliability
23 issue for the grid.

24 So that has been a very strong focus. We have a

1 new, actually a new group within Edison, but that -- that
2 is what they're focusing on is the cyber and the physical
3 security. So we've been taking that very seriously.

4 MR. AVERY: Obviously, this is a critical issue
5 for all of our industry throughout the United States, not
6 just in Southern California. And it is something that the
7 FERC, the NERC, the WECC and everybody else with the
8 alphabet soup behind it is critically looking at.

9 In San Diego's case in particular, back after
10 September of 2001, September 11th, the FERC actually made
11 an offer out to all utilities across the nation to take a
12 look at what it is doing for physical and cyber security
13 and authorized utilities to make a one-off filing to make
14 reinforcements to their transmission networks so that we
15 could start getting ahead of that issue, now 13 years ago.

16 SDG&E was actually the only utility in the
17 country that took advantage of that offer. And we at that
18 time started installing everything from cameras at critical
19 substations, motion proximity alert, proximity indicators,
20 and started revamping some of our cyber security, actually
21 really the introduction of cyber security in a much broader
22 sense at that point in time, and -- and have worked very
23 carefully with -- with our neighboring utilities, with the
24 ISO, with WECC, with NERC towards identifying really where

1 are the critical assets and ensuring that those critical
2 assets are protected with the state of the art in
3 technologies at this stage.

4 And we are working, again, with -- with our
5 neighbors, as well as with other utilities in -- in testing
6 protocols, in testing new technologies, in testing
7 opportunities to ensure that we have a robust and safe
8 system.

9 COMMISSIONER FLORIO: Yeah. It's kind of a big-
10 picture question. I mean, there's a lot of transmission
11 work that -- that the panel has talked about and, you know,
12 combining with the generation and demand side that we
13 talked about this morning, you know, setting aside
14 something going wrong which it probably will, but if -- if
15 all these things that are planned come to fruition, you
16 know, is what is in the pipeline now sufficient to replace
17 SONGS and the once-through cooling and maintain voltages
18 and -- and all of that, or do we still have more that we
19 have to push through the pipeline?

20 MR. AVERY: I'll start with the discussion on San
21 Diego and say for the most part we started planning for the
22 retirement of the once-through cooling back in 2005. And
23 we were actually planning in that time period for the
24 decommissioning of San Onofre in 2022. What happened was

1 we had San Onofre go down a lot sooner than anticipated.
2 But from our standpoint the reinforcements that we've --
3 that I've discussed here are not major reinforcements to
4 the grid at this stage. They are really a continuation to
5 the efforts that we started many years ago. And they serve
6 dual purposes. They facilitate the integration of
7 renewables, while at the same time provide the dynamic
8 support, especially as Dana has pointed out a number of
9 times, in contingency operations to ensure the integrity of
10 the grid.

11 I think what's going to happen next, and Phil may
12 want to touch on this, is we have to deal with the once-
13 through cooling issue which is the most critical issue on
14 our system -- San Onofre is really secondary to a very
15 large extent -- but the loss of those once-through cooling
16 facilities, again happening to a very large extent with
17 thousands of megawatts of capacity in this region. And at
18 some point in time as we continue to see more generation
19 added into the system in different areas I'm sure there are
20 going to be opportunities for reinforcements to the grid to
21 actually ensure that the ISO can move energy more
22 efficiently and we can take advantage of those economic
23 opportunities and not run generation inefficiently.

24 Go ahead.

1 MR. PETTINGILL: Yeah. Mike, I appreciate you
2 asking the question, you know, from the -- from the big
3 picture. Because if we step back I think a couple of
4 thoughts that come to mind for me, first of all, and really
5 none of us mentioned it here or even this morning, I think
6 Ron Nichols touched on it in a very subtle way when he
7 pointed out that we need to aware of the fact that the --
8 that the target we're going towards is constantly changing
9 every year. And what you saw in his presentation is the
10 notion that load is continuing to grow. And I think it was
11 even in one of his footnotes that he said if you can
12 develop, you know, energy efficiency or demand response or
13 other preferred resource programs to at least offset that
14 load growth, that might be a very, very modest but
15 reasonable target for all of us, because in the region it's
16 approximately 400 megawatts a year that we're trying to
17 offset between the San Diego and Edison system.

18 So I think that's one -- one challenge. We say,
19 "Are we out of the woods yet?" Well, that's part of the
20 tie-in to the preferred resources and knowing that our --
21 our objective is -- is, you know, continuing to change.
22 Now, we try to incorporate that when we do these long-term
23 studies and part of the LTPP proceeding, and so forth and
24 so on. But I think you saw also in -- in Cynthia Walker's

1 presentation the fact that we're looking at a lot of
2 different programs that optimistically can -- can
3 potentially help, you know, meet these needs. But we've
4 still got to see those actually start to produce real
5 results in this ten year horizon that we look at.

6 COMMISSIONER FLORIO: Yeah.

7 MR. PETTINGILL: And I think that's the next
8 piece I would say is that what we said in -- in our
9 transmission plan was this is a good start. This looks
10 like it's heading us in the right direction. But there are
11 so many of these pieces that are changing that I think we
12 even said that there's as much as 900 megawatts of need in
13 the region that still is not being met with our most recent
14 plan. Now, it could be less than that, but certainly the
15 challenge when we think about what happens beyond the ten
16 year horizon. And I think that's why diligence, you know,
17 is probably a good word, you know, for us to keep an eye on
18 are these assumptions that we have actually starting to pay
19 and produce real results. And if they are, then we're in
20 good shape. So right now we've got a great plan. And I
21 think -- I think most of you said in your opening comments,
22 now we're in the implementation phase. And I would
23 certainly reinforce, that's really where we're at. We've
24 got to be monitoring our implementation.

1 COMMISSIONER FLORIO: And that -- that's a great
2 segue to my other question. I guess to Mike, at least
3 initially, how are we doing in assembling the data and the
4 really more of a process than an end point, but an approach
5 to tracking all of these developments and looking at it in
6 a holistic way. You talked about a particular tool that
7 you were developing. Are you getting the data you need
8 from the PUC, from the ISO? Are -- are things going
9 smoothly or are there some major roadblocks that we should
10 be aware of?

11 MR. JASKE: There aren't roadblocks. But at the
12 same time we're not getting the data because in many
13 respects there aren't data to be had yet. It's -- we're
14 still at the translating decision into proposed programs
15 and power purchase agreements yet to come to the PUC. So
16 six months from now, you know, might be the timeframe to
17 re-ask that question if there is some forum in which to do
18 it.

19 COMMISSIONER FLORIO: Yeah.

20 MR. JASKE: But we are definitely talking about
21 all the bits and pieces. And I mentioned some delineation,
22 for example, between the monitoring evaluation for existing
23 programs, the -- the traditional energy efficiency, for
24 example, versus any energy efficiency that will come out of

1 these RFO processes that's on top of but different kinds of
2 programs, therefore need to be treated differently. So
3 we're -- we're thinking through how to do that at this
4 stage.

5 CHAIR WEISENMILLER: Great.

6 COMMISSIONER FLORIO: Yeas

7 CHAIR WEISENMILLER: Although, Mike, I would -- I
8 would certainly say in the context of -- our demand context
9 has a lot of energy efficiency baked in --

10 MR. JASKE: Uh-huh.

11 CHAIR WEISENMILLER: -- you know, and that's our
12 programs and your programs.

13 COMMISSIONER FLORIO: Right.

14 CHAIR WEISENMILLER: And certainly it's very
15 important that the EMV part is timely on all that.
16 Certainly, you know, the PUC has been struggling with the
17 EMV issues. But having said that you're -- you're in some
18 respects further ahead of us where there are -- some of our
19 programs we have assumptions, and we'd like to get those
20 more scientific in terms of what's really coming out from
21 the building standards or what's really coming out from the
22 applied standards. We think we know but, frankly, I think
23 we need to have a much more solid basis for those
24 assumptions.

1 COMMISSIONER PICKER: Well, there's another --
2 there's -- there's probably another problem in trying to
3 translate this -- these statewide programs --

4 CHAIR WEISENMILLER: Oh, definitely.

5 COMMISSIONER PICKER: -- or utility wide programs
6 into those specific areas in the load constrained areas
7 because their monitoring programs for energy efficiency
8 really would focus on who gets paid when, not how does that
9 actually fit within this much more granular review of the
10 grid.

11 CHAIR WEISENMILLER: Oh, yeah.

12 COMMISSIONER PICKER: So I don't -- I don't think
13 we actually will be able to do that easily or soon. Yeah.
14 I had a couple of questions that sort of build on that.

15 MR. JASKE: Commissioner Picker, we -- we
16 demonstrated -- the PUC staff is actually making
17 considerable progress to translate tracking the
18 participants into defined geographic areas. They're --
19 they're working at it from a zip code perspective, less
20 from an individual circuit. But probably that's sufficient
21 to map into these large buses that Edison has in Orange
22 County.

23 COMMISSIONER PICKER: Perhaps. That was -- those
24 were some of my next questions. But you just make my point

1 that we don't actually have the systems that could
2 originally do that. It has it as a matter of this exercise
3 of trying to figure out how it fits within the reliability,
4 within the flow constraint area, that we've actually
5 developed that capability. So it's just a useful thing for
6 us to remember that -- that, as in so many other cases,
7 we're discovering that our statewide capacities don't
8 translate into the things that we need, where we need them
9 or when we need them.

10 So my question is a little -- is a slightly
11 different take on that same general issue. You know, there
12 may have been a time when many significant policy decision
13 makers and opinion leaders in California understood that
14 our grid didn't automatically flow everywhere immediately
15 or that there's such a thing as congestion. I think it
16 became very clear in 2000-2001. But I can't tell you how
17 many people have come to me in the last two-and-a-half
18 years to say that, gee, if we just had this 500 megawatts
19 of pumped storage financed and under construction it would
20 solve the problem of San Onofre, or 500 megawatts of
21 geothermal, or all this rooftop solar north of -- of the
22 Cahuenga Pass would solve the problem.

23 And so part of it is really an educational issue.
24 Do -- when we do map and define the power flows do we have

1 tools, visualization tools that accompanies that software
2 that can illustrate power flows with those different
3 technologies? I don't know that the transmission engineers
4 necessarily need them, but it sure is helpful for
5 explaining the different cases to everybody else.

6 MR. AVERY: Commissioner, tell me the number of
7 special interests out there and I'll tell you the number of
8 solutions that are out there.

9 COMMISSIONER PICKER: No, I -- after -- after you
10 tell them it won't work they come to me.

11 MR. AVERY: I think the answer, when we go
12 through the transmission planning process we look at a
13 wealth of solutions. And in fact, when we were -- when
14 we're operating under the transmission planning group in
15 concert with the work that the ISO is doing we brought
16 together all the municipalities, all the investor-owned
17 utilities, and we would study a wealth of different
18 scenarios to try to test and see what the best solutions to
19 deal with the real-world issues that we are facing. And
20 the ISO does this for really the joint utilities under the
21 ISO umbrella. And Phil mentioned the notion this is an
22 annual process. It's actually a two-year process, and they
23 restart the process every year so it's always overlapping.
24 And I can't begin to imagine or guess the number of

1 solutions that are plugged in and tested, and then plugged
2 in and tested again to determine what are the best
3 solutions. But I guarantee you, every special interest has
4 been asking to have their interests studied.

5 COMMISSIONER PICKER: But I'm -- I'm just trying
6 to help other decision makers and policy opinion leaders be
7 able to visualize the concept of topology in the grid,
8 power flows, and to see the impact of these solutions and
9 how they don't necessarily provide a solution.

10 So what I'm looking for is a visual tool, global
11 maps for the grid that actually helps people to begin to
12 see the routes and directions that occur. I think it would
13 be a useful thing. I don't know if there is such a thing.

14 If there is I'd love to get it on my cell phone so that
15 when people are grabbing me I could help them to see
16 things.

17 MS. CABELL: There is a power flow tool
18 developed by a company called Power World that is a very
19 visual tool. Edison has just acquired that tool because it
20 actually is a powerful tool that will help us model the
21 relays and protection schemes as required in the new
22 reliability standards from NERC. So we're -- we're testing
23 it out. But it is a very -- it is a very visual tool that
24 you can see, okay, how is the power flowing and what is

1 happening during disturbances and that type of thing.

