

JOINT COMMITTEE WORKSHOP
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)	
)	
Preparation of the AB 1632 Nuclear)	Docket No.
Power Plant Assessment Report,)	07-AB-1632
2008 Integrated Energy Policy)	Docket No.
Report Update, and the 2009)	08-IEP-1F
Integrated Energy Policy Report)	
_____)	

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

THURSDAY, SEPTEMBER 25, 2008

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COMMISSIONERS PRESENT

Jeffrey D. Byron
Presiding Member, Electricity and Natural Gas
Committee
Presiding Member, 2009 Integrated Energy Policy
Report Committee
Associate Member, 2008 Integrated Energy Policy
Report Update Committee

James D. Boyd, Vice Chair
Associate Member, Electricity and Natural Gas
Committee
Associate Member, 2009 Integrated Energy Policy
Report Committee

ADVISORS PRESENT

Kristy Chew

Tim Tutt

STAFF and CEC CONTRACTORS PRESENT

Barbara Byron

Steven McClary, MRW & Associates

Suzanne Korosec

Donna Parrow

ALSO PRESENT

Bob Emmert, California Independent System Operator
(CAISO)

Pat Mullen, Pacific Gas and Electric Company
(PG&E)

Scott Galati, Galati|Blek, representing Pacific
Gas and Electric Company

Dr. Lloyd Cluff, Pacific Gas and Electric Company

Dr. Norm Abrahamson, Pacific Gas and Electric
Company

Dave Miklush, Pacific Gas and Electric Company

Gary L. Schoonyan, Southern California Edison
(SCE)

Rochelle Becker, Alliance for Nuclear
Responsibility

David Weisman, Alliance for Nuclear Responsibility

Bernadette Del Charo, Environment California

Michael Cannon, Cannon Associates and the Economic
Vitality Corporation for San Luis Obispo County

Rebecca McMurry, Pismo Beach Chamber of Commerce

Carl Dudley

Fred Giffels, HGP, Inc.

Caroline M. McAndrews, Southern California Edison

Assembly Member Sam Blakeslee, California State
Assembly, 33rd District (via telephone)

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P R O C E E D I N G S

9:05 a.m.

COMMISSIONER BOYD: Good morning, everybody. I would like to welcome all of you to this morning's workshop. The purpose of the workshop, while well enunciated in the Hearing Notice, I'll quickly summarize, is to receive public comment, stakeholder comment, on the draft AB 1632 Consultant Report, which is entitled, quote, AB 1632 Assessment of California's Operating Nuclear Plants. And as I indicated, you have all had access to the Notice which does a very good job of spelling out what is in the legislation and what our task is.

I am Jim Boyd. I am Vice Chair of the Energy Commission. I am also the State's Liaison Officer to the Nuclear Regulatory Commission and therefore I get to watch over nuclear power and nuclear waste issues at the Energy Commission. Which when I signed on six and a half years ago I was told was no big deal. That was a mild understatement.

I am also the Associate Member of the Electricity and Natural Gas Committee, which is more or less overseeing this 1632 assessment. And

1 as the Notice indicated to you, the workshop was a
2 joint workshop by the Commission's 2008 Integrated
3 Energy Policy Report Committee and the Electricity
4 and Natural Gas Committee.

5 To my right is Commissioner Byron and to
6 his right his advisor, Kristy Chew. Commissioner
7 Byron is the Presiding Member of the Electricity
8 and Natural Gas Committee, Associate Member of the
9 2008 Integrated Energy Policy Report, or IEPR as
10 we choose to call it, and is chairing the 2009
11 Integrated Energy Policy Report Committee and I am
12 the Associate Member of that. So we are plugged
13 into this thing every which way from Sunday it
14 seems to me.

15 AB 1632, or Chapter 722 of the Statutes
16 of 2006, which was authored by Assemblyman
17 Blakeslee, is a significant piece of legislation.
18 Among it's many features it requires an assessment
19 of the vulnerability of California's large
20 baseload plants. That was defined as 1700
21 megawatts or more, to a major disruption from an
22 earthquake or due to plant aging. And the
23 legislation directs the Energy Commission to
24 complete and adopt an assessment related to
25 California's operating, large baseload plants as

1 part of the 2008 Integrated Energy Policy Report,
2 which means by November of this year.

3 Since our operating, commercial nuclear
4 power plants account for roughly 12 percent of the
5 state's overall electricity supply, their
6 reliability and their potential vulnerability to
7 any kind of major disruption are, of course, a
8 concern to this agency and to the state and
9 obviously to the Legislature. As well as, is the
10 accumulating nuclear waste at these plant sites
11 and the prospects for their safe storage,
12 transport and permanent disposal, which AB 1632
13 directs the Commission to assess.

14 So today is an opportunity for
15 stakeholders and members of the public to comment
16 on this draft Consultant Report. And we indeed
17 look forward to your comments today.

