

STATE OF CALIFORNIA - THE RESOURCES AGENCY
BEFORE THE
CALIFORNIA ENERGY COMMISSION (CEC)

In the matter of,)
) Docket No. 11-IEP-1A
)
Preparation of the) Joint Agency Workshop
2011 Integrated Energy)
Policy Report)

**Committee Workshop:
California Clean Energy Future**

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Nancy Ryan, California Public Utilities Commission

Anthony Eggert, California Environmental Protection Agency

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David Wright, California Municipal Utilities Association
(CMUA)/Riverside Electric

R. Steven Kelly, Independent Energy Producers

V. John White, CEERT

Dave Ashuckian, Division of Ratepayer Advocates

Stephanie C. Chen, The Greenlining Institute

Bonnie Holmes-Gen, American Lung Association

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Eileen Wenger Tutt, California Electric

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P R O C E E D I N G S

1
2 JULY 6, 2011

1:47 P.M.

3 MS. KOROSSEC: I just have a few introductory
4 remarks before we get into the day. Welcome to today's
5 workshop on the California Clean Energy Future. This is
6 being held jointly by the Air Resources Board, the
7 Environmental Protection Agency, the California
8 Independent System Operator, the Public Utilities
9 Commission, and the Energy Commission's Integrated Energy
10 Policy Report Committee. I am Suzanne Korosec and I lead
11 the Energy Commission's Integrated Energy Policy Report
12 Unit.

13 Just a couple of housekeeping items before I go
14 over the agenda. Restrooms are out the doors and to your
15 left. There is a cafeteria on the first floor at the
16 bottom of the stairs, turn right as you go down the
17 stairs. For those of you with computers, we do have open
18 Wi-Fi access in here with no password needed. Today's
19 workshop is being recorded and it will also be
20 transcribed. We'll make an audio recording available on
21 the CEC website in a couple of days and a written
22 transcript is available in about two weeks. The workshop
23 is also being webcast for parties who are unable to
24 attend in person, we ask that those of you who are
25 listening to the webcast, please submit your questions

1 and comments via email, the email address is
2 auditorium@CalEPA.ca.gov, and we'll display your
3 questions or comments on the screen at the appropriate
4 time. We've also set up a telephone option for
5 participants that don't have computer access, and we'll
6 open those lines at the appropriate time. Because there
7 is about a 10-second delay between the audio here and
8 what you here on your computers, for those of you on
9 webcast, if you do decide to call in, please turn off
10 your computer when you're on the phone, otherwise we'll
11 get a very interesting echo effect.

12 The California Clean Energy Future was developed
13 by the Joint Agencies and released in September of 2010
14 after the Scoping Order for the 2011 IEPR came out in
15 August of 2010. So, in March of this year, the IEPR
16 Committee issued a revised Scoping Order that
17 acknowledged the need to refine the focus of this year's
18 IEPR to include the most effective approaches for
19 implementing Governor Brown's Clean Energy Jobs Plan, and
20 building off the vision that was in the California Clean
21 Energy Future. We have a very simple agenda today
22 beginning with opening comments from the dais, followed
23 by a joint presentation by Agency staff on the California
24 Clean Energy Future Overview and Metrics; we'll then take
25 questions from the dais, followed by an opportunity for

1 questions from those of you here in the room. You can
2 use either of these two podiums here in the front and
3 please be sure to state your name and affiliation. After
4 we've had questions from the in-person participants,
5 we'll pull up the email questions that we receive from
6 the WebEx parties, and we'll open the phone lines after
7 that. I do want to stress that questions for this part
8 of the agenda really should be focused on clarifying
9 questions for the Agencies on the Overview on the
10 Metrics. Other questions and comments can be saved for
11 the Public Comment period at the end of the agenda.
12 Next, we'll get comments on the Overview on Metrics from
13 our invited panel participants, I do want to note a
14 change in the agenda, our representative from Southern
15 California Edison will be Carl Silsbee and then we'll
16 follow that with questions from the dais. After the
17 panel discussion, we'll then move to the Public Comment
18 portion of the agenda and take comments, again, starting
19 with folks in the room, followed by email, and then the
20 phone lines.

21 We are also accepting written comments on today's
22 topic until close of business on July 15th, and the
23 directions for submitting those comments to the IEPR
24 record are shown here, and also in the notice for today's
25 workshop, which is available on the back table and also

1 on our website. So, with that, I'll turn it over to
2 Chair Weisenmiller for opening remarks.

3 CHAIR WEISENMILLER: Good afternoon. I'd like to
4 welcome everyone to today's meeting. I'd like to
5 certainly thank Mary Nichols for the use of this
6 facility. And also, I'd like to thank all the agencies
7 for their participation in this workshop, the first one
8 in this IEPR series, which is an interagency one, and
9 we're certainly dealing today with the California Clean
10 Energy Future in terms of the way that we work to
11 integrate our various policies and programs into an
12 overall coherent process. So, with that, I'll turn it
13 over to Mary for opening comments.

14 CHAIR NICHOLS: Well, thank you, and welcome to
15 the Byron Sher Hearing Room. This is an appropriate
16 venue, I think, to be having this discussion. I am
17 delighted to be allowed to participate in this joint
18 interagency review of the Clean Energy Future document,
19 this is a product that emerged, as the Chairman
20 indicated, from work by the agencies that are represented
21 here today, and I believe its origin actually was under
22 AB 32 in the effort to try to figure out how to make a 33
23 percent Renewable Portfolio Standard effective
24 operationally, as opposed to simply setting a goal, and
25 the agencies got together and began to work through how

1 their policies complemented each other, where there were
2 deadlines or processes that could possibly undermine that
3 goal, and in the process we came to realize that there
4 was a need for -- we believed there was a need for -- a
5 document that would pull together the policies of the
6 various agencies, that could actually be said to
7 constitute a State Energy Policy that could be put in one
8 place, and then to come up with the management tools to
9 actually implement it. So, this is a work in progress
10 and I think it's a very good opportunity, Mr. Chairman,
11 to hear from members of the affected and interested
12 public about how they see it, and what possible uses they
13 might see for this document, and where it needs to be
14 either changed or amended. So, I'm looking forward to
15 the discussion. Thank you.

16 MS. RYAN: Good afternoon. Thank you all for
17 turning out for this afternoon's workshop. Just to pick
18 up on Chairwoman Nichols' remarks, I really see this
19 joint exercise that the agencies embarked on, now, I
20 think almost two years ago, as fundamentally about
21 execution. It really came out of our mutual
22 understanding of the daunting nature of the challenge
23 before us to implement a 33 percent RPS, as well as many
24 other ambitious energy policies, while managing cost to
25 customers and maintaining reliability, and protecting

1 worker and consumer safety, and that really was what led
2 us to initially put together the document that is known
3 as the California Clean Energy Future, but fundamentally
4 was intended to be a composite portrait of all of the
5 different mandates, legislative and otherwise, that we're
6 charged with executing. So, to begin by making sure that
7 we're all pointing in the same direction, and appreciate
8 where we're all intended to go together, then to develop
9 the road map which you'll hear about in the staff
10 presentations and, finally, the third component, which
11 will be part of the staff presentation, and where I think
12 your input might be especially valuable, and that is the
13 metrics. So, inward facing metrics for the management
14 and leadership of the agencies to ask the question, "How
15 are we doing on executing the plan," and outward facing
16 metrics for those of you who are really active and
17 engaged stakeholders to judge our performance, to
18 anticipate forks in the road, or rocks in the path, and
19 also outward facing metrics for the broader public at
20 large to really be able to ask the question, you know,
21 "Is our State Government following through on the promise
22 of the 33 percent RPS of AB 32 of this mandate," and so
23 on and so forth. So thanks again for coming and I really
24 look forward to hearing from you all today or in your
25 written comments, subsequently.

1 COMMISSIONER DOUGLAS: Thank you, Chair
2 Weisenmiller. I'm Karen Douglas, Commissioner and the
3 Associate Member of the IEPR Committee. I would like to
4 join my colleagues in welcoming everyone here and also
5 add my thanks to Chairwoman Nichols for being here with
6 us and for helping us host this meeting. I think that
7 it's fair to say that you would be allowed to participate
8 in IEPR Workshops just about any time that you wanted, so
9 don't let this be your last if you'd like to do a little
10 more on the IEPR.

11 I don't want to add much to the description of
12 what the Clean Energy Future document is, we compiled it
13 out of an effort to put together a list of all of the
14 policies that we are pursuing under our separate
15 authorities -- climate, air, energy, environmental --
16 within the energy realm and under the energy umbrella,
17 and to work together to figure out how to implement these
18 policies in a way that makes sense, in a way that allows
19 us all to achieve our goals and our statutory mandates,
20 and makes sense for Californians and brings us towards
21 the clean energy future that the State is committed to.

22 This document and this effort do not eliminate
23 some of the tensions and some of the difficulties between
24 some of the policy goals that we're trying to reconcile
25 and trying to work towards. As much as anything, it's

1 about a process and it's about a commitment to work
2 together, and it's about a commitment to move forward in
3 a way that has the support of our agencies and has the
4 support of the public. So I appreciate you being here
5 today and look forward to hearing the questions and
6 comments.

7 MR. EGGERT: Thank you. My name is Anthony
8 Eggert, Deputy for Cal EPA; it's a great pleasure to be
9 here. Secretary Adams sends her regards. I think, you
10 know, this workshop is fundamentally about metrics and
11 measurement, and I think most people have heard the old
12 adage, "you can't manage what you can't measure," and I
13 was doing a little bit of research to try to figure out
14 the origin, and it is attributed variously to Peter
15 Drucker Deming, who is the quality guru, but one of my
16 favorite origin stories of this quote was from a guy by
17 the name of William Thomson, who says, "I often say that,
18 when you can measure what you are speaking about, and
19 express it in numbers, you know something about it; but
20 when you cannot express it in numbers, your knowledge is
21 of a meager and unsatisfactory kind. It may be the
22 beginning of knowledge, but you have scarcely in your
23 thoughts advanced to the stage of science, whatever the
24 matter may be." He was also known as Lord Kelvin, who
25 was one of the foundational contributors to the first and

1 second laws of thermodynamics, who came up with the
2 concept of Absolute Zero, and I think contributed a lot
3 to our ability to measure things, especially in the area
4 of thermodynamics. And I think hopefully today, what I'm
5 looking forward to, is an understanding of whether or not
6 we do have the right appropriate metrics that will guide
7 us on the path to meeting our policy goals, and that they
8 are of a sufficient nature so that we can take corrective
9 course or corrective action if we find ourselves going in
10 the wrong direction, or not necessarily proceeding at a
11 pace that we think is necessary. So I look forward to
12 the discussion.

13 MR. BERBERICH: Good afternoon. I'm Steve
14 Berberich. I am the Chief Executive Officer of the
15 California Independent System Operator. The California
16 Independent System Operator is responsible for making
17 sure the Grid is in balance at all times, supply and
18 demand are at equilibrium, about 25,000 miles of
19 transmission network, as well as making sure the power
20 that comes from out of state comes in, as well. The
21 Clean Energy Future is an excellent collaborative effort
22 that represents a good piece of work for all of these
23 agencies and the ISO, as well. The ISO is not a
24 policymaking institution, but rather we provide technical
25 expertise into shaping how these things might be

1 implemented so that we can continue to have a reliable
2 electric system here in California, while also achieving
3 the State's greenhouse objectives and other policy
4 objections.

5 The metrics that you'll see here today, I think,
6 represent an excellent way of managing this, to
7 demonstrate to everyone that we're working together
8 closely and that we're keeping an eye on how well things
9 are progressing and taking steps if things aren't
10 progressing well. So, I'm delighted to be here today
11 and, Chairman Nichols, I echo the thanks for letting us
12 use this facility today.

13 CHAIR WEISENMILLER: Let's have the staff
14 presentation.

15 MR. PETTINGILL: Thank you, Chairman
16 Weisenmiller. I'm Phil Pettingill, I'm the Director of
17 Regulatory Affairs for the California ISO, and I'm joined
18 here with my fellow staff members from the CEC, PUC, and
19 California Air Resources Board. And today we're here to
20 present the California Clean Energy Future, really to
21 you, the stakeholders, and to receive your input. Our
22 intention is to walk through at a fairly high level, the
23 Clean Energy Future Overview, and then the associated
24 Metrics, as you've heard about.

25 And so let's go to Slide 1, good, and thank you.

1 When we first created the Clean Energy Future, we really
2 envisioned that this would be a document, it would be a
3 living document, and certainly be seeking updates and
4 adjustments as we went along. It is at least a 10-year
5 view or plan, and what we've highlighted here and just
6 sort of the purpose of the workshop is to recognize with
7 a new Administration and Governor Brown's visions, we
8 certainly need to consider what changes are necessary
9 there, with the actual statutory 33 percent RPS; we need
10 to confirm that the overview is consistent with those new
11 requirements; and more importantly, as you've heard, is
12 to talk about the metrics: are we measuring the right
13 things, and are these helping us show that we're making
14 progress to meeting the essential goals? So let's go to
15 the next slide.

16 When I think about the Overview document, I think
17 about this as, really, a type of a vision statement. It
18 really was developed by bringing together all four State
19 agencies, as well as the California ISO, and much of this
20 has already been said, but what makes it unique is that
21 we brought together many many State policies, goals, and
22 regulations into a single place. And the idea is we all
23 recognize that these are driving a significant change
24 into a very different energy sector than what we have
25 today, and the vision is certainly looking out to the

1 year 2020 and beyond. And so, with that in mind, just my
2 observations on the background, we went to what is the
3 primary purpose of the Overview document, and it really
4 is to compile all those goals and bring them together
5 into a single planning and coordination device.

6 We recognize that there are many inter-
7 dependencies between all of us in achieving most of these
8 goals, and so it's important to recognize that we need to
9 have some specific goals and some detailed tasks and
10 objectives, and that's what we mean when we refer to the
11 adaptive management that's here on this slide, is to
12 recognize that we intend to have things done by a certain
13 point in time, but then things will change as we go over
14 the course of the next nine, ten, and more years to make
15 these changes. So I think what you'll see in the
16 Overview is it is comprehensive, it is not only covering
17 the issues around reliability, safety, and electricity,
18 as well as air emissions, and so forth, but it is trying
19 to make sure that we're looking at all of the goals as
20 they cover all energy use and purposes within the state.
21 So let's go to the next slide.

22 To communicate what is in the Clean Energy Future
23 as a project, we actually created a new website, so
24 hopefully everybody can take note of this because what
25 you'll find here is, currently, the Overview, as well as

1 two other fairly helpful documents, one we refer to as
2 the Roadmap, and you might think about that as just sort
3 of a project management chart, how we, at least in this
4 first iteration, envision the timeline to achieve some of
5 these major goals and objectives that are defined, or at
6 least mentioned, in the Overview. They are further
7 defined in the Implementation Plan, and for all of you
8 that have taken a look at that, you'll find that it's
9 quite a read, it's about 200 pages long, but it goes
10 through all the necessary details as we came to
11 understand the tasks that are before us, to try to
12 achieve many of these goals and certainly the vision that
13 is described in the Overview.

14 So I would encourage you to make note of this
15 website because what we're talking about today in metrics
16 will eventually be posted there and you'll see us
17 updating those metrics as we go along over the course of
18 the coming years. Let's go to the next slide.

19 So I mentioned a little bit about tracking and
20 updating, and in the Overview document, we specifically
21 mention that we know we need to do an update; at least
22 every two years as the IEPR comes out, we have the change
23 in demand forecast because that may very well change what
24 our target is in trying to hit 33 percent, or some of the
25 other goals.

1 So today we're going to walk through with you
2 what the metrics are, but one of the things we recognize
3 in almost every case is the metric is not unique to any
4 one of us as an agency, so in most cases you can assume
5 that all of us have something to do with helping assure
6 the success of that particular activity that's being
7 measured in that metric.

8 And then, of course, "today." Today is certainly
9 one opportunity to update the CCEF. We recognized that
10 we needed to do that and I look forward to hearing your
11 comments and your feedback as we go through the rest of
12 the material. For now, what I'd like to do is hand it
13 over to Heather from the Energy Commission, to talk a
14 little bit in more details about what's in the overview,
15 and then, when she is finished, we'll transition back and
16 start going through the metrics. So, Heather.

17 MS. RAITT: Okay, thanks Bill. I'm Heather Raitt
18 of the California Energy Commission. The Overview
19 outlines the agency's vision for 2020, it's organized
20 into four elements with the first being Demand. As Phil
21 pointed out, the Overview was released in September of
22 last year and we plan to update it to reflect the
23 Governor Brown Administration's Energy Policy. But it
24 has currently drafted some of the targets that include
25 energy efficiency, in which we have a target of

1 reductions of 5,000 to 8,100 megawatts of peak by 2020,
2 with advancements in efficiency and Demand Response.
3 That would be in addition to the 2,300 megawatts of
4 committed energy efficiency savings included in the 2009
5 Demand Forecast. The plan currently also calls for
6 installing 5,000 megawatts of distributed generation by
7 2020. Next, please.

8 The second element is Supply. The Overview
9 envisions achieving 33 percent Renewable Portfolio while
10 maintaining reliability needs and meeting environmental
11 goals. The agency has also put forward a goal of
12 developing at least one utility scale carbon capture and
13 storage facility in California by 2020. Next, please.

14 The third element is Transmission Distribution
15 and Operations. The overview envisions that planning and
16 permitting will be coordinated to ensure that sufficient
17 transmission and distribution infrastructure will be
18 available to meet the renewable goals and greenhouse gas
19 reduction targets. Investments in advance metering and
20 Smart Grid will empower customers to use energy more
21 efficiently, and the agencies envision that, through
22 supporting pilot studies, we're targeting 1,000 megawatts
23 of additional storage capacity by 2020.

24 The fourth element is Additional Supporting
25 Processes, including cap-in-trade to reduce greenhouse

1 gas emissions and advancements in emerging technologies.
2 The Overview also recognizes that alternative fuel
3 vehicles and electrification of the transportation
4 sector, in particular, will be a central component to
5 energy security in reducing greenhouse gas emissions.
6 The Overview calls for California to develop the
7 infrastructure and operational capabilities necessary to
8 absorb targeted one million fully electric and plug-in
9 hybrid electric vehicles by 2020.

10 California also will need to plan for and adapt
11 to climate change such as changes in temperature and
12 precipitation that will affect energy supply and demand.
13 And finally, the overview calls for engaging California's
14 institutions and citizens to be partners in achieving its
15 goals.

16 The agency, as Phil had mentioned, planned to
17 refresh the plan to reflect significant developments
18 since last fall, such as the passage of the RPS
19 legislation and Governor Brown's energy policy. For
20 example, the policy in the Governor's Clean Energy Jobs
21 Plan calls for 12,000 megawatts of localized energy by
22 2020, and 6,500 megawatts of combined heat and power over
23 the next 20 years. And with that, I'll pass it back to
24 Phil. Thank you.

25 MR. PETTINGILL: Thank you, Heather. So a quick

1 overview of what the CCEF Overview is and then I thought
2 I'd share a few thoughts about the metrics, themselves.
3 So, we've talked a little bit about how they interplay
4 with the Overview, and I think the one thing I would
5 mention here on this first slide is the last bullet, is
6 just to indicate that this is our opportunity to propose
7 the course corrections: Are the metrics looking at the
8 right things? Are they measuring the right things? And
9 if we find that we're off, then they can certainly
10 indicate that we need to go back and make some course
11 correction in terms of the overall CCEF Program. Next
12 slide.

13 I had mentioned the website and this will be
14 another plug for that again, just to point out that what
15 you'll see, then, is all of the metrics displayed on the
16 website, but to point out here on this slide, one I
17 wanted to differentiate, is some things are metrics, some
18 things are where we have goals, and we want to track how
19 we're getting to those goals. But we've also identified
20 some other sort of essential data items, and here we
21 describe them as Data References. And what's important
22 here to recognize is that these are things that we know,
23 like energy demand, we want to track. We want to be
24 aware of where we are because, clearly, if it goes up or
25 down, it has some effect on what we're trying to achieve

1 with the rest of our goals. So we've proposed that these
2 four elements are things that are issues that we should
3 be at least tracking and seeing how those things are
4 changing as we go through time.

5 So metrics are really two flavors, and all of
6 those would be displayed on the website. Next slide.

7 And so, then, Questions and things that we're
8 looking for from feedback from you, the stakeholders and
9 participants with us here: Right now, the metrics are
10 organized around the California Clean Energy Future
11 Overview and what that vision is, but, certainly, is
12 there another way to organize the metrics? Or other
13 metrics that might be appropriate in terms of the
14 overarching long term goals. The other question that
15 we're posing here for you is could they be presented in a
16 different way? Obviously, there are certain intention,
17 information that we're trying to convey with the metrics,
18 and that's part of the reason why we're going to walk
19 through those with you here in just a moment, to make
20 sure that you can hear from us what it is we're trying to
21 convey with the metric, but if there are ideas you have
22 on how we could present them, or make them more clear,
23 we're certainly open and would like to receive those
24 comments from you. And so, with that, I think I'll hand
25 it over to Dave to help us get started on metrics.

1 MR. MEHL: Well, I'm Dave Mehl with Air Resources
2 Board. And the first metric is measurement of greenhouse
3 gas emissions from the electricity sector. Very
4 significant with the passage of AB 32, greenhouse gas
5 emissions is something very important for everything we
6 do. We anticipate an emission rate of 83 million metric
7 tons of CO₂ equivalent greenhouse gas emissions in 2020.
8 Now, that could vary based on change of electrification,
9 you know, fuel usage, electricity demand, energy
10 efficiency, all these other metrics will go into play on
11 that. So what we do is we're going to be collecting data
12 through the mandatory reporting regulation and updating
13 our projections of where we expect the emissions to be.
14 We're basing the past on actual emissions in the future,
15 based on anticipated electricity demand and fuel
16 consumption rates. The next slide actually presents this
17 image, where the solid line is actual emissions from the
18 electricity sector, and the dash lines are forecasted or
19 expected emissions. What we'll do is we'll update the
20 graph with actual data and plot it vs. what our projected
21 emissions are anticipated to be. With that, we'll move
22 on to the next metric with Andy.

23 MR. SCHWARTZ: Thanks. My name is Andy Schwartz
24 with the CPUC. So I am covering Energy Efficiency. So
25 Energy Efficiency as it is used here refers to a variety

1 of measures and programs supporting the deployment of
2 those measures that reduce the amount of energy used to
3 provide energy services. Energy efficiency is recognized
4 as a critical resource to the State of California, as it
5 represents the cheapest and most environmentally benign
6 way of meeting our energy needs.

7 The importance of energy efficiency has long been
8 reflected in State Energy Policy, beginning with
9 Appliance Standards and Building Codes and Standards, but
10 it's more recently been codified into the State's loading
11 order, which identifies the priority list of resources on
12 which the State should rely in the provision of energy
13 services, with energy efficiency alongside Demand
14 Response at the top of that list. Consistent with this,
15 Energy Efficiency is also identified in the Air Resources
16 Board Scoping Plan as a key strategy in meeting the
17 State's greenhouse gas objectives, providing reductions
18 in greenhouse gas emissions relative to the business, as
19 usual case, on a scale second only to California Light-
20 Duty Vehicle Greenhouse Gas Standards.