2 I agree, a lot of this is education. You know,
3 everybody does have their own interest. The way I always
4 like to think of what we have to do going forward, we still
5 need a hybrid grid. We need all of this. We need the --
6 we need the renewables. We -- you know, preferred
7 resources, the central plants, the transmission, it all has
8 to work together because the physics dictate that it all
9 has to be there to work to be able to keep the lights on.
10 So it's not just one solution. It's -- you know, it has to
11 be a variety of solutions as, you know, as we've been
12 discussing here.

13 MR. AVERY: I think I want to add, this is, I
14 hate to say this, a very complex issue. And even the
15 physical tools that we have that show you a picture of
16 what's happening in a moment, that is just one of many
17 moments that have to be studied. And it's surprising where
18 we usually didn't have to worry about like load spring
19 conditions as being the limited factor on our grid, yet
20 that's one of the biggest problems we have to contend with
21 right at the moment. And so then you have to worry about
22 contingencies. What happens if we lose one line? What
23 happens if we lose one line and a generator? What happens
24 if it's a different generator? What happens if it's two

1 lines? These are all the scenarios, and they're getting
2 extremely more complex as you layer and layer on the
3 different scenarios that the ISO has to do. And they do a
4 yeoman's job of trying to assess what are all the potential
5 contingencies that are real contingencies that have to be
6 planned for.

7 Unfortunately, at this stage there is no one
8 model that can simplify that that I can put on your iPhone.

9 But I'll ask the ISO to look into that.

10 COMMISSIONER PICKER: I'm looking for an Android
11 app.

12 MR. AVERY: That's right.

13 MR. PETTINGILL: And I just wanted to give a
14 quick response here. And I think Jim was headed down the
15 path where it was. There -- I mean, I know for a fact,
16 when we do the LCR studies in the San Francisco Bay Area,
17 for example, our engineers are looking at well over 1,000
18 different contingencies. They're running it through the
19 computer models, as Dana was talking about. But there's at
20 least 1,000 different scenarios that they're trying to
21 study.

22 So I think what you see us do, Michael, is to try
23 to raise it up to a level like the graphic I was using
24 today, and you see it sort of catches on, where we can say

1 there's these load pockets, there's these regions that are
2 important. And I hope you heard me say that the reason we
3 have the load pockets is the transmission system does have
4 some limitations. It's unable to serve all that load and
5 we have to rely on generators in those load pockets.

6 But let me just say this, I'll take up the
7 challenge. I think it's a worthwhile request that we
8 really do need to find ways to, as the professionals here
9 in this energy business, to be able to explain and take up
10 the 1,000 different contingencies to something we all say,
11 what's the problem we're trying to solve?

12 The only thing I would say is I think you're
13 hearing us say that there are also multiple problems we're
14 trying to solve. And ultimately there's one that maybe
15 rises to the top that becomes the binding solution, and
16 that's the one that's derives our outcome. But it looks --
17 at least we ought to be able to explain more clearly what
18 are -- what are those multiple issues that we're trying to
19 balance and ultimately coming up with the -- the solutions
20 that we're proposing.

21 COMMISSIONER PICKER: I don't know that you
22 necessarily have to illustrate every scenario and every
23 contingency.

24 MR. PETTINGILL: Right.

1 COMMISSIONER PICKER: But I do think that there's
2 two conceptual issues that you have to get through to
3 people. And one is that we're not just talking about
4 energy. And two, that for both energy and for -- for other
5 ancillary services there is a topology that -- to the grid
6 that has -- has flows that -- that are similar to the way
7 water will flow from a mountain --

8 MR. PETTINGILL: Yeah.

9 COMMISSIONER PICKER: -- down to the ocean, and -
10 - and that you can't necessarily count on -- on rain
11 falling on one side of the mountain to automatically
12 translate to the other side of the mountain. You have to
13 somehow help people to see that so that they can embrace
14 the solutions that we're offering wholeheartedly because
15 they just see it as a matter of energy.

16 MR. PETTINGILL: Yeah. I think -- I think it's a
17 fair challenge and one that I think we should take on.

18 COMMISSIONER FLORIO: Do pictures like this help?

19 COMMISSIONER PICKER: Not a lot because people
20 don't understand that -- that you can't all of a sudden
21 flow more power the other direction through -- through --
22 you know, for example, the question of how power is
23 actually shaped in the L.A. Basin coming in from -- from
24 Henderson by the presence of the seams from LADWP, what

1 that means. Those kinds of concepts don't necessarily
2 show. Well, people will say, well, yeah, we understand
3 that you -- you have a little bit of problem there, but why
4 can't you just simply take more power from Montana Wind?
5 And seriously, I get this call -- this call, I got it last
6 week. And it's cheaper, you know, and we don't have to --
7 we don't have to build these natural gas peakers.

8 Now, the flip side of it is that we have those
9 same kinds of constraints sometimes in the distribution
10 system. And I am starting to see visualization software
11 there, but it is the same issue, is that it's -- it's
12 designed for power engineers, not for actually this kind of
13 educational tool.

14 So I'm just feeling for what -- for something
15 that we can help people to understand this better, and then
16 be more supportive of the solutions that we're talking
17 about. It's only taken me five years to understand, so --
18 and even then I can not explain VARs to anybody else. I
19 accept it. It's like -- it's like the constraints in
20 relativity, I know it's there but I can't explain it to
21 anybody.

22 COMMISSIONER SCOTT: Oh, Barry, go ahead.

23 MR. WALLERSTEIN: I would like to, as others are,
24 second your suggestion because it would be extremely

1 helpful. Because we get asked all the time, why can't you
2 just import all the power? Why can't it all just be
3 renewable power? And I think a tool would be wonderful.

4 I wanted to note, and it will be part of Mohsen's
5 presentation on the next panel, that our agency remains
6 strongly supportive of developing these contingency
7 measures. I do want to note, however, that we are still
8 hearing from environmental and environmental justice
9 stakeholders a concern that we're just going to immediately
10 go to the contingency and undercut the preferred resources.

11 So the definition of the triggers and the transparency of
12 the process by which the trigger occurs I think is
13 extremely important. And I know there's at least two
14 individuals in the audience today that may get up later and
15 say what I just said or say I said it properly.

16 The second thing, and this is maybe a smaller
17 point, but going to Mike's presentation, his fourth slide
18 on contingency mitigation measures talked about three
19 options being evaluated, and one of them was IOU targeted
20 renewable DG program. My assumption is as the preferred
21 resource programs are occurring the monitoring is
22 occurring. And if you see an ability to enhance any of
23 those preferred resource programs in a way that meets the
24 timelines, location, and so on, that that kind of iterative

1 process will occur that you're not just going to
2 immediately fall back to just to the distributed
3 generation, although it has certain attributes that are
4 desirable. And I would just encourage kind of that
5 articulation.

6 COMMISSIONER SCOTT: Well, thanks to everybody,
7 to our panelists for informative presentations and, again,
8 a good set of thoughtful questions.

9 I just want to remind folks, if you would like to
10 make a comment please be sure you get a blue card. They're
11 up front where the presentations were. And they'll --
12 they'll get those to me.

13 We're just running a little bit behind time, so
14 we're just going to take a short break, probably about five
15 minutes while they transfer out the panels, and we'll get
16 going again.

17 (Off the record at 2:50 p.m.)

18 (On the record at 5:58 p.m.)

19 COMMISSIONER SCOTT: Okay. Welcome back,
20 everybody. We're going to go ahead and get going again.
21 We're going with our Panel Number Three, the Environmental
22 Agency Considerations. And we are joined by Mohsen Nazemi
23 from the South Coast Air Quality Management District, by
24 Tom Weeks from San Diego Air Pollution Control District,

1 Jonathan Bishop from the State Water Resources Control
2 Board, and from Tung Le from the California Air Resources
3 Board. So we will turn it over to Mohsen to kick us off.

4 MR. NAZEMI: Thank you and good afternoon. Thank
5 you and good afternoon, everyone. I'm Mohsen Nazemi, the
6 Executive Officer for Engineering Compliance. I'll try to
7 give you a quick update regarding the status of power
8 generation in South Coast, and start with same chart that
9 Cynthia went over and you're all familiar with.

10 I guess the only point I want to make on this
11 chart is that on the Track 1 PUC approved a minimum of
12 1,000 megawatts of gas-fired generation, with another 200
13 megawatts of any source, potentially V-gas (phonetic)
14 generation. And then in Track 4 another 100 to 300 of
15 additional from any source.

16 So when you look at that the bottom line is that
17 you see in the very last row that up to 1,500 megawatts of
18 generation under the Tracks 1 and 4 that Edison is
19 (inaudible) could be in terms of gas (inaudible).

20 When we look at once-through cooling sites in
21 Southern California, the private producers, there are
22 really only two entities that now own these once-through
23 cooling facilities, AES and NRG. And for AES, they have
24 three -- three facilities, Alamitos, Huntington Beach and

1 Redondo Beach. Just this morning AES informed us that
2 they're going to request CEC to suspend and us to halt any
3 processing of their permit for repowering of the Redondo
4 Beach facility and focus on Alamitos and Huntington Beach,
5 and indicated that's due to the competition for new power
6 generation and potential reuse of this site. Last month I
7 guess AES submitted a petition to City of Redondo Beach
8 requesting to put on the ballot a land use plan that will
9 convert the site to a mixed use 600 homes, 250-room hotel,
10 and 85,000 square foot of commercial. So if that gets
11 voted on in March then we probably would not be processing
12 that permit anymore.

13 In addition, if you look at the total pending
14 projects, we have over 4,000 megawatts. And of the once-
15 through coolings owned by private producers only about
16 1,000 megawatts have been retired so far. The NRG Boilers
17 1 through 3 in El Segundo with 3 still using partially, and
18 then the two Boilers 3 and 4 in Huntington Beach, which
19 were actually originally turned off or shut down in the
20 '90s by Edison and then were reincarnated in the last
21 energy crisis in 2000.

22 In addition to CAISO territory there's always --
23 also LADWP with once-through cooling units, and this is a
24 summary of what's the status of those. And as you can see,

1 the private producers; once-through cooling deadlines was
2 2020, but -- and some 2015. But with the LADWP, they
3 negotiated, retired some of their units much earlier in
4 order to get some extended time to 2024-2029 timeframe.
5 And with the LADWP units we have not received the
6 applications yet for repowering because they are so far
7 into the future. But they are -- there is, again, about
8 1,400 megawatts of applications that are pending our
9 review, and we will be taking action on those.

10 So I guess the big question about permitting of
11 power plants in our regions, South Coast Air Quality
12 Management District, is the offset issue. And I just
13 wanted to give you a quick snapshot of what sources are
14 considered major in our District and what is our offset
15 thresholds. And because of our extreme (inaudible) on non-
16 attainment status our measured source threshold for VOC and
17 NOx is a ten ton, but for us it's -- we have a threshold of
18 four tons for all criteria of pollutants with the exception
19 of carbon monoxide, which we are in attainment with.

20 And then for VM 2.5 (phonetic) we actually
21 implement a federal resource review program. So although
22 we are not at attainment the offset threshold is what the
23 Federal NSR requires, which is 100 tons, same as the
24 definition of the major source. For NOx, almost all of our

1 power plants are in the reclaim which is a Climate Action
2 Plan Cap and Trade Program, so they use RTCs, reclaimed
3 trading credits, instead of VRCs which are emission
4 reduction credits.

5 Under our rules, existing rules, utility boilers
6 are exempt from offset requirements when they repowering
7 with combined cycle or advanced gas turbine. However, we
8 still -- the District still provides those offsets to meet
9 the federal requirement. Last year in September our Board
10 adopted a new rule, 1304.1, which required the sources that
11 use this offset exemption to also pay a mitigation fee.
12 And the mitigation fee would be used in a priority placed
13 on the use of the funds to improve air quality, consistent
14 with our Air Quality Management Plan and in the impacted
15 surrounding communities.