18 And before I call upon Commissioner
19 Byron I'll just mention a couple of procedure
20 items. We have an agenda for the day. The first
21 item on the agenda will be Ms. Suzanne Korosec,
22 who is the Integrated Energy Policy Report Leader,
23 will take us through some logistics.

24 And that will be followed by
25 presentations on the AB 1632 assessment itself,

1 key milestones and the Consultant Report. And
2 that presentation will be led by Barbara Byron,
3 who is the Energy Commission's Nuclear Policy
4 Advisor, and by Mr. Steve McClary who is the
5 principal with the consulting firm that prepared
6 the report and who directed and was the program
7 manager for the consulting firm on this project.

8 And then we will go to public comment
9 and we invite all of you. This is a workshop so
10 please, we invite any and all who want to speak
11 today to do just that. We know we are going to
12 hear from the California ISO, we are going to hear
13 from PG&E and Southern California Edison. And as
14 we proceed through the day I welcome and call upon
15 any of you who are here to make comments to do so.
16 We have to receive comments from the podium and
17 the microphone so all who are tuned in can hear
18 and so we can also prepare a record of the
19 hearing.

20 With that I will turn to Commissioner
21 Byron and ask if you would like to make some
22 comments before we start the staff's presentation.
23 Commissioner.

24 COMMISSIONER BYRON: Thanks,
25 Commissioner, I'll be brief, that was a very

1 thorough introduction. I'll only add one thing.

2 Well, I think I'll add two.

3 First, thank you all for being here. We
4 have a very full audience this morning and that
5 kind of participation really benefits this
6 commission.

7 The second is that I would just like to
8 add that we have a very thoughtful Assembly Member
9 in Assembly Member Blakeslee in creating this
10 legislation. Obviously he convinced the rest of
11 the Legislature of the importance of this work and
12 added it to our Integrated Energy Policy Report.

13 So Commissioner Boyd and I are taking
14 this very seriously and I think it is a pretty
15 thorough report. We are looking forward to
16 comments today and I thank you all for being here.

17 COMMISSIONER BOYD: Thank you,
18 Commissioner. And you do remind me of one point.
19 I think one of my minor grievances these days is
20 not enough people pay attention to the Integrated
21 Energy Policy Report. And you are correct in
22 commending Assemblyman Blakeslee who has paid a
23 lot of attention and was seen carrying it through
24 the halls of the Capitol on more than one
25 occasion. So I salute and thank him for that. I

1 continuously try to remind other legislators they
2 might want to take a look at it on any and all the
3 subjects that it covers. So after that commercial
4 I will turn the microphone over to Suzanne.

5 MS. KOROSSEC: Thank you. Just a few
6 housekeeping items. Restrooms are out the double
7 doors and to your left. There is a snack room on
8 the second floor of the atrium under the white
9 awning. And if there is an emergency and we need
10 to evacuate the building please follow the staff
11 out to doors to the park that is kitty-corner to
12 the building and we will wait there for the all-
13 clear signal.

14 Today's workshop is being webcast. And
15 for those who are listening in on the webcast who
16 may wish to speak during the public comment period
17 the call in number is 88-566-5914 and the passcode
18 is IEPR.

19 Just to reinforce what the Commissioners
20 said about the connection between this report and
21 the Integrated Energy Policy Report. We are
22 directed to adopt this assessment by November 2008
23 and include it in the 2008 Integrated Energy
24 Policy Report update. We are currently planning
25 to release the initial draft of that Update today

1 and the nuclear information that is included in
2 this draft of the report reflects the current
3 status of information from the Consultant Report.

4 (Advisor Tutt entered and took a
5 seat at the dais.)

6 MS. KOROSSEC: As that evolves and
7 changes based on what we hear today and based on
8 what the Committee chooses to put in their
9 Committee Report that they will be preparing after
10 today, the IEPR will reflect the new information.

11 The Energy Commission expects to adopt
12 the final AB 1632 Report in November. And as I
13 said, the final findings and recommendations from
14 that report are what will ultimately be included
15 in the final 2008 Integrated Energy Policy Report
16 Update. So with that I will turn it over to
17 Barbara Byron.

18 COMMISSIONER BOYD: Suzanne and Barbara,
19 before we proceed. I neglected to mention that
20 the other member of the 2008 Integrated Energy
21 Policy Report Committee is Chairman Pfannenstiel,
22 who is out of the state on state business. But we
23 were just joined on my left by her Advisor, Tim
24 Tutt. Tim, welcome. Okay, Barbara, take it away.

25 MS. BYRON: Thank you. I am the project

1 manager from the Energy Commission for the AB 1632
2 assessment and Steve McClary, who is the project
3 manager for the study team. We will present to
4 you just a brief overview of this project.

5 And we plan to cover, just very briefly,
6 AB 1632, the study that was conducted and some of
7 the very important dates that are coming up. The
8 consultant report process. And then Steve will
9 provide some of the preliminary findings from the
10 study.