21 The slide presented here shows energy savings
22 resulting from programs implemented by both the investor-
23 owned utilities, as well as the publicly-owned utilities.
24 I'm going to speak briefly to the investor-owned utility
25 data and then hand things over to my colleagues at the

1 CEC to talk about the publicly-owned utility data.
2 Currently, the IOUs are operating under budgets that were
3 approved in September of 2009. These budgets are on the
4 order of \$3.1 billion, covering energy efficiency
5 programs from 2010 to 2012. Collectively, these programs
6 are expected to provide energy savings on the order of
7 7,000 gigawatt hours, demand savings in excess of 3,000
8 megawatts, and gas savings of 150 million therms. Given
9 the limited time here, I would just note that the manner
10 in which the energy efficiency goals and data is
11 presented is somewhat complicated by changes in the
12 manner in which the energy goals and the savings were
13 measured by the CPUC; in particular, for 2006 through
14 2008, the IOU goals were measured on a net basis, so this
15 means you have gross energy savings attributed to the
16 programs, or to the deployment of energy efficiency, and
17 then you apply an attribution factor to determine how
18 much of those savings are really directly attributable to
19 the utilities' role in catalyzing those savings. For
20 2009, the CPUC shifted policy on this, changing to a
21 gross approach, so the goals or the amounts represented
22 for 2009 and 2010 are gross savings. So, with that, I
23 will turn things over to Kae at the CEC.

24 MS. LEWIS: I'm Kae Lewis with the Energy
25 Commission and I'm going to talk for a few minutes about

1 the energy efficiency programs in the publicly-owned or
2 municipal utilities. We monitor about 39 of those
3 utilities in California. In 2006, legislation passed
4 that obligated the Publicly-Owned Utilities, POUs for
5 short, to do energy efficiency potential studies to
6 establish targets, along with the Energy Commission, and
7 then to annually report savings expenditures on
8 efficiency and cost-effectiveness of their programs.
9 They report that to us on an annual basis.

10 We also derive on an annual basis -- we measure
11 their progress using other metrics such as energy savings
12 as a percentage of sales and also energy spending as a
13 percentage of revenue. The POUs are also required to do
14 a verification process of their energy savings as the
15 IOUs also do. And many of the POUs have submitted what
16 we call "Evaluation, Measurement & Verification," EM&V
17 studies to us. At this point in time, we are helping
18 them develop their methodology because it's not developed
19 to the point where we can use the results of these
20 studies to make adjustments in our Demand Forecasts as we
21 can do with the IOUs.

22 The IOUs, since 2007, which was the first time we
23 worked with them to set efficiency targets, they have
24 actually doubled their expenditures in those four years.
25 They have more than doubled their savings and a little

1 less than doubled their peak savings. As you can see on
2 this slide, they have increased their savings every year
3 until 2009, that's the first time, in 2009 and 2010, they
4 had a bit of a drop, but really it was only because of
5 LADWP had a huge program in 2009 and it was a big CFL
6 Program that really heavily weighted savings in 2009, and
7 the program ended by the time 2010 started. So, in fact,
8 the POU's have been relatively consistent with increasing
9 their savings. But because they are very heterogeneous
10 and their customers are also -- many utilities have very
11 small amounts of customers, their savings and
12 expenditures can really differ for the individual
13 utilities. I think that's it.

14 MR. SCHWARTZ: Thank you. So I will now be
15 turning to Demand Response. So, Demand Response refers
16 to a reduction in the customer's energy demand over a
17 given time interval and response to a price signal,
18 financial incentive, or a liability signal. Currently,
19 the investor-owned utilities operate a number of
20 different Demand Response programs, these include
21 emergency demand response triggered in circumstances
22 where Grid reliability is physically at risk of being
23 compromised, as well as price-based Demand Response,
24 where Demand Response offers a lower cost alternative to
25 procuring additional supply-side resources typically

1 during periods of peak demand when wholesale price is
2 relatively high. Although there is not currently a
3 capacity goal for Demand Response, it has expressly been
4 identified, as I mentioned before, as a high priority
5 resource in the energy loading order, alongside energy
6 efficiency.

7 In December of last year, the Commission adopted
8 a Demand Response cost-effectiveness protocol, which is
9 used to assess the IOUs' Demand Response portfolios,
10 which I understand are filed every three years similar to
11 energy efficiency for three-year cycles. Though the
12 programs most generally are found to be cost-effective in
13 order to be approved, other attributes may also be
14 considered, for example, the dispatchability of a given
15 DR program and its usefulness potentially and, for
16 example, facilitating the integration of renewables. My
17 understanding is that there are a couple pilot projects
18 the utilities are running along these lines. The Demand
19 Response metrics shown here indicate the Demand Response
20 capability across the Investor-Owned Utilities for each
21 year; the metric also includes a comparison of the bottom
22 of the Demand Response capability to the CAISA coincident
23 system peak to provide some perspective regarding the
24 scale of Demand Response availability. For 2009, 2010,
25 and 2011, these are the numbers that are identified as

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1 the Ex Ante Demand Response, these are the amounts of
2 Demand Response that are staff vetted, so they are staff
3 vetted and approved values as, I believe, in the Resource
4 Adequacy Reports that the PUC publishes each year provide
5 these sort of fully vetted numbers. Know that this is
6 not the amount of Demand Response that was actually
7 called; it's the amount of Demand Response capability
8 that's available to be called because the amount that you
9 actually use Demand Response depends very much on the
10 circumstances in any given year and whether or not Demand
11 Response is, in fact, needed.

12 For 2012 onward, the values represent the amount
13 of Demand Response capability that the utilities have
14 indicated they believe will be available based on their
15 filings in the Long Term Procurement Planning Proceeding,
16 so over time we will be evaluating these and sort of
17 vetting those. These values do assume some incremental
18 Demand Response attributable to the roll-out of Smart
19 Meters and the transition to dynamic pricing, including
20 default critical peak pricing, and peak time rebates that
21 the Smart Meters enable. The reasonableness of these
22 numbers is tied very much to the Commission's
23 determinations regarding the phase-in of default critical
24 peak pricing and peak time rebates, and I should note
25 that we do have - currently, we have a filing before us

1 that would seek to slow that schedule down, so I think
2 that will be an issue that is fairly hotly discussed in
3 the context of the Long Term Procurement Planning
4 Proceeding.

5 MS. DOUGHMAN: Okay, the next metric is for
6 Renewable Energy. So this metric is intended to measure
7 the historical renewable energy for California compared
8 to the statewide RPS targets for 2013, 2016, and 2020.
9 The metric also shows the total minimum energy that has
10 been signed in contracts by Investor-Owned Utilities and
11 Publicly-Owned Utilities.

12 There is at this point one additional graph that
13 shows a portion of the IOU signed contracts that have
14 achieved a number of milestones, including financing,
15 obtaining necessary permits, beginning construction, and
16 commencement of commercial operations. The 2020 target
17 goal is 33 percent of retail sales procured from eligible
18 renewable energy resources. The law also sets targets
19 for 2013 of 20 percent and 25 percent by 2016. I should
20 also mention the metric has a breakdown of the
21 technologies that have been used to generate renewable
22 energy over time.

23 And then the data that we are using for the
24 metric is currently the total system power data and that
25 shows the actual generation by year, rather than the

1 energy that may actually be applied for the Investor-
2 Owned Utility RPS because there is a banking and
3 earmarking possibility that is not reflected in the
4 metric.

5 So the next graph, the solid line shows the
6 actual energy that was generated over time, the blue
7 dotted steps indicate the targets, and they are between
8 two bracketed estimates of what the percentage would be
9 in terms of gigawatt hours, so we have an estimate for
10 -- 20 percent would be between the two red bars, 25
11 percent between the two blue, and 33 percent between the
12 two green bars because the actual percentage depends on
13 the success of energy efficiency, combined heat and
14 power, and other measures.

15 Next slide. So this shows milestones achieved by
16 contracts that have been signed by Investor-Owned
17 Utilities, and this chart comes from the Division of
18 Ratepayer Advocates. We would like to prepare a similar
19 chart for publicly-owned utilities, and we have a
20 question in the materials on availability of data to
21 prepare such a chart. We welcome input from you on how
22 to do that. Next slide.

23 Okay, so this is the Installed Capacity metric.
24 This is actually a series of graphics and information to
25 provide an indication of the installed nameplate capacity

1 for conventional and renewable resources, including self-
2 generation photovoltaic systems. The metric compares
3 installed capacity to goals for renewable resources,
4 combined heat and power, and energy storage. The goals
5 listed here are 8,000 megawatts of existing utility-scale
6 renewable resources, 12,000 megawatts of renewable
7 distributed generation, and 1,000 megawatts of energy
8 storage. The first two targets are from Governor Brown,
9 and the last is a target that is in the current Clean
10 Energy Future Overview document. The metric also
11 includes the goal of adding 6,500 megawatts of combined
12 heat and power in 20 years and then we have the data
13 sources listed there for you. Next slide.

14 Okay, so this slide gives an indication of the
15 amount of large-scale renewable installed capacity and
16 how it has changed from 2001 to 2010, compared to the
17 goal of 2020. Above that, we have Renewable DG, which
18 includes customer and wholesale and electricity storage.
19 The electricity storage shown here is pumped hydro. Now,
20 back to the CAISO.

21 MR. PETTINGILL: Thank you, Pam. Consistent with
22 the ISO's major mission is to do the transmission
23 planning, at least for about 80 percent of the load
24 served in California. So what you see here is the metric
25 that would look at transmission expansion that is able to

1 achieve the renewable goals. And so, looking at a goal
2 of 33 percent RPS by 2020, then what we've done is
3 identified at least what we have currently in this
4 representation materials is what we can report on within
5 our particular balancing authority, in other words,
6 clearly other areas within the state, and so our
7 intention is to work with the CEC to collect that data,
8 and then give a comprehensive presentation on
9 transmission. So let's go to the next slide.

10 Looking at how we would present the information,
11 at least currently using ISO data, what we've done here
12 is identified a set of transmission upgrades that we've
13 gone through in at least two different possible ways;
14 first, possibly through our large generator connection
15 process where we would have identified large generator
16 interconnection agreements that identify the transmission
17 necessary to interconnect renewable resources. But the
18 other way the ISO identified transmission is through our
19 Transmission Planning process. And then, we are tracking
20 how those projects are getting approved, going through
21 the CEQA process here, well, at the PUC, how many
22 megawatts the project would provide, and more
23 importantly, how many terawatt hours of renewable energy
24 that could be provided by the transmission project. And
25 the other thing that I would just point out on this

1 slide, a little bit easier to read, is the far right-hand
2 column where what the projected online data is for the
3 transmission, and that's helpful because - let's move to
4 the next slide - what we're proposing is a metric that
5 would look something like this. Based on the projects,
6 then, what is their status and how do they build up to
7 allow us to provide the terawatt hours of renewable
8 energy?

9 Let me just take a quick second and walk you
10 through this - if we take project 1, which is the Carrizo
11 Midway line, it's intended online date is 2012, and
12 that's why it shows up in the data for 2012, and then
13 beyond. It's still blue in color because it hasn't been
14 approved in the planning process. So, we're still trying
15 to look for that signed LGA that would show a need, at
16 least from the ISO's perspective. And then it would
17 change color to orange. But, until it changes, then it
18 would remain this color blue, and that's why you see it
19 staying blue all the way from the year 2012 through 2018.

20 If we take some of the other projects, for
21 example, if we look to Project 6, which is the West of
22 Devers, that project is already approved through the LGIA
23 process, but it's not expected to become available until
24 2017, and so that's why you see it reflected in the stack
25 of resources starting in Year 2017 and going forward. So

1 what we would intend to do is show how the transmission
2 facilities can provide terawatt hours of energy, but then
3 you would expect to see these colors change and become
4 more and more certain as they move through the permitting
5 and approval, and then construction process. So, Dave?

6 MR. MEHL: The next metric is plug-in electric
7 vehicles. We restricted this metric to the plug-in
8 electric vehicles because they're the ones that have the
9 impact on the electricity system, as opposed to fuel cell
10 electric vehicles, or other alternative fuel vehicles.
11 This metric also measures the cumulative number of
12 vehicles as opposed to most of the metrics are on a year-
13 by-year basis.

14 The 2020 goal is to have the infrastructure and
15 operational capabilities to support one million electric
16 vehicles by 2020. The electric vehicles that we're
17 projecting here could also be used to meet ARB's Zero
18 Emission Vehicle Program, which has targets that are not
19 specific based to the number of vehicles, it's a credit
20 system, depending upon the type of vehicle, they get
21 different amount of credits. So we projected on the next
22 slide what we anticipate as a likely pathway for plug-in
23 hybrid electric vehicles and also battery electric
24 vehicles, and kept the projections on separate tracks.
25 The auto manufacturers will be required to annually

1 report how many vehicles were sold and leased for
2 compliance with the Zero Emission Vehicle Program, and
3 we'll use that information to update the metric. And
4 with that, back to you, Phil -- or, Heather.

5 MS. RAITT: Thanks, Dave. So the next two
6 slides, or I should say that concludes staff's
7 presentation on the metrics, and the next two slides are
8 the discussion questions that are also an attachment to
9 the agenda. We encourage you to provide feedback on
10 these questions, either today or in written comments,
11 recognizing that we haven't had a lot of time to review
12 and digest these metrics. We welcome the written
13 comments by July 13th, a week from today, and as Suzanne
14 had mentioned, the instructions for submitting those
15 comments is in the Notice.

16 MS. KOROSSEC: Do we have any questions from the
17 dais for our agency representatives?

18 CHAIR WEISENMILLER: No, I think we're set up
19 here.

20 MS. KOROSSEC: All right, we did not have any
21 questions on the email. Can we go ahead and open the
22 phone lines to see if we have any questions online? That
23 may just take us a second. Okay, no phone lines, and I
24 apologize, I jumped right to the phone lines. We need to
25 have the comments from people here in the room, so if

1 anyone here has a clarifying question that you have for
2 the staff, please come up to the podium and ask. All
3 right, no great waves. All right, at that point, then,
4 we'll switch to our Panel comments, it's going to take us
5 a minute to get the Panelists up here and get the Court
6 Reporter shifted over, so about a two-minute delay here.

7 (Recess at 2:35 p.m.)

8 (Reconvene at 2:37 p.m.)

9 MS. KOROSEC: Thanks for your patience. We're
10 ready to get started again. Heather.

11 MS. RAITT: Thank you. All right, I'm going to
12 ask each Panelist to introduce themselves, if they would
13 be so kind to do that, and Carl Silsbee has a time
14 constraint, so if I could ask you to -- I'm sorry, my
15 mistake - David Wright, excuse me, has a time constraint.
16 If you would go first, please, that would be appreciated.
17 Thank you.

18 MS. KOROSEC: As mentioned, Mr. Wright has a time
19 constraint and needs to go first, so, please, go ahead
20 and start.

21 MR. WRIGHT: I really appreciate you having us
22 here today. My name is Dave Wright; I am the General
23 Manager of Riverside Public Utilities and also the Vice
24 President of the California Municipal Utilities
25 Association. Riverside serves about 300,000 residential

1 customers and a population of about 300,000 and about
2 10,000 businesses in Southern California. CMUA
3 represents over 40 Publicly-Owned Utilities providing
4 power to about one-fourth of the state. We are governed
5 by locally elected or appointed Boards, and our actions
6 are closely scrutinized by our customers and local
7 officials, in fact, we can be making a presentation, and
8 before the presentation is over, somebody has driven in
9 because they've been watching on T.V., and they provide
10 comment. So, a very transparent, locally controlled
11 organization. We also are a nonprofit so that we do not
12 have a profit motive; we just want to provide safe,
13 reliable electricity, at reasonable rates, and in a
14 environmentally responsible manner.

15 CMUA supports the greenhouse gas reduction goals
16 of AB 32 and AB 32 Scoping Plan support the 33 percent
17 renewable energy standard. Many of our governing bodies
18 have, in fact, adopted renewable RPS higher than the 33
19 percent and they did it before the statewide
20 requirements.

21 We support the loading order, and we really
22 support the goal of cost-effective energy efficiency, we
23 do support the continued public benefits charge and our
24 utilities provide programs under that public benefit
25 charge for energy efficiency and renewable energy,

1 distributed generation, electric transportation, and
2 infrastructure that we need for that.

3 I'm going to use our Riverside Public Utilities
4 and I'll call it RPU, I'll fall into the alphabet soup
5 mix, but RPU adopted the 33 percent standard in 2007,
6 though we started a progressive and focused effort on
7 renewables in 2001, most of our POUs, most of the
8 Publicly-Owned Utilities, did it off of those standards
9 and we need to continue to be aggressive on those. Like
10 many of our peers, our Resource Portfolio consists of
11 hydro, solar, wind, geothermal, and biomass. We're
12 constantly looking at how we can maximize the investment,
13 minimize the cost, but really make sure that we have the
14 reliability, so reliable, renewable energy is truly our
15 goal. In addition, we fund grants with UCR. UCR has a
16 program called SC-RISE, Southern California Research
17 Institute for Solar Energy. The utility provides grants
18 every year to ensure that we are looking at the most
19 technically advanced solar that can possibly be produced.
20 Much of what they research is, of course, several years
21 away from market, but it starts in Riverside and we're
22 excited about that. We are significantly reducing our
23 coal power, you know, we have some coal in Southern
24 California, we're obviously going to completely eliminate
25 that at the end of the existing contract, and, in fact,

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1 are looking at a very preliminary investigation on can
2 that plant be converted to a different fuel source and
3 we're having some studies done and we're starting that
4 process. We also have some nuclear power in Riverside,
5 San Onofre Nuclear Generating Station. We just changed
6 out all the steam generators, and that is a non-
7 greenhouse gas emitting resource. We're also looking at
8 meeting all of the once-through cooling regulations.
9 We're a member of the ISO; we participate in all their
10 planning and development sessions. ISO costs are a
11 factor in our rates, but we really welcome the inclusion
12 by the ISO of what our ideas are, what our thoughts, what
13 our feedback is, and they've been really great to work
14 with. We participate in improving transmission, in fact,
15 recently improved a transmission line into the Rocky
16 Mountain area, so that we can access renewables,
17 primarily wind and geothermal, in order to bring that
18 into California.

19 I mentioned public benefit programs, a big part
20 of Riverside Public Utilities, we get about \$10 million a
21 year through our public benefits charge, but we expend
22 much more than that in public benefit programs. One of
23 the areas is actually low income assistance, not
24 completely a Clean Energy Future, but I do need to say,
25 one out of 10 of our customers required low income

1 assistance last year, and that is a large percent, it
2 shows how the economy can hit a region significantly, and
3 we really work with those customers to provide some
4 support.

5 We also created the Whole House Rebate Program
6 which, the more programs you participate in to get
7 rebates, the higher your rebate goes. If you participate
8 in seven programs, you get 350 percent of the ongoing
9 rebate; the idea is to completely change the envelope of
10 the home, put a solar energy system on that, a high
11 energy efficiency air conditioner, because that envelope
12 stays energy efficient and provides renewable energy,
13 regardless if the house sold several times. I really
14 love this program, and the Federal Department of Energy
15 Secretary Steven Chu recognized that as a national best
16 practice that other utilities should look at emulating
17 that. Our customers love it because, once they start
18 with one part, one program, they start looking at what
19 they can add on, what they can do to improve their
20 rebate, get more money back, but in the long run they
21 improve that location.

22 I'm also going to make a few comments on the
23 staff presentation today, but CMUA hasn't met on this, we
24 just got the information, as you know, last week, but
25 we're meeting this Friday and we will discuss this and we

1 can provide some written comments that formally provide
2 CMUA Board approved feedback. First, the key metrics
3 identified by staff look really reasonable. I want to
4 commend staff, it's really easy to create very
5 complicated, detailed, data driven metrics that you need
6 a translator to understand, these metrics were so
7 straightforward, so well done, staff did a fantastic job
8 boiling them down to easy to understand, not just by
9 members of the utilities, but members of the general
10 public. So my strong commendation to staff for some
11 great work.

12 Most of the Publicly-Owned Utilities are already
13 reporting this information to State and Federal agencies,
14 including the Energy Commission, ARB, and ISO, we really
15 hope this doesn't trigger an entirely new set of metrics
16 and data that we have to provide, it would really be good
17 to look at streamlining the reporting requirements and
18 eliminating any overlap or anything, it allows us to
19 submit one set of data. Data collection is expensive, it
20 requires people, it requires programmers, it requires
21 software, then usually it requires an annual audit by a
22 specific entity that has already been approved, so really
23 would like that, on the other hand, we've recently had a
24 situation where data from one agency was utilized by
25 another agency and it wasn't consistent and didn't work,

1 and we had about three months of begging, pleading, and
2 demand to say, "Please use the appropriate data instead
3 of this inaccurate data." So really would like to look
4 at consistency, but appropriateness. Second, we should
5 add a key metric on cost and cost-effectiveness, really a
6 goal of adopting least cost principles throughout the
7 process as we move towards sustainability is very
8 important; in fact, the RPS statute recognizes that cost
9 to ratepayers to achieve goals is not unlimited, and we
10 should really look at doing this and having the lowest
11 impact to rates. Third, really agree with staff's
12 suggestion that there should be a metric for the ability
13 to maintain reliability, reliability is a key factor and
14 it's very important for a successful outcome. We need
15 careful coordination to make sure that exists. I've got
16 an example, the elimination of coastal power plants
17 because of once-through cooling, and limits on local
18 generation and imports from out of state really affects
19 California's reliability, and success of that effort
20 requires coordination of the State Lands Commission, the
21 CEC, the CPUC, the ARB, the AQMD, the ISO, the California
22 Coastal Commission, and others. So you could see
23 changing -- sometimes changing is a very complicated
24 process and takes a significant amount of time. Fourth,
25 really agree that recent statutory changes should be

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1 added to the California Clean Energy Future Plan,
2 including the 33 percent Renewables. However, all the
3 goals haven't been thoroughly evaluated and vetted
4 through a public process, such as a legislative or
5 regulatory process, and we don't think they should be
6 designated as statewide goals or targets until that
7 process is complete.

8 In the staff presentation, there was an element
9 that said we must engage and partner with California
10 citizens, we completely agree with that, that process
11 should be completed before some of the goals are
12 included. I know the CEC has started evaluating the
13 Governor's Clean Energy Jobs Plan for the 12,000
14 megawatts of local energy resources by 2020, there is a
15 lot of questions that still exist and it will include a
16 whole number of those questions in our comments, but
17 really those have to be resolved and answered before we
18 move forward, and that should be done in an open and
19 public process.

20 Finally, I really ask you to continue to
21 recognize the importance of locally Publicly-Owned
22 Utilities, they've served California well, in fact, our
23 rates are generally lower than the Investor-Owned,
24 reliability better, we've made decisions in a very open,
25 transparent, and local process, responsible and local

1 customers, and really our customers through survey show
2 they prefer our service. We really would like to partner
3 with all the agencies as we move forward and create
4 answers and plans and really do ask you, though, unless
5 there is specific statutory direction, allow our local
6 governing bodies to continue to make decisions that have
7 been successful and appropriate. So, really, thank you
8 for the opportunity to speak and I do appreciate you
9 taking me first, I have another meeting tonight in
10 Southern California. I'll be happy to answer any
11 questions you might have.