16 The repowering for 1304.1 rule applies to only
17 electric utility boiler at -- at existing power plants and
18 provides offsets and exemptions for, as I mentioned, all of
19 the pollutants with the concept that these sources will
20 probably use these offset exemptions, because if they
21 didn't they would have to go on the open market and obtain
22 their own emission reduction credits, or ERCs, and those
23 are scarce.

24 And for example, if you look at what has happened

1 to the fine particles PM10 ERCs in the decade-and-a-half
2 the supply of ERCs has dropped by almost 60 percent,
3 whereas the price has increased over 2,000 percent. And in
4 fact, the remaining supply of PM10 ERCs is not enough to
5 permit 1,000 megawatt power plant. So you can see that the
6 existing ERC holders, many of them who may need these for
7 their own future expansions are not necessarily even
8 willing to sell these. But the price of PM10 ERCs at some
9 point really exceeded a quarter of a million dollars per
10 pound per day. So it is very, very expensive and
11 unaffordable in some cases, even if they can find it to
12 build a power plant this way.

13 The 1304.1 mitigations' fee were to be used in
14 terms of utilizing preferred resources with energy
15 efficiency, demand response, energy storage, and
16 renewables, but also to meet our Air Quality Management
17 Plan needs. And for example, we need to reduce NOx by 75
18 percent or greater depending on what the ultimate ozone
19 standard would be. And we're looking at further
20 development of near zero- or zero-emission vehicles,
21 charging infrastructures, and other types of facilities.

22 At this time there are also some inquiries about
23 the market being really in the hand of only the existing
24 power plants for repowering. And therefore, if there is

1 new competition there may be even better sites or better
2 prices for electricity. And we looked into that and we
3 have initiated development of a new rule that would also
4 allow new power plants to use our internal offset bank and
5 require a fee, again, to be paid if they were to use our
6 internal (inaudible). Again, this is not a mandatory but
7 it's a voluntary process. And the fees that would be
8 collected if the rule is passed would be used for the same
9 purpose or strategies to meet the Air Quality Management
10 Plan.

11 Again, we'll look at and promote preferred
12 resources under PUC Loading Order, the AB 32 Scoping Plan,
13 and our own Energy Policy. This should better facilitate
14 grid reliability. You heard from almost all speakers today
15 that there is a need there for power generation in South
16 Orange County or North San Diego County to stabilize the
17 grid. And it would also have to be in a manner to assist
18 us in implementation of our attainment strategies. So
19 that's why the mitigation fees become important.

20 And again we will look at the same concept of
21 providing preferred resources low- or zero-emission vehicle
22 charging. And once our Board approves our 1304.1
23 mitigation, the expenditure, which we haven't received any
24 funds yet, we will decide on how to proceed with that.

1 So the bottom line is, okay, so how much power
2 may be needed in Southern California? I showed you a chart
3 that independent producers, over 4,000 megawatts that are
4 pending under CAISO authority, LADWP has about 1,400
5 megawatts pending. And even if you assume that all the
6 1,500 megawatts that PUC has approved under Track 1 and 4
7 are going to be gas-fired generation and they're all going
8 to be in addition to the OTC replacement, you're looking at
9 under 7,000 megawatts.

10 And again, this is just a hypothetical. I don't
11 think you're going to find 7,000 megawatts of new
12 generation in South Coast. But to look at whether or not
13 there are offsets available in our internal bank I just
14 wanted to give you a snapshot. And as you can see, for
15 VOCs there is not significant problem. We have plenty of
16 offsets in our internal bank. NOx typically goes through
17 reclaim programs, so they don't use our internal bank.
18 They maintain RTCs in the program. And for SOX and CO
19 there is not a lot of emissions that need to be offset, but
20 PM10 is really the issue. And as you can see, even if all
21 these 6,900 megawatts were to be using our internal bank,
22 we think there's still enough credits in the bank. But we
23 are pretty sure that they're not all going to be using our
24 internal bank.

1 And that was to kind of cover the question about
2 the offsets.

3 I just want to make one comment about the options
4 that Mike introduced earlier. And in terms of the timing,
5 I think it will really not serve the purpose of expediting
6 licensing or permitting of a power plant if we don't have
7 the specifics about the sites that make the model, the
8 emission levels, because that really is what we need to
9 analyze and CEC needs to analyze. So I think that option
10 may not really help to improve the expediency of the
11 contingency plan.

12 And that concludes my presentation. Thank you.

13 COMMISSIONER SCOTT: Thank you very much. Thank
14 you very much.

15 Our next presentation is from Tom Weeks.
16 Welcome, Tom.

17 MR. WEEKS: Good afternoon, everyone. Once
18 again, my name is Tom Weeks. I'm Chief of the Engineering
19 Division at the San Diego Air Pollution Control District.
20 And my presentation focuses on some of the potential
21 permitting issues that may arise if the contingency issues
22 that -- that Mike discussed are -- are triggered. Of
23 course, offsets are always an issue for permitting of
24 conventional gas-fired resources.

1 So I wanted to give a brief overview of what
2 District offset requirements are. They're contained in a
3 District Rule 20.3. That rule specifies that offsets are
4 required prior to issuance of an authority to construct for
5 a new major source or major modification. In practice that
6 means that applicants must demonstrate that they have
7 rights or options to sufficient ERCs prior to issuance of
8 the authority to construct.

9 In our District major sources are 50 tons per
10 year or more of all organic compounds or nitrogen oxides.
11 And the District only requires major source offsets. We
12 don't have any state or District offsets, so that somewhat
13 reduces the demand for offsets in our District. And there
14 have been sufficient offsets available recently to -- to
15 support
16 the -- the allow construction of the two projects that we
17 discussed today, Pio Pico and -- and we think Carlsbad,
18 also.

19 This slide shows current ERC balances and recent
20 transaction costs. There are 242 tons of nitrogen oxide --
21 oxides of nitrogen, and 279 tons of (inaudible) organic
22 compounds available. These are in tons per year, expressed
23 in tons per year. And also we give some of the recent
24 transaction costs there. The Pio Pico offsets have been

1 subtracted from those totals; the Carlsbad facility offsets
2 have not. And I would note that a fairly high percentage
3 of these offsets are owned by either the military or
4 utilities. About 24 percent of the NOx are owned by the
5 military, and about 42 percent are -- are currently owned
6 by utilities. Okay.

7 One issue that we anticipate with the alternative
8 generation design approaches that have been discussed today
9 is that the authority to construct main need to be issued
10 for an extended period pending triggering of a project.
11 Rule -- our District Rule 17 states that authority to
12 construct are issued for a one-year period unless the Air
13 Pollution Control Officer determines that additional time
14 is required for completion of the project, or if our Board
15 authorizes issuance for a longer period. And there's a
16 five-year limit on authority to construct, so that pretty
17 much means that those permits can't sit on the shelf for
18 too long.

19 Also, authority to construct must be valid
20 throughout the construction process. And because projects
21 need to comply with all the applicable requirements at the
22 time that the permit to operate is issued we anticipate
23 that some type of review would be necessary when a project
24 is triggered.

1 In other words, if we issue an authority to
2 construct, that authority to construct sits on the shelf
3 for some period of time, we would need to go back and make
4 sure that project still is in compliance with our rules and
5 that primarily it would apply to things like BACT, best
6 available control technology, health-risk assessment
7 requirements, perhaps AQIA. Those are things that can
8 change over time. And so we -- we'd have to be assured
9 that before that permit is exercised that the project is
10 still in compliance with our rules.

11 Another possible issue is the requirement to meet
12 emission offset requirements in the case of a once-through
13 cooling deferment, and this would potentially be an issue
14 with the Encina facility. If the Encina facility shutdown
15 is used to net out or partially net our emission increases
16 from the Carlsbad Project, subsequent concurrent operations
17 of both of those facilities would invalidate the Carlsbad
18 Project permit because the offset assumptions would no
19 longer be valid.

20 And so as I have previously stated, District
21 Rules require the ERCs to be provided prior to issuance of
22 an authority to construct. So the District is -- is open
23 to options on this. We're hoping this isn't -- isn't an
24 issue. We think that if the concurrent operation is

1 necessary just during commissioning and startup and that's
2 potentially something that we can handle through permit
3 limits. But if it extends beyond that permit then offsets
4 are going to potentially be an issue. And, you know, we're
5 open to options, but whatever we do is going to have to
6 comply
7 with -- with District rules and is going to have to pass
8 EPA muster.

9 And the last issue is PSD permitting. The
10 District currently doesn't have PSD delegation. We expect
11 that to change in the not too distant future. If PSD
12 permitting is required before the District has delegation,
13 then a site-specific delegation agreement is an option, but
14 District Board action may be required in order to implement
15 that.

16 And so in closing I would just say that the
17 contingency measures do raise some potentially significant
18 permitting issues. And those issues certainly don't seem
19 insurmountable, but it will take a cooperative effort by
20 the stakeholders to address. And I would just say that our
21 District is committed to facilitating the process to the
22 extent that is allowed by our -- our rules. Thank you.

23 COMMISSIONER SCOTT: Thank you very much.

24 We will now here from Jonathan Bishop. Welcome

1 again, Jonathan.

2 MR. BISHOP: And I don't have a PowerPoint. So -
3 - so I think we've looked at PowerPoints long enough today.
4 So I thought I'd just let you close your eyes and wander
5 around in your mind while I talk.

6 As you heard today, one of the contingencies is
7 the idea of getting a delay in a specific power plant for
8 the OTC requirements. And so what I want to talk about, a
9 little bit about is, you know, what does that mean and how
10 would that happen, and is that really a possibility?

11 No problem. You go do what you need to do.

12 I think -- I know, actually, since I wrote it
13 that the OTC policy contemplated that there might be issues
14 related to grid reliability. And that recognized that the
15 plants are interconnected, and that's not something that we
16 as a regulatory agency are very good at dealing with. And
17 so we tried to -- to that end we tried to set up mechanisms
18 in the policy to allow for adjustments in the schedules
19 to -- to address the issue of grid reliability, primarily.

20 And there is a short-term and long-term approach.

21 The short-term approach is not likely to be
22 useful for this issue, but it is less than 90-day extension
23 to any of the compliance dates with essentially a request
24 from the CAISO with concurrence of the Energy Commission

1 and the PUC.

2 For longer than 90 days the -- the policy
3 contemplates that the Board would give the energy agencies,
4 and CAISO in particular, deference. It doesn't say that
5 they're just going to agree to anything, but that they
6 would give -- that they would listen very carefully to what
7 they had to say. And then -- the SACCWIS, the stateside --
8 I can't even remember what it means anymore, but it is --
9 it gives the energy agencies and the other permitting
10 agencies the ability to advise the State Board on grid
11 reliability issues. They meet annually and propose
12 recommendations. The -- that mechanism could be used for
13 this for an extension.

14 But for the extension to be successful I think
15 there are some things to consider. The need for an
16 extension needs to be -- needs to be compelling. As we
17 looked up earlier you saw that the LADWP got some time
18 extensions on some of their plants and some of the units in
19 their plants. They got that because they made a compelling
20 argument that it was needed for addressing other issues
21 related to their infrastructure in terms of transmission,
22 in terms of reducing their reliance on coal-fired plants
23 and -- and pulling in more of their preferred resources for
24 their -- to have all that happen they needed to be able to

1 do it in an orderly fashion. And then in addition they
2 competed to being off of once-through cooling totally at
3 the end, which also was an important factor. And they
4 phased in some of their removal of some of their units for
5 -- so they did essentially some trade-offs, and they gave
6 (inaudible).

7 And so my suggestion is that as we consider the
8 contingencies we consider, you know, what is the story,
9 what's the compelling story for the Board to understand.
10 And so why is it needed? Well, you know, is there -- what
11 is the back piece of the contingency that's been tripped?
12 How long will it take? And I suggest the shorter the -- as
13 possible would make the most compelling reason to the
14 Board. What's the end game? How are we going to -- is
15 this going to be -- well, we really don't quite know how
16 we're going to get there so we'll ask for a few more years
17 to figure it out, or do we have a plan to how to get to --
18 so that that can be moved on. I think that what we saw
19 earlier is that that's not where we are. We've got a
20 pretty good idea of what we need. That might mean a year
21 or two additional time. Those are -- those are much easier
22 for the staff to recommend and for the Board to accept.