11 As the Commissioners mentioned, AB 1632
12 by Assemblyman Blakeslee directs the Energy
13 Commission to assess the potential impacts to the
14 state from relying on large baseload power plants.
15 And in our study these include Diablo Canyon and
16 San Onofre as the only plants that meet the AB
17 1632 definition for baseload plant.

18 This study will include the
19 vulnerability of the plants to a major disruption
20 caused by a large seismic event or plant aging.
21 And the potential impacts of such a disruption on
22 system reliability, public safety and the economy.
23 And the costs and impacts from nuclear waste
24 accumulating at the plant sites. And then other
25 major policy issues related to the future role of

1 these plants.

2 Our study, the main objective for the
3 Consultant Report is to provide these assessments
4 and information to the policy makers about Diablo
5 Canyon and San Onofre.

6 And after the Consultant Report the
7 Energy Commission's Electricity and Natural Gas
8 Committee will be developing a Committee Report
9 with some recommendations.

10 These assessments are to be completed as
11 part of the IEPR process and will be adopted by
12 the Energy Commission in November of 2008.

13 We encouraged public input throughout
14 this process. At the very beginning a year ago we
15 had stakeholders, they were provided an
16 opportunity to comment on our study plan and
17 recommend literature to be included in this
18 review. And they were given opportunities
19 throughout the process on draft reports.

20 We have held, we will be holding three
21 total public workshops. One was held in December
22 of 2007 on the Study Plan, we have the public
23 workshop today on the draft Consultant Report and
24 then there will be a third public workshop on the
25 Draft Committee Report. And that will be October

1 20th.

2 In addition we developed a Seismic
3 Vulnerability Advisory Team that was comprised of
4 state agencies, staff, senior experts from the
5 Seismic Safety Commission, the California Geologic
6 Survey and the California Coastal Commission.

7 And throughout this process, beginning
8 way back when we did the request for proposal,
9 they provided some input into the criteria for the
10 study and the proposed study plan and some of the
11 literature and studies that should be included in
12 the study. And then provided input on early
13 drafts of the seismic vulnerability assessment.
14 They also will be reviewing seismic sections of
15 the Draft Committee Report.

16 And here are some of the key dates that
17 we wanted to just bring to your attention.
18 October 2 is the due date for the written comments
19 on this report, on the Consultant Report.

20 And then October 10 we plan to release
21 the draft Committee Report with recommendations.
22 And then October 20 the Commissioners will hold a
23 public workshop on the draft Committee Report.
24 Written comments will be due on the Committee
25 Report October 22.

1 And then October 30 we will release the
2 final Committee Report. And our plan is
3 consideration for adoption of the AB 1632
4 Committee Report on November. With adoption of it
5 included in the 2008 IEPR Update of November 19.

6 Now I would like to introduce Steve
7 McClary with MRW & Associates.

8 MR. MCCLARY: Thank you, Barbara. Good
9 morning, good morning to the Commissioners. Happy
10 to be here today to take this -- What I would like
11 to do is just briefly review the consultant
12 report, the process that has been gone through and
13 some of our preliminary findings that we have
14 made. Remembering that this is a draft report and
15 we are here today to receive comments and
16 suggestions as to improvements that can be
17 incorporated in the final due in approximately a
18 month.

19 I would like to quickly review what the
20 process we went through here was. MRW, of which I
21 am a principal, is a consulting firm that has
22 assisted the Commission in the past on nuclear
23 policy issues in the last couple of IEPR cycles.

24 For this study, which is somewhat a
25 different focus than was taken in those, we

1 assembled a team that included MRW and
2 subcontractors, subconsultants with expertise in
3 those areas directed by AB 1632. We have some of
4 those team members here with us today and they are
5 all awaiting comments on the report.

6 On seismic issues, plant aging, we had
7 ABS Consulting as part of the team. They are a
8 recognized worldwide risk assessment and
9 engineering firm with expertise specifically in
10 nuclear as well as in other infrastructure areas.
11 And we have David Montague and Paul Thenhaus here
12 today with us from ABS Consulting.

13 On environmental issues we had Aspen
14 Environmental Group who are very familiar with
15 environmental issues and have participated in many
16 of the most prominent environmental reviews here
17 in California. Suzanne Finney with Aspen is here
18 with us today as well.

19 From MRW, while I am listed as the
20 project manager, I have to acknowledge that the
21 work and the hard labor that has gone into this,
22 as is usual in these things, primarily a team
23 effort led by Heather Mehta with valuable
24 assistance and heroic work I would say from Laura
25 Norin and Briana Kobor, who are also here today.

1 This team then, we were able to bring
2 expertise in seismic areas, in engineering. We
3 looked at environmental issues associated with
4 changes in energy resources due to disruption of
5 output from the nuclear plants. And we also did
6 some production cost modeling. Preliminary
7 efforts on that front, in particular to look at
8 the impact of disruptions in the near term.