12 CHAIR WEISENMILLER: Thank you for your
13 participation. I guess the one question I had was
14 whether, as a metric, we should be tracking the reliance
15 on coal?

16 MR. WRIGHT: We absolutely -- I think that's a
17 great idea because that should be going like this over
18 the next decade and showing that we are every year taking
19 a few percentage away so that we will, in a decade or so,
20 have very little. And those few percentage every year is
21 being replaced with renewables. And, again, I think
22 that's a great idea, would welcome that.

23 MR. EGGERT: If I might, just a couple follow-up.
24 In terms of, you had mentioned cost and cost-
25 effectiveness; do you have a particular metric in mind to

1 capture that most succinctly?

2 MR. WRIGHT: We'll provide that as part of our
3 comments because, again, we're still looking at it and
4 developing it and getting ideas.

5 MR. EGGERT: And then I guess the next question I
6 had was for staff, perhaps, and maybe it can hold, but
7 I'm just curious as to whether or not the metrics as
8 proposed require any additional reporting beyond what
9 currently is provided to the State.

10 MS. RAITT: I don't believe it does, it's all
11 based on information we have already coming in, as far as
12 I understand.

13 MR. EGGERT: Because I like the idea of
14 streamlining that reporting process, if there is
15 opportunities to do so.

16 COMMISSIONER DOUGLAS: Yes, and actually this is
17 a follow-on question from Commissioner Eggert's question.
18 Can you describe the reporting that, say, for example,
19 Riverside would provide to the State? And what you see
20 as some of the opportunities for streamlining? Because
21 even though the metrics that we started out with aren't
22 additional, we through this process might actually come
23 up with one or more metrics that could be additional, and
24 if you could help us understand, you know, the different
25 reporting requirements that you have and how they might

1 be streamlined?

2 MR. WRIGHT: Yeah, we have to create a number of
3 reports and data submissions monthly, quarterly,
4 annually. I'll give you one example that we looked at,
5 so we are members, obviously, of a number of agencies,
6 sometimes voluntary, sometimes we're obligated to. Very
7 recently, staff came and said we do not have the
8 available staff to continue for submitting everything we
9 need to the Air Resources Board and to the Climate Action
10 Registry. So we made a difficult choice, and one I
11 really didn't like, but we basically withdrew or
12 discontinued participation in the Climate Action Registry
13 because I just don't have the staff to provide that data
14 in the different formats that both agencies need. In
15 reality, there are very similar goals, so why isn't the
16 data exactly the same for both organizations? You know,
17 I have a financial background, so I just think, why can't
18 we just add a couple columns to a spreadsheet that
19 provides the information for one agency that another
20 might not have, but submit that same spreadsheet to both
21 agencies? And, again, we could provide actually a list
22 of every single agency we provide the information to, but
23 it has gotten to either we add staff, or we withdraw from
24 some agency/ organization, and the idea of pulling out of
25 the Climate Action Registry, I didn't like, but it meant

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1 that or we go out, find an analyst, hire them, and
2 increase cost to our customers.

3 COMMISSIONER DOUGLAS: All right, I appreciate
4 that. I mean, obviously you do report data to the Energy
5 Commission, as well as the ARB, and so, you know, we're
6 very open to talk about ways of streamlining data
7 collection.

8 MS. KOROSSEC: Yes, I agree. Thank you. Good
9 comment.

10 MS. RAITT: Okay, our next speaker is Steven
11 Kelly. Thank you.

12 MR. KELLY: Good afternoon. I'm Steven Kelly.
13 I'm the Policy Director for the Independent Energy
14 Producers Association and I appreciate the opportunity to
15 speak with you today about this important planning
16 process and, just in background, I know that you all can
17 appreciate this, but the observation I have overall is to
18 achieve the GHG and RPS goals that we've set by 2020 in
19 statute, key infrastructure and investment decisions need
20 to be made within the next three years as we move
21 forward. And that relates to financing, siting, and
22 permitting the resources that are going to meet this
23 stuff, so I just want to reinforce the critical point you
24 are in the infrastructure and investment process as you
25 move forward with your planning routines.

1 A couple planning principles that I would just
2 like to throw out to help guide you, first, keep it
3 simple. A good example from my perspective of one of the
4 best planning tools that all the agencies put together
5 was the original joint action agency loading order. It
6 was three or four pages, as I recall, but it was very
7 clean, very concise, and everybody in my world understood
8 what you were going to do. And the hierarchy was so
9 opaque, or transparent, that it was very very helpful in
10 leading people to positioning themselves to make the
11 investments today that we think are going to help you
12 meet your goals. So I would just encourage you to do
13 that.

14 Secondly, similarly, make the assumptions
15 transparent in your planning processes. For example,
16 right now, I've watched some of the - I've been
17 participating in some of the meetings on distributed
18 generation, and my impression has been that the
19 definition of distributed generation has varied across
20 the agencies and across the time. I think it's very
21 important that we come to a common grip about what the
22 12,000 megawatts of DG actually are, what are the
23 technologies and resources that are going to help meet
24 that goal, because the definitions do vary and the
25 differences are going to matter when you get into a

1 planning routine in trying to model what's happening, so
2 I encourage you to look at that.

3 As mentioned earlier, it's important to ensure
4 planning and modeling consistency across the agencies.
5 This starts with data collection, which you just talked
6 about, but also the manipulation of the data and the use
7 of the data, and the extent to which you can be
8 consistent across the agencies when you do this is very
9 helpful to the marketplace.

10 And then finally, streamline where possible and
11 watch, most importantly, the synergies where the resource
12 choices interconnect because, as I sit back and look at
13 the program plans and I think of the synergies across
14 program elements, it gets very complicated about how one
15 impacts the other in a positive or negative way. It's
16 very complicated for the ISO to model, very complicated
17 for policy makers to think through, but those synergies
18 are there and we need to start wrestling with how that
19 works.

20 I'd like to talk briefly about planning matrices
21 and respond to some of the questions that staff had
22 raised. And first, this is a general observation that
23 the metrics that are in the presentation today in the
24 planning document for the most part tend to be programs,
25 I think. And really what is the key is what are the

1 metrics to determine whether the programs are performing
2 as you planned, the lead into the overarching plan, and I
3 am thinking we're a little weak on identifying exactly
4 what those metrics are for each of the program elements
5 that you have in your plan. For example, some of the
6 programs are measured in capacity, some are measured in
7 energy. I think it would be helpful if you can do this
8 to meld them into one common denominator, so to speak,
9 and for those like me who are math challenged, I throw
10 out capacity because it's a small denomination and I
11 don't know what a terawatt hour is anyway. But, anyway,
12 if you can take these programs and translate them into a
13 common metric as a goal that will also be helpful in your
14 planning processes.

15 The second thing I'd like to mention about the
16 metrics is that I think one thing that is missing in what
17 you've got now is the measure of what has to happen, the
18 rate of change over the next eight years as we strive for
19 the 2020 goals. We know what the 2020 goals are, usually
20 the bar charts show a megawatt or energy number or
21 something, but really what is critical to me as a policy
22 person is the rate of change over time. How much do we
23 have to change in what we're doing between Year 1 and
24 Year 2 and between now and 2020 to achieve it? Because
25 some of these imply a significant amount of change, and I

1 just want to give you some examples. I did some back of
2 the envelope calculations based on the presentation
3 materials. Demand response, as I understand it, you
4 know, in 1980 to 2011, 21 years or so, a little more --
5 actually 21 years, 30 years, we got about 2,500 megawatts
6 of demand response. Over the next eight years, we're
7 looking to increase that by 3,500 megawatts. That's 175
8 percent increase over that time frame. To me, that's a
9 challenge, it's a good stretch goal, but that is a
10 challenge. CHP, it's taken us 30 years to get 4,000
11 megawatts of CHP that delivers to the Grid, the stretch
12 goal is to get 4,000 megawatts in the next eight, that's
13 a challenge.

14 Utility-scale renewables, I think I calculated in
15 your number that we had about 6,000 megawatts of utility-
16 scale renewables today, it might be a little higher than
17 that, but the stretch goal is to add 8,000 in the next
18 eight years, that's 133 percent, give or take a little
19 bit.

20 DG renewables, I think we have about 3,000 right
21 now, the goal is 12,000. Setting aside what I mentioned
22 about the definition, whatever is going into that
23 definition, that's a huge challenge for policy makers and
24 for the marketplace to respond to this. So, I've
25 calculated that we're looking at roughly about 28,000

1 megawatts, give or take, of new resources that are going
2 to be added to the system over the next eight years under
3 this plan, which is fine, it's just going to be a
4 challenge. And I think it's something you need to be
5 cognizant of and I think the best way to track the
6 challenge is a rate of change calculation in the metric,
7 how much does it have to change over time in terms of
8 improvement?

9 The only other comment on metrics I'll make today
10 in my presentation is on the electric vehicle. I
11 originally read the proposal to indicate that the metric
12 was going to be the number of vehicles on the road, zero
13 energy electric vehicles, and so forth, a million. I
14 read the presentation today and it sounded like the
15 infrastructure to support a million cars, those are very
16 different. And you might want to focus in on whether
17 we're talking about metric being the cars on the road, or
18 the infrastructure to support the cars, it wasn't clear
19 to me.

20 Finally, and more in closing, I just want to
21 raise a couple of concerns that we have when we think of
22 moving forward in this environment. First and foremost,
23 given the stretch goals and the hurdles we have to make
24 this happen, one of the biggest questions we have are,
25 are the requisite experience and staffing available

1 within the agencies to process these preferred policy
2 outcomes because, if there are not, some of these are
3 going to lag and the individual agencies are going to
4 have to prioritize some of these programs. And how that
5 prioritization goes is going to go a long way to the
6 ultimate success of the overarching program.

7 So we have been concerned about this, we have
8 expressed this concern to the Governor's Office about the
9 need to increase staffing at the agencies, and we hope
10 that message gets through. I know that certain agencies
11 like the Public Utilities Commission have the staffing
12 budgeted, there's just a freeze, so we're trying to work
13 on that and get you the people that you need to get this
14 done.

15 Secondly, given that there may well be tradeoffs
16 as we move forward over the next eight years to achieve
17 these goals, we want to make sure we're not changing
18 horses in the middle of the stream here. I've been
19 involved with the RPS now since 2002, it's almost been 10
20 years. It's just now, quite frankly, getting to where
21 I'm comfortable that it's going to result in some
22 meaningful projects, in the last two years. I hope we're
23 not in a position that we divert the resources needed to
24 attain the remaining 8,000 megawatts by moving staff
25 around so that we can't continue that process because it

1 takes a lot of staffing and time and resources to make
2 that program work. So I just hope that we keep on track
3 and keep focused on there.

4 And then, finally, I just note that, while the
5 focus is on clean energy, clean technology, clean energy
6 sector, there is an element of the overarching program
7 that we cannot be oblivious to, which is the need for a
8 certain amount of fossil to support this. And this will
9 be clean fossil, but there is going to have to be some
10 fossil, I think, in the near term to maintain the overall
11 grid reliability. As a practical matter, I tend to think
12 of this as, over the next eight years, this vision of the
13 Smart Grid and the integration of these new program
14 elements as very difficult to achieve by 2020, certainly
15 probably achievable in the next decade after that, but
16 we're really probably what I call one long term PPA away
17 from that, so I don't want the agencies to stop pursuing
18 the infrastructure investment on transmission
19 distribution upgrades and PPAs that are needed to help
20 meet these goals today while we look at some of the other
21 technologies, I just urge you to keep the eye on the
22 prize, about what the goal is for 2020. Those are my
23 comments and I welcome any questions.

24 CHAIR WEISENMILLER: Thank you, Steven.

25 CHAIR NICHOLS: Question for you, since you

1 mentioned the issue about investment. Obviously, a huge
2 amount of the investment that we're relying on to meet
3 all of these goals is private sector investment, which we
4 have certain policy tools to address, but are not able to
5 actually direct investments in most instances, ourselves.
6 Do you have any suggestions about metrics that would help
7 us evaluate how we're doing on that?

8 MR. KELLY: Well, one metric would be, for
9 example, in the RPS Standard, one metric would be the
10 amount of viable projects that are bidding into the
11 utility RFOs. Now, the Public Utilities Commission has
12 moved to kind of improve what they call a Project
13 Viability Calculator that includes financing capability.
14 So, hopefully going forward we'll be seeing more and more
15 private sector investors lining up to pass through that
16 screen. I think that might be one. It's interesting, in
17 my business, five or six years ago, the industry was
18 bifurcated between kind of the people who did renewables
19 and the people that did fossil. That bifurcation has
20 almost evaporated in my view, in terms of the companies
21 that are investing.

22 The State succeeded in moving the investment
23 dollars within companies that were primarily fossil
24 oriented, for California at least, into a plan to invest
25 in green. And I think that started with the loading

1 order concept that you promulgated a couple years back,
2 it sent the signals for people that, if they want to be
3 investing in California, that's where they had to put
4 their money and I've seen a lot of capital move that way.
5 So, I think you're seeing it. Actual metrics would be
6 participation.

7 CHAIR NICHOLS: Thank you.

8 COMMISSIONER DOUGLAS: Thank you, Steven, it's
9 been really helpful to hear your comments. I had a
10 couple questions. When you talked about the importance
11 of seeing additional consistency not only in the
12 collection of data, but the use of data and modeling, and
13 so on, can you give us some specific examples of what you
14 mean - processes, models.

15 MR. KELLY: Yeah, I'll give you -- it's very
16 difficult for any individual stakeholder to participate
17 in all the planning processes that are going on in
18 California today. Probably in the best position to do
19 that are the utilities. For example, in transmission
20 planning, this is my Jihad, so to speak, I mean, I watch
21 -- there is a CTPG, that first it starts with the Energy
22 Commission and its assumptions in the IEPR; a couple
23 years back, it was the assumptions in the RETI Program
24 that I participated in. That information transfers over
25 to the CTPG, which does something, and then that work

1 product transfers over to the ISO, which does something,
2 and that information transfers back to the Energy
3 Commission, or the PUC, depending on the time of the
4 year, and they do something. It's very difficult for
5 stakeholders to track that. If I knew that everybody was
6 taking the position, "We're going to be open and
7 transparent in our assumptions, and we're going to be
8 consistent as we possibly can across all the agencies in
9 what we're using," it's very helpful. And the I just
10 have to trust you all.

11 COMMISSIONER DOUGLAS: All right, thank you. One
12 more question. You mentioned that the next three years
13 are critical in order to set the stage for some of the
14 investment that needs to happen in order for us to meet
15 our 2020 goals. What are you looking for in the next
16 three years? What do you see as the signal that you
17 think will help us direct that investment towards meeting
18 the goals?

19 MR. KELLY: Well, I think it expands across just
20 generation and into transmission, for example. To build
21 transmission in California today, I pretty much assume it
22 takes seven years. To build generation, we're talking
23 three to five years, at least utility-scale. And I'm
24 just backing out from the 2020 goal. You don't want to
25 end up in 2018 to find, "Oh, my gosh, we are way short.

1 What did we do wrong five years ago?" Because, by then,
2 it's pretty late to actually meet that 2020 goal. So,
3 I'm trying to back out of that and say that we are
4 getting really close to a point that, if you want
5 significant investment occurring in either generation or
6 transmission, or anything else, electric vehicles, those
7 decisions are getting pretty critical right now in terms
8 of signals to people to actually spend the money.

9 COMMISSIONER DOUGLAS: All right, so you're
10 backing out the time it typically has taken in some
11 processes and suggesting that we better start soon, given
12 the experience that we've had typically with the
13 timeframe for moving forward?

14 MR. KELLY: Yeah, that's correct.

15 COMMISSIONER DOUGLAS: Thank you. Those were my
16 questions.

17 MS. RYAN: A couple of quick -- Mr. Kelly, thank
18 you very much for your remarks. I think your point about
19 we need to be looking not only at progress towards a
20 target, by the rate at which we're moving toward the
21 target, is a point very well taken, and I think you just
22 pointed to one reason for that in your response to
23 Commissioner Douglas. So, I think that's something for
24 us to bear in mind. I want to go back to your other
25 comment that you made about essentially the metrics being

1 linked to programs and then going into units to measure
2 progress towards those metrics because I think that's
3 actually an interesting question and one that we would
4 benefit from hearing from, from a number of you. And I
5 think it, in fact, makes sense. It makes sense to me, at
6 least that, to a large extent, the metrics are aligned
7 with programs because the metrics tend to measure our
8 progress towards some ultimate goal like 33 percent
9 renewables and we have a program that we design to reach
10 that goal. Sometimes we have multiple programs that are
11 aimed at the same goal and then that can make things more
12 complicated and I think that would be true, particularly
13 if we layer on additional goals, or DG, however it ends
14 up being defined.

15 But as far as units are concerned, I think one
16 thing that we struggled with when we talked about the
17 metrics among ourselves was, you know, ultimately, for
18 example, do we want to boil everything down to tons of CO₂
19 avoided? Well, to do that, then you have to make certain
20 assumptions or calculations in a consistent way,
21 presumably across different types of measures and, in a
22 way, you conflate the effectiveness of the measures with
23 your progress towards achieving the measures because you
24 may not actually get the same amount of tons - you may
25 not actually get the anticipated amount of tons per

1 megawatt hour of investment in CHP, or whatever it is.
2 And so, even though, if everything were in tons of
3 carbon, then it would be easier to add up, or compare,
4 whatever, you have to ask the question, and I'm really
5 asking you all the question, what is it that we want
6 these metrics to tell us? Does it make more sense to
7 measure each thing in its native units? So, whether it's
8 megawatts installed for renewables, or terawatt hours of
9 conservation avoidant, but I think that's for energy
10 efficiency, so I think it's very helpful to get a sense
11 from you all, again, of what questions do you want to be
12 able to answer, what do you want to be able to track?
13 And, again, you all are very involved and sophisticated
14 stakeholders, but you're also engaged -- you look outward
15 towards, you know, other sets of stakeholders who spend
16 much less of their time thinking about these things than
17 we do and, I mean, there's multiple audiences and I think
18 there will be multiple metrics for different audiences,
19 but maybe the most useful thing to know, for us to hear,
20 is what do you want to know? What do you need to see to
21 know that progress is happening? Or to give you some
22 reasonable degree of confidence that progress will occur,
23 where there may not have been historically as much
24 progress as any of us might have liked. So, I don't
25 know, you may have a response to that, Mr. Kelly, or it

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1 may just be something I'll leave to the rest of you all
2 to come back to.

3 MR. KELLY: I do have a quick response because I
4 think that it may not be the one-size-fits-all and the
5 key is to make sure that you've got common metrics across
6 all the program elements, it may be a couple, it may be
7 megawatts, it may be carbon, or whatever. I mean,
8 unfortunately -- fortunately or unfortunately, it doesn't
9 really matter -- most of these programs originate in the
10 Legislature and the Legislature thinks in megawatts,
11 generally, except for the RPS and except for the AB 32
12 carbon goal. You know, the CHP stuff and all these
13 little silos that the Legislature likes to create tend to
14 be in megawatts, so you're going to probably have to do
15 that anyway because you're going to have to report to
16 them how we're doing against the statutory obligation.

17 MR. BERBERICH: Thank you. I guess I'm sort of
18 the King of Megawatts. By the way, in case anybody is
19 interested, we're pulling about 44,000 megawatts right
20 now, which is a pretty healthy load day. In fact, I
21 think we'll probably hit the highest load we've had so
22 far this year, just for some trivia. Steven, it's clear
23 that we're going to have to have some of the fossil fleet
24 that exists now and perhaps -- I don't want to say
25 "additional capacity" because I really think it has to be

1 capability as opposed to capacity, going forward. How
2 best do you think we can make sure that occurs? Now, I
3 know we don't really have a measure of that, but it has
4 to be there, perhaps Mr. Wright's suggestions associated
5 with reliability as a metric because, if we don't have
6 enough, we will have a reliability issue. Any thoughts,
7 real quickly, on how we can make sure we maintain that?
8 What's attractive to your people?

9 MR. KELLY: Well, the ISO is the most technically
10 capable entity to identify kind of the requirements and
11 the need for some of these resources, so I think that
12 voice is important. The one thing that clearly would
13 send the message to the world is the lights start
14 flickering, and we don't want that. So you're trying to
15 prove the opposite, right, which is very difficult. But
16 I think it's the role of the planners who are the
17 sophisticated analyses and people, the Thought Police, so
18 to speak, on this, to be thinking about this and the
19 synergies amongst these technologies and be perfectly
20 frank with the world, in my view, that it would almost be
21 impossible in the next 10-15 years to -- I've heard
22 people advocate the elimination of the fossil fleet, I
23 mean, it just makes no sense. So, I think speaking up on
24 that and challenging those assumptions would be helpful.

25 MR. BERBERICH: Thanks. We'll talk further off

1 line, I think, about that. Then, for everyone, and
2 Steven, I don't know if you want to talk about this, I
3 would be interested in everybody's perspective on the
4 definition of distributed generation because I think
5 that's an elusive definition. And to the extent you guys
6 can contribute to that, to help us -- hello --
7 distributed gen -- anyway, if you guys have comments on
8 the definition of Distributed Generation that would be
9 very helpful as we go through the comments.

10 MS. RAITT: All right, are we ready to move on to
11 the next speaker? V. John White. Thank you.

12 MR. WHITE: Thank you, Mr. Chair, Madam Chair,
13 Commissioners, staff. Thank you for inviting our
14 participation in this workshop and I share the respect
15 and appreciation for the hard work that your staffs have
16 done. I have a couple comments on metrics and then some
17 thoughts on planning issues.

18 First of all, I think I share Chairman
19 Weisenmiller's observation that we need to be tracking
20 the level of coal imports and the planned retirements and
21 reduction in use. This is important not just from a
22 greenhouse gas standpoint, but also from the standpoint
23 of resource adequacy and transmission planning. Our
24 resource adequacy process currently at the PUC embeds all
25 the existing fossil at the front of the transmission

1 queue, regardless of the plans for its future. And so it
2 artificially pushes the renewables out. So, to me, this
3 is a very critical element of the metric and I think it
4 should not just be coal imports, but also fossil
5 retirements, as well, because we don't want to base our
6 reliability planning on resources that we are going to
7 soon be doing without, without even looking, and that's
8 the current practice.

9 Secondly, it's been our view for some time that
10 California must not have a CO₂ centric greenhouse gas
11 policy, and one of our concerns has been neglecting of
12 the other greenhouse gas pollutants, so we want to be
13 sure in these metrics that at least methane and black
14 carbon are counted, evaluated and considered because, for
15 example, one of the principal strategies for reducing
16 methane, which is 40 times more powerful than CO₂ is
17 distributed utilization of renewable methane in fuel
18 cells and other advanced technologies. This has not been
19 a key part yet, unfortunately, in the talk about
20 Distributed Generation resources, and yet these resources
21 have very significant value to meeting these other goals,
22 not to mention that, in many cases, they're baseload
23 resources, so they actually help contribute to
24 reliability and so forth. So, this is an example of why
25 I think the metrics need to be broadened.