23 And will it lead to -- to elimination of once-
24 through cooling? The -- the Board has been, in the past,

1 pretty clear that they -- they're willing to make
2 adjustments to schedule, but they don't want an adjustment
3 to the schedule to -- to lead to the minimal compliance of
4 maybe a Track 2 where we're putting in screens and things
5 of that nature to try and reduce the impact, but that they
6 want to get away from the cooling -- the once-through
7 cooling totally at the end of that.

8 There are some issues to consider. One is that
9 any -- any extension that goes beyond December 31st, 2022
10 requires additional mitigation activities, things -- it
11 essentially requires evaluation of putting screens on
12 during that -- the extension period. Not probably a very
13 cost-effective measure if you're talking about a few months
14 or a few years beyond 2022. So that's a limit that should
15 be very carefully looked at. Do you need -- does the plant
16 really need to go beyond that December 31st, 2022 because
17 of the additional requirements that kicked in there?

18 Then I wanted to switch for a minute to think
19 about timing on what this would take and lay out some of
20 the pieces in that puzzle. Because as I mentioned,
21 anything beyond a 90-day would require us to take an
22 amendment to the policy to the Board, and so that requires
23 some preparation to get it there. Once the State Board
24 staff received a request for extension they would need some

1 time to put together a staff report and a proposal.
2 Depending on how -- how detailed that request is that time
3 gets shorter, but I can't give you exactly how long but
4 it's probably at least a month and maybe a little longer.

5 Then we need to public notice it. That's going
6 to be a minimum of 45 days. We've got to respond to
7 comments. That's usually about another month. We have to
8 have a public hearing before the Board. Likely, we have to
9 have a hearing and then an adoption meeting so that there
10 is an opportunity for enough public input. Once the Board,
11 assuming they approve it, approves it, it has to go to the
12 Office of Administrative Law for -- and that's a maximum of
13 20 working days.

14 So we're -- add all that up, we're talking about
15 a minimum of about six months to get this through the
16 process. It could likely -- it could be done in an
17 emergency in a shorter period of time, but that's really a
18 pretty -- pretty short timeframe. And that doesn't leave
19 any opportunity for a mistake or a problem or an issue.
20 And so my suggestion, which I will get to in a second,
21 would be we give ourselves a little bit more time than
22 that.

23 And I have just kind of a short bullet list of a
24 suggested approach. If we need to do an extension to do an

1 extension to -- to a plant, I think the first thing is we'd
2 want to ID the -- be ready to identify the plant and the
3 unit that needs to be done and the need very clearly. We
4 need to work with the interagency working group of folks
5 from all the energy agencies and the permitting agencies
6 to -- to develop that request to make sure that all of
7 their concerns are addressed early in that process.

8 I would suggest that they then ask the SACCWIS to
9 be their -- move it forward with their regular scheduled
10 meeting or have a special meeting. There's no reason why
11 they couldn't have a special meeting to -- to bring forward
12 their request. And keep in mind that -- and then submit it
13 a minimum of a year ahead of the deadline that you need
14 to -- to get so that whatever issues come up, and there
15 always seem to be issues, they can be addressed without
16 bumping up to those deadlines.

17 And I just would remind that this has been a very
18 important and a major policy issue for the Board. There
19 are a lot of stakeholders that have a lot of interest in
20 this. There will be a lot of scrutiny and a lot of concern
21 about any extensions made. And so we just want to make
22 sure that we're all working together on getting it done.
23 And that's all I have. Thank you.

24 COMMISSIONER SCOTT: Thank you very much,

1 Jonathan. Our next presentation will be over the WebEx,
2 and that is Tung Le from California Air Resources Board.
3 Welcome, Tung.

4 MR. LE: Hi. Thank you. First, I'd like to
5 apologize for not being able to attend in person. I had a
6 little difficulty getting to the airport this morning so I
7 missed my flight. But thank you very much for the
8 flexibility that you've provided here in giving me the
9 opportunity to go ahead and, you know, still talk to the
10 group about what -- some of the things we've been working
11 on with the EPA's latest proposal. So with that I'm going
12 to go ahead and get into the -- into the presentation.

13 Go ahead and go to the next slide please. All
14 right, just to give you a little bit of context about where
15 EPA Power Plant Rules fit, they're part of a larger Climate
16 Action Plan that President Obama unveiled back in June of
17 last year. Within the Climate Action Plan it really
18 addressed greenhouse gas emissions from several different
19 areas in -- in the national economy. Transportation was an
20 area that -- that the Climate Action Plan addresses. It
21 also looked at industrial sources. It looks at mines. It
22 looks at landfills. There's quite a myriad of different
23 measures that are in the Climate Action Plan. And one of
24 the areas that the Climate Action Plan also proposes on is

1 energy, specifically speaking, power plants.

2 Next slide please. In the Climate Action Plan
3 it's -- it's a multi-pronged approach to energy. So it's
4 sort of a breakdown of -- of how the Action Plan is going
5 to address emissions from -- from energy. First it looks
6 to, you know, make it easier to permit renewable energy
7 resources on public lands. It also looks at making it
8 easier to upgrade transmission and infrastructure. There
9 are, you know, national sort of approval processes that
10 have to be done on public lands in order for these projects
11 to be implemented. And so the action plan asks for the
12 agencies who oversee those to -- to come up with processes
13 that are streamlined to make the process a little easier.

14 And finally what we're talking about today is
15 that the Action Plan directs the United States
16 Environmental Protection Agency, or EPA, to -- to
17 promulgate power plant rules that address both future power
18 plants and new power plants, and also addresses the
19 emissions from existing power plants, as we're going to
20 talk about the new power plants first.

21 Next slide please. So the new Power Plant Rule
22 is being called 111(b) which is in reference to the section
23 out of the Federal Clean Air Act that gives EPA the
24 authority

1 to -- to regulate new power plants. It is something that
2 those of us who are in the air quality world are -- are
3 pretty familiar with. It is more traditional in that it
4 looks much like a new source performance standard in the
5 traditional sort of control rule that sets forth emissions
6 performance standards, and it requires subject sources to,
7 you know, come up with ways to meet those standards.

8 So the 111(b) Rule was proposed in September
9 2013. But it wasn't published into the Federal Register
10 until January of this year, which is why the applicability
11 date

12 is for units built and operated after January 8th of 2014.

13 It -- the -- the rule sets up applicability based on the
14 size of the electric generating units, or EGUs, and on the
15 type of fuel. So the -- the 111(b) Rule delineates between
16 coal and natural gas-fired power plants, essentially. You
17 know, it's a little bit more complicated than that, but
18 that's essentially what it breaks down into.

19 So for California, since most of our fleet, going
20 to the future we, you know -- fossil-fired (inaudible)
21 going into the future expect to be natural gas-fired units.

22 We -- we concentrated on -- on looking at the proposal for
23 those. And the rule sets -- you know, proposes two -- two
24 different emission limits based on size. For units that

1 are larger than 850 million EGUs per hour, what we like to
2 call big units, they propose a standard of 1,000 pounds of
3 CO2 per megawatt hour. And for units that are equal to or
4 less than 850 they're proposing a standard of 1,100. And
5 for electric generating units that have low capacity
6 factors or less than 33 percent they're saying those units
7 would not be subject to the 111(b) Rule. They are
8 proposing to exempt those units.

9 Next slide please. So we worked with the Energy
10 Commission staff and with PUC staff in examining EPA's
11 proposal. And we saw that, you know, we -- we came to the
12 conclusion that EPA really hadn't addressed how EGUs were
13 being used, especially in California where we're
14 continually integrating additional amounts of renewables.
15 And the -- the integration of renewables is something that
16 we are seeing more of and that EPA and the other states
17 really hadn't considered because they're not as far -- you
18 know, what we're concluding is that they're not as far
19 along as we are in bringing renewables online and into our
20 mix. And so they're not seeing the same sorts of issues
21 that -- that we're seeing in integrating renewables. Units
22 -- fossil-fired units that are used to integrate renewables
23 are required to, you know, ramp up and down very quickly.
24 They are required to fast start. And -- and operating in

1 those various types of modes causes their efficiencies to
2 drop, and therefore the emissions might not be as favorable
3 as, you know, what we might see out of a base-loaded unit
4 that would be running at one speed all day long.

5 And so (inaudible) EPA basically said, hey, you
6 know, you need to look at what California is doing as far
7 as our renewable integration needs. You need to look
8 beyond just big, little and not subject units and you need
9 to see how these -- how these units are being operated,
10 what
11 their -- what their -- what their intended usage is. You
12 need to recognize that, you know, that -- that (inaudible)
13 future power plants are going to be used in different ways
14 than they were traditionally because of the renewable
15 integration. California is starting to see a lot of this.

16 And you know, we suspect that as the rest of the nation
17 catches up to where we are in integrating renewables
18 they're going to start seeing some of these thing as well.

19 So we continue to work with the EPA on -- on
20 those comments. We -- we did -- we have been, you know,
21 following up with them, and they've been very receptive and
22 open to going ahead and exploring this issue further. So
23 it's -- it's something that we're continuing to work with
24 them on

1 to -- to provide them data and provide them, you know, the
2 basis for going ahead and -- and, you know, looking at how,
3 you know, units might operate to answer the renewable
4 integration question.

5 Next slide please. All right, so for the
6 existing power plants the -- the rule is being called
7 111(d) for those of us working with it. And again, that's
8 in reference to that -- the section out of the Clean Air
9 Act that it comes from. The -- the 111(d) Rule is not
10 quite as traditional as, you know, what we have seen in the
11 past as far as Federal Rules relating to industrial sources
12 like power plants.

13 What the 111(d) Rule does is that it proposes to
14 look at a state's electrical grid as a whole, meaning that
15 it would take into account all of the existing fossil-fired
16 generations' emissions and compare that to all of the
17 generation that is part of a state's electric grid. So it
18 takes into account renewables. It takes into account
19 avoided energy generation due to energy efficiency
20 programs. And so it -- it compares those two numbers
21 together and it comes up with a rate-based standard that is
22 much lower than any individual EGU could come up with or --
23 or be able to meet on its own. And it's because they're
24 taking this holistic look at the grid.

1 Next slide please. So in -- so -- so as part of
2 that holistic look what -- what EPA did in putting
3 performance targets for each individual state together it
4 took four general measures, and those four measures are
5 called building blocks within the rule. So these four
6 building blocks, I'm going to cover them real quick.

7 The first building block is to make existing
8 coal-fired units more efficient. They assume that there's
9 a six percent additional efficiency that could be gained
10 for -- for existing coal units. There were some analyses
11 that EPA did based on existing data and they -- they
12 concluded that a six percent efficiency gain for coal units
13 was something that could be achievable by all states.

14 In the second building block -- well, first of
15 all, so this -- so this first building block didn't result
16 in much of a reduction for California because, as you know,
17 we have very little coal generation within the state.

18 So the second building block again is sort of a
19 coal-based sort of a standard. And it -- and it asked the
20 states to use lower emitting (inaudible). And what that
21 means is that if there is underutilized gas resources
22 within a state that building block looks to see how
23 emissions might change by having those underutilized gas
24 plants be relied upon to generate before coal-fired units

1 would be brought online. And so then that would result in
2 a certain amount of emissions reductions because the carbon
3 intensity from the natural gas units is less than coal.

4 So again, for California that didn't result in
5 much of a reduction. It resulted in some, according to
6 EPA's calculation methodology, but it didn't result in a
7 very large compliance burden for California.

8 In the third building block they looked at
9 renewable energy resources within a region. So for -- for
10 us they looked at the western region to see what RPS, or
11 renewal portfolio standard, requirements were in place at
12 the time. And they did a regional sort of average as far
13 as an RPS percentage requirement and applied that in the
14 third building block.

15 Because they did this sort of on a regional basis
16 California's RPS was a little bit undervalued -- well,
17 actually, significantly undervalued. And then so a large -
18 - a large part of our compliance burden actually comes from
19 this third building block because we do have a lot of, you
20 know, renewables on the ground. But again, they -- they
21 didn't fully look at their renewables potential, and they
22 didn't even really take into account the 33 percent RPS
23 that we had because of the regional look that they did as
24 part of the analysis.