9 In performing this analysis a focus was
10 to look at existing work that is out there. This
11 was not to be a new and independent assessment
12 analysis pushing forward but to review where we
13 are today based on existing scientific studies,
14 documents in the public domain in regulatory
15 proceedings and so on, and on information provided
16 by the plant owners in response to data requests,
17 which we submitted. And I will acknowledge here
18 that those data requests, in particular from PG&E,
19 were extremely helpful in developing the
20 assessment that is prepared and presented today.

21 In doing that we did not hold private
22 meetings. This is intended to be a transparent
23 and public process. We did not hold independent,
24 private meetings off the record, let's say, with
25 the plant owners or with other stakeholders. And

1 this was a deliberate effort to keep this a public
2 process and as transparent as possible.

3 So the draft report that is out now dos
4 reach some preliminary conclusions. As I said, it
5 is a draft. We are open to hearing reactions both
6 to the findings and to the analysis in the
7 assessment underlying those preliminary
8 conclusions. I would like to run through those in
9 the main areas that the report addresses.

10 Seismic vulnerability. Both plants were
11 designed to withstand the kind of seismic event,
12 the terminology used was a safe shutdown
13 earthquake. An earthquake that would allow the
14 plant to -- they were designed in order to allow
15 the plant to shut down in the event of the most
16 severe seismic incident that was predicted at the
17 time they were designed, without creating the kind
18 of damage or release of any radioactive materials
19 to the environment.

20 This, of course, was done in the context
21 of the knowledge of the seismic settings for these
22 plants at the time they were licensed, which is
23 going back 30 years in some case. Since that time
24 there has obviously been work done in better
25 understanding and characterizing the seismic

1 settings of the plants.

2 One theme that emerged and that we found
3 in the review was that the seismic setting and the
4 understanding and detail of the seismology around
5 the Diablo Canyon plant is better understood,
6 better characterized, than that around the San
7 Onofre plant.

8 This is largely a function of the fact
9 that during licensing the Diablo Canyon plant
10 operator, PG&E, was required to and has carried
11 forth a relatively detailed seismic program, a
12 long-term seismic program since then. And so a
13 lot of the research characterizing the area around
14 it has been deliberately undertaken as a result of
15 the license process.

16 No equivalent existed or was put in
17 place for the San Onofre program, which means that
18 there's -- for the San plant. That means that
19 there is less detailed understanding, less
20 comprehensive kind of seismic analysis that has
21 been done at that site.

22 Another aspect that we found is that
23 better understanding of seismic events, of
24 earthquakes and the resultant ground motion and
25 how those can affect plants like the nuclear

1 plants, that understanding has evolved in the
2 years since these plants were licensed.

3 And that better understanding tends to
4 overall cause the potential, I don't want to over-
5 characterize this, but the potential that there
6 could be more ground motion effects and they could
7 be more severe at San Onofre than at Diablo
8 Canyon. Again, this may be in part because of the
9 better understanding. But it also stems just from
10 better understanding of how seismic events in
11 general occur and how they can affect a plant in a
12 setting such as the San Onofre Plant.

13 At Diablo Canyon the Hosgri Fault, which
14 was identified during the licensing process for
15 Diablo Canyon and sparked, in fact, the long-term
16 seismic program requirement there, continues to be
17 the feature that dominates the predicted seismic
18 hazard at PG&E -- at the Diablo Canyon plant.

19 There has been and continues to be some
20 disagreement over how best to characterize the
21 Hosgri Fault that I would describe as a scientific
22 debate that is largely but not 100 percent
23 settled. And I look forward, in fact, to hearing
24 some reaction from the Diablo Canyon operators as
25 to how they would view that issue. It is

1 certainly something that we have heard from our
2 advisory team and from others and it is not a
3 black and white issue, certainly.

4 One issue that arose in looking at the
5 plants in the current state of affairs is that
6 there is what is not precisely a data gap but
7 perhaps an area that needs further investigation.
8 And this has to do with the fact that the nuclear
9 plants are designed primarily with a view toward
10 the safety and the maintainability of the nuclear
11 safety-related components. The reactor vessel,
12 the pressure vessel. Those components that come
13 directly in contact with those. And the NRC
14 clearly takes the lead in reviewing and monitoring
15 those.

16 However, there are a lot of non-nuclear
17 safety-related components, buildings elements, to
18 the nuclear plants, just as with any large power
19 plant. And there's something of a gray area in
20 how the evolution of seismic design standards
21 since the time the plants were designed would
22 apply to those non-nuclear safety elements of the
23 plants. And frankly, we think this is something
24 that merits greater attention than it has received
25 and is a topic that we would recommend to the

1 Commission for further investigation.

2 This has implications for the
3 reliability of the state's electricity system. It
4 is not necessarily directly related to nuclear
5 safety or the plant's response in those terms but
6 they do relate to the nuclear plant's ability to
7 contribute to the state's electricity system.