1 I will say that, as enthusiastic as we are to see
2 all this level of cooperation, as Steven said, this still
3 sort of looks like a representation of each agency's own
4 silo, okay? So one of the things that we've got to do
5 and what I'm really glad you're here all today and wish
6 you had other of your colleagues here, is that one of the
7 features that made the Energy Action Plan process so
8 valuable was that it included not just staff, but
9 Commissioners. Now, I know you all have Energy
10 Principles meetings, but there is nothing like an
11 opportunity, particularly from a resource constraints
12 standpoint, to have public opportunity to discuss with
13 all of the agencies at the Commissioner level because
14 that, then, gets dialogue going with the Commissioners,
15 and then we start to get to a policy focus that is
16 broader than the sum of all the agency activities.

17 So those are my thoughts on metrics and a couple
18 more thoughts on process. First, I do think it's very
19 important, despite our focus on these near term goals,
20 2020 is not very far away, and in the electricity
21 planning business, a 10-year plan is almost immediately
22 out of date, so I think you need to now start thinking
23 beyond 2020 and maybe not as far as 2050, but I think
24 2030 is probably a horizon without our capacity to grasp,
25 and I think because, if we don't, if we stop at 2020,

1 there is a danger of making mistakes. For example, there
2 is a lot of hand wringing about once-through cooling, and
3 yet we believe that we're going to need much less fossil
4 than is currently imagined, particularly if we are
5 successful doing the other things like energy efficiency,
6 like balancing authority coordination, and so we
7 shouldn't just project all that fossil as being
8 absolutely needed without evaluating what the options
9 are. And so that's why I think the 2020 horizon is too
10 short, it's a good focus because that's what our
11 statutory goals and stuff are focused on, but from an
12 electricity planning standpoint, we've got to look
13 beyond. And I don't want to pick a number, the Governor
14 said 40 percent, I'm good with that, but it matters less
15 what the goal is than that we're thinking out that far.

16 Thirdly, there was a reference to the CHP goal as
17 a Governor's goal, and this was news to me, and so I'd
18 like to have a little more clarity about where that came
19 from, and if we're going to have it in here, we had
20 certainly better have an efficiency standard included
21 because all CHP, just like all renewables, aren't equally
22 valuable and we should be encouraging the highest
23 efficiency uses.

24 We've talked about the loading order and the
25 relative success, but I think we have much more progress

1 that we need to make with respect to energy efficiency.
2 We need much more transparency, not just dollars spent or
3 programs administered, but actual emphasis on what are we
4 getting for the money we're spending. I think we're
5 going to have to face up to the politics of time of use
6 pricing if we're going to be successful in regard to
7 energy efficiency.

8 We also are going to have to be more transparent
9 about things like buildings; the Energy Commission has a
10 program we hope will soon be up and running that could be
11 a basis of helping people grade buildings so we can rank
12 them, not with numbers, but with grades like in school,
13 so we know who the "Ds" are and who the "As" are, and we
14 can get them talking to each other.

15 I mentioned the silo problem as one of the
16 biggest challenges that we face in achieving what Steven
17 said with regard to the progress that's needed to be done
18 quickly. We cannot afford to have everything be as
19 bifurcated and as divided as it has been. And so, one
20 thought I had is, first of all, these kind of meetings
21 for us are very valuable and for people that have the
22 opportunity to come and see you all, I think you need to
23 do this on a regular basis. I'd like to suggest that
24 there be quarterly meetings at the Commissioner level, if
25 possible, and take up specific topics at each of these

1 meetings. And a couple suggestions I have is the once-
2 through cooling, future of fossil conversation, one of
3 the things we have to recognize about fossil is that
4 we're going to need, as Steve said, some of it for
5 capacity, but we don't want it to run all the time, we
6 don't want to use that capacity for energy, so we're
7 going to have to change the incentives for how these
8 people get paid. Now, capacity markets have been
9 controversial, but we need to figure out a way to pay the
10 capacity to be there, but not have that capacity have to
11 want to run all the time because it will interfere with
12 what else we're trying to do.

13 Secondly, when we get to the once-through
14 cooling, our friends in the City of Los Angeles, I
15 understand, are coming back to the Legislature again to
16 revisit the Water Board's policy and, in the end, we need
17 to have that conversation out in the open about what are
18 we doing? Retiring or repowering? And we have all this
19 new fossil capacity that is coming on line, fast ramp,
20 and high efficiency, how much of that can we use to
21 substitute for the coastal plants? Recognize that there
22 may be specific cases where we need to look at specific
23 plants and suggestion maybe the Water Board needs to be a
24 little more flexible. But we don't want to just have it
25 say, "Oh, the sky is falling, we can't do it," and I

1 think an interagency forum maybe with the Water Board
2 would be a useful topic for discussion.

3 Second, the Distributed Generation resource
4 discussion has already galvanized a lot of conversation.
5 I think that would be a topic worthy of a significant
6 interagency Commissioner level discussion, and so we can
7 maybe examine what kind of resource diversity are we
8 going to do with this portfolio. For my money, DG is
9 under 10 megawatts and primarily customer-owned, okay,
10 there are other who want to call it 20 megawatts, but to
11 me that's more wholesale generation that's finding a home
12 in the world of Distributed power. That customer-owned
13 generation is very valuable, but it's complicated to get
14 at and the incentives that are needed to bring it on line
15 vary. You've got some projects that are going to need
16 self-generation incentive type help because it's on-site
17 load. Others are going to have the opportunity to export
18 power to the grid, like from landfills or from dairies
19 where there isn't a lot of on-site load, so those are
20 going to maybe need the feed-in-tariff. So I think you
21 need to think about the resource base was have, the
22 regional diversity, and the combinations that will work
23 to give us resource adequacy, reliability, greenhouse gas
24 reduction, and renewables, and not just one of the four
25 because, when it comes to cost, solving for multiple

1 problems for large-scale renewables, as well as
2 distributed, we need to solve for multiple goals, not
3 just renewables, but also these other factors. Then, I
4 think at the risk of calling attention to a problem that
5 folks would maybe rather not hear about, I think we need
6 to take a special look some day at the Los Angeles
7 Department of Water and Power. This is the single
8 biggest greenhouse gas emitter in the system and their
9 progress is variable, depending on what's going on in the
10 City with regard to rates and the City Council, and so
11 forth. Air Resources Board and CEC share jurisdiction
12 for oversight of the DWP, but knowing what their plans
13 are, and having them be accountable for those plans will
14 be the best way to ensure their compliance and not have a
15 messy penalty argument. So we need, I think, to focus
16 particularly because the Los Angeles system is very
17 important to reliability, and there is great
18 opportunities for sharing power and resources with the
19 ISO system, there is a history of religious differences
20 between the ISO and the DWP, but we have new leadership
21 in both institutions and it's really important, I think,
22 that they be included not so much as an enforcement
23 target so much as a partner in all this enterprise,
24 because their success is vital to the achievement of
25 these goals and, if we wait until 2015 to find out how

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1 they're doing and what their plans are, then I think that
2 will be too late.

3 Finally, I'll just say that there's going to be a
4 lot of talk about cost of renewables and I think we're
5 going to have to look at the value, as well as the cost.
6 We know that we pay for natural gas, regardless of the
7 price, through automatic pass-through to the ratepayers,
8 there is no opportunity to discuss or debate that, it
9 just happens, so when gas prices are cheap, renewables
10 tend to seem expensive, but if we look at how we can make
11 this program solve multiple problems and create value for
12 ratepayers, as well as emphasizing, as I know my friend
13 Carl Zichella is going to emphasize, that we're talking
14 about bills people pay and not just rates, but this cost
15 value proposition is one where all of these agencies that
16 are here, and some that are not, have a part of that
17 story and a part of sharing in the discussion of those
18 issues. So I thank you for letting me comment. Thank
19 you for your attention.

20 CHAIR WEISENMILLER: Thanks for being here today.

21 COMMISSIONER DOUGLAS: I just have -- this may
22 even be more in the nature of a comment, but both you and
23 Mr. Kelly have brought up the issue of the need for
24 fossil generation, and yet the question of how might the
25 system use fossil generation differently and how much is

1 needed, how much of the existing fossil capacity will we
2 need going forward, hopefully through an increasingly
3 through new and efficient plants as opposed to just some
4 of the less efficient plants out there, pursuant to
5 legislation, these agencies you see sitting at the table
6 today have been working together on an analysis of this
7 question in the South Coast, and it's been interesting
8 because it has been a new way of looking at a question,
9 it's required a lot of new analysis, it's required kind
10 of integrating analyses, some of which have been done in
11 some ways, but not in the way we kind of need to put them
12 together, so it's just a comment that, while work on that
13 is progressing more slowly than I would like, I think
14 that we see its importance and its value and I'm hopeful
15 that we will get to it and get it done in the right way,
16 and in a way that all of us and the public will have
17 confidence in, but it certainly has not been easy to look
18 at the system in that different way. And, of course, the
19 question in that legislation has been, under this policy
20 preferred scenario with Distributed Generation and
21 efficiency and renewable energy, how much in-basin fossil
22 generation is needed for reliability, or for balancing
23 the system, or for whatever other reasons it might be
24 needed there. So, it's been an interesting endeavor and
25 to be continued probably for longer than we would like,

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1 but we're on it.

2 MR. WHITE: It kind of depends, you know, on
3 assumptions and you may need to do some scenarios and,
4 after Fukushima, we have to also maybe reexamine how long
5 we might be having some of the nuclear plants available
6 to us.

7 COMMISSIONER DOUGLAS: I agree with that
8 question, you know, we do need to, especially as we look
9 out beyond 2020, look at the question of how the nuclear
10 plants will be available to us and it's a daunting
11 question, frankly, because it's a lot of zero carbon
12 electricity that right now is factored into our
13 assumptions. So it's a question -- I think it's a very
14 important question. I also just want to say that I
15 appreciate your suggestion that we look beyond 2020
16 because, in particular, 2030 is not that far away from
17 a planning perspective and so we want to make decisions
18 today that are at least informed by that longer term
19 perspective, even though, of course, the closer we get to
20 today, the easier it is to have certainty. But, anyway,
21 I appreciated your comments.

22 MR. EGGERT: Just a quick -- I would echo the
23 comment that looking beyond 2020 is important, to see
24 that we're -- that the trajectory, for example, for GHG
25 is continuing to bend down and we're not fooling

1 ourselves with the dip that comes back up afterwards.
2 Actually, just maybe a question with respect to your
3 comment about the CHP and the efficiency of the CHP, is
4 your suggestion that it be tracked by efficiency? In
5 other words, you'd have different bins associated with
6 it? Or was it more than that?

7 MR. WHITE: My observation is that, if we're
8 going to have a CHP goal part of this program, I'm very
9 supportive of capturing thermal energy savings both in
10 cooling and in heating, because they are often more cost-
11 effective than some of the electricity programs by
12 themselves. But, at the same time, there's a lot of
13 different ways to do CHP, it's sort of like DG, it sort
14 of matters what kind. And my suggestion is that the kind
15 that we should value the most are the kind that are the
16 most efficient and that some kind of a loading order or
17 something within the CHP, I mean, we don't disagree that
18 that should be part of the goal, partly because it's in
19 the Scoping Plan and because it helps get at things like
20 heating and cooling that are sometimes afterthoughts in
21 the focus on electricity. My thought was, if it's going
22 to be part of the goal, then we need to define it a
23 little better and be sure that we have our eye on the
24 efficiency.

25 MR. BERBERICH: Yeah, John, I appreciate your

1 comments, as well. A couple of thoughts, and I guess
2 they are more comment than questions, about the Parson
3 Divide(ph.), I submit to you that we will work on that.
4 There is new leadership on both sides of that; because
5 there is a lot of coal production down there, the
6 collaboration, I think, can help resolve that issue.
7 And, also on the definition of Distributed Gen, I think
8 it is going to have to be flexible. The conundrum we
9 have is kind of where you plug it in really matters, and
10 I know you know that, so we'll have to work that issue,
11 as well. Really, I think I just have a comment there,
12 Chairman Weisenmiller.

13 CHAIR WEISENMILLER: That's good. Yeah, I think,
14 John, as we struggle through these things, at least in my
15 mind, the first priority is the coal back out, the second
16 priority is going to making sure that we're starting to
17 think through the backstops on the nuclear plants, and
18 the gas stuff is more like the third trench, you know,
19 then I think it would be unfortunate if we start at the
20 first trench and let the coal stuff continue, but not
21 deal with the potential we could have on a nuclear
22 displacement.

23 MS. RAITT: Okay, our next speaker is Dave
24 Ashuckian.

25 MR. ASHUCKIAN: Thank you very much. I'm Dave

1 Ashuckian representing the Division of Ratepayer
2 Advocates and I appreciate the opportunity to represent
3 ratepayers. DRA is an independent division within the
4 California Public Utilities Commission and our statutory
5 mandate is to advocate for low affordable utility rates
6 that are consistent with safe and reliable service. And
7 with that, we also advocate for environmental
8 protections. I do think that the clean energy future
9 opportunity here is a perfect opportunity to help guide
10 an area where we focus on how these programs are doing.
11 I'll call it an annual report card of the state of the
12 state in achieving our energy goals.

13 One of the things that struck me in looking at
14 the presentation and also, as we, the Division of
15 Ratepayer Advocates, look at how these programs are
16 implemented by the investor-owned utilities, is that we
17 have to continue to consider the interactions between the
18 various programs and one of the things that struck me is
19 even how this presentation that the staff made is
20 organized was by "here's the program, here's how it's
21 achieving its goals, here's another program, here's how
22 it's achieving its goals," but there is no obvious
23 interaction between the various programs. And I think
24 there are some simple ways to potentially change the way
25 that is presented, in a way that helps policy makers

1 understand and address how these programs interact and
2 how they can be changed when they are implemented. For
3 example, slide 23 talked about how the renewable
4 resources have increased over the last 10 years and the
5 Governor's goal of 20,000 more megawatts by 2020. If you
6 overlay that on the slide about we're trying to also
7 achieve 8,000 megawatts of energy efficiency, how does
8 that affect the demand? I think that the reduction in
9 8,000 megawatts with the demand for more resources is,
10 again, an issue that we have to consider, and that gets
11 to the point of the timing is critical and looking beyond
12 2020 is critical.

13 One of our jobs as the Division of Ratepayer
14 Advocates is to evaluate the requests and the contracts
15 and the activities that the utilities are asking for to
16 achieve the state policy. When, as we show on slide 23,
17 that we essentially have 33 percent renewables under
18 contract at this point in time, when they continue to ask
19 for more resources, we have to say, "You don't need those
20 right now because you already have achieved your goal."
21 And therefore we have to look about how these things
22 affect long term. The other example is with Demand
23 Response. I think a lot of these programs were created
24 as a result of the energy -- I won't call it a crisis,
25 but the energy events of 2001, it was a man-made crisis -

1 - but a lot of these programs had good intentions, had
2 great expectations to achieve results from that
3 situation, and yet we have achieved many of those -- the
4 system has evolved and has achieved many of those goals,
5 and yet we're just now continuing to finalize many of
6 those programs. We have just adopted -- just paid for
7 \$5 billion worth of Smart Meters. The goal of those
8 Smart Meters is really to achieve Demand Response, and
9 yet we're still approving individual programs for Demand
10 Response at the utility level. And so how those
11 individual programs are going to overlap with how Demand
12 Response, should become ubiquitous among all ratepayers,
13 I guess, is something we have to continue to think about.
14 And we even have seen Severin Borenstein say, in a
15 presentation at the PUC, that the original goals of
16 Demand Response have changed because there is very little
17 change in the wholesale price of electricity because our
18 capacity has become so robust and therefore Demand
19 Response really has less value to the ratepayer now that
20 we have such a robust capacity, and so we have to
21 continue to think about how these programs interact with
22 each other.

23 One recommendation that we made regarding the
24 implementation of AB 32 was a specific loading order like
25 the Energy Action Plan created for the overall

1 electricity system, but a loading order based on
2 achieving a specific goal of reducing greenhouse gas
3 emissions, and then identifying programs that can reduce
4 emissions as what is the most cost-effective, and then go
5 to the next level, what is the next cost-effective, etc.,
6 etc., so we actually have a loading order within the
7 program goals of the total electric energy system
8 program.

9 And I do support the comments about how the
10 Energy Action Plan, where there was joint agencies
11 interacting, was really a great system that, even though
12 it had a lot of discourse at times, it did allow a lot of
13 these programs to get discussed at an open forum and it
14 provided that interaction in thinking about, well, if we
15 do this, how does it affect a different program?

16 A comment that Dave said about cost effectiveness
17 as a critical piece of that, again, cost-effectiveness is
18 one of the issues that we, again, as ratepayer advocates
19 obviously are concerned about, but, again, making sure
20 that we are not duplicating, we are not paying -- the
21 ratepayers are not paying for one program and, at the
22 same time, paying for the exact same benefits in another
23 program that essentially do not provide any additional
24 benefit to those ratepayers. Some specific comments
25 regarding rate reporting, one of the things I think, as

1 Steve said, is that the trends are critical and the
2 timing is critical, just knowing what the system average
3 price is is an interesting piece of information, but how
4 that has changed over time is really the impact that
5 ratepayers are affecting, you know, they have planned for
6 a certain utility bill over time and if that changes over
7 time, regardless of what the individual magnitude is,
8 they have expected a certain amount of growth or of a
9 cost, and therefore that change over time is really
10 critical to the ratepayer. Identifying what the rate
11 impact is from individual programs is also critical to
12 understand which programs are truly achieving their goals
13 and which programs may be really costly for what the
14 results are is another program that I think this metric
15 could expand upon. Realizing that 30 percent of all
16 customers in California are under the CARE, which means
17 that they are within -- they are subsidized, the rates,
18 they are within 200 percent of the Federal poverty level,
19 one-third of essentially all customers have a difficult
20 time and cannot afford their rates, and so just having
21 that metric of what the overall rate is, or revenue
22 requirement is doesn't get to the point of how affordable
23 rates are for those customers who are struggling.

24 Regarding the comments on electric vehicles,
25 again, I think Steven made a good point about it's the

1 infrastructure that, really, we have the true ability to
2 achieve or to affect. But, again, when you look at the
3 goals of the electric vehicle program, those goals are
4 really going to be achieved and probably only going to be
5 achieved if we can truly affect how those vehicles are
6 charged on the system. And that means those vehicles
7 have to be charged off-peak to achieve those goals. If
8 we allow infrastructure to be - to let vehicles charge
9 on-peak, we're going to actually need more infrastructure
10 to handle those vehicles and we're not going to achieve
11 any of the environmental goals that those vehicles were
12 going to expect. And so, the ideal infrastructure for
13 those vehicles is in-home charging, to encourage people
14 to charge at home, after they get home from work. And
15 that in-home charging is only necessary for those
16 individuals who actually have vehicles. So, again, being
17 cognizant of not just going out and putting out
18 infrastructure with the expectation that, you know, you
19 build it and they will come; in the case of electric
20 vehicles, I think it's the incremental infrastructure is
21 the way to go because it actually will help achieve the
22 environmental goals that the program is designed for.

23 The last thing again is, again, back to the
24 timing. We have seen significant reduction in cost of
25 renewables over the last 10 years since the RPS program

1 has achieved, and so making sure that we don't -- we're
2 not too over-reactive to trying to achieve our goals too
3 quickly, allowing the market to adjust and to reduce the
4 price of some of these programs so that we can actually
5 achieve the programs at the most cost-effective manner is
6 critical. We are still nine years away from 2020 and,
7 again, we already have contracts for our 33 percent
8 renewables, and yet now, just now, we're seeing the price
9 of renewables come down. Is it because the developers
10 know that we've already achieved 33 percent under
11 contract? Or is it because, you know, of our
12 transformation of the market? It's hard to tell the
13 difference. But the point is, as we continue to
14 implement these programs, making sure that we're not too
15 over-zealous and trying to achieve them too quickly, so
16 that we can't achieve the value. And, again, when it
17 comes to reporting these programs, I look back to -
18 looking at the performance goals, for example, greenhouse
19 gas has the environmental benefits, rather than reporting
20 on individual program goals and their abilities to say
21 how many renewable megawatts do we have, identify here is
22 the goal of greenhouse gas reduction and here are the
23 five or 10 different programs that are working to achieve
24 that goal, and then identifying what the cost of
25 individual programs are and how those programs interact

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1 with each other so that policy makers get a better
2 understanding of how, for example, maybe Demand Response
3 isn't the best program to pursue at this moment in time,
4 maybe more renewables or some other program would be a
5 better, more cost-effective way to achieve those goals.

6 Regarding the comment about DG, I think, in my
7 opinion, DG is any resource that is connected at or below
8 the sub-station level, and so, to me, it doesn't matter
9 what it is, it just matters where it is connected. And
10 so, again, one of the values of DG was the fact that it
11 does reduce the need for transmission, but on the other
12 hand, if there is not sufficient load where you put the
13 DG to absorb that load, then you may need transmission to
14 take the DG from one location and send it to another DG
15 location. So you have to be careful about how you
16 implement DG, and 20 megawatts is typically the size of
17 what is considered DG, that's a pretty good sized power
18 plant. And so, again, consideration of how that is
19 implemented is critical. That's all I have.

20 CHAIR WEISENMILLER: Okay. Thanks, Dave, for the
21 comments. I guess I had one question. Certainly DRA has
22 been in the middle of multi-year effort on conservation
23 and quantification, and I was trying to figure out if
24 there is any simple metrics we could use in this
25 analysis, other than getting involved in that

1 controversy, like the number of home/house audits, or
2 something so that we've got a way of measuring energy
3 efficiency benefits without quite, as said, diving into
4 the whole litigation landscape that's occurred.

5 MR. ASHUCKIAN: Right, right. Well, you know,
6 and that's an issue that we have had in how you measure
7 energy efficiency, you know, just procuring a fluorescent
8 light bulb does not make for a reduced load on the
9 system, and so -- and this gets back to my point about
10 the interaction between programs. If we continue to
11 procure resources, whether it be renewable, fossil fuel,
12 or whatever, the energy efficiency goals are attempting
13 to reduce our load. And yet we are also continuing to
14 increase our resources at the same time. We actually
15 have to -- the only true measure of reducing or achieving
16 our energy efficiency goals is reducing our need for
17 resources, to replace that load. And so looking at how
18 much total resource growth is occurring by procurement is
19 one metric that is, I think, a true measure of whether we
20 are achieving our energy efficiency goals. We see
21 utilities asking for resources in the Long Term
22 Procurement Plan. At the same time, they're saying
23 they're achieving their energy efficiency goals which,
24 when you put the two together, there should be no need
25 for new resources. And so, again, ratepayers end up

1 paying for the resources to increase load, and we're
2 paying for the efficiency products that reduce our load
3 at the same time. What we have, and the ISO has
4 projected, a significant planning reserve as we approach
5 2020 that is a result of these programs not interacting
6 with each other, to make sure that we're not over-
7 procuring with these various programs. And the concern
8 that we have is that we're actually making California a
9 less secure - the energy market will become less secure
10 because, like we had before, we have over-procurement,
11 individual power plant operators will have less
12 opportunity to sell their products and it may result in a
13 rebound effect, so to speak, in us basically saying,
14 "Hey, you know what? California has kind of screwed up
15 the system again by over-procuring, by doing too much,
16 and it's no longer a robust market for us to invest in."