1 So finally on the building block they looked
2 to see nationally what could be done as far as increasing
3 energy efficiency. There was an analysis that was done
4 there to see what was the energy efficiency potential,
5 again nationally. And for California that resulted in some
6 interim annual targets for energy efficiency starting in
7 2015, leading up to 2020. And then in 2020 starting with -
8 - at a one-and-a-half percent annual energy efficiency
9 increase every year from 2020 through 2030.

10 So those -- so those were the four measures
11 or building blocks that EPA used. And again, you know, I
12 just -- I want to emphasize that this is -- that these four
13 building blocks is just to have EPA set the targets for
14 each state, including California. We don't have a
15 particular compliance, actual compliance burden within each
16 one.

17 So you know, we have the flexibility to comply
18 with the eventual target that has been set up by using any
19 combination of measures that we have. It doesn't
20 necessarily have to be even out of one of the building
21 blocks. So if those -- or what EPA's case is -- is if a
22 target has been overestimated in one building block then it
23 could be made up for in another building block or in
24 another measure altogether. They're giving the states a

1 lot of flexibility in how we are going to comply with our
2 targets.

3 And so the next slide please. So for -- for
4 California, EPA proposed a target of 537,000 pounds of cod
5 per megawatt hour by 2030. And they based that off of a
6 2012 baseline of 698. We have done some preliminary
7 analysis, we meaning staff at the Air Resources Board
8 working with the Energy Commission staff and -- and PUC
9 staff, have started looking at sort of two areas of work
10 really. One is we've been analyzing EPA's proposal, how
11 they set up the targets, were the assumptions that they
12 used correct, you know, what type of data did they use. So
13 that's one area of -- of work that we've been looking at,
14 and that's going to help inform our comments back to EPA.

15 Another area of work that we've been doing is,
16 well, you know, how -- taking into account California's
17 policies, taking into account California's regulations such
18 as our loading order requirement, AB 32, you know, the
19 Scoping Plan of AB 32, take into account all those things,
20 how does -- how does California's emissions profile look
21 compared to the proposed target?

22 So we've done pretty, you know, reasonable --
23 well, I shouldn't say reasonable, they're actually pretty
24 conservative assumptions. We -- we assumed, for instance,

1 that we would reach a 33 percent RPS in 2020 and it
2 wouldn't increase anymore. So the 33 percent RPS would
3 stay flat at 2020. We also assumed that in 2020 the Cap
4 and Trade Program, the cap wouldn't decrease anymore, that
5 the cap would stay flat from 2020 through 2030. You know,
6 and so those are two larger sort of conservative
7 assumptions that we made. And even taking those into
8 account it -- it -- well, the data that we're showing is
9 that California will meet the target that -- that EPA is
10 proposing for us.

11 So this -- this actually gets to one of the
12 questions that was provided, and question six is that, you
13 know, how does -- how does federal -- how do these Federal
14 Rules -- or how are they going to affect California's
15 programs? And I think, you know, what we're seeing so far
16 is that California's policies, California's regulations in
17 both energy and air quality are going to continue to drive
18 California's policy and regulations in those areas. And we
19 don't anticipate that the Federal Rule will have a
20 significant effect on what it is that we're doing.

21 So next slide please. So I'll talk about a
22 little -- a little bit about the rule-making schedule. The
23 EPA must finalize the (b) Rules, B as in boy, for the new
24 plants prior to or concurrently with the existing rules.

1 The reason for that is because the 111(b) rule is an
2 extended authority for EPA to regulate the 111(d) rules.
3 So the two actually go hand in hand. And the (b) Rules
4 actually must precede the (d) Rules. So you know, whether
5 they submit those to the Federal Register concurrently or
6 one, you know, right after the other, I don't -- I don't
7 think it matters too much just as long as those standards
8 are being promulgated with the (b) standards cemented in.

9 So we anticipate those -- that the two rules will
10 go final in June of 2015. In the 111(d) rule there is a
11 compliance plan that the states have to put together to
12 show how they're going to comply with the targets. Again,
13 because EPA is allowing this flexibility we have to, you
14 know, show EPA exactly what programs it is that we're going
15 to be relying again to get emission reductions, what sorts
16 of measures, things like that. And so we're going to be
17 putting that into a plan, and those are to do budgeting in
18 2016.

19 Again, going with the flexibility theme, the
20 proposal allows states to work together. California
21 imports, you know, a good part of its power from other
22 western states. And so there might be some opportunities
23 for us to collaborate with our -- with our neighbors on
24 putting together a multi-state plan. And, you know, and in

1 doing so it would allow all the states to comply with their
2 targets. So if we choose to go that way then we'll have
3 until June 2018 to submit a plan, if we -- if we do any
4 work with our neighbors on that.

5 And so we've been talking with Washington and
6 Oregon with -- with our Pacific Coast collaborative
7 partners, as well as other western states like Arizona,
8 Nevada, Utah, you know, states that we import power from to
9 see if, you know, there are some opportunities there for us
10 to collaborate with them.

11 Next slide please. So some of the next steps
12 that we're looking at, on June -- not June -- on September
13 9th we are going to be having a workshop here at the Cal
14 EPA building. And it will be a joint workshop between ARB,
15 the Energy Commission, and the PUC staff to sort of, you
16 know, present to stakeholders the work that we've done so
17 far, some of our preliminary analysis. We're going to be
18 providing some -- some of the numbers as we see them. And
19 we're going to be identifying some issues, as well,
20 particularly some issues such as -- because EPA drew, you
21 know, arbitrary -- not arbitrary, but they said, you know,
22 we're only looking at the resources within each state's
23 borders, how are we going to account for power that is
24 traded between states? You know, who gets proper crediting

1 for those? You know, for instance, if there are energy
2 efficiency programs that California ratepayers are paying
3 for but those are actually being realized in a power plant
4 that is being operated in say Arizona, then who gets to
5 take credit for that?

6 You know, so those are some of the issues that
7 we're going to be talking about at the workshop. And we're
8 going to be getting some input from the stakeholders on
9 that, as well.

10 We're going to continue to look at EPA's
11 proposal. We're going to prepare some joint comments. The
12 comment due date is October 16th. So that, you know, is --
13 we've got a little bit of time, but that's actually coming
14 up on us real quick here. You know, we're going to
15 continue to work with the energy agencies to make sure that
16 we understand what -- what some of the potential issues are
17 so that we can provide some good informed comments.

18 And we continue to have conversations with our
19 western neighbors in how we might be able to collaborate on
20 putting together a compliance plan. So those -- those
21 conversations are nascent right now. They're developing.
22 Some of the western states have shown, you know, a pretty
23 good healthy interest. And some are just, you know,
24 showing possibly an interest in collaborating. I think a

1 lot of the work that they're doing right now is just trying
2 to figure out what the rule means to them, as well, you
3 know, pretty similar to what we're doing. And I think once
4 some of those answers are found then some of these, you
5 know, collaboration questions might be easier to answer as
6 well.

7 So that was my presentation. Thanks.

8 COMMISSIONER SCOTT: Great. Thank you very much,
9 Tung.

10 I would like to now turn to the dais and see if
11 we have any questions for the panelists?

12 CHAIR WEISENMILLER: I've got a couple for
13 Jonathan. Anyway, the first question was just for
14 perspective. Could you compare the -- the amount of once-
15 through cooling water used by the plants in the L.A. Basin
16 versus say San Onofre or Diablo?

17 MR. BISHOP: So that's a really hard question
18 because the -- the fossil fuel plants are not base-load
19 plants for the most part, and so that changes on a -- on a
20 pretty regular basis. I could have my staff go back and
21 look for the year, but my recollection was that -- that
22 they are running at about a 15 percent capacity factor.
23 And -- and so I just don't remember now how many gallons
24 that equates to.

1 CHAIR WEISENMILLER: Okay. That's fine. My
2 other question is from time to time some of my colleagues
3 in other agencies will look at say the LADWP option and the
4 -- the Edison -- Edison one and say, well, wait a minute,
5 why can't we get the same deferral for those plants as
6 LADWP got for its plants? And I thought I would at least,
7 you know, ask you if you have any comments on that notion?

8 MR. BISHOP: Sure. Well, I don't think it was
9 suddenly a tradeoff on, you know, oh, the -- one group of
10 plants got a better deal than the other. They were -- they
11 were in a totally different situation than the individual
12 plants, the fossil plants that were -- that are under the
13 CAISO's jurisdiction. But what they did is they made the
14 compelling argument to the Board that they were willing to
15 do whatever they could right up front if they would allow
16 them to do some of the other issues that the -- that were
17 important to the state, going to more renewables, upgrading
18 their transmission, and getting -- getting rid of their
19 reliance on coal. Those were all things that resonated
20 with the Board. And so they felt like they give some on
21 the timing for the once-through cooling.

22 They also eliminated their biggest units first.
23 So their -- their -- the units that were pulling in the
24 most water, as best they could they eliminated those first.

1
2 MS. NICHOLS: I just wanted to add a little bit
3 to Tung's very comprehensive presentation, just to say
4 that, as it may be obvious, we don't think that the EPA
5 rules have an immediate effect in California, other than to
6 make us do a plan, which we will have to do.

7 However, we do see them as potentially an
8 opportunity because California's electricity mix is much
9 cleaner than some of the states in our region. And because
10 we're a big importer of electricity it does create some
11 interest and some incentive on the part of other states to
12 want to work with us. And we're seeing a lot of -- and in
13 addition to just in a general sense that if people are
14 going to have to do something, and some states are hedging
15 their bets on litigating, also, but that if they think
16 about complying they think about the possibilities of doing
17 something market based and regional.

18 And while at the end of the day that could mean
19 that Californians would end up, in some sense, subsidizing
20 these other states, because we will have already taken
21 action in the past for our own reasons, we've done that
22 for, I think, good sound reasons of our own. And it's very
23 much to our advantage to see other states clean up their
24 generation and get in -- get into the game, so to speak.

1 So it's a very -- it's an interesting dynamic.
2 And overall I think it's very positive, in addition to the
3 fact that we support what the president is trying to do, of
4 course. But just in terms of the method it turns out, I
5 think, to be something that's thoughtful and designed in a
6 way that actually does more than you might think at first
7 glance to -- to push everybody forward in the direction
8 of -- of reducing their overall carbon footprint.

9 CHAIR WEISENMILLER: No, that's -- that's very
10 good. I mean, most people have noticed how you and I are
11 very much in tandem on these issues. And I would say I
12 thought it was a very good Staff presentation, sort of
13 looking at really hitting the key points.

14 MS. NICHOLS: Yeah.

15 CHAIR WEISENMILLER: And as you said, certainly
16 this provides an opportunity. You know, and that's why
17 we've had a lot of synergies over time of loads and
18 resources, and it provided regional benefits. And we get
19 about 25 percent of our power from out of state.
20 Certainly, some of the accounting issues for EPA in terms
21 of where coal is or where renewables are, are complicated.
22 But, you know, we would really, A, the Board have been
23 very strong supporters of this proposal for the state, and
24 B, and so I think it's a pretty safe assumption the

1 comments (inaudible) would be very strong support of these.
2 And we're certainly reaching out to the rest of the states
3 in the West on ways to work together on this.

4 COMMISSIONER SCOTT: Okay.

5 COMMISSIONER FLORIO: I would just like to thank
6 all the presenting agencies for the -- the cooperation,
7 flexibility that you've shown. I mean, we've -- we've got
8 a big problem here. I think back three or four years ago
9 it looked to me like a Gordian Knot that we were going to
10 have a hard time cutting through. And I think by all this
11 good cooperative work we -- we see a path to -- to success,
12 and that's -- that's really due to everyone here
13 participating. And I just want to say on behalf of the PUC,
14 we truly appreciate that.

15 COMMISSIONER SCOTT: All right. I would also
16 like to -- to echo that thanks, and say thank you to our
17 panelists for their very informative presentations.