8 Another area that emerged was tsunami
9 hazard at the two plants. Tsunami creation and
10 how those are started is an area that has also
11 seen significant advances in our understanding in
12 the time since the plants were licensed. We know
13 better what can cause tsunamis and what the
14 effects would be.

15 This was looked at to some extent in the
16 context, particularly at Diablo Canyon, of spent
17 fuel storage installations being put in place
18 there. As near as we were able to determine, the
19 tsunami hazard at the San Onofre plant has not
20 been reviewed or updated in detail since the plant
21 was licensed and it appears that this is an area
22 ripe for investigation and updating.

23 This is particularly true since the
24 seawall at San Onofre was designed with the
25 understanding of what the tsunami hazard was at

1 the time it was built. The margin of error may
2 not be substantial enough to give a lot of comfort
3 that an updated tsunami hazard assessment would
4 lead you to the same conclusion about that
5 seawall.

6 Spent fuel pools at the two plants. The
7 accumulation of spent fuel at the California
8 reactors is an issue that this Commission and we
9 have looked at in the past and it continues to be
10 a problem. One element of that, both reactor
11 operators are installing and putting in place dry
12 case storage, which allows them to move spent fuel
13 from the pools to dry casks, which are generally
14 much less vulnerable and more stable than the
15 spent fuel pools.

16 To the extent that that allows a more
17 open racking system in the spent fuel pools, that
18 appears to have benefits from a seismic hazard
19 perspective as well. Essentially what's happened
20 is the spent fuel pools have been re-racked to
21 allow greater density of spent fuel storage
22 because there is no place to send that spent fuel,
23 there being no federal repository yet.

24 As the longer term storage at the
25 reactor sites becomes available and you are able

1 to off-load fuel from those spent fuel pools, that
2 appears to have benefits from a seismic hazard
3 perspective as well.

4 Plant aging. The plants are getting
5 older. They are reaching the end of their initial
6 40-year lifetime. And predictably and
7 understandably in plants, and any kind of major
8 industrial facility, as plant components age that
9 can have an impact on plant performance.

10 Both of the plants in California, the
11 capacity factors remain relatively high, they
12 perform well. To a large extent it is hard to
13 discern whether there are in fact aging issues
14 that are overcome by operational changes and
15 improvements at the two plants that basically make
16 up for anything going on on the aging front and
17 whether that will continue to be the case.

18 But generally speaking, the improvements
19 and maintenance procedures at the plants have
20 allowed the plants to maintain quite high capacity
21 factors. And to the extent that there are plant
22 component aging problems they are dealt with by
23 that kind of activity.

24 There is an indirect issue related to
25 plant aging that you need to be aware of from a

1 state perspective. And that is, to the extent
2 that that kind of activity and maintenance of
3 capacity factors does not take place elsewhere,
4 particularly elsewhere in the country in similar
5 designs of reactors, we may find that there are
6 plant aging issues in other states that could come
7 back to reflect on the reactors operated by the
8 California utilities.

9 In other words, you might find a plant
10 aging issue that is identified at a plant in
11 Michigan or Georgia or someplace that then comes
12 back to San Onofre or Diablo Canyon and is imposed
13 as a change and might well require significant
14 changes here, even though the plant operators here
15 maintain good capacity factors.

16 There have been -- We tried to look at
17 and review the status of the safety culture. The
18 approach to maintenance of safety and maintenance
19 of the plants in general at the two plants. There
20 have been problems that have been reported in the
21 press and quite prominently, particularly at San
22 Onofre.

23 The NRC has increased their oversight
24 because of some issues with falsification of
25 certain records and whether the culture at San

1 Onofre has been maintained. I think this is an
2 area I would very much like to hear from Edison
3 about today. But it has been identified both by
4 NRC and the Institute for Nuclear Power Operations
5 as an issue for San Onofre.

6 Aging work forces. They are older
7 plants. These plants have been in operation for
8 20, 30 years. The average age of the work force
9 at the plants has gone up. This is something that
10 is well understood by the plant operators and is
11 an issue for nuclear plants nationwide.

12 It continues to be a focus in being sure
13 not only that you are bringing in new talent, new
14 operators, new engineers who can take the place of
15 the work force as they retire, but that you are
16 adequately transmitting the institutional memory.
17 The knowledge that has built up in those plants as
18 people have worked there for 20 or 30 years and
19 know all the systems very well. That you are
20 really transmitting that to the next generation of
21 workers.

22 On economic issues related to the
23 nuclear plants. We looked at the impact of a
24 disruption that could lead to one of the plants
25 being taken off-line for anywhere up to a year.

1 Essentially for a year. This would not
2 necessarily be a seismic event, it could well be a
3 regulatory event here or elsewhere in the country
4 that would reflect on the plants and they might be
5 ordered to be shut down. It could be a failure of
6 a non-nuclear component at the plant that would
7 require a shutdown for a protracted period of
8 time.

9 Because the plants are large and they
10 are important to the electric system, we took a
11 look, did production cost modeling of the impact
12 of taking one of those plants out of the electric
13 system and how the electric system would respond.