17 MS. RAITT: Okay, thank you. Our next speaker is
18 Stephanie Chen.

19 MS. CHEN: Good afternoon. Thank you to the
20 joint agencies for having this forum today and for taking
21 on the task of coordinating these efforts. My name is
22 Stephanie Chen and I'm with the Greenlining Institute.
23 We are a think tank and advocacy organization that is
24 dedicated to economic empowerment for communities of
25 color and low income communities. And it seems to me,

1 from my point of view, which as I recognize is a very
2 unique vantage point on this panel, that I think really
3 the only oversight in these metrics is in communication
4 with everyday customers.

5 The substance of the metrics are well tailored to
6 the task and I think they're being refined through this
7 process today, but one of the stated objectives is to
8 involve citizens. And citizens play a couple of roles in
9 this process, they are voters and they are customers, and
10 I think that, really, the most important thing is, as
11 customers, how much time are they willing to invest? How
12 much money are they willing to invest? They're certainly
13 not the biggest resource in terms of how many megawatts
14 or terawatt hours we're going to need to reach some of
15 these goals, but they're quite possibly the most
16 important in that they're funding a lot of this and
17 they're probably the most complex in that it's a lot
18 harder to understand what makes them tick.

19 But I think that we're not really going to be
20 able to move forward smoothly and quickly if we don't
21 start taking into account from this very early planning
22 stage where customers are and where customer sentiment is
23 on a lot of these projects. We need them to participate
24 in some of these things, like energy efficiency, some
25 Distributed Generation and Demand Response in certain

1 capacities, and we need them to pay for a lot of this
2 stuff.

3 Dave mentioned about \$5 billion in Smart Meters,
4 we've got the Smart Grid coming up, we've got all of the
5 renewable energy projects, and all of these are really
6 adding up incrementally in terms of bills for customers.

7 And I know that it's hard from our vantage point
8 to understand how people who aren't into energy stuff
9 don't understand how important peak demand is and how
10 important Demand Response is, and all of these things.
11 But these are just not things that ordinary citizens care
12 about, they care about the results that come out of
13 these, but they're not necessarily identifying with the
14 way that we look at the metrics and with the way that we
15 need to look at the metrics from a system-wide
16 perspective, and from a policy-wide perspective.

17 But we've got to make sure that we are making the
18 effort to translate that so that we get buy-in from
19 customers. And this is really not to say that
20 communities don't care about these efforts and, in
21 particular, the communities that I represent often, I
22 think, are underestimated in terms of their environmental
23 commitments. And that's really not what I'm saying here.
24 Communities of color, low income communities, very much
25 care about environmental issues.

1 And, in fact, there was a poll that was released in
2 November that USC and the *LA Times* conducted that showed
3 that Latino and Asian American voters cared a lot more
4 about some of these issues -- air quality, water quality
5 -- than White voters did. And you look at Prop. 23, too,
6 I mean, that was a major environmental push to overcome
7 that Proposition and communities of color and the
8 Environmental Justice movement, I think, really put the
9 nail in the coffin for that one.

10 But the thing is, communities still feel that
11 they are not being reached, that there is a communication
12 barrier between the environmental movement and
13 environmental causes and the things that they care about
14 the most. And what that represents here in terms of
15 achieving system-wide goals is really untapped capacity.
16 I think we have to view the customer as a resource just
17 as we're viewing any of these other more technical
18 resources.

19 From our experience, even in organizing around
20 Prop. 23, we ran into some of our own coalition members,
21 our allies, who could not support the proposition. Many
22 were Chambers of Commerce, or business development
23 organizations, and they were really swayed by the fear of
24 increased costs. And even messaging from allies from
25 within wasn't really enough to be able to overcome that

1 fear.

2 Another example that I heard, and perhaps one
3 that is a little bit more optimistic for our purposes
4 here today, is one of our chambers has a member who is a
5 small Latino-owned independent farm, and this farmer was
6 approached to give buy-in on the organic farming. And he
7 wasn't really into it, he was saying, you know, organic
8 farming is something that other people do, it is
9 something that is expensive, and it's really more the
10 purview of people who don't look like me, don't live near
11 me, don't know me, and don't know people like me. But
12 this chamber said, "No, no, that's not - you're
13 misunderstanding the concept, this is just going back to
14 the way that our grandparents farmed." And immediately
15 he got it and he bought in. This is exactly the same
16 concept and you're achieving exactly the same result, but
17 there's a huge difference in the way, in the
18 effectiveness of the message that's being put forward.

19

20 So I think that, with the overview and the
21 metrics, to the extent that we want it to really be
22 available to the public and we want customer
23 understanding and customer buy-in, we have to make this
24 information digestible to the average customer, and
25 that's not just the one that identifies with organic, but

1 the growing number of consumers and the growing number of
2 voters who really identify with other messages.

3 And I don't think this is a new idea, really.
4 You know, when you see organizations that go out there
5 and they're protesting a power plant, they're trying to
6 get a power plant shut down, you have the ones who are
7 out there because they are concerned about greenhouse
8 gases and they're concerned about climate change, and
9 then you've got the ones out there who want to keep their
10 kids healthy, they want to keep their air clean. So if
11 you go and you knock on that second person's door and you
12 say, "Hey, come on out and help us out so that we can
13 curb climate change," that person is going to probably
14 have a lot less free time than if you said, "Hey, come on
15 out and help our kids be healthy enough so that they can
16 play Little League."

17 And I think here, when we talk from a system-wide
18 perspective, we run the risk of falling into, "Okay,
19 we're going to design price signals and we're going to
20 provide enabling technologies, and we're going to provide
21 rebates or tax incentives for the enabling technologies,"
22 and that will be enough to get people on board. I think
23 it's enough to get some people on board. But what that
24 says to other people and what it says to a lot of the
25 communities that I represent is, "We're changing your

1 rates, but you can do this and you can buy that so that
2 you can keep your costs low, so that you can keep your
3 bills low." Well, for the customer that can't afford to
4 respond to that price signal, that's really a slight,
5 it's a punishment. And that's going to create some
6 resentment.

7 So, if we want to really engage customers and we
8 want to prevent resentment of the kinds of things that we
9 know is important to invest in for the long term future,
10 we have to find a different motivational hook, and we're
11 actually going to need to find a few of them in order to
12 really tap into what matters to California communities on
13 a very day to day basis.

14 And I think the same thing goes for policy
15 makers. The policy makers that are in this room are the
16 easy audience, you know, "We're with you." But if you
17 need legislative buy-in for some of these things along
18 the way, and I think we probably experienced this moving
19 along, they are going to respond more to a constituent-
20 oriented message than to a policy-oriented message in a
21 lot of instances because they're the ones that are going
22 to have to go out and sell it at the town halls and sell
23 it in their campaign appearances, and things like that,
24 and they can't sell it if it's seen as "you're asking
25 more money from me for somebody else's benefit."

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1 And I think that we really need the customer buy-
2 in because we don't want to have more Bakersfields. We
3 don't want to have more misunderstanding of what it is
4 that we are investing in. And I think that we, being
5 involved in this planning process for so long now, we
6 kind of assume that public sentiment is somewhere near
7 where we are, but for most people, they're just now
8 hearing about this for the first time and the first thing
9 they hear about is "we're installing a Smart Meter on
10 your house." And they're not really sure what that means
11 and they're not really sure they like that.

12 And I think that there's always going to be this
13 issue of the power company wants to do this, and the
14 power company wants to do that, because they're really
15 the gatekeeper in all of this, and so I think when it's
16 seen as the power company wants to do something expensive
17 for general benefit, for statewide benefit, for somebody
18 else's benefit, we run real risks there, and we run the
19 risk of public sentiment either just vastly increasing
20 the cost of what we need to do, or really derailing the
21 process as a whole.

22 So I would actually suggest that we need a metric
23 for customer buy-in and we need a specific policy
24 objective to create a more energy savvy California
25 customer base.

1 Now, that *LA Times* poll that I mentioned earlier,
2 that looked at voter sentiments, but what it asked is,
3 "How much do you care about X,Y,Z? Do you care a great
4 deal about X,Y,Z?" But what it didn't ask is, "How much
5 time and how much money are you willing to invest in
6 X,Y,Z?" And I think there is a real difference between
7 what people say, "Yes, I will vote for this because it is
8 good policy," and, "Yes, I will change my daily habits,"
9 or, "I will make more room in my monthly budget,"
10 particularly for the folks who more room in the monthly
11 budget is maybe a dollar, maybe two dollars, and that's
12 it, that's all they've got.

13 And so I think what we need to do is take a look
14 periodically at how customer sentiment is looking at
15 these issues across the state and, in doing so, in
16 creating the sample for that, for such a survey we really
17 need to look at the income diversity, geographic
18 diversity, and cultural diversity that is represented
19 within California; it's a great benefit in a lot of ways,
20 it's hard to manage in a lot of ways.

21 And I would suggest that we also take a look,
22 recognizing that public sentiment is a little bit behind
23 where we are in our understanding and our adoption of
24 some of these ideas, it would be interesting to take a
25 look at a panel study that sampled the same customers

1 over a period of time because, again, most people are
2 really just getting their first introduction to what this
3 new energy future is going to look like, and so if we
4 start looking at where folks are now and how they respond
5 as this becomes more of an everyday reality, then we can
6 sort of see where we're understanding things differently
7 than the general public, how well the general public is
8 responding to some of the messages that we're putting out
9 there.

10 And I want to highlight, given the constituencies
11 that Greenlining represents, I really wanted to highlight
12 the thing that jumped out as the biggest problem for me
13 as I was reading through these materials, and it came in
14 the discussion of the System Average Rate, which maybe
15 not everyone is going to be reading, but the reference
16 notes that rate increases may not actually translate into
17 bill increases because you can invest in energy
18 efficiency, you can invest in distributed generation,
19 things like these are only available to the wealthy, or
20 to the pretty well off.

21

22 We've got some problems in the state that will
23 provide some of these things for low income households,
24 we've got the Energy Savings Assistance Program that
25 provides a limited amount of assistance to a limited

1 customer segment, and there are those customers that are
2 250-300 percent of the poverty level, who are just not
3 going to be able to afford these kind of investments.
4 And so, for those customers, which is a big chunk of
5 customers, "my rates are going up and I can't really
6 afford any of the solutions that are being discussed," so
7 that, when that ends up happening, you end up getting
8 that feeling that this is a punitive change and it's
9 going to breed a lot of resentment.

10 And I think that that's not only a communications
11 and a messaging risk, but it's also a real risk when it
12 comes to the imbalance between who is making the
13 investments and who is able to reap the benefits. And I
14 know that we're not talking - we're talking about the
15 metrics and the outreach today here, but while everybody
16 is in the room, I just have to say that equitable access
17 to these direct customer benefits is not only going to
18 help get buy-in and keep resentment down, but it's going
19 to help us get to those goals. To the extent that we
20 need customers to participate, it can't just be the
21 "have" customers, it's got to be all customers, otherwise
22 this isn't really California's energy future, and it is
23 some of California's energy future.

24 So I would also suggest that, when we're looking
25 at customer sentiment and customer buy-in, we also look

1 at how that translates in terms of household income
2 because I think that there will be some surprising
3 results when it comes to how much proportionately lower
4 income households are willing to invest in some of these
5 measures, and I think that those lessons will be very
6 valuable as we move forward in terms of planning,
7 particularly as we start looking well beyond to the
8 timeframe that we're looking at here.

9 And I think that the last thing that I want to
10 suggest is expanding the greenhouse gas metrics. There
11 is a concern that the cap-and-trade structure is going to
12 allow some bad actors with the access to free allowances
13 and then, after that, through the offsets, these bad
14 actors will be able to buy their way into just emitting,
15 as usual. And this means that the climate hot spots that
16 are around those emitters are going to continue to cause
17 health problems and they're also going to continue to
18 drag down our efforts towards emissions reductions,
19 overall.

20 So, in addition to looking at aggregate statewide
21 metrics, I would also be interested in seeing a sample of
22 some of the climate hot spots that are around some of
23 these particular emissions heavy areas, to see whether we
24 are in fact seeing some lumpy progress as we move through
25 this, and that we can better design programs that will

1 address that, not only for the overall emissions success,
2 but also for health and safety concerns. I think that's
3 all I have for now, but I'm happy to entertain questions.

4 COMMISSIONER DOUGLAS: Thank you. I do have a
5 couple of questions. And I wanted to follow-up on your
6 suggestion that we make a greater effort to explicitly
7 reach out and engage with some of the communities that
8 you represent. What recommendations do you have for how
9 we would approach that? Do you think it's through -- you
10 know, I think it's generally not through workshops like
11 this, although I appreciate your being here. Chairman
12 Weisenmiller asked me to ask, you know, is it making
13 materials available such as the website in other
14 languages, you know, but yet the information contained
15 isn't necessarily very accessible even if it were in
16 another language. Is it through other kinds of outreach?
17 What recommendations do you have for us?

18 MS. CHEN: So a few things come to mind,
19 initially, and I don't know if anybody has tried this
20 experiment, but I have and it's kind of entertaining to
21 watch. Try and explain the stuff that you do to your
22 dad, or your neighbor, or the guy next to you on the bus,
23 and you would be surprised how much of a niche we really
24 find ourselves in, and not coming myself from an energy
25 background, it's interesting to find myself in this kind

1 of niche, but I think that give that a try first and
2 foremost, I think that providing information in multiple
3 languages is an excellent start, it's an essential place
4 to be, but that, too, you know, to come to the website
5 requires a knowledge, first of all, that the website is
6 there, and then the time and the inclination to go there,
7 so it's a great passive resource and it's a great
8 repository for information, and I think we should make it
9 as accessible and as useful as possible, but at the same
10 time, I think we also have to really go and get the word
11 out there, and I think what we saw in Bakersfield is that
12 the word didn't get out there ahead of the technology,
13 the technology got out there, and then nobody really knew
14 what to do with it.

15 So, I think that more assertive outreach to the
16 extent that it's necessary. I don't know that the
17 general public needs to know a lot about transmissions
18 -- sorry -- but, to the extent that they need to
19 understand why we're investing in what we're investing
20 in, in a way that really matters the most to them, it is
21 going to require us all getting out there and saying,
22 "Look, this is - let me talk to you a little about what
23 we're talking about." And also, "Let me hear what your
24 concerns are."

25 And I think that an excellent conduit for that,

1 and I think Dave probably hears me say this a lot at the
2 PUC, is through community-based organizations. These are
3 organizations that have the ear of the communities that
4 we are trying to reach and often times that's how
5 Greenlining reaches communities is through the community-
6 based organizations that these communities know and
7 trust, and who know how to speak the language, and I mean
8 that not only just literally, but also have the cultural
9 sensitivity and the better understanding of what makes
10 this community tick.

11 And I think, too, that we really shouldn't
12 discount youth in terms of this outreach. Youth are into
13 new stuff, they are eager to jump on board with things
14 when they are put to them the right way, and so I think
15 that it would be kind of interesting, and you see a lot
16 of these sorts of efforts in terms of the digital divide,
17 which is another area where Greenlining works. A lot of
18 times Broadband adoption in a household will kind of
19 start through the kids, and maybe to the extent that a
20 household needs to respond in terms of energy savings and
21 energy usage, youth may be a good way of getting in
22 there.

23 But I think we have to break out of the economist
24 and the analyst mindset that a price signal is going to
25 do it because a price signal assumes that we are all

1 economically rational actors and, I don't know about you
2 guys, but my credit card bill does not indicate economic
3 rationality. And I don't think that's the case for many
4 Americans. So, I think we've got to find, really,
5 another angle beyond the one that makes sense to us on
6 paper.

7 COMMISSIONER DOUGLAS: Thank you. To what extent
8 do you think the CARE Program helps buffer low income
9 people against the effects of rate increases that could
10 come about, as opposed to some of these programs? Is
11 that a sufficient mechanism? Is that under-inclusive?
12 You know, how do you see that interacting?

13 MS. CHEN: You know, it's interesting that you
14 bring that up. The PUC is in the process of looking at,
15 of course, the CARE and ESEP budget cycles, but also the
16 growing number of disconnections over the last several
17 years, and I think it's obvious that, when the economy
18 goes sour, then there's going to be more disconnections.
19 But what you see in the data is a lot of CARE households
20 being disconnected multiple times, and sometimes even
21 multiple times of the year, so there's a lot of
22 households for whom the CARE discount is enough, and
23 there's a lot of households for whom it really isn't
24 enough.

25 And so I think we may - if we're really concerned

1 about making sure that power is affordable, particularly
2 as we go along some of these measures, I think first and
3 foremost we've got to start at the system level, as Dave
4 was mentioning, and look at where we are missing out on
5 some of these overlaps that are going on and sort of
6 paying twice for the same results.

7 But we also have to take a look at affordability of
8 energy and I think we need to do it more often and I
9 think we need to do it more comprehensively and I think
10 we also need to really think about whether 200 percent of
11 the Federal poverty level is really some kind of magic
12 number because, if you're at 212 percent of the Federal
13 poverty level, you're in rough shape and there's very
14 little assistance available for you. And I think it's
15 those households that are really going to get squeezed
16 the most when it comes to looking at the incremental
17 increases that we're looking at over the next 10-20
18 years.

19 COMMISSIONER DOUGLAS: I wanted to ask you if you
20 are familiar with some of the programs that the Energy
21 Commission has funded with various kinds of match and
22 local participation under the Energy Upgrade California
23 umbrella. I think that some of those programs target
24 small business, for example, and have had some pretty
25 good success at reaching minority-owned businesses.

1 You know, we've funded residential retrofit
2 programs, as well, we've funded a program aimed at
3 Downtown Oakland, commercial retrofits that should be
4 very interesting, or will be very interesting to me in
5 terms of successful ways of doing outreach to, say, for
6 example, the Chinatown in Oakland and engaging people at
7 that scale. I think there is a lot of potential in those
8 programs, there is also a lot of potential to learn from
9 them.

10 So, you know, we would definitely be interested
11 in talking to you more about some of those program models
12 and various ways of outreach that people have tried in
13 different parts of the State with local government
14 partners, community partners, with nonprofit partners,
15 because I think there are lessons there in outreach and
16 I'm sure that nobody is going to reach everyone and I
17 think that the lower income residential customers
18 probably are the hardest to reach with some of these
19 programs. But, you know, we're very interested in
20 looking at different ways of doing broad-based programs
21 and even possibly developing a fact sheet of what kinds
22 of efficiency measures you can take that will only cost
23 \$20.00 instead of \$2,000 and, so, sort of helping people
24 with limited means think about what the most effective
25 thing to do with their \$20.00 is could be helpful. So,

1 anyway, we would be very interested in hearing more from
2 you on how we could achieve that.

3 MS. CHEN: Let's talk further about that. And I
4 think that I would add to your comment, there are a lot
5 of models that are going on in various locations, in
6 various singular locations, that are not only being
7 carried out by State agencies, but also by nonprofits, by
8 utility companies, and I think there is probably a really
9 good opportunity, and maybe now is exactly the time when
10 we need to do it as part of this planning process, to
11 bring all of those best practice examples together and
12 really identify not only what has worked, but what hasn't
13 worked, so we don't keep trying to do that again and
14 again.

15 But I really like the idea that you mentioned
16 about what can you do, what's the biggest bang for your
17 twenty bucks you can get, if you can spend a hundred
18 bucks, what would be the top ten most effective things
19 you could do? I think those are the kinds of things that
20 would really help to translate this to the customer
21 perspective, now you're thinking like a customer.

22 COMMISSIONER DOUGLAS: Well, being a customer
23 myself, sometimes I'm called upon to think like a
24 customer, thank you. Those are my questions.

25 MS. CHEN: Thank you.

1 COMMISSIONER DOUGLAS: I think the only thing
2 I'll add, just because I can't resist, is that your
3 suggestion of the exercise of explaining to the person on
4 the bus next to you or, for example, your husband, or
5 your mom, what you do every day, and why it matters, is
6 really valuable and I add to it my five-year-old; the two
7 and a half year old, I don't think, is really able to
8 grasp it yet, but the five-year-old occasionally sets me
9 straight. So I agree that it's a really important
10 exercise for all of us to do, just so that we don't get
11 so lost in the world, the special language that some of
12 us have learned to speak, that we lose the ability to
13 communicate.

14 MS. RAITT: Okay, thank you. Our next speaker is
15 Bonnie Holmes-Gen. Thank you.

16 MS. HOLMES-GEN: Good afternoon, Chairpersons and
17 Commissioners, I'm Bonnie Holmes-Gen with the American
18 Lung Association of California. I greatly appreciate the
19 chance to participate in this very interactive discussion
20 today, I think it's very valuable, and I'm going to try
21 to move through my comments because I'm realizing that
22 time is moving along here.

23 The American Lung Association in California has,
24 of course, been a strong advocate for strategies to
25 reduce air pollution and all the health impacts

1 associated with air pollution, asthma, and respiratory
2 illnesses and other health impacts, and we have been a
3 very strong supporter of AB 32. And we strongly support
4 this effort to integrate the ARB, energy agencies, and
5 CAISO planning efforts and actions to reach our State
6 goals for reducing energy demand, boosting renewable
7 energy, and electrifying the transportation sector.

8 And I guess I wanted to maybe just start off,
9 just my first point is just framing it again, like there
10 was a document that came out recently called *Health in*
11 *All Policies*, and our energy policy is "health policy,"
12 so I just want to kind of think about that for a moment,
13 that the energy policy goals that we're talking about
14 here are critical to achieve many public health
15 objectives, including reducing exposure to criteria
16 pollutants, reducing our GHG emissions, increasing
17 community resiliency and ability to adapt to climate
18 change. And the public health burden of air pollution
19 is, of course, placing a huge cost burden on society in
20 addition to the public health emergencies and the
21 tragedies that result. And there's been various efforts,
22 of course, to place a price tag on the cost of the public
23 health burden of air pollution. The Lung Association
24 just did a report just focusing on what would be the
25 avoided cost to society of just turning over our entire

1 fleet of vehicles to a mix of vehicles that includes a
2 much greater emphasis on electric, plug-in electric, and
3 advanced cleaner vehicles, and we found a savings of over
4 \$7 billion in avoided health and societal cost every
5 year.