18 We are now going to transition into the -- the
19 public comment portion of the workshop.

20 Do either of you have any announcements to make
21 before I start?

22 MS. NICHOLS: No.

23 COMMISSIONER SCOTT: Okay. We have -- we're
24 going to start on the phone with Michael Hadley from

1 Assembly Member Rocky Chavez's Office.

2 MR. HADLEY: Hi. Can you hear me?

3 COMMISSIONER SCOTT: Yes.

4 MR. HADLEY: Great. Thank you so much,
5 Commissioners, for having me here today. Assembly Member
6 Chavez is currently in floor session in Sacramento, but he
7 has advised me to read a few things into the record on this
8 important issue.

9 As the elected representative of the 76th
10 Assembly District I would like to speak in support of the
11 Carlsbad Energy Center and its benefit to the region and
12 the coastline as a whole. With the retirement of the San
13 Onofre Nuclear Generating Station, San Diego Gas and
14 Electric was required by the California Public Utilities
15 Commission to make up 800 megawatts of power to continue to
16 meet the needs and demands of this region. The Carlsbad
17 Energy Center could cover a little over three-fourths of
18 that need.

19
20 This agreement would also start the removal of
21 the Encina Power Station and the four hundred foot stack
22 that goes with it. This preemptive space on the coastline
23 is a huge win for coastal access and property values for
24 that area.

1 Lastly, I would like to applaud the City of
2 Carlsbad, San Diego Gas and Electric, and NRG Energy for
3 working together and coming to a compromise that makes
4 sense for all parties involved.

5 I would like to close in reminding concerned
6 citizens that the alternative to this agreement would have
7 large negative effects to the regions capacity for energy
8 and improvement to the coastline of Carlsbad. This
9 collaborative effort is the right thing to do and has my
10 full support.

11 Thank you.

12 COMMISSIONER SCOTT: Thank you. Okay. So we've
13 got the -- for here in the room the -- the microphone is
14 right there in the aisle way. And our next commenter is
15 Sarah Matsumoto from the Sierra Club.

16 UNIDENTIFIED FEMALE: Can we pass? She's out in
17 the out in the hallway. She'll be in shortly.

18 COMMISSIONER SCOTT: Oh, she's coming back?
19 Okay.

20 Next I have Jan Smutney-Jones from Independent
21 Energy Producers.

22 MR. SMUTNY-JONES: Thank you very much. I'm Jan
23 Smutny-Jones at the Independent Energy Producers, and we
24 represent utility-scale renewable providers, as well as the

1 natural gas providers that are responsible for the
2 reliability here.

3 I used to worry a lot about this topic because we
4 had seven different agencies that were, you know, following
5 what they were supposed to be doing, and there -- there
6 didn't seem to be a whole lot of connective tissue. That
7 has changed significantly, much for the better. And I
8 think -- I think you're all following whatever your
9 individual requirements are of your agencies, but you're
10 doing a very good job of working together.

11 Over the last ten years my members have added a
12 significant amount of new renewables with respect to large-
13 scale wind and large-scale solar. I think Terra-Gen has
14 built the largest wind plant in the United States here.
15 And I've got other members that quarrel every other month
16 about who has the most solar. But the point is that it's -
17 - it's a very competitive process and it's been working
18 pretty well.

19 We've also invested heavily in modernizing the
20 existing gas facilities and replacing those, and storage as
21 well. Ironically enough, AES brought some batteries to
22 California several years back and they sat there for two
23 years because no one knew what to do with them. So my
24 members were actually doing storage before it became

1 something that was the in thing to do.

2 The good news is there's a lot -- a lot of work
3 done with respect of trying to use those with the
4 integration of other resources elsewhere. But it's
5 important to remember that storage basically is a
6 facilitator. It's moving energy from one time period to
7 another. It in and of itself is not generating
8 electricity, and so often times that gets lost.

9 Bringing us back to the -- today's discussion
10 about reliability and the -- the OTC, we've -- we've bet
11 heavily on energy efficiency, DG and storage. The
12 modernization of the -- the existing fleet took -- has
13 already been taking place. We had one -- the first tranche
14 with Sentinel out in Riverside County and the Edison
15 Emission Plant (phonetic), and the El Segundo unit. We've
16 learned several things. One is these were geographically
17 disbursed, they were different technologies, and it took a
18 really long time.

19 And so going forward, these options that were put
20 out there, we basically believe that people should be
21 telling the generation community where you want things as
22 soon as you can so things can actually be sited. I don't
23 know how you site a generic resource. I don't know what
24 that means under CEQA. I don't know how you go to the Air

1 Board and say I need X amount of credits for something that
2 doesn't exist. So I think our preference would be that.

3 I do want to sort of close with the -- while the
4 rest of the nation is -- is moving from coal to gas, gas
5 has become the new coal in California. And there are
6 people very aggressively attacking gas plants here.
7 Basically, it's a transition technology. It's an important
8 part of an insurance policy that if these other resources
9 that we've bet heavily into in terms of DG and everything
10 else we have (inaudible) don't show up, you've got
11 something to keep the lights on. I (inaudible) advocated
12 on behalf of solar in 1980. We have made great progress.
13 I don't think anybody had any idea we'd be where we are
14 today. However, the quickest way to get the California
15 community to go south on preferred resources and solar is
16 to have protracted, you know, outages. The job of you
17 folks, to keep the lights on (inaudible).

18 CHAIR WEISENMILLER: Mr. Smutny, I just have a
19 question for you. It could have been either you or Mike,
20 and Mike may ultimately be the submitted record -- oh, he's
21 gone. A few years ago basically the practice of many
22 merchant generators, and Calpine was at least a classic
23 one, was to follow the Energy Commission projects and, you
24 know, with offsets, with interconnection, the whole nine

1 yards, and then hope eventually they were going to get EPA
2 out of it. And you know, we -- we at the Energy Commission
3 have permitted, I'm going to guess 10,000 megawatts of
4 projects which never got built --

5 MR. SMUTNY-JONES: Yes.

6 CHAIR WEISENMILLER: -- in that post-2000 period.

7 And so part of the question is trying to
8 understand, given the current dynamic, whether any of your
9 members as we deal with the contingency stuff are just
10 going to march in and say here it is, here's our
11 application. You know, as you know, you have five years,
12 at least, to build it once you get through the Energy
13 Commission, but to do more or less the merchant of
14 contingent play as a way of foreclosing the competition?

15 MR. SMUTNY-JONES: I think people have shifted
16 more towards need a little more certainty in terms of
17 moving forward before we put \$20 million on developing a
18 site. Although I can't speak for everybody, I do know in
19 this
20 last -- this last tranche of -- in the LTPP there seems to
21 be a lot of people that -- that may show up in -- in -- you
22 know, before the Energy Commission. I'm assuming that's
23 the case because I get to referee lots of internal fights
24 among -- among my members on that.

1 So I think the issue, and this -- this comes up
2 in this contingency issue, I don't -- not only don't I know
3 how you site a generic plant, but there are -- there is a
4 shelf life at the Energy Commission for once you get a
5 plant sited. You know, after five years it's gone. And I
6 know I obviously can't speak for the air agencies, but I
7 assume the same is true there, that, you know, the -- the
8 ability to sort of sit on, you know, what kinds of credits
9 you're going to use for a respective power plant is
10 something that people need to know sooner rather than
11 later. There's a lot of money riding on all that.

12 CHAIR WEISENMILLER: Okay. Thanks. I would note
13 that for the almost 40 years I've been associated with the
14 Energy Commission there's been always a various discussion
15 from time to time about site banking, and this just strikes
16 me as another variant on that notion. Thanks.

17 COMMISSIONER SCOTT: Okay. Our next comment is
18 Mike Levin from FuelCell Energy.

19 MR. LEVIN: Good afternoon. I'll try to avoid
20 the buzzer. I'm Mike Levin. I'm the Director of
21 Government Affairs with FuelCell Energy. In terms of
22 installed megawatts of fuel cells we're the largest fuel
23 cell company in the world. We have about 20 megawatts of
24 projects here in California. Thank you, Commissioner

1 Scott, for visiting one of them yesterday. And I think I
2 met with Staff or with each of you over the last several
3 months.

4 And I'd like to briefly mention that in the last
5 few years we've installed five plants of larger than 10
6 megawatts, including a 15 megawatt plant in Bridgeport,
7 Connecticut, and a 59 megawatt plant in Korea. And until a
8 few years ago plants of that size for fuel cells were
9 really not something that we saw.

10 And the costs now pencil out. They've been --
11 the costs have been dramatically reduced. The availability
12 and reliability of these plants is on par with any
13 combustion generation. And we're really hoping that we can
14 do more of these sorts of projects in California.

15 The challenge is we're sort of stuck between a
16 rock and a hard place in terms of are we conventional or
17 are we preferred because we are renewable-ready resources
18 in the sense that we operate on natural gas or biogas, but
19 we are, what we like to say, preferred conventional
20 resources. We're kind of our own category, so it's easy to
21 forget us. So we're really trying to encourage everyone
22 not to forget about fuel cells.

23 When we met with folks at the ISO they've told us
24 that there's a lot of things about fuel cells that they

1 really like in terms of their -- their support, their --
2 their reactive power, of VAR support. I'm no engineer by
3 any stretch, but like Commissioner Picker, I trust that
4 VARs exist and I know that we provide them, which is a good
5 thing. And again, we have virtually zero criteria
6 pollution, zero NOx, things like that, so we get through a
7 very streamlined permitting process in South Coast AQMD
8 Rule 219, and we're exempt from Cap and Trade under AB 32.

9 So there's a lot of things to like about fuel cells.

10 You know, and the challenge has been, as you look
11 at the preferred resources pilot, kind of work on the
12 street. And I live in Orange County. I've actually been
13 raised in Orange County and I'm raising my family in South
14 Orange County, is that there will be more conventional gas-
15 fired generation on a large scale within the preferred
16 resources pilot service territory is action is not taken to
17 prevent it and to replace it with something better.

18 So I stand here before you hoping that you will
19 do that. Thank you.

20 COMMISSIONER SCOTT: Thank you. Okay. Our next
21 comment is from Aura Vasquez from Sierra Club.

22 MS. VASQUEZ: Thank you. Hi. Good afternoon.
23 My name is Aura Vasquez and I'm here representing My
24 Generation Campaign from the Sierra Club.

1 So as we know, the closing of San Onofre has
2 offered us an opportunity to use more clean energy. And
3 we're hoping that all of the agencies present here are
4 really committed to that. Not only because we now already
5 are more able to utilize more clean energy, but also
6 because we desperately need to improve our air quality.

7 There are about 5,000 people that die a year for
8 air quality related issues, and that shouldn't be the case,
9 especially in California that is leading the way in
10 environmental issues and in clean technology.

11 We have been here. I hear all the presentations
12 today, very informative. And I heard earlier this morning
13 that for the whole year that San Onofre has been closed we
14 have not had any reliability -- the reliability hasn't been
15 compromised. So we urge you to not commit to open any more
16 gas plants but to begin investing in clean energy.

17 So as the AQMD, also our South -- South Air
18 Quality Management Board wants to promote preferred
19 resources, it's -- it's the time now to also include all of
20 those in all of the related plants in the AQMD and in
21 (inaudible).

22 And finally, I'm really urging you to utilize the
23 credit, the bank credits to alleviate all of the trouble
24 and all of the environmental issues that a lot of

1 communities in California are -- are suffering. So I meet
2 on a monthly basis from people from all around the
3 southland region, and I haven't met one person on all sorts
4 of economic and socioeconomic backgrounds that have not
5 been affected by air quality issues. Thank you.

6 COMMISSIONER SCOTT: Thank you. Okay. I have
7 next Ted Owen from Carlsbad Chamber of Commerce. He's not
8 here? Okay. Put in the right stack.