14 In doing that we did not do a detailed
15 analysis of reliability in the sense of the impact
16 on the transmission system. That was beyond the
17 scope, we felt, here. Although clearly there are
18 issues, particularly at San Onofre, related to the
19 location on the electricity grid and how an outage
20 there can impact the ability to move power around
21 Southern California.

22 One thing we do find is that looking
23 farther out, which we did on a very preliminary
24 basis and would recommend that further studies be
25 done, particularly as we approach potentially a

1 re-licensing or license extension proceeding for
2 the plants, is to look at how plant reliability
3 over a period after the 40 year lifetime would be
4 assessed in looking at the cost and benefit of a
5 license extension.

6 In particular we see this as an area
7 that is not likely to be part of NRC's purview or
8 what they would look at in a license extension
9 proceeding but seems to be very much part of the
10 state's review of the costs and benefits of license
11 extension going forward. And would anticipate
12 that it would be part of what the state would look
13 at.

14 Economic benefits provided directly by
15 the plants. We looked on a state and a local
16 level at what the benefits from the plants are.
17 Generally speaking, and this is at a fairly broad
18 level. Consistent with this Commission's energy
19 policy, if, for example, the plants were to be
20 replaced at the end of the current license period
21 with renewable resources rather than to be
22 extended for additional time.

23 The local and state economic benefits
24 would be roughly equivalent. The difference, of
25 course, would be on the local level. That you

1 would have to make an assumption about where such
2 resources would be built since many of the local
3 benefits, particularly for Diablo Canyon, are key
4 to the local economy in the San Luis Obispo area.
5 If you replace that plant with renewable resources
6 built elsewhere, clearly the economic benefits
7 would go to another locality to a very large
8 extent.

9 Nuclear waste accumulation continues to
10 be, has been and continues to be a real issue for
11 the plants. I don't think it is news to anyone
12 but we still do not have a federal long-term or
13 final repository for the spent fuel or the waste
14 from these plants and this is something that both
15 the operators have to deal with and are dealing
16 with. The spent fuel continues to accumulate at
17 the reactor sites just as it does at reactors
18 around the country.

19 Both operators have implemented longer-
20 term, interim, spent fuel storage facility
21 programs where they build facilities, dry cask is
22 what it is normally referred to. Where they can
23 take that spent fuel from the cooling pools at the
24 reactors and put it in dry storage. Which is more
25 compact, is more stable and easier to maintain,

1 cheaper, has a lot of benefits.

2 We did find and had noted that Diablo
3 Canyon's spent fuel storage facility is sized to
4 take the spent fuel anticipated to be generated at
5 Diablo Canyon throughout the remaining lifetime of
6 the plant through its current license period. So
7 in other words, if you go through the current
8 license period, which expires in the early 2020s,
9 all the spent fuel generated would ultimately be
10 able to be accommodated in the spent fuel storage
11 facility.

12 At San Onofre it appears that that's not
13 quite the case. That there is a slight shortfall
14 in capacity in being able to accommodate all of
15 the spent fuel that would be generated by San
16 Onofre in dry storage. There again is an issue
17 that we would welcome response from Southern
18 California Edison on that.

19 Finally, low-level waste, which is waste
20 other than the spent fuel. And the highly
21 radioactive materials tends to be things like
22 cleaning materials, the suits that get worn. Many
23 of it is, much of this is really quite low level
24 and not overly contaminated. However, it does
25 need proper disposal.

1 And at this point an issue that has been
2 identified over the past several years by this
3 Commission has come to be, there is no place to
4 send that low-level waste except for the very,
5 very cleanest category known as Class A waste.
6 The rest of this kind of waste currently needs to
7 be retained at the reactor sites.

8 This may or may not be a huge problem
9 for the reactor operators. It may well ultimately
10 be a problem when decommissioning comes and you
11 have a substantial amount of low-level waste that
12 has accumulated at the sites. Plus the act of
13 decommissioning generates substantial amounts of
14 low-level waste itself. And if we still don't
15 have a place to put it by then we will be
16 seriously wanting one.

17 Environmental issues associated, that
18 were identified and that we looked at. The long-
19 term, on-site dry cask storage option that I
20 mentioned. We looked at the experience, which is
21 not huge but there is experience now with that
22 kind of storage and conversion of plant sites.
23 And what we found was that at those sites where
24 plants have been decommissioned, taken out of
25 service and spent fuel storage remains in place in

1 dry cask facilities, that that doesn't have a huge
2 impact on the area.

3 We have one example of that locally,
4 which is Rancho Seco. There is dry cask storage
5 there. It's a relatively small part of the site
6 and the remainder of the site has been turned to
7 other uses. There are other examples around the
8 country where reuse has been made of sites and
9 they have been able to accommodate what ends up
10 being a relatively small area devoted to longer-
11 term, dry cask storage awaiting a final repository
12 for its spent fuel.