6 So I guess what I'm getting to is that we'd like
7 to see more of a focus and highlight in this document on
8 the public health impacts of energy policies, of the
9 importance of not only achieving our greenhouse gas
10 reduction goals, but also achieving our air pollution
11 goals. And clearly, you know, just meeting our current
12 criteria of air pollution standards is a huge challenge
13 and we expect that we will have even tightened ozone
14 standards coming out in the next few months, even. And
15 all of that, the transportation and electricity sectors,
16 of course, are significant contributors responsible for
17 emissions that contribute to a range of respiratory and
18 heart illnesses. And our efforts to retain our Federal
19 Air Quality standards are really dependent in many ways
20 on the strategies that we're developing to achieve a
21 rapid transition to zero emission combustion
22 technologies, especially in the South Coast and the San
23 Joaquin Valley, I know many of you know all that, but I
24 just wanted to put that out there because that's such an
25 important issue to us and we think there could be greater

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1 emphasis in the document on this aspect of how our energy
2 policies are contributing to addressing these issues, and
3 we would like to see some metrics also in the document to
4 address air quality emissions, greenhouse gas emissions,
5 and specifically we think we can translate some of those
6 air quality emission reduction numbers into public health
7 outcomes, also. So I just wanted to put that suggestion
8 forward.

9 To the extent that we can measure the reduction
10 in emissions from reducing conventional fossil power use,
11 from increasing efficiency in Demand Response, replacing
12 older power facilities with newer, more efficient
13 facilities, increasing renewables, and those emission
14 reductions can be translated into a positive benefit in
15 terms of improved health outcomes. So we would like to
16 suggest going in that direction, and we would be happy to
17 sit down and talk about more specifically how we could do
18 that. We think that you can demonstrate to the public,
19 hey, by reducing our emissions through these policy
20 means, we're actually reducing asthma attacks,
21 respiratory impacts, heart attacks, and other health
22 outcomes. So that's one focus I wanted to put out for
23 you.

24 A second theme that's kind of following on a
25 theme, and I won't spend a lot of time on it because it

1 has been discussed, is we are, of course, very supportive
2 of all of the efforts to achieve our 33 percent renewable
3 energy goal, and along with that, we think it's
4 important to track the reduction and the scaling down of
5 fossil resources that should occur as the increase in
6 renewables occurs, and we think it would actually be
7 important to set a goal for reducing our fossil power
8 resources, and that there should be a roadmap for how
9 much fossil capacity is really needed and what type to
10 support that renewable energy base by 2020, and a plan to
11 scale our fossil to that level. So I think this is an
12 important need. It's been discussed and we just want to
13 agree that that's an important direction to go and that a
14 tracking metric to track a reduced reliance on fossil and
15 reduced reliance on coal would be a very valuable metric
16 to include in the document.

17 So another key emphasis, I've got two more points
18 I want to make, American Lung Association has been a very
19 strong supporter, of course, of zero emission vehicles
20 and plug-in electric. Another advanced technology is in
21 the transportation sector and a focus on the 2050 GHG
22 reduction goal requires, of course, a very strong
23 emphasis on this goal and the need for coordination among
24 your agencies to achieve the electrification of the
25 transportation sector. And so I haven't read all the 200

1 pages in the Appendix from the documents that I read,
2 this is certainly included, but we would certainly like
3 to see a specific list of action items for agencies to
4 integrate existing regulatory efforts to ensure that we
5 reach our goals, and we applaud the million electric
6 vehicle goal that is in the document and we think that,
7 you know, making sure that we're integrating the
8 strategies in the cap-and-trade regulation, the clean
9 fuels outlet regulation, the LCFS, and other strategies,
10 is really important to make sure they work together
11 smoothly to incentivize the development of the necessary
12 electric charging infrastructure. And we also agree with
13 the importance of ensuring that the charging of vehicles
14 is certainly done in a way to minimize the impact on the
15 Grid. That's very important.

16 And to that end, I'm sure Eileen will talk maybe
17 to some extent about this, but we do think it would be
18 important to have more close coordination of this effort
19 with the Plug-In Electric Vehicle Collaborative. And
20 that role of the Collaborative could certainly be
21 discussed, I would think, in the plan, in the documents
22 that you're putting forward.

23 The next point is a point about Environmental
24 Justice and I'd like to recommend inclusion of a section
25 on the interaction of climate justice issues and energy

1 policy and, again, this theme has come up here, but
2 wanted to put this out, clearly it seems to be missing,
3 to me, from the documents and the slides and the
4 discussion today. It is certainly important to identify
5 in this state policy the importance of initiating and
6 expanding programs or projects that would ensure emission
7 reductions, improve energy efficiency, and production of
8 renewable energy in disadvantaged communities to mitigate
9 health impacts associated with air pollution and climate
10 change and, of course, to improve the health and economic
11 vitality of these communities, and I think that's an
12 important addition that should be highlighted, and I
13 think that you should think about a metric to go along
14 with this. I have been thinking a little bit, but need a
15 little more time to address this, but certainly we could
16 talk about a metric to measure reductions in greenhouse
17 gases and air pollution in disadvantaged communities or
18 talk about the dollars committed to energy efficiency and
19 other programs in disadvantaged communities. So I think
20 that would be important.

21 I also wanted to mention the importance, of
22 course, of a VMT reduction, reducing Vehicle Miles
23 Traveled and our whole effort that's going on to reduce
24 our dependence on single occupant vehicles as another
25 component of our State's energy strategy, and I'd like to

1 see that highlighted.

2 So, finally, I think, as was said earlier, having
3 metrics that are simple and easily understandable by the
4 public is really important and we think that if you
5 present metrics clearly to the public, they're easily
6 understandable, accessible, it could be really helpful in
7 promoting public investment in a personal way and buy-in
8 to the State effort, and we hope that you can work hard
9 as we discuss a little bit about making these metrics and
10 this material very clear, easily understandable to the
11 public, and available. Thank you very much for the time
12 to discuss this and look forward to working with you as
13 we move forward. Thank you.

14 CHAIR WEISENMILLER: Thank you.

15 MR. EGGERT: Maybe just a quick question, and
16 thanks, Bonnie. I guess this might also be similar to a
17 question I would have for Eileen, as well, obviously the
18 ALA has had recent success with publicizing some of their
19 monitoring and measurement data on city compliance with
20 air quality standards and such, and I guess my question
21 relates to the health-related metrics. Should we be just
22 sort of referencing existing measurement efforts that are
23 already underway, rather than trying to recreate them
24 within this process? And if so, do you have any
25 suggestions along those lines?

1 MS. HOLMES-GEN: Well, I was kind of thinking, as
2 there was a lot of discussion about grades, that we're
3 really good at giving grades, as some of you know, with
4 our State of the Air Report, but it is somewhat difficult
5 to develop a whole new grading system. I guess my focus
6 was, at a minimum, that we should be able to put out to
7 the public specific information on metrics that people
8 understand, reduce greenhouse gas emissions, reduce
9 pollution emissions, reduce emissions of particulates,
10 and other pollutants that harm public health, and
11 specifically if we could translate that into specific
12 health outcomes, reduced respiratory illnesses and asthma
13 attacks, those sorts of things, that's something very
14 easy for the public to understand and grasp, and see if
15 there is progress being made by our energy policies that
16 affects my health, and I think that's very important to
17 our State goals and to getting public buy-in. I'm
18 certainly happy to discuss new ways of grading, or
19 evaluating buildings, or providing some way to better
20 measure success in other ways on public health, but I
21 guess I was thinking mainly of just getting that very
22 basic information out there that we can calculate as a
23 first step.

24 MS. RAITT: Thank you. Before I move on to our
25 next speaker, since we are running late on time here, I

1 would ask the remaining speakers to focus your comments
2 on the metrics and, for any more detailed comments, if
3 you could be so kind as to put it in your written
4 comments to us, that would be appreciated. So our next
5 speaker is Carl Zichella.

6 MR. ZICHELLA: Good afternoon, everyone. I'm
7 Carl Zichella. I'm the Director of Western Transmission
8 for the Natural Resources Defense Council, testifying
9 today on behalf of our organization and our whole team of
10 people working on renewable energy issues in the State,
11 not just transmission.

12 I'll try to only touch upon things that are
13 related to elements that we have intended to focus on,
14 and not necessarily things that we overtly support, a lot
15 of that is happening, so maybe we can get through this a
16 little more quickly, and we do plan to submit detailed
17 written comments.

18 A lot of questions were asked of everyone and a
19 lot of interesting work has gone into this. I have to
20 say that this is a very exciting refreshment, if you
21 will, of this whole energy future process. Leading off,
22 and I should say - before I begin, I just want to say
23 parenthetically, I began my career almost 30 years ago
24 doing low income energy programs for a community-based
25 organization, so I just wanted to say what Stephanie

1 suggested about outreach going through community-based
2 organizations is a terrific suggestion, they're always
3 hurting for resources, but they really do have their
4 finger on the pulse of the communities in which they
5 operate. So I want to second that on a personal level.

6 Back to NRDC comments. We think, I'm just going
7 to jump right in here, that we ought to ensure that the
8 scope of the goals focus on the bill savings to consumers
9 as opposed to just focusing on rates.

10 We think that high environmental performance
11 absolutely needs to be incorporated, but, as Bonnie
12 mentioned, it's not limited to greenhouse gas emissions.
13 We obviously strongly support ambitious renewable energy
14 requirements in the 33 percent RPS Standard and support
15 the proposed update in the energy plan to reflect this
16 requirement. I have to say that an RPS, though, is not
17 the ultimate goal, climate mitigation is our ultimate
18 goal, and if we needed another wake-up call, we just
19 recently got it from National Research Council's
20 America's Climate Challenge Report, which if you haven't
21 seen it, I really suggest you take a look at it, there's
22 not a lot new in it, it's a lot of continued bad news,
23 frankly, about challenge that we face, and it isn't
24 getting easier. We do have a really urgent need to get
25 this done and at scale quickly. There is an equity issue

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1 here for future generations that we have an obligation to
2 consider now, too. And the RPS is a floor, not a
3 ceiling, and climate mitigation is the goal. And in
4 order to reach that goal, we're going to need both
5 distributed generation, as well as central station
6 renewable plants. There's no easy way to do this, all
7 the pieces that we have talked about today are necessary.
8 I realize we don't want to pay for duplicative services,
9 but it's difficult to comprehend over-procurement when we
10 have a need to de-carbonize the largest economy in the
11 industrial world.

12 We want to second the notion about ensuring that
13 Senate Bill 1368, the Clean Power Plants Law is fully
14 enforced and tracked going to your point there, Mr.
15 Weisenmiller, as part of the Governor's plan. It's not
16 clear that it is being part of that plan right now, and
17 we think that the Energy Commission and the PUC should
18 analyze potential investments that power plants currently
19 own by or are under contract to California utilities that
20 don't meet the standard, and only allow new long term
21 investments in the plants that will meet the standard.

22 And as far as fossil fuels go, we have an
23 opportunity to re-purpose our natural gas fleet somewhat
24 and, as we do retrofits, to look at retrofitting
25 characteristics of new plants that benefit integration of

1 renewables. I don't think anyone that I know in my
2 organization says we're going to get off fossil fuels
3 tomorrow, that's obviously not going to happen. But if
4 we can replace some of these Korean war vintage plants
5 with plants that ramp faster, and reduce emissions by up
6 to 90 percent, now we're talking and we need to be
7 considering some of those things, and I'm aware some of
8 the retrofits of once-through cooling plants that are
9 contemplating that in the business plans of some of the
10 companies involved, and that needs to be commended.

11 We generally support the proposed metrics with
12 some specific recommendations and to follow additional
13 recommendations in our written comments, and we fully
14 support designing these metrics to align with and
15 reinforce the prioritization of the Energy Action Plan.
16 NRDC recommends the State avoid significant changes or
17 long term extensions to the Water Board's policy on once-
18 through cooling and to schedule a phase-out of such
19 facilities. The ISO, the Energy Commission, and the PUC
20 should work together and with other balancing authorities
21 to consider how to minimize the need for fossil coastal
22 plants through better coordination of new and existing
23 resources, and replacement with cleaner alternatives.

24 NRDC supports the stated metric for electric
25 vehicles, but also recommends that the Clean Energy

1 Future Plan also account for a more comprehensive set of
2 transportation metrics, including progress towards
3 implementing California's Low Carbon Fuel standard, and
4 the Clean Cars Campaign. Some quick additional comments
5 on metrics. On greenhouse gas emissions, it was earlier
6 said, we wanted to track the trajectory of emissions, and
7 we second that idea. On the System Average Rate, this
8 metric should be modified to reflect what customers truly
9 care about, bills, not necessarily rates, and that the
10 Public Utilities Commission and publicly-owned utility
11 boards focus on minimizing the total revenue requirement
12 over time vs. just trying to keep rates low to minimize
13 the total bill impact, and therefore economic burden on
14 customers. We therefore recommend modifying the metric
15 to be a) average annual bills, and/or b) the total, not
16 average, revenue requirement.

17 Another metric on energy efficiency, this one is
18 tricky, as was mentioned earlier, to ensure that energy
19 efficiency is sufficiently incorporated into all relevant
20 portions of the plan, as it is the State's top priority
21 resource and should be reflected as such in the
22 Governor's Clean Energy Future Plan.

23 There have clearly been disputes about how we
24 measure energy savings, however, even the most
25 conservative estimates of impacts, particularly with

1 regard to assumptions of whether the savings would have
2 happened anyway, show hundreds of millions of dollars in
3 net benefits to utility customers. NRDC strongly
4 supports evaluated savings to determine the amount of
5 energy efficiency we can rely on for clean energy future
6 goals, but we highlight here that there are numerous
7 outstanding disputes over the values determined by the
8 2006-2009 Investor-Owned Utilities Energy Savings
9 Evaluation that need to be resolved before using these
10 metrics to accurately account for the energy efficiency
11 we are receiving and will achieve.

12 In addition, the State should track progress of
13 both energy efficiency program and Codes and Standards,
14 since both provide critical cost-effective savings and
15 the two policies are closely linked.

16 With regard to transmission, in addition to the
17 proposed metrics, NRDC strongly supports considering how
18 policy and process improvements can assist with meeting
19 State goals, as well as adding a metric that identifies
20 and prioritizes system upgrades that facilitate renewable
21 energy integration, opens opportunities to utilize
22 degraded lands for generation and transmission, and
23 maximize system flexibility. There's a number of these
24 that I think we can get into, but one general point I'd
25 like to make is that these things can save quite a bit of

1 money for customers, we can get more out of the system,
2 take more benefit from the renewables to help balance
3 resources, and affirm and shape renewables using other
4 renewables, it gives us an opportunity to use the same
5 ability that we would use for in-state shaping to help
6 address variability of imported resources, as well.

7 I think the point that was made earlier, I'm
8 going to streamline here so we can get through this a
9 little more quickly, the idea about streamlining, how the
10 agencies interact is critically important, it is
11 difficult for people to participate when you have so many
12 different parts of transmission planning being considered
13 in separate venues. I appreciate and NRDC appreciates
14 the efforts to coordinate that we're seeing, I think we
15 can do better, I think we may need some institutional
16 changes to make that happen in a single process, would be
17 very welcome in terms of transmission planning, so we can
18 actually have more effective planning, we can have more
19 effective participation.

20 There is a metric on this, the metric that is
21 needed about the increased ability to take advantage of
22 flexibility in the system, I think, you know, an example
23 of this would be the proposed Midway to Greg Transmission
24 line in the Central Valley, that line would open up
25 renewable energy development on contaminated, drainage

1 impaired, or otherwise retired agricultural lands,
2 provide multiple in-state and regional balancing
3 opportunities, and expand the utilization of the Helms
4 Pump Storage Project. Under the metrics that you have
5 for transmission, it wouldn't even appear because it
6 isn't an approved line, it isn't a line that has gone
7 through a certain level of review, and its handicap is
8 mainly that the development interest in this area was
9 late coming, it was one of the last zones to be
10 established in the RETI process, for example, the CTPG
11 has not prioritized this line, but I would argue that
12 this line is of critical value to California consumers
13 and through our goals because we'll get so much more out
14 of the system if we were to make this improvement, we
15 would get access to a lot more resources that we wouldn't
16 be able to get at with lower environmental land use
17 constraints than in other parts of the state. And we
18 would get better value out of the storage resource right
19 now that we can only take advantage of in a very limited
20 way. So, I think we need a metric that addresses the
21 system efficiencies that go into it, and maybe it's a
22 checklist of criteria, if a line isn't on the existing
23 chart of metrics, it isn't identified using those, does a
24 line provide enhanced reliability benefits, enhanced
25 ability to benefit between balancing area authorities in

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1 California, an enhanced ability to use greater access to
2 pump storage, and a greater ability to balance outside of
3 the state, which some of these lines have a greater value
4 for than others. So I think these kinds of lines are
5 overlooked right now in the metrics that you've
6 established here and we should come up with one that
7 actually would value and prioritize such lines in the
8 future.

9 The question on distributed generation, I think
10 it's a really important point. I think the more
11 important point is let's pick one. I almost don't care
12 what it is, it's going to affect very greatly the
13 planning that is happening across the rest of the Western
14 United States, if not the entire country, that are
15 looking at how we're going to address this issue, as a
16 stakeholder in the Western Electricity Coordinating
17 Council transmission planning process, and the demand
18 side management and distributed generation assumptions
19 that we're using in those processes, having the same
20 exact problem, I think California taking a step to
21 affirmatively define distributed generation would really
22 be of very great value across the board to have an apples
23 and apples ability to plan, and have common assumptions
24 about how much distributed generation we can expect, not
25 only in our own state, but the rest of the markets in the

1 Western interconnection. I think I'll stop there and we
2 can certainly address many of the other questions that
3 were posed in our written comments, and I'm happy to take
4 some questions right now, and we can come back and
5 address some of these other issues that were raised in
6 testimony this afternoon, in our written comments.

7 CHAIR WEISENMILLER: Great. Thank you for being
8 here.

9 COMMISSIONER DOUGLAS: I just have a brief
10 comment. I appreciated your reference to system
11 efficiencies and it sounded to me quite similar to what
12 Mr. White was saying about solving for multiple problems
13 at one time, and thinking more broadly than the one
14 problem that, you know, statutorily we might be here to
15 solve. And so I would appreciate your help as we go
16 forward and try to do that sometimes if it's not always a
17 matter of habit, it helps if people point out those
18 opportunities, you know, in the planning effort around
19 the Desert Renewable Energy Conservation Plan, where
20 we're working with the PUC and the ISO and the Federal
21 agencies, BLM, Fish & Wildlife Service, and around an
22 effort to identify the lower conflict areas for
23 development in the desert and the land use side, working
24 with the local governments to ensure that those are
25 appropriate and acceptable, work with stakeholders,

1 provide easier permitting in those areas, lower the costs
2 of environmental mitigation, lower the cost of conflict
3 going forward over proposals that otherwise might appear
4 in higher conflict areas, you know, this sort of approach
5 is a savings, but it's not easy and it's very different
6 than the typical way of doing things and so people
7 sometimes need to have help understanding how those
8 savings occur and thinking about things differently, and
9 that's just one example that's not, I'm sure, the only
10 example, or even the example that those of you around the
11 table who brought up System Efficiencies would jump to
12 first. So, I think it's a great point. I think it will
13 help us a lot to have stakeholders engaged in helping us
14 see those opportunities.

15 MR. ZICHELLA: Yeah, just one quick comment on
16 that. I think the electric industry has really emerged
17 and developed as a very siloed industry, to serve compact
18 areas initially, and sort of like adding rooms to the
19 mansion, to create the grid that we have today, as
20 opposed to designing a system to serve broad areas, and
21 it's understandable why that happened, but it really
22 creates a siloed view of what is needed. Everybody looks
23 at the reliability of their own system, not the
24 reliability of the overall Grid, and the efficiencies
25 that can go along with that. There is a lot less

1 transmission we would need to build if we operated the
2 Grid in a much more coordinated way. If we are able to
3 get all the balancing areas, our five balancing area
4 authorities in California, to coordinate better, it's
5 just amazing to me that LADWP isn't connected to CAISO.
6 The ability to get more out of balancing these resources,
7 we would need less fossil back-up, the costs are to go
8 down and down and down for consumers because you avoid
9 duplicative transmission, duplicative generation, you're
10 able to integrate more resources with fewer new
11 generation sources, and you're able to integrate
12 innovation into the system better, whether you're using
13 Demand Response as a tool to help integrate distributed
14 generation, well, that's also pretty useful for bulk
15 electricity integration, as well. I think we need to
16 think bigger than our silos and it's not -- you know,
17 we've talk about having the agencies cooperate, but
18 balancing areas authorities need to be given
19 encouragement and even told to do so at times, to do more
20 coordination. And in the west, California is lucky, we
21 have a regional transmission organization called the ISO,
22 the rest of the West does not. So this silo problem
23 really is an issue for us, and the ability to use
24 geographically distributed resources to aggregate
25 variability and decrease the cost of renewable

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1 integration is a huge opportunity we could miss if we're
2 not careful.

3 COMMISSIONER WEISENMILLER: That was very good.
4 I know one of the things I've been talking to the
5 Governor's Office on is pushing the various balancing
6 authorities to go to intra-hour scheduling on the ties as
7 a way we could try to move forward more quickly than some
8 of the more regional global solutions.

9 MR. ZICHELLA: Yeah, absolutely. And FERC is
10 going to require that, I believe, soon. We should go to
11 15-minute scheduling for dispatch, you know, I think
12 California has actually led the way. We have an energy
13 and balance market within our state, there is now one
14 proposed to cross the entire Western interconnection and
15 that, if we were to help participate in, we could really
16 drive a much more efficient system that would
17 economically benefit us, take more carbon out of the
18 system west-wide, which we would otherwise have no
19 control over, or very little control over, and again
20 we're getting more and more and more benefits from
21 looking at this thing as the broader system, and as a
22 participant in a broader energy market and a broader
23 system across the west.

24 MS. RAITT: Okay, if we could go to Eileen Wenger
25 Tutt, she has a time constraint.

1 MS. WENGER TUTT: Thank you. I'm Eileen Wenger
2 Tutt, I'm the Executive Director of the California
3 Electric Transportation Coalition and we are an
4 organization that's committed to the successful early
5 introduction and large scale deployment of electric
6 vehicles. Right now, that tends to be our focus, but we
7 really have had a long history of support for electric
8 transportation in everything from trains to lawn mower
9 equipment to Ports. So, with that, I'm going to focus my
10 comments and make them very brief and very focused on
11 really the plug-in electric vehicle component of this
12 document. And I want to say first that it's oddly
13 familiar sitting in this seat. It's comfortable,
14 somehow. So it's very nice to be here and I thank you
15 for inviting me.

16 What I'd like to say about the electric vehicle
17 world is there are a lot of hopes and dreams around what
18 electric vehicles can do for the Grid and for the safety,
19 reliability and efficiency of the Grid, and I think we
20 need to be very careful as we go forward, I like the
21 simplicity of the metrics that are outlined here,
22 although I'm going to make a little comment because I
23 didn't understand One, but I do think that, as we go
24 forward, I mean, there's all kinds of distributed
25 generation benefits and renewables, everybody has their

1 ideas about how electric vehicles can meet the desires of
2 whatever organization you're talking to, and I think as
3 we develop metrics with this purpose right now, we do
4 need to keep them relatively simple and I think the
5 cumulative number of plug-in electric vehicles sold is a
6 very strong and metric that is based on information that
7 we already collect, it is easy to find, and it's going to
8 be very useful for an organization like myself to
9 Chairman Weisenmiller's point, what do we need.