9 UNIDENTIFIED FEMALE: He's on the telephone, I
10 believe.

11 COMMISSIONER SCOTT: Oh, okay. Sorry. Okay. So
12 when we get to the phone, then I will get there.

13 MS. MATSUMOTO: You called me before.

14 COMMISSIONER SCOTT: I'm sorry?

15 MS. MATSUMOTO: You called me before. Should I
16 wait or do you want me to go?

17 COMMISSIONER SCOTT: I had just added you to the
18 back of the -- to the bottom of the pile.

19 CHAIR WEISENMILLER: No. It's okay. Either way.

20 COMMISSIONER SCOTT: Sure. Go ahead.

21 MS. MATSUMOTO: Okay.

22 COMMISSIONER SCOTT: So are you Sarah?

23 MS. MATSUMOTO: Yes.

24 COMMISSIONER SCOTT: Okay. Yes, so Sarah

1 Matsumoto from Sierra Club.

2 MS. MATSUMOTO: Thank you. Thank you very much
3 for the opportunity to speak. And I'm sorry I wasn't here
4 when you --

5 COMMISSIONER SCOTT: It's okay.

6 MS. MATSUMOTO: -- when you called me. So
7 following on my -- on my colleagues comments I just want to
8 say we all here in the room have this incredible
9 opportunity to forge a clean energy future in California,
10 and we really hope to partner with all of you to make sure
11 that happens.

12 We are very concerned. Southern Californians
13 breathe some of the dirtiest air in the country and which
14 has increased asthma rates and other, you know, health
15 problems, and even deaths. So we also have a really
16 incredible opportunity right now in Southern California to
17 have a plan that brings on line clean energy instead of
18 dirty energy that's going to increase our air pollution
19 problems.

20 The Public Utilities Commission decision for San
21 Diego authorized a choice of any resource to replace San
22 Onofre. But instead of requiring a fair competition for
23 clean energy, SDG&E went with a dirty gas plant. So you
24 know, this has a huge impact on -- on folks that breathe

1 the air in San Diego. And we really want to urge Southern
2 California Edison to, you know, go in a direction that, you
3 know, you have the opportunity to have 100 percent clean
4 energy. And we urge you to do as much clean energy as
5 possible.

6 Several new transmission line projects or
7 transmission projects were approved last year with the goal
8 of reducing local area need for new energy by between 800
9 and 1,400 megawatts. We would like to know, after spending
10 over \$1 billion of ratepayer money from these projects, how
11 much did it reduce the need, and what are the plans to
12 replace the rest of the need caused by the loss of San
13 Onofre and the OTC plants with clean energy?

14 You know, and finally, just building new gas
15 plants is locking in 30 more years of carbon emissions at a
16 time when the state is trying to reach our 80 percent
17 goals. So, you know, we question the -- you know, how can
18 the state reach these really important critical goals and
19 continue to be a climate leader if we're continuing to
20 bring online new fossil fuel plants.

21 So thank you for your time, and I will look
22 forward to working with you throughout the coming years.

23 COMMISSIONER SCOTT: Our next comment is Peter
24 McLaggan from the Poseidon Water Carlsbad Desal Project.

1 Oh, do you know who I have here that's actually
2 in the room? I've got -- I kind of have a stack that's not
3 --

4 MS. RAITT: I wrote some of them --

5 COMMISSIONER SCOTT: Thank you. Okay. How about
6 Adrian -- I know I saw Adrian -- Adrian Martinez?

7 MR. MARTINEZ: Good afternoon. My name is Adrian
8 Martinez and I'm an attorney for Earth Justice based here
9 in L.A. And I work a lot on air quality issues, and
10 increasingly more on energy issues.

11 Earth Justice is working with several
12 organizations on the 2016 Ozone Plan. It's an immense
13 challenge to meet the ozone standards. As Dr. Wallerstein
14 and Chair Nichols are intimately aware, we have this thing
15 called a black box which is pollution reductions that we
16 haven't figured out how to eliminate before we can meet
17 ozone standards. And it's an immense challenge even to
18 meet standards that have been on the books for decades,
19 including the one hour ozone standard.

20 Because of this there's a lot of concern about
21 moving forward with fossil fuel energy sources. I think
22 Dr. Wallerstein explained it quite well about our concern
23 that the contingency becomes what just happens
24 automatically as we start discussions around rules like

1 1304.2 which is allowing internal bank credits for new
2 rebuilt fossil generation. I just want to reiterate, we do
3 have a deep concern about that. We think it distracts from
4 promoting preferred resources.

5 I also want to echo -- and our concern isn't
6 happening in a vacuum. We have concern about what's
7 happened recently. While we're happy that the PUC has
8 required SCE and SDG&E to specifically procure clean
9 energy, the loading order also applies to the any resource
10 authorization. And we've seen several instances or we're
11 starting to see instances where it's not happening in that
12 way in the automatic kind of goes to gas, like to building
13 new gas plants.

14 And we are as concerned as my colleague Sarah
15 Matsumoto just reiterated about transmission, how that gets
16 accounted into what's needed in the region.

17 The air quality issues are huge. And I think the
18 environmental and community groups that are working on the
19 air plan want to figure out what our path to success is. A
20 lot of groups have put many years of work into pushing our
21 agencies like the South Coast and the California Air
22 Resources Board to close this black box and figure out how
23 do we finally meet ozone standards. And so I think that's
24 why you're seeing increasing attention for all sources.

1 We're happy that the South Coast and the
2 California Resources Board are taking really serious issues
3 on the freight industry and other large sources of
4 pollution. But when you look at the pie of emissions,
5 electrical generation facilities aren't insignificant.
6 They still need to be part of the solution in actually
7 achieving ozone standards. Thank you.

8 COMMISSIONER SCOTT: Thank you. Okay. Thank
9 you. I have Maya Golden -- I don't know how to say your
10 last name -- Krasner from Communities for a Better
11 Environment.

12 MS. GOLDEN-KRASNER: Hi. Good afternoon. I'm
13 Maya Golden-Krasner. I'm an attorney -- it's okay. I'm an
14 attorney with Communities for a Better Environment. I'd
15 like to talk about three points today.

16 First, and Dr. Wallerstein has heard this before,
17 but I have consistently expressed and continue to express
18 here my concern about opening the priority reserve to power
19 plants. We have, as Mr. Martinez stated, huge challenges
20 to closing the black box, huge challenges in terms of
21 having really unhealthy air in this country. And yet the
22 district is continuing to push to allow offsets for an
23 enormous amount of new fossil fuel power because offsets
24 are scarce and expensive. That's great. That means the

1 Clean Air Act is working as it's supposed to. If we or the
2 district follows it here and that incentivizes investment
3 in clean energy instead of in gas we might actually make
4 more progress toward cleaning up the air, as the act has
5 contemplated. We might meet our AB 32 requirements. For
6 air agencies, those should be your only concerns.

7 Second, beyond the Clean Air Act and the
8 district's sole duty to enforce and implement it, we are
9 very concerned that the state is not taking the loading
10 order seriously. For example, the PUC's Energy Division
11 recently approved a plan for SDG&E to meet its entire 600
12 megawatt any-resource authorization through a bilateral
13 procurement of the Carlsbad gas plant, even though the
14 decision required an all-source request for offers for at
15 least some of this capacity. This is a slap in the face of
16 everyone that breathes air in the region, clean energy
17 providers that thought that they would have a chance to
18 compete against gas, and ratepayers who are stuck paying
19 for a contract that never allowed competitive bidding.

20 Third, I reiterate and want to agree with Mr.
21 Martinez. On transmission, we believe that transmission
22 upgrades do not just provide flexibility, as I think you
23 guys -- several utilities were arguing earlier, but, in
24 fact, provide a significant reduction, 800 to 1,600

1 megawatts in local capacity needs. This reduction must be
2 taken into account, and at the very least used to reduce
3 procurement to the minimum amount that was authorized.
4 Ratepayers shouldn't be on the hook to pay for unnecessary
5 over-procurement.

6 So those are my comments. Thank you.

7 COMMISSIONER SCOTT: Okay. Thank you. I think
8 the rest of my comments are on the phone. Now I'm going to
9 get to some of the last of these cards. Okay.

10 I have on the phone Tom Lemmon from the San Diego
11 County Building and Trades Council.

12 MR. LEMMON: So can you hear me?

13 COMMISSIONER SCOTT: Yes.

14 MR. LEMMON: Good. My name is Tom Lemmon with
15 the San Diego Building and Construction Trades Council. I
16 represent 35,000 construction workers, highly skilled
17 construction workers here in San Diego County. We are
18 supportive of building the plant because we know that it's
19 part of the big picture when it comes to renewables. We
20 all know the sun doesn't shine at night. And plants like
21 this will absolutely meet that peak demand from
22 (inaudible). We know that it will create really, really
23 good jobs for the people we represent, as well as in the
24 future of folks that we'll bring into our programs. It's a

1 huge compromise that SDG&E and NRG and Carlsbad agreed to
2 downsize the original plant. And we think it's a new plant
3 and should move forward with it.

4 Thank you so much for the opportunity to testify
5 remotely from beautiful San Diego.

6 COMMISSIONER SCOTT: Okay. Thank you. Our next
7 person on the phone is Efren Brycer from San Diego Economic
8 Development Corporation.

9 MR. BRYCER: All right. Well, good afternoon.
10 My name is Efren Brycer. I'm with the San Diego Regional
11 Economic Development Corporation. Our mission is to
12 maximize the San Diego region which we describe as the San
13 Diego County, Imperial County and Northern Baja, maximize
14 our region's economic prosperity and (inaudible). We see
15 the Carlsbad Energy Center Project as a part of that, as a
16 part of California's renewable energy future. We think
17 that the generating station will provide the insurance
18 needed to leverage our clean energy, but also give us that
19 insurance to make sure that our businesses are constantly
20 online. (Inaudible) of the region are strong, especially
21 because this is the sole project in the pipeline when we
22 stop -- to retire Encina in 2017. It not only provides
23 good jobs, it provides assurance for residents and
24 businesses that this region has a reliable source of energy

1 that integrates wind and solar power as we move beyond --
2 beyond SONGS.

3 And so to keep my comments brief, we support the
4 project. Thank you very much.

5 COMMISSIONER SCOTT: Thank you. Okay. Next we
6 have Ted Owen from the Carlsbad Chamber of Commerce.

7 MR. OWEN: Good afternoon. Thank you very much
8 for allowing us to testify by telephone. My name is Ted
9 Owen. I'm the CEO of the Carlsbad Chamber of Commerce.
10 And on behalf of the Carlsbad Chamber I would like to
11 express our strong support for the Carlsbad Energy Center
12 Project as part of a plan to ensure reliability of the
13 Southern California power supply.

14 For close to 90 years the Carlsbad Chamber of
15 Commerce has worked to promote a favorable business climate
16 for the 1,400 businesses and more than 75,000 employees in
17 and around the City of Carlsbad. This is why we pay close
18 attention to issues in Carlsbad that could impact not only
19 the ability of local businesses to thrive, but also matters
20 that could impact the quality of life in our community.

21 And I co-wrote an opinion piece published last
22 Saturday in the San Diego Union Tribune entitled "Securing
23 San Diego's Clean Reliable Energy Future." While I won't
24 read the piece verbatim, I will reiterate my primary

1 mission. The solution of the problem to ensuring
2 reliability after the closure of San Onofre must be
3 diversified and can not be a Band Aid. We want power to be
4 as affordable and green as possible. We welcome the growth
5 of renewable power and emerging technologies such as
6 utility-scale battery storage. But they must be
7 complimented by keeping generation sources like the
8 Carlsbad Energy Center to ensure power is available on
9 demand not subject to the weather. The Carlsbad Energy
10 Center will offer quick and flexible capacity that will
11 integrate more renewable power.

12 The Carlsbad Energy Center is the only project
13 far enough along in the development process to replace the
14 loss of additional generating capacity when the Encina
15 Power Plant retires in 2017. Everyone knows Carlsbad and
16 the surrounding areas experienced wildfires this past
17 spring. We watched with anxiety as these fires came close
18 to major transmission lines. We appreciate the value of
19 generation being located where the power is needed as long
20 as distance transmission lines are often under threat of
21 fire in our region.

22 The City of Carlsbad and others in our area
23 recognize the significance of environmental benefits of the
24 Carlsbad Energy Center, the peaker project as compared to

1 the project previously approved as the power -- excuse me,
2 Encina Power Station. That is why we endorse this project.
3 Not only will it ensure the lights stay on, but it will
4 also be a tremendous opportunity to redevelop the former
5 Encina Power Station site and adjacent SDG&E service center
6 for non-industrial purposes.