13 And also, you know, I would point out.
14 When we looked over the longer term, and this is
15 an area that I think needs further examination in
16 the context of this Commission's resource planning
17 and scenario work. But to look at how renewable
18 resources, if the decision were made to replace
19 the nuclear plant generation with renewable
20 resources.

21 If you made that decision you could see,
22 consistent with the planning scenarios that this
23 Commission has undertaken, ways that that could
24 happen. In particular to replace the energy
25 output of the nuclear plants. However, the

1 capacity associated with the plants, the ability
2 to provide baseload capacity, would likely, at
3 least on a very preliminary basis, look like you
4 would continue to need backup capacity. Probably
5 fossil fueled capacity, to supplement renewable
6 resources. If you were looking at a resource plan
7 to replace the nuclear output that we have today.

8 Again, that is a very preliminary kind
9 of finding and I think it is an issue that would
10 need to be addressed in scenario work and resource
11 planning work and future IEPRs at this Commission.

12 That's kind of the overview. As I said,
13 it's a draft. We look forward to hearing comments
14 from the reactor operators and the CAISO and any
15 other stakeholders who are here. We have received
16 some comments to date already which have proven to
17 be helpful. And we certainly look forward to
18 hearing from you and preparing the final report
19 and getting to the end of this process. Helping
20 the Commission reach the end of the IEPR update
21 process as well. Barbara.

22 COMMISSIONER BOYD: Thank you, Steve.
23 Commissioner Byron, do you have any questions you
24 want to ask of Barbara or Steve as of yet?

25 COMMISSIONER BYRON: This one just came

1 to me, Mr. McClary. It seems to some extent we
2 have looked at things that may be outside of the
3 scope of the original legislation. But be that as
4 it may, what about greenhouse gas? Did we look at
5 -- You know, everything we do at the Commission
6 now is through the lens of reducing greenhouse
7 gases. Did you look at those benefits in any way?

8 MR. McCLARY: Well we did. And this
9 again, particularly over the longer term when we
10 are looking at replacement of the nuclear plants,
11 becomes a real issue. And in fact that last point
12 that I made about supplementing renewable
13 resources with fossil fuel resources becomes key
14 then. The extent to which you have got to operate
15 fossil-fueled resources in conjunction with
16 renewable resources is critical.

17 While the nuclear plants are not
18 greenhouse gas free, almost no resource is,
19 including most of the renewable resources that
20 have been identified or are being developed, they
21 still do not emit greenhouse gases to the extent
22 that a fossil plant does. And so if you are
23 replacing largely with renewable, but have to
24 supplement those renewable with fossil-fueled
25 plants, you do look at the potential for having

1 some greater impact on greenhouse gas emissions
2 overall.

3 On the other side and the reason why
4 this is preliminary in our analysis, very
5 preliminary. What you introduce as that kind of
6 backup for renewable resources is a complicated
7 question. One that we would expect that the
8 Commission will have to deal with as it looks at
9 greenhouse gas emission policy going forward. Not
10 one that we were going to try and preemptively
11 answer in the course of this study.

12 However, it is clearly an issue. If you
13 are replacing the plants with renewable resources,
14 if you find that you need to supplement with
15 fossil-fueled resources to provide capacity to
16 replace the nuclear plants. Those fossil-fueled
17 plants do have the potential to contribute to the
18 greenhouse gas emissions.

19 On the other hand, if you are replacing
20 older, inefficient gas-fired units with fossil
21 units in that context you may end up with a net
22 greenhouse gas reduction. It may be a question of
23 not having as much of a reduction in greenhouse
24 gases as you would otherwise have if you kept the
25 plants in operation.

1 COMMISSIONER BYRON: Thank you.

2 COMMISSIONER BOYD: I did note in
3 reading the report that indeed it did touch upon
4 the very point that Steve just made. Which I
5 thought was a valid point. And as you say, the
6 lens through which we look at everything, or
7 everybody looks at us these days is global climate
8 and greenhouse gas emission reductions.

9 And we as an agency, as you know only
10 too well, have been dealing with this question for
11 quite some time and through multiple Integrated
12 Energy Policy Reports and well into the future.
13 The issues we deal with at the moment are the
14 intermittency of some renewables, solar, wind.
15 And then you can back them up with, at present the
16 only available capability, which is gas, natural
17 gas-fired facilities, while we strive to try to
18 expand what could be renewable baseload, both
19 geothermal and the use of biomass in California.

20 But as many people in the audience, and
21 certainly knows this Commission knows, there are
22 lots of hurdles associated with that. So it's
23 going to be a long process and many iterations of
24 Integrated Energy Policy Reports. Probably,
25 unfortunately, beyond my term in office that we

1 will continue to address the hurdles that face us
2 there. Everything from the major issue we are
3 dealing with now of inadequate transmission system
4 capability to move that around. And I may be
5 getting on the ISO's turf right now. To all the
6 other problems associated with siting facilities
7 in California. You know, NIMBY, NUMBY, not in my
8 backyard or under my backyard, et cetera, et
9 cetera.