10 This idea of the infrastructure, and I agree with
11 Steve, I don't know that there's a metric here, it's sort
12 of like there is a target and the infrastructure
13 operational capabilities necessarily to absorb one
14 million fully electric and plug-in hybrid electric
15 vehicles by 2020, that's a target. I think that the
16 metric that you use to measure progress towards goal is
17 completely unknown at this point and I can't remember who
18 said most of these vehicles need to be charged at home,
19 but that is really one of the key findings of both our
20 organization and the Plug-In Electric Vehicle
21 Collaborative, of which we are a member and strong
22 supporter. So I don't know how to measure that one, I
23 would put that one aside because I think you can measure
24 the number of chargers that are publicly available and
25 there's an App for that, but I don't know how you would

1 measure necessarily who puts in home chargers, that might
2 be a little trickier and a lot of people won't even put
3 in chargers, they'll just plug in. So, that one I would
4 kind of set aside for a little while, but one that I
5 think is very very important is how much electricity do
6 these vehicles use and, you know, that's going to be a
7 key part and we aren't actually going to be able to
8 capture all that for the most part because, like I said,
9 people are going to plug in to 120 chargers when they go
10 to grandma's house or girlfriend's house, they're not
11 always going to charge in a way that's separately
12 metered. But we are, in the context of the LCFS
13 Proceeding, looking at how to measure how much
14 electricity these vehicles use and that's how I would
15 measure it in terms of rather, again, trying to build
16 upon and keep this as simple as possible. I would use
17 whatever measurement methodology we come up with in the
18 context of that proceeding and that will be probably some
19 direct metered and some estimation data, but that is an
20 important goal and it is an important measurement metric
21 for this particular effort, given its focus on
22 electricity specifically.

23

24 So, then I also had a question about -- I don't
25 know, but I know that we're looking at electricity here,

1 but natural gas vehicles also have -- I don't know if
2 that's an issue that you want to think about, I don't
3 know that they necessarily fit in here or if this is just
4 simply electricity, but they are an alternative fuel
5 vehicle that has an impact on the availability of a
6 certain kind of energy, although I don't think it's quite
7 as significant as electric vehicles, perhaps.

8 Then, I guess what I would say, finally, is that
9 when Dr. Weisenmiller asked about what do we need in
10 terms of for stakeholders and for those of us who are
11 trying to successfully transform a particular market, I
12 just want to sort of echo what Bonnie said and I listened
13 to a story this morning and Gina McCarthy from USEPA was
14 quoted as defending the USEPA efforts to clean up the
15 environment in many ways, and they've taken on this idea
16 of monetizing the benefits associated with different
17 programs. And to the degree that is possible, and I
18 think Bonnie's organization did a fabulous job when it
19 comes to zero emission transportation, that is an
20 incredibly powerful metric -- to Stephanie's point --
21 people can relate to children and adults with asthma and
22 the impacts on the elderly of air pollution, and the
23 impacts of greenhouse gases.

24 And so those kinds of numbers are very powerful
25 and, to the degree that we can do it without going

1 overboard, and I'm going to quote my friend who is now
2 gone, but Stephen Schneider, who once said to Mark
3 Delucchi, the famous Monetizer, he said, "Damn it, you've
4 monetized the world and you've determined that it's not
5 worth saving." So, you know, we do have to be careful, I
6 do think, at least in my history, that those kinds of
7 assessments where you look at the damages to people's
8 health and the costs associated with those damages, they
9 touch people in ways that terawatts or all these numbers
10 don't. So, with that, I really again thank you and I am
11 going to look at this more carefully and provide some
12 written comments, as well.

13 CHAIR WEISENMILLER: Thanks for your comments. I
14 think one thing we've struggled with is that certainly
15 the Air Board has a lot of those metrics in its website,
16 or certainly I think the PUC and its website has a lot of
17 the metrics on reliability or safety, and the question
18 part is how much do we pull those in here and, so, it's
19 good to get the feedback, but, I mean, that is the
20 struggle between what some of the agencies are tracking
21 and how much to pull that in. I'm sure the ISO has its
22 own sets of things that it's tracking.

23 MS. WENGER TUTT: Well, and if I could just
24 respond for a minute because Deputy Secretary Eggert
25 asked me a similar question and I think, on some level,

1 there are metrics that organizations like myself, my
2 organization and other organizations, are tracking, and
3 I, at least with regards to plug-in electric vehicles, I
4 think we kind of need to be careful about what metrics
5 you need for this particular process and not over collect
6 on some level, so that's kind of a concern that I have in
7 that, yes, we are as an organization collecting quite a
8 bit of information, but I'm not sure it's very valuable
9 for our members, but I'm not sure how much it's valuable
10 for this effort. And then there's also often
11 sensitivities around certain data that I know you're
12 familiar with.

13 MR. EGGERT: Actually, I think you made my point
14 and CEC is also collecting through the ARRA sponsored
15 Infrastructure grants, and that's an enormous amount of
16 data that is required as a component of that funding.
17 And I think what we hope to gain from that is at least a
18 better understanding of what types of things we likely
19 will need to know to assure that these things are having
20 a positive impact on the Grid. So I think we're going to
21 learn a lot more through that data collection, which is
22 fine grained and detailed, and at a much finer level of
23 detail that would be necessary for this effort.

24 CHAIR NICHOLS: I think we've identified
25 attention that exists between the kinds of data that the

1 agencies need for their own purposes and the kind of data
2 that it might be actually useful or relevant to the
3 public that is trying to evaluate what's going on in the
4 State of California, we're all looking for ways to
5 simplify and do more with less, so creating a new
6 website, or a new publication, or a new set of data, that
7 involves taking stuff that already exists and repackaging
8 it, or repurposing it, brings with it both opportunities
9 for error and also opportunities for expending money on
10 something that might later not be judged to be all that
11 useful. And, you know, that's really one of the main
12 reasons for engaging this group and others as we go
13 forward, we are committed to -- I think I speak for
14 everybody on the panel and those who had to leave -- to
15 improving the integration of our efforts through things
16 that we track and measure internally, and you've given us
17 a lot of good suggestions, I think, just for that
18 purpose, as well, ways in which we have not necessarily
19 really been properly capturing or measuring things that
20 we need to know to do a better job of that. But that
21 always immediately, at least in our organization, leads
22 people to say, "Oh, boy, a new website!" And new
23 opportunities to publish more data. And I think we want
24 to be cautious as we venture into that realm because
25 there are many many opportunities to generate new kinds

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1 of reports that might look good for a while, but then
2 either turn out not to be very useful and then very
3 difficult to stop because you did it once, or twice, and
4 now you've got a data series that you're changing, you
5 know? And also difficult to measure how the public is
6 really utilizing them. So, just know that this is
7 information that I hope we're going to take in and do
8 some more processing around before we just jump into
9 creating some new tool.

10 MS. RAITT: All right, thank you. Our next
11 speaker is Valerie J. Winn.

12 MS. WINN: Hi, I'm Valerie Winn with PG&E and I'm
13 their Manager for Renewable Energy Policy and Planning,
14 so I've been focused a lot the last few years on how do
15 we get more renewables on line. But I think, today, what
16 actually I'll do is channel my colleague from Greenlining
17 and ask the question of, you know, we have about 11
18 different metrics here, and people have proposed
19 additional metrics, but if I had to say to my neighbor,
20 to my mother, "What is California's clean energy future?"
21 Do I have five words for what that is? Is it reduced
22 greenhouse gas emissions? Is it more renewable energy?
23 You know, we have a lot of different programs, but what
24 are they all contributing towards? And I think actually
25 helping to focus that message for customers would be

1 really helpful.

2 There are many good things in the presentation
3 that was given today with respect to how can we measure
4 progress on individual goals, and it certainly can't be a
5 static process, as we were saying, this is going to be
6 changing often as we get new legislation, as we get more
7 ideas about how can we achieve these goals and how can we
8 do it at a reasonable cost for customers.

9 So a few things just to add to the discussion,
10 certainly simplicity, you know, what is our goal and,
11 then, how are we tracking things to get to it. But more
12 importantly, and I think my colleague from IEP mentioned
13 this, are we dedicating the right resources to the
14 program so that we can achieve the goals? We've made a
15 lot of progress over the last few years with the Desert
16 Renewable Energy Conservation Plan, and that's been a
17 great stakeholder process trying to identify all the
18 different environmental constraints to developing in the
19 Mojave and the Colorado Deserts, how can we expand that
20 so that we can give more certainty to developers, that
21 they'll be able to get their projects built and help lead
22 to this clean energy future.

23 Another issue we might want to consider is, do we
24 have all the agencies involved who can help us achieve
25 that future? Certainly, the Department of Fish and Game,

1 Fish and Wildlife Services, Federal agencies, are all
2 part of how we get to this clean energy future, and how
3 are we collaborating with them upfront so that we can put
4 more streamlined processes in place and reduce
5 duplication. Those are just some of the thoughts that I
6 have today; we'll be submitting more comments next week.

7 On the specific metrics, some have commented
8 already on the system average rate and I think what might
9 be a more meaningful metric there is not the system
10 average rate, but maybe looking at it more along the
11 lines of our rate design that we have in place today. No
12 one of our customers actually pays our system average
13 rate, so that's perhaps not the most meaningful metric
14 there might be. And with that, if you have any
15 questions, I'll be happy to respond.

16 CHAIR WEISENMILLER: No questions, thank you.

17 MS. WINN: Thank you.

18 MS. RAITT: Thank you. Our next speaker is Mark
19 Joseph.

20 MR. JOSEPH: Thank you. And thank you for the
21 invitation to address you at the very near end of the
22 day. I'll pick up on the suggestion to look at the rate
23 of change and trying to keep going, the rate of change
24 and the length of the comments, so my comments will be
25 fairly short.

1 I'm here on behalf of the California Unions for
2 Reliable Energy, which is a coalition of three Unions who
3 will be heavily involved in actually building much of
4 what the California Clean Energy Future plans. In its
5 campaign, Governor Brown did not have a Clean Energy
6 Plan, he had a Clean Energy Jobs Plan, and yet there is
7 on metric proposed here that's in any way related to
8 measuring the jobs impact of the plan. Governor Brown
9 said investments in Clean Energy produce two to three
10 times as many jobs per dollar as gas, oil, or coal, and
11 dollars invested in clean energy tend to stay in
12 California instead of going to other states or other
13 countries. On his campaign website, then Attorney
14 General Brown said, "Brown's plan sets a goal of 20,000
15 megawatts of renewable energy, as well as key investments
16 in innovative efficiency technologies by 2020, which will
17 create close to half a million jobs." Well, maybe he was
18 right, but we'll never know if we don't measure it.

19 And measuring jobs is a benefit that is much much
20 easier to monetize than measuring much of the other
21 things. There's huge potential, and I'm sure you all
22 know this, there is huge potential in renewable power
23 plants for creating jobs. One quick example, the one
24 renewable utility-scale power plant currently under
25 construction, the Ivanpah Plant, right now, today, this

1 week, there are 335 construction workers out there, on
2 the way ramping up to 1,200 workers for two years. We're
3 looking at a construction payroll -- just construction
4 payroll -- of \$250 million, and four million hours of
5 work, and that's all for a plant that's less than 400
6 megawatts. You know, do the arithmetic, stretch that out
7 to 8,000 megawatts, and we're talking enormous potential.

8 Same story in energy efficiency; done right, it
9 requires high skilled craft workers, electricians, air-
10 conditioning mechanics, sheet metal workers, huge
11 potential, it's very labor intensive. Carbon capture and
12 sequestration, it requires lots of high skill
13 construction workers, building a gasification plant and a
14 power plant, tremendous potential. The natural gas
15 plants, the high efficiency natural gas plants we will
16 need to support renewables, again, lots of jobs there.
17 And the transmission lines that we're going to need to
18 integrate all of this, lots of work for high skilled,
19 highly trained people. And yet, of course, the plan
20 doesn't have any systematic look at which of the various
21 policies will create more jobs and gives no consideration
22 at all, of course, of what the quality of the jobs are
23 that will be created. Not all jobs are created equal.
24 Not all jobs are career enhancing, some of them are just
25 one-shot jobs.

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1 Many of these jobs, we hope and expect, will be
2 Union jobs for high skilled mechanical crafts, where
3 people will have middle class wages and they'll have
4 health care, and they'll have a pension, and as important
5 as all that is, for the State's purposes, they'll be
6 training people for careers. When you train to be a
7 career electrician, you're not just learning how to snap
8 a PV panel onto a rack and move on and snap the next
9 panel onto the rack, you're actually learning a skill and
10 a skilled work force is the basis for future prosperity
11 for the State.

12 Now, it's important to measure these things and
13 important to focus on these things, and important to be
14 sure that these things happen because there are those in
15 the industry whose business model is taking people off
16 the street, paying them \$10.00 an hour, giving them no
17 benefits, very minimal training, and trumpeting all the
18 green jobs they're creating. The State should care about
19 whether we're creating good jobs or we're creating Wal-
20 Mart jobs, it makes a difference. We want high road
21 jobs, we should be less interested in low road jobs.

22 So we need a metric, or a set of metrics to
23 measure job quantity and job quality that we're creating.
24 Lord Kelvin was right, it's the only way we're going to
25 have any hope of focusing on getting it right is if we

1 measure it. Obviously, it's the right thing to do, to
2 focus on jobs for many reasons, there's nothing more
3 important that you can do for someone than to give them a
4 good job. And there's nothing more important to helping
5 the State Budget crisis, which I know all of you have to
6 be focused on all the time, than creating a lot more
7 people with good paying job, who will be paying income
8 taxes, and property taxes, and sales taxes, and having
9 the huge multiplier effect when they go out and buy
10 things. We have this potential, the money is going to
11 come in, it's going to be mostly private capital, it's
12 going to be doing this investment, and we can harness
13 this and do it right and get the most bang for our buck
14 if we measure it and focus on it.

15 And beyond all those reasons, focusing on job
16 quality and quantity creates a political constituency for
17 this very aggressive agenda. You know, it's not just
18 what the plan costs, it's what we get from it that will
19 help determine whether this is successful or not. And
20 it's important not just for California to achieve all the
21 things that are set out in this plan, it's important for
22 us to set an example for other states who are less
23 progressive and who don't have this in mind. You know,
24 every state wants its Silicon Valley, and they don't want
25 it just because high tech is cool, they want it because

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1 Silicon Valley is a tremendous economic growth engine.
2 This is exactly the same thing over again, we can do this
3 right, we can create a huge economic growth engine that
4 all of the other states want to emulate, whether or not
5 they believe in global warming, whether or not they care
6 about air pollution, they don't have to care about any of
7 that, everybody wants jobs. And if we focus on that, we
8 will achieve much more than just doing this for
9 California, we'll be doing it as an example that other
10 people emulate.

11 And with that, I will wrap up with one small
12 note, I'm sorry she had to leave, there are actually
13 three apps for finding chargers, and all of them agree,
14 there is not a single public electric vehicle charger
15 within walking distance of the Capitol, so far we're
16 batting zero.

17 CHAIR WEISENMILLER: Just trying to figure out if
18 the apps were made in California or not. Thanks, Mark.
19 While you came at the end, you really did cut to the
20 fundamental or the basic questions, and so we do need to
21 figure out a way on tracking the jobs. So, obviously,
22 we're trying to do training programs, too, so that's the
23 other element of things we need to be tracking.

24 MR. JOSEPH: It's really not that hard. We can
25 track job years created, we can track number of jobs

1 which are at prevailing rates, and we can track
2 apprentices in State certified apprentice training
3 programs, all that data exists, it's not hard to get,
4 it's not ambiguous or uncertain, it's all straightforward
5 and available.

6 CHAIR WEISENMILLER: Well, and certainly, I'm
7 sure if the staff have further questions, they can
8 contact you for some data sources.

9 MR. JOSEPH: Absolutely.

10 COMMISSIONER DOUGLAS: Just a brief comment. I
11 also appreciate your comment, of course we need to be
12 tracking jobs. We've actually got some experience with
13 some of that, given the breadth of Recovery Act programs
14 that we're administering and the job reporting
15 obligations that come with it, although I think that I
16 can guess already that, you know, we'll look at it and
17 we'll think that, in some cases, the tracking was
18 appropriate, and in other cases, you know, we might have
19 used a Federal formula that actually is off by some
20 amount given conditions on the ground in California, so
21 we'll want to be able to true that up and, to the degree
22 we can, we will. And then, the question of job quality
23 is going to be relatively easy maybe in some cases and
24 relatively challenging to get in other cases, especially
25 if we look at, for example, activity that might have been

1 directly or indirectly generated by a program, and so not
2 all of this is straightforward, but it's very important.
3 So, you know, certainly we really appreciate your help in
4 thinking through how to reflect jobs created and types of
5 jobs created. I guess from the vantage point of looking
6 at approaches on the Recovery Act reporting, in some
7 cases it's very straightforward and, in other cases, it's
8 not as straightforward, it's not as easy, but important.

9 MR. JOSEPH: But probably easier than measuring
10 the effectiveness of energy efficiency measures.

11 COMMISSIONER DOUGLAS: Well, it hasn't been
12 litigated to the same degree. But, you know, at times
13 projections and assumptions need to be made, and so that
14 always gets a little bit sticky.

15 MR. EGGERT: Just a quick -- this is a great
16 discussion and a very important one, and it made me think
17 of another more of a macro-economic measure that I know
18 the group NexTen tracks, which is the amount of gross
19 state product per unit of energy in which California
20 competes quite well. Those are two also very easily
21 accessible metrics and, I believe if I'm remembering
22 correctly, California is about 70 percent above the
23 national average on that one. Another one to consider on
24 that one.

25 COMMISSIONER DOUGLAS: That's a good point. And

1 obviously the State has had longstanding goals to
2 displace petroleum and to move to alternative fuels, as
3 well as the goals we're articulating here to move towards
4 a clean energy system and the different elements that
5 that involves, so certainly displacement of traditional
6 fossil fuels with either efficiency or different forms of
7 energy, whether it be sort of some of the bioenergy
8 options, or the solar and wind and other forms of
9 renewable energy, those, as you said, have the effect of
10 keeping investment in state and keeping some of this
11 production in state, so that, I think, is a way of
12 understanding the broader benefit of some of these
13 programs.

14 CHAIR WEISENMILLER: Yeah, I would note, I think
15 it was today, the Energy Information Administration noted
16 that renewables have bypassed oil in the U.S. and
17 particularly pointing to having said that it's the
18 general on how much California is also pushing forward on
19 the renewable front. Everybody is starting to change the
20 needle in many respects.

21 MS. RAITT: All right. The next speaker is Carl
22 Silsbee. Thank you.

23 MR. SILSBEE: Thank you. And thank you for your
24 persistence. Let me start by offering my support for the
25 efforts that the agencies have taken in attempting to

1 collaborate in the CCEF. I tend to be a quiet speaker,
2 so I'm trying to talk loud, but hopefully it all works.

3 We get pulled in a lot of different directions by
4 different agencies and it's very meaningful for us to see
5 the agencies trying to work together to collaborate on
6 what is the right overall strategy, so we don't get
7 pulled in incompatible ways. We're also very supportive
8 and pleased to see you initiate a stakeholder process.
9 And despite the length of the input that you've received
10 today, I hope you will continue to look for stakeholder
11 input through the development of refinements to the CCEF.
12 I guess you can treat today as pent up demand.

13 At a broad level, it's important to recognize
14 that the CCEF roadmap needs to be a vision document, and
15 not an effort to implement any form of centralized
16 planning. There are way too many significant
17 interactions in these different goals to simply adopt
18 rigid trajectories and then pursue them without regard
19 for the interaction and consequences. And I had a quote
20 from page 2 of the CCEF, but in the interest of time, I
21 won't quote it, but if you look there, there's this
22 recognition of these interactions and the risk of failing
23 if we aren't flexible in implementation.

24 And let me give three examples because I think
25 it's important to understand what I mean by these

1 interactions. We're seeing that the deployment of solar
2 generation technologies over the next few years appears
3 to be shifting the peak reliability period from the mid-
4 afternoon to later in the afternoon or into the evening
5 because of the heavy contribution of solar at times when
6 the air-conditioning peaks. This has consequences for
7 the value potential for traditional forms of Demand
8 Response because many of these programs target air-
9 conditioning. So you have two potentially incompatible
10 goals set up in these various metrics.

11 Another one is the CEC efforts to reduce
12 parasitic plug loads from electric chargers, and the
13 movement to the solid state chargers. Well, that reduces
14 -- it's a great program, it reduces a lot of off-peak
15 load, which lowers the value proposition that wind energy
16 provides because wind tends to produce more in the night
17 time hours, and may contribute in the future to wind
18 curtailment and undermine some of the RPS objectives.

19 A third one is the increased vehicle
20 electrification. If we don't get appropriate cross
21 sector attribution of the impacts, it could result in
22 shifting additional compliance burden to the electricity
23 sector. Again, a conflict between two of the different
24 goals that have been set up in the metrics.

25 So with all due respect to Lord Kelvin, it's not

1 just simply a matter of tracking the data, but I think
2 it's equally important for us to understand as best we
3 can the equations that connect these different pieces of
4 data, so we understand those interactions. Any rigid
5 adherence to proposed goals, no matter how thoughtfully
6 we develop them at the outset, is going to be doomed to
7 failure.

8 So, I'm not suggesting that we not track metrics,
9 I think they're an important building block, but what we
10 have to understand is it's important for the affected
11 State agencies to recognize that there are three
12 fundamental goals to resource planning: reliability,
13 reasonable cost, and environmental sensitivity. And that
14 the specific targets that the agencies would develop need
15 to be subordinated to a balanced approach to address all
16 three of those resource planning objectives. A key thing
17 is to use the metrics to create a dialogue amongst the
18 agencies, to encourage interagency compromise, and to
19 create paths into the future that make sense for all of
20 us.

21 Let me turn to two specific things, energy
22 storage and GHG. There's a proposal in the CCEF for
23 1,000 megawatts of energy storage. Well, energy storage
24 may very well prove to be an extremely valuable tool for
25 addressing renewable intermittency, and resolving some of

1 the renewable integration problems that we are projecting
2 over the next five to 10 years. But it may very well be
3 that the appropriate performance metric isn't megawatts,
4 but the ramping rate or its flexibility. If you adopt a
5 goal based on megawatts, you're going to encourage the
6 least cost dollar per megawatt solutions, which may not
7 be cost-effective, or particularly useful for solving the
8 problems that storage is there to solve.

9 One of the things that we've advocated is to
10 impose the cost of renewable integration on the renewable
11 technologies that are causing the integration needs.
12 This isn't being anti-renewable, it is trying to create
13 accountability at the point of the project developer, so
14 the developer has the incentive to find the most
15 reasonable way to address renewable intermittency and has
16 incentives aligned and consistent with what's of best
17 interest for the State. This is an instance of what I
18 call "Demand Pull," not "Supply Push." I will note that
19 the CCEF Overview does endorse dispatchable renewables
20 and the idea of imposing costs on those who cause the
21 problem is a good way to get there.