7 I am pleased to once again express my support for
8 the Carlsbad Energy Center. And I thank you very much for
9 the opportunity to offer you my comments. Thank you.

10 COMMISSIONER SCOTT: Thank you. Okay. Our next
11 comment is from Peter McLaggan from the Poseidon Water and
12 Carlsbad Desal Project.

13 MR. MCGLAGGAN: Thank you very much, and good
14 afternoon, Commissioners, agency heads and representatives.
15 My name is Peter McLaggan. I'm the Vice President of
16 Project Development with Poseidon Water. And my comments
17 are in regard to the Carlsbad Energy Center.

18 As you may know, Poseidon is constructing the
19 largest seawater desalination project in the Western
20 Hemisphere on the site of the Encina Power Station in
21 Carlsbad. And by 2016 the Carlsbad Desalination Project
22 will be delivering up to 50 million gallons per day of
23 drinking water to the San Diego County Water Authority.
24 This project will provide a locally controlled drought-

1 proof supply of water that is not dependent upon snow pack
2 or rainfall. It represents a significant investment in
3 water supply reliability by the San Diego region.

4 The desalination facility is going to receive its
5 power supply from San Diego Gas and Electric's Cannon Road
6 Substation, and this substation was recently expanded to
7 serve the project. As a result our water supply
8 reliability and our power supply reliability are now
9 inextricably linked. And we believe diversity needs to be
10 an important consideration in the power supply reliability
11 plan. We also understand the role of conventional
12 generation in supporting the ability to base load renewable
13 generation. And this is why Poseidon has been a long-time
14 supporter of the proposed Carlsbad Energy Center. This
15 quick start and flexible peaker project will enhance
16 diversity in our regional power supply.

17 I wanted to share with the participants in
18 today's meeting, as well, that the Carlsbad Desalination
19 Project is being developed on a net-carbon neutral basis.
20 And we will be installing onsite generation to meet a
21 portion of our project's power supply needs. The Carlsbad
22 Energy Center offers significantly lower emissions than the
23 existing Encina Power Station, and it also supports the
24 integration of renewable resources, both of which helps

1 Poseidon with our commitment to ensure that the Carlsbad
2 Desalination Project is carbon neutral.

3 Lastly, the Carlsbad Energy Center is poised to
4 come online prior to the Encina Power Station's scheduled
5 retirement in 2017.

6 In closing, Poseidon wishes to reaffirm its
7 support for the Carlsbad Energy Center, and we thank you
8 for the opportunity to comment this afternoon.

9 COMMISSIONER SCOTT: Thank you. Okay. Our next
10 commenter is Matt Kriz from San Diego Building and Trades
11 Council. Is he on the phone? Anybody on the phone? Do we
12 have any others on WebEx or on the phone? No? Okay.

13 All right, well, so I'd just like to make a
14 couple closing remarks, and then turn to my friends on the
15 dais and see if they have any as well. I think today's
16 workshop
17 was -- was really informative. I think you saw the state's
18 commitment to making progress on this. We got some really
19 informative updates from both the state agencies and the
20 southern -- the two Southern California IOUs on what's
21 taken place since the last time we met, which was in
22 September of last year. We got a little bit of a preview
23 from Air Resources Board folks and others about things that
24 are coming up. And we had a chance to add some context to

1 the conversation. I think you saw that we are all working
2 in collaboration with one another, and I want to thank all
3 of you for your -- your partnership in that.

4 And then I'd just like to say thank you to our
5 panelists for the -- the great presentations that they gave
6 us. I was delighted to be joined here by California
7 Independent System Operator, President Steve Berberich. We
8 had California Public Utilities Commission, Commissioner
9 Michael Picker. And we also had from the State Water
10 Resources Board, Jonathan. So they all weren't able to
11 stay but, yeah, I just wanted to acknowledge that they were
12 here since you won't hear closing remarks from them.

13 And then I wanted to say thank you very much to
14 my team, Jim Bartridge, and to the Chair Adviser Kevin
15 Barker, and to Heather and the IEPR team for -- for helping
16 us to put together a terrific meeting.

17 And let me turn to the Chair to see what closing
18 remarks he has.

19 CHAIR WEISENMILLER: Yeah. Well, again, I would
20 like to certainly thank the other agencies. I mean, I
21 don't know how many times I have seen someone say the state
22 agencies aren't planning, aren't coordinating, which
23 normally we're going what more could we do? But you know,
24 I think this is again living proof of the coordination.

1 I think in terms of looking at -- I started out
2 by saying in the SONGS' context it's not time for
3 complacency, period. You know, again, we've had average
4 weather, and this is going to be a tough summer, I'm
5 afraid. And again, I think part of the message is that we
6 are trying to do a portfolio. We're certainly trying to do
7 what's -- it's not 100 percent. You know, frankly, the
8 system is not going to operate at 100 percent. You know,
9 it's the proverbial Sunday night you lose a power line or a
10 generator, it's midnight, I need 1,000 megawatts in ten
11 minutes. You know, most of the stuff doesn't -- it won't
12 fill that blank. But having said that, we're certainly
13 making as much progress as we can on the preferred.

14 And again, I think the related issue is the other
15 challenge at the time, I mean, this is somewhat -- SONGS is
16 a major headache for us to make sure that we do deal with
17 the reliability side, and obviously climate. And I think
18 we certainly all share people's passion here about climate
19 issues.

20 I think it's important to put in perspective that
21 40 percent roughly of our greenhouse gas emissions are from
22 transportation. We really have to move very, very fast on
23 the transportation system, electrifying it, moving to zero
24 emission. If we can do that it provides wondrous benefits

1 down here air quality-wise. I think certainly Barry has
2 done a study saying if you live near a freeway, if you live
3 near a refinery you should be much more worried than if
4 you're living near a power plant, you know? But we've got
5 to move on transportation; it's just really critical.

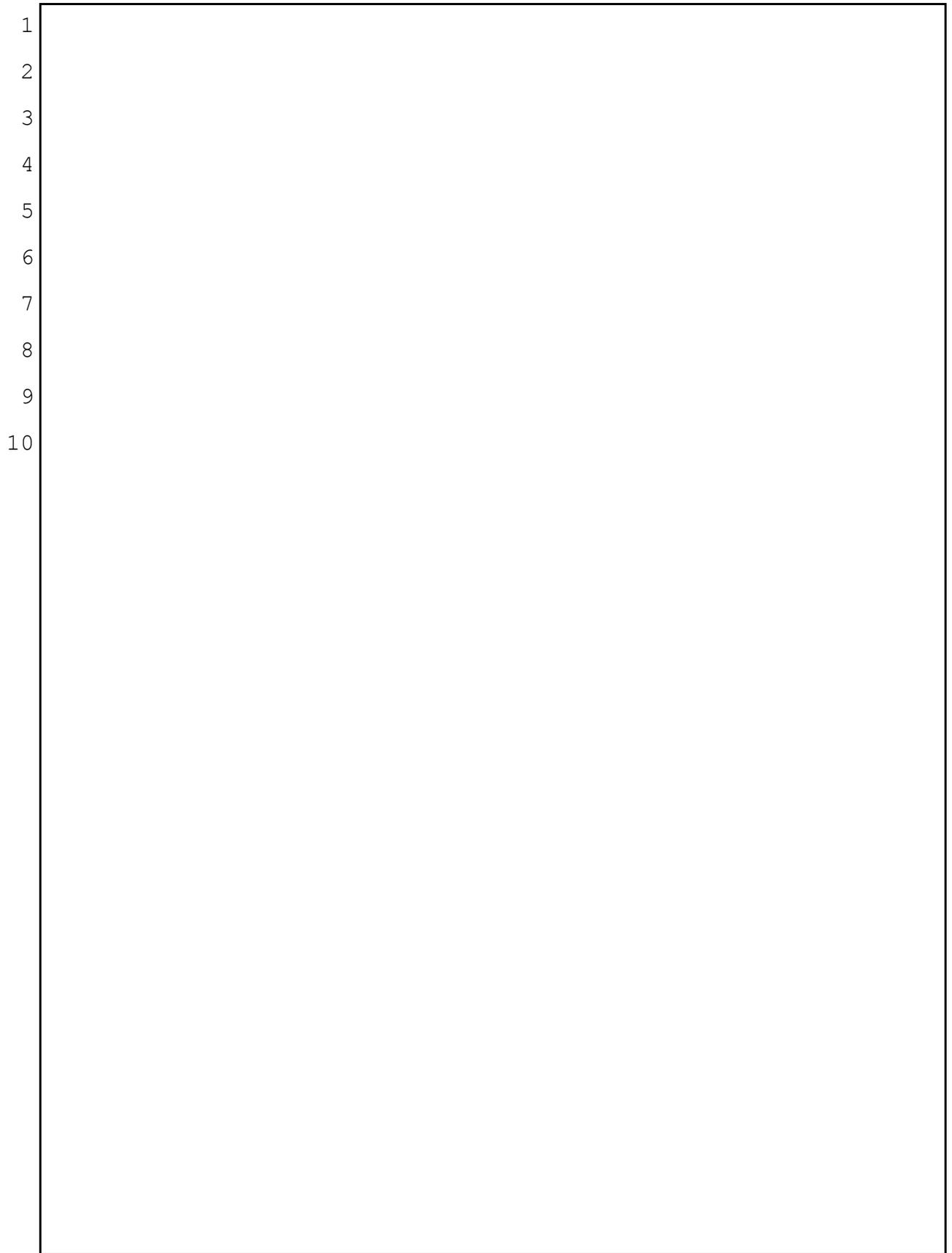
6 We also have to deal with existing buildings.
7 You know, there are about 10 million existing buildings in
8 California that, of course, run about 30 percent of our
9 greenhouse gas emissions. These were buildings before
10 Energy Commission building standards. Many of those are
11 ones which are rented space, commercial or residential.
12 Many of our low-income citizens live in those. We've been
13 trying for 30 years to get deep retrofits there. We need
14 to get deep retrofits there now. Certainly, there's 20
15 percent on the power system; 10 of that 20, half of that is
16 out-of-state coal. We've got to get rid of that out-of-
17 state coal. We're making progress. And that leaves ten
18 percent is the in-state power system. And again, we're
19 making progress on that. But I'm just saying when you look
20 at your priorities, start with transportation, start with
21 energy efficiency on those existing buildings. We are --
22 you know, we're moving on the power stuff, but let's not
23 spend 90 percent of our time on that.

24 And you know, certainly I would encourage all

1 those -- the passion you bring on the air issues, that's
2 certainly, in terms of the Energy Commission 118 Programs,
3 Mary's programs, Barry's programs, help us on the
4 transportation side. You know, certainly encourage people.
5 Luxury vehicles are wonderful, is the bottom line, and for
6 a lot of reasons. But really, we've got to deal with the
7 climate issues, but we have to have a pretty comprehensive
8 plan, and we are getting -- moving there. But it's not
9 simply, you know, let's deal with the power system.

10 Mike?

11 COMMISSIONER FLORIO: Yes. Well, I want to thank
12 all the presenters for an excellent and very informative
13 day. I think we are making progress. We can always do
14 better and we have to strive to do better. And I think the
15 challenge is clearly out there for our investor-owned
16 utilities to fill as much of the authorization as possible
17 with preferred resources. We probably can't do it all in
18 the short run. But let's not let the perfect be the enemy
19 of the good. We're going to be shutting down a lot more
20 fossil fuel generation than we'll be replacing it with, and
21 that is real progress on the environment and the climate.
22 We've certainly got a long way to go, but I think we're off
23 to a good start. And I thank everybody for their
24 contributions.



CERTIFICATE OF REPORTER

I, MARTHA L. NELSON, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission IEPR Lead Commissioner Workshop; that it was thereafter transcribed.

I further certify that I am not of counsel or attorney for any of the parties to said conference, or in any way interested in the outcome of said conference.

IN WITNESS WHEREOF, I have hereunto set my hand this 20th day of August, 2014.

/s/ Martha L. Nelson
MARTHA NELSON

CERTIFICATE OF TRANSCRIBER

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.

/s/ Martha L. Nelson
MARTHA L. NELSON, CERT**367

September 9, 2014