10 Plus the questions when you come to
11 biomass, the questions of fuel supply and all the
12 concerns multiple stakeholders have about the
13 benefits or dis-benefits of some of those fuel
14 supplies. This is all connected and it is all
15 part of a very complex system that you and we have
16 to deal with in the future. As do the utilities
17 sitting out there and the merchant generators and
18 the publicly-owned utilities and what have you.
19 So welcome to our world. Thanks Steve.

20 Any other? All right, thank you Steve
21 and Barbara. I guess, as it says, it is time for
22 public comment, but I am going to extend the
23 courtesy to our partners at the CAISO. Bob Emmert
24 is here and I believe prepared to testify.

25 They are our friends. They aren't a

1 state agency. I choose to call the ISO a crown
2 corporation. An entity created by the Legislature
3 but not a state agency. But they are our partners
4 in all that we do.

5 MR. EMMERT: Well good morning,
6 Commissioners. I thank you for this opportunity
7 to make comments at this workshop. I am primarily
8 going to be talking about how this draft report
9 portrayed the California ISO Report, which is
10 called the CAISO 2008 Summer Loads and Resources
11 Operations Preparedness Assessment, which I'll
12 from here on forward call the 2008 Summer
13 Assessment.

14 The report, we feel that the draft
15 report really misunderstood what the 2008 Summer
16 Assessment was really portraying. And I will be
17 going through a number of comments that were made
18 in the reliability planning section of this
19 report, which started on page 201. On page 202
20 there's a comment that:

21 "The CAISO publication
22 entitled 2008 Summer Loads and
23 Resources Operations Preparedness
24 Assessment provides a detailed
25 discussion of electricity

1 transmission issues and replacement
2 power supply plans."

3 In reality, the Summer Assessment did
4 not really address these issues in any detail,
5 either on the transmission side or the replacement
6 power side.

7 Also on page 202 there's a statement
8 where:

9 "Table 6 shows that under
10 normal conditions and given current
11 loads and resources, there is a
12 23.9 percent planning reserve
13 margin, which is well above the
14 CPUC's required resource adequacy
15 margin of 15 percent to 17
16 percent."

17 The chart here, the table here is the Table 6.
18 And Table 6 is really based on a planning
19 perspective and based on various planning
20 assumptions, not on normal conditions. And that
21 may seem like a minor point but the Summer
22 Assessment goes into a probabilistic analysis and
23 some of the figures in this table are not normal.

24 In one particular case if you look at
25 net interchange, the numbers portrayed here,

1 particularly for the ISO system and for SP 26, are
2 really at the very high end of the probabilistic
3 range of import numbers that were studied. Really
4 close to the 100th percentile, which is nowhere
5 near a normal condition.

6 Also the 19.9 and 23.9 percent planning
7 reserve margins represented were projections of
8 what is now a historical time frame and is, in our
9 view, not appropriate to use these planning
10 reserve margins to make conclusions about
11 potential future events.

12 The Summer Assessment did take a quick
13 look at what we expected to have come on line by
14 2009 and there was significant generation that was
15 scheduled to come on-line prior to 2009's summer.
16 And currently roughly about over 800 megawatts of
17 -- somewhere over 2,000 megawatts that was planned
18 to come on-line before this coming summer is not
19 going to make it, those dates have been moved
20 back. I know, I believe the report also
21 referenced that but that assumption or that
22 discussion is no longer valid as a number of those
23 plants are being moved back further.

24 A statement on page 202 says that:

25 "If actual imports at the time

1 of plant outages were lower than
2 the assumed amount, the loss of
3 generating capacity or capability
4 at Diablo Canyon and SONGS would
5 have a proportionately greater
6 impact on operating reserve
7 margins."

8 And as I sated in the previous table, the numbers
9 that were assumed in that statement were really at
10 the high end. And actual imports are frequently
11 lower than the assumed amount in that table, in
12 that planning reserve calculation. And
13 particularly at time of peak those numbers can be
14 quite a bit lower than the numbers assumed from
15 that table.

16 Another statement:

17 "-- the CAISO did not address
18 contingencies that occur in real-
19 time, such as a loss of a
20 significant amount of generation
21 and/or transmission and limited
22 ability to rely on imports from
23 other control areas."

24 In reality those areas were the real
25 crux of what the Summer Assessment is all about.

1 What we do for the Summer Preparedness Assessment
2 is try to look all the contingencies that we may
3 see in the upcoming summer in order to help our
4 operators to be prepared in case those
5 contingencies actually come to fruition in
6 operating in real-time. So those things were
7 looked at in detail as well as we are taking a
8 look at the range of both demand import levels.

9 I wanted to just real briefly go over
10 these. I didn't want to get into these charts at
11 all other than just to show the fact that we did
12 go over those things. In the Summer