22 Let me turn to GHG. First of all, I'd like to
23 applaud the recent delay in cap-and-trade implementation,
24 which I view as ensuring there's enough time to get it
25 right. This is not something that we want to rush into

1 and not get right out of the box. Having said that, I'm
2 very concerned with the GHG metrics that are being
3 proposed in the CCEF because they all target the
4 electricity sector. As I mentioned a minute ago, there's
5 an interaction between other sectors such as
6 transportation fuels and the electricity sector, and if
7 all we do is focus on the electricity sector, we're going
8 to miss the broader public purpose objectives of AB 32.
9 Let's say that electric sector GHG goes up and it goes up
10 substantially because the electrification goals vastly
11 exceed what's in the CCEF; I would argue that's not a bad
12 outcome, and yet it's adverse to the way the metrics have
13 been constructed.

14 Finally, let me observe that the performance
15 metrics that you've suggested are all, by their nature,
16 lagging indicators. The reason for this is that the
17 actions we take today are going to take five to 15 years
18 to come to fruition. It makes sense to look at the
19 metrics in an overall policy context, not in a sense of
20 "did we hit them this year?" I also think that the IEPR,
21 or some process like that, that occurs on a bi-annual
22 basis, and has a policy focus, is the right way to
23 periodically revisit the metrics, not simply to say, "Did
24 we get there?" But I think the dashed lines on the
25 charts are probably more important than the solid lines

1 in that they're a statement of where we expect the future
2 to be. So I would encourage you to think in that manner.

3 Finally, what's important to us is that this
4 process that the agencies have undertaken be performed
5 with some reasonable level of transparency. We'd like to
6 see some kind of stakeholder communication plan described
7 and articulated that lays out what the work plan is for
8 moving forward, gives us an idea of when we can make
9 appropriate input into the process, and gives us some
10 insight into the agency's thinking as the CCEF evolves.
11 So, with that, thank you very much for the opportunity to
12 address you.

13 CHAIR WEISENMILLER: Thanks, Carl. You've raised
14 a number of interesting issues. I think the first one I
15 was going to say, when this process started, certainly
16 before I was here, and probably would attribute a lot of
17 the initial impetus to Yakut and Mary, trying to pull
18 this together, and certainly given that combination, the
19 CAISO, as you know, very focused on electricity, so this
20 whole effort was very much around electricity or things
21 that affect the Grid, and people have noted there's
22 really not much on natural gas, there's not much on a lot
23 of the broader transportation issues, and we've sort of
24 struggled with that. But, again, in terms of the four
25 agencies we have actively involved at this stage, it

1 tends to be very electricity focused. Now, we may also
2 develop different venues for a different set, or we're
3 struggling, but we realize it has that specific focus.

4 The other thing, on the fundamental part,
5 obviously you're more Southern California electric
6 utility focused, I guess one of the messages that really
7 has hit all of us in Northern California, is that safety
8 is important, you know, and so that's, again, in terms of
9 how we keep track of that is an issue, but in terms of
10 fundamental sort of why we regulate, it's not only
11 reliability, but safety.

12 MR. SILSBEE: And I agree with that.

13 CHAIR WEISENMILLER: Yeah. The last thing I was
14 going to mention was just I think the other thing that
15 comes out from this, although, again, we're trying to
16 deal with the things one could measure, but the other
17 things we're struggling with is trying to figure out what
18 are the things that are very fundamental in terms of
19 having fundamental impacts on the system, as opposed to
20 the things we can easily measure. And so, to some extent
21 storage could be a real game changer in terms of the
22 whole electric utility system, if we can figure out how
23 to do that in the right way and, again, struggling a
24 little bit as we go through what we're tracking or trying
25 to do to try to keep track of also what's really

1 fundamental, as opposed to things which are important,
2 but not as much of a game changer for this industry.

3 CHAIR NICHOLS: I would agree with that, although
4 I think I heard something a little bit different, at
5 least at the beginning of the testimony, which I would
6 like to ask if I understood it correctly, which is a
7 suggestion that, you know, in addition to whatever we may
8 be measuring for our purposes of evaluation of programs
9 and progress, and so forth, that we really need a kind of
10 a overarching set of things that we're measuring that
11 directly relate to the big goals of the California Energy
12 future document, and that would be the way to integrate.
13 And so I guess in the world that I come from, there was a
14 fad a number of years ago, which has kind of gotten
15 pushed aside recently for environmental indicators, but
16 the concept, rather than just measuring your progress
17 against an emissions standard, or even an air quality
18 standard, would be to look at what is the state of the
19 environment that we would like to achieve, and then what
20 are going to be the things that we measure to see whether
21 we got there or not. So, I'm seeing some head nodding
22 with recognition there, but are you in a way sort of
23 asking us to do a better job of developing some
24 indicators or metrics of how we're doing, as against our
25 larger goals for our energy system?

1 MR. SILSBEE: No, it's a slightly different sense
2 than that. If I look at the CAISO, they are statutorily
3 obligated to achieve grid reliability and the PUC is
4 obligated to assure reasonable rates.

5 CHAIR NICHOLS: Right.

6 MR. SILSBEE: The two agencies by virtue of that
7 charter have different perspectives on this balanced
8 nature of resource planning. They'll argue, you know, in
9 the absence of the other, for tilting the triangle, if
10 you will, towards what is important for them to carry
11 out. And what I'm saying is this collaboration process
12 needs to recognize that there are some checks and
13 balances here and it's important for the agencies to work
14 together to find that balance point among the interests
15 of the individual agencies, not that I'd want to go out
16 and measure reliability or cost per se, but that we need
17 to understand that we all walk into this room with
18 different objectives. And what we need to come out of
19 this room with is a plan to get to the right place.

20 CHAIR NICHOLS: Right. Well, that's another also
21 very interesting point.

22 COMMISSIONER DOUGLAS: Although I guess I would
23 say that's probably why we're here, because we do have
24 different, as you say, different primary mandates in some
25 of the different agencies here, so you've got the ISO

1 responsibility, the PUC with the responsibility over the
2 costs, and the ARB with a very strong climate and air
3 quality responsibility, and the Energy Commission with
4 reliability and environment and policy, and so I think
5 the fact that we are all here and that we have decided
6 that it is important to invest scarce time and resources
7 in developing a plan for how we're going to work together
8 to achieve California's energy goals is a reflection of
9 the fact that we believe that, left to our own devices
10 and our own silos, we will, if not frustrate each other,
11 at least not help each other enough to get there. So, I
12 appreciate that point and I think that's why we're here.

13 I did want to quibble, if I might, with your
14 battery charger example. I really appreciate the support
15 of the utilities in much of the Energy Commission
16 standards work, but I would say that every bit of
17 electricity that's not drawn by wasteful devices ought to
18 just be off the system and that's our first priority, and
19 if it means that the wind power is not being uselessly,
20 but safely, discharged through wasteful devices at night,
21 that's all the more reason to move forward with storage
22 and I think that you will agree with that. But I did
23 want to -

24 MR. SILSBEE: Yeah, I certainly do, it's just
25 that it's the interaction point that, if we have an RPS

1 Standard to achieve, it becomes harder for us to achieve
2 that with the wind because of the lower night time lows
3 and it's just a conflict between the metrics. And I
4 fully agree, taking wasted electricity out of the system
5 has got to be the number one priority.

6 COMMISSIONER DOUGLAS: Right, and I appreciate
7 that. And I do know that the metrics interact in
8 sometimes interesting ways, and my first thought is that
9 lowering the amount of electricity used helps us directly
10 and immediately with achieving the Renewable Portfolio
11 Standard; you're raising an interesting wrinkle, which is
12 that if we waste less electricity at night, then that
13 could change the equation for wind, but I guess I will
14 express the firm hope and desire that we're far enough
15 ahead of the game with storage and other measures at that
16 point that we put that wind power to great and effective
17 use.

18 Let's see, your comments did, to me, underscore
19 the importance of flexibility and underscore the
20 importance of us having a forum where we hear from
21 stakeholders together, so that we can talk about how we
22 would respond if we meet all our energy goals, but,
23 whoops, we're so far ahead in electrification that load
24 has grown, so, you know, ARB, what does that look like in
25 terms of electricity vs. other sectors? And, you know, I

1 think that all of us are willing and able to have that
2 discussion should that very positive scenario emerge.
3 So, anyway, I guess the only thing I have to add is that
4 you have an interesting point in terms of raising the
5 fact that many of our indicators are lagging indicators,
6 and certainly the Recovery Act work and reporting we do
7 has made me acutely aware of the pain of lagging
8 indicators, so I don't know if there is anything to be
9 done about that. There are good reasons for measuring
10 the effectiveness of an approach after that approach has
11 been carried out, but if there are ways of hedging that
12 to some degree with some real time indicators, you know,
13 I think that some of us would be receptive in terms of
14 thinking through what that might be. So, thank you.

15 MR. EGGERT: I'll just briefly build on that. I
16 thought that was a really interesting point with respect
17 to how do we account for the fact that we're generally
18 looking in the past, but one of the charts that was used
19 that I believe was coming out of the DRA Report on the
20 RPS contracts has this interesting differentiation by
21 basically defining certain milestones that are achieved
22 to allow you to both look at, you know, what the
23 anticipated growth and renewables generation might be,
24 and where those things are at in their approval process,
25 all within a single chart, which I thought was a really

1 nice way of pulling forward some of that information in
2 time.

3 And I just also wanted to make a comment about
4 your GHG reference and I think that you are correct in
5 that, you know, if there is potentially a shift for the
6 vehicles from petroleum to electric, that is a benefit to
7 our GHG goals and that's fully recognized within the
8 policies like Low Carbon Fuel Standard. And I think it
9 might be worth, if we haven't already, sort of
10 differentiating where the GHG dotted line is really just
11 a projection based on information vs. a specific target
12 for that particular sector, there isn't one that I'm
13 aware of, and so I think there is still value in tracking
14 the sectors specifically in terms of its GHG performance,
15 but it's different than, say, the absolute greenhouse gas
16 goal that we have under the totality of all sectors
17 within AB 32.

18 CHAIR WEISENMILLER: Great.

19 MS. KOROSK: All right, I would like to give an
20 opportunity for those who have hung in here throughout
21 the day to make any public comments. If there is anybody
22 who would like to speak, please just line up here at the
23 mic and we'll take you one at a time. Please state your
24 name and affiliation.

25 MR. PINGLE: Thank you. Hello. My name is Ray

1 Pingle with Sierra Club California. I've got a few just
2 brief comments. One is on the Renewable Energy Report,
3 we would request and recommend that that also have a
4 section reporting progress of targets by program, so how
5 is the SB 32 program doing vs. the RAM (phonetic)
6 Program, vs. CSI, and so on. And that way, target which
7 ones are doing well, which aren't, and which ones need
8 some help. Secondly, on the report on OTC, we would
9 recommend broadening that, re-titling it to something
10 like "Changes in Non-Renewable Supply," so then, under
11 that, you could have "OTC: What's Happening with the
12 Repowering or Replacement..." of those. You could have
13 "What's Happening with Coal," "What's Happening with
14 Nuclear," "What's Happening with Retirement, Repowering
15 of Other Natural Gas Plants," that type of thing. And
16 then, another thing is, if one of the objectives of this
17 whole process is to identify where things are failing, so
18 that you can take early mid-course corrections, I think
19 we need to have something in the report about what's
20 going wrong, why those things are going wrong, and what
21 can we do about it. And two areas that might help in
22 that is to look at a project failure rate, what
23 generation projects have been proposed, but failed? And
24 why have they failed? And I know the PUC does track some
25 of that, but to give that visibility into this report.

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1 And then, one last thing is in that area and this would
2 be a little more difficult to create, but a "Removing
3 Barriers to Generation Report," and that could be, you
4 know, you could take pieces out of the SB 17 Smart Grid
5 process to look at what is the percentage of substations
6 that can support two-way electricity flow vs. a target,
7 for example. Or you could take some of the key things
8 out of the Re-Deck (phonetic) Report, just high level
9 reports for this level, of what's the status, how long is
10 the interconnection queue, some basic things like that.
11 So those are my brief comments and, again, I think this
12 is a wonderful effort and you're doing very well to all
13 work together in an integrative way. Thank you.

14 CHAIR WEISENMILLER: Thank you.

15 MR. WHITE: Thank you very much. Chuck White
16 with Waste Management. I had about an hour and a half of
17 things I wanted to discuss, but I'll try to boil it down
18 to two minutes. Waste Management is involved in
19 developing biomass energy, we've got about 100 megawatts
20 that we've developed in California so far, and there's a
21 lot more potential out there. We've also developed
22 13,000 gallons a day of renewable natural gas from
23 landfill gas. These are the lowest carbon fuel sources
24 you can get from biomass. And my point today was, I was
25 really surprised in reviewing the documents, including

1 the existing Implementation Plan, I did a search on how
2 many times waste biomass is referenced and it's less than
3 10 times, only around one paragraph related to wastewater
4 treatment plants. Bioenergy is used once in the entire
5 report, with a brief reference to the Bioenergy Action
6 Plan, and biomass isn't mentioned at all. So, I guess
7 what I would ask is that, as a metric, you give
8 consideration to tracking biomass energy sources. The
9 Energy Commission does have a Bioenergy Action Plan, it
10 calls for 20 percent of renewable energy to be provided
11 by biomass. As this gentleman here indicated, I'm not
12 looking necessarily for strict adherence to 20 percent,
13 but it would be good to make sure that this plan
14 recognizes that there is a commitment that California has
15 made in the Bioenergy Action Plan, to get as close to 20
16 percent as you can, and it's helpful to monitor that as
17 part of an overall energy framework, to really show how
18 we're doing in approaching and maintaining that 20
19 percent of the renewable, and there's a variety of
20 reasons related to that. Right now, the existing biomass
21 plants are under extreme fire from the investor-owned
22 utilities in terms of the rates that they're willing to
23 get. If you put a new renewable energy plant in, you can
24 get \$.10, or \$.11 a kilowatt hour. Somebody's existing
25 biomass plants are being offered only \$.5 a kilowatt hour

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1 because they're in chances of shutting down, and thereby
2 further reducing. And the reason you want to include, I
3 think, biomass energy is they are a good baseload demand
4 source of energy that you can basically adjust and move
5 around where other sources of renewables are not
6 necessarily quite so flexible as biomass. So, again, I
7 would just urge that there be some kind of metric in the
8 overall plan, looking at biomass energy resources.
9 California is only using about eight percent of its
10 technically available biomass potential from municipal
11 solid waste, from agriculture, and from forest. And
12 there's a bunch of secondary and tertiary benefits. From
13 municipal waste, you make maximum efficient use of it,
14 you reduce the reliance on landfills; from agricultural
15 waste, you reduce water quality impacts, from
16 agricultural waste, if you're able to convert that into
17 energy; and forest waste, you maintain the health of the
18 forest by getting rid of burnable materials that are
19 waste materials in the forest if you do it in an
20 environmentally sensitive way. So I'm just saying, there
21 is a whole bunch of collateral benefits on really
22 focusing in on biomass energy and I think it should have
23 a role to play in this overall Clean Energy Future
24 framework you're developing. Thank you very much.

25 CHAIR WEISENMILLER: Thank you.

1 MR. COHEN: Hi, my name is Ted Cohen. Thanks for
2 the opportunity to speak with you on this topic. I'm
3 sorry, I'm from the Clean Coalition and we're a nonprofit
4 advocacy group focused on local clean energy projects.
5 My first comment on this, and I'll try to keep these
6 quick also, is before we get into the metrics on the
7 report, the loading order as it is expressed in the
8 report already has a bit of a flaw in it in terms of how
9 it defines DG, so, at the moment, the loading order is
10 expressed as energy efficiency, renewable energy, and DG,
11 suggesting that DG is not renewable energy. And the
12 renewable energy is assumed to be the large-scale stuff.
13 Then, wholesale DG is actually placed in the Energy
14 Demand section of the Clean Energy Futures Report, rather
15 than the Energy Supply section, where it actually is more
16 appropriately placed in the Energy Supply section, and
17 compared against large central station. So, in terms of
18 just framing your priority loading order in your
19 decisions about -- your strategy for your portfolio,
20 wholesale DG, the system side of the meter vs. retail DG,
21 is an important distinction that should actually be
22 corrected, I think, in the loading order before we even
23 talk about metrics, about how we're measuring where we're
24 going. Then, the next distinction I would like to make
25 in this discussion today is a lot of the discussion today

1 was about simplifying metrics for the purpose of being
2 able to communicate them and make them very accessible to
3 people. The other goal of the metrics, though, was
4 metrics that are actually useful for knowing when you
5 need to course correct, which may be a different set of
6 metrics than the ones that are more communicable. And
7 so, to that point, about the ones you need to understand,
8 to know whether or not you need to course correct from a
9 policy point of view, I think there are three major areas
10 in which the current metrics are lacking in that
11 particular area. The first one is a measure of risk, and
12 the idea of, if we look, as people said here on the
13 panel, the portfolio of energy solutions for our future
14 is a portfolio, and it's an investment portfolio that we
15 are investing our time and money as California citizens
16 in, and the agencies are, in effect, Portfolio Managers,
17 managing where this money is getting invested. I could
18 ask my Fidelity Portfolio Manager any time what my risk
19 profile is of my portfolio investments, and at the moment
20 in the RPS, and in the way we're doing our energy future,
21 I can't ask that question. I can't get a good answer on
22 what is the risk in the investments we've made. And to
23 the credit of the DRA with that report about the
24 milestones of the portfolio, that's one way of
25 characterizing the risk of the current portfolio, but it

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1 isn't a very accurate way of telling you how likely you
2 are to actually get the energy that you've invested these
3 contracts in. And a good example of a metric that is
4 available for that, as the utilities have already said,
5 the IOUs have already stated, they actually measure that
6 risk assessment on their projects internally on almost a
7 monthly basis, so they understand where their contracts
8 are going. So if that information was available to
9 everybody, then we could all see the risk portfolio for
10 what we're investing in. The second important thing that
11 is missing in here is also the process risk, or the
12 process issues of what we're investing in today, also, so
13 if it's metrics around, for example, interconnection, and
14 this was mentioned also before. If we were measuring
15 interconnection and the processes, how much time it
16 takes, and the risks involved, with interconnection of
17 our investments right now, I think you would say we need
18 a mid-course correction right now. You would already
19 know that that needs to be fixed from a policy point of
20 view. And the third thing which was also brought up by
21 Mark Joseph also on the economic benefits, not just the
22 jobs created, but also the market maturity. So, as an
23 investment in California, as a California citizen, I'm
24 investing in the market maturity of the clean energy
25 market in our state, and the development of the market

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1 and jobs and companies in state manufacturing and those
2 kind of metrics also, and whether or not we're actually
3 investing in a way that's actually bringing costs down
4 over time, so are we investing in a way that is bringing
5 down our energy costs in the future, so metrics around
6 that would also be really useful to me as a ratepayer and
7 as a citizen, also, and it should be also tracked in
8 order to understand whether or not we're actually making
9 the right investments and whether we need to change
10 course. My last comment on this is just there are a lot
11 of questions around DG, about definition of DG, and I
12 think there is actually a really easy definition of DG,
13 and it's a definition of DG that is useful for policy.
14 Whether that's the right definition doesn't matter as
15 much as whether it's useful for policy. And that really
16 comes down to jurisdiction, so from our point of view,
17 and in terms of policy where we do, DG is - the
18 definition of DG vs. Central Station is really based on
19 CAISO vs. the utilities and who owns the Grid, where they
20 connect, and wholesale vs. retail, which is which side of
21 the meter. And then that's relatively clear, relatively
22 straightforward in understanding like the metrics for
23 each of those different market segments. Thank you.

24 CHAIR WEISENMILLER: Thank you. Any other
25 comments?

1 MS. KOROSSEC: We have nothing online or on the
2 phone.

3 CHAIR WEISENMILLER: Okay. So closing comments.
4 And it will be very very brief, no 45-page slides on
5 this. I certainly would like to thank everyone for their
6 participation today. I think one of the things we were
7 trying to do is, obviously this document came out last
8 fall, it reflected a lot of work on the part of a lot of
9 people in the agencies, and I think it was a very good
10 step forward in terms of, as we said, trying to take the
11 existing policies and provide some benchmarks we could
12 look at how they're doing. And so this was the next
13 step, I thought, in terms of reaffirming the commitment
14 and interest in the agencies to keep this going;
15 obviously, it's a living document, it's evolving, and I
16 think as we go forward we'll find out ways it needs to be
17 modified, but certainly appreciate people's thoughtful
18 comments, well, actually certainly very much appreciate
19 the staff's effort in trying to flesh out some of the
20 metrics, to get those out for comments, and also
21 appreciate everyone's thoughtful reaction back on those,
22 and suggestions on how we might improve those.

23 CHAIR NICHOLS: I agree. I have to admit that,
24 when you first proposed this workshop, I was a little
25 dubious about how much interest there would be, so I was

1 pleasantly surprised by the number and the quality of the
2 thought and input that has gone into this. I do believe
3 that it vindicates not only your idea for having a
4 stakeholder workshop, but also the idea that this process
5 has value not just for us, but for the broader public
6 that watches what we're doing. And I'm really
7 appreciative of the people who gave us thoughts about how
8 we can turn this into a tool that accomplishes even more
9 of the goals that the Governor has set for us, it's clear
10 that we've done something positive in terms of engaging
11 with each other and, frankly, taking some risk, I think,
12 in exposing the potential for actual conflict -- and we
13 knew that when we started, that we do come from different
14 mandates, that we have different specific legislative
15 mandates, different overseers and, in some instances,
16 also very different audiences for the work we do. And
17 combining our efforts in a public way, I think, is not
18 just a good faith gesture, but really an opportunity for
19 all of us to kind of move to a whole new level in the way
20 we go about doing our work. So I think this is just a
21 first step and I'm looking forward to seeing where it all
22 leads. Thank you.

23 COMMISSIONER DOUGLAS: All of us don't actually
24 need to make closing comments, but I will thank -- I'll
25 join my colleagues in thanking everybody for

1 participating, thanking you for your thoughtful comments.
2 When we have workshops like this go to nearly 6:00 in the
3 evening, that says to me that we probably ought to do
4 more of them because it's really that valuable and just
5 sitting here, it has helped me think about this document
6 and this effort, and so I see it has helped others, so
7 thank you.

8 MR. EGGERT: Okay, I'll be really brief. Yeah, I
9 guess, you know, as an engineer, I love measurement, so
10 this has been quite fascinating and illuminating, and I
11 think also provides a little bit of humility. I can't
12 remember who said it, but really we need to have the
13 recognition that, within the State agencies, you know,
14 we're just really writing the rules and in some cases we
15 might provide a little small amount of seed funding, but
16 it's the companies and the workers who are doing the real
17 work to actually turn these metrics into real megawatts
18 on the ground, jobs in the California economy, and to
19 make sure that what we're providing, both in terms of
20 information and how we use that information in formulating
21 our policies, is really important and I certainly came
22 away with a much stronger appreciation for the
23 significance of this effort, and I just want to thank
24 everybody for their input.

25 CHAIR WEISENMILLER: Okay, this meeting is

1 adjourned. Thanks.

2 (Adjourned at 5:26 p.m.)

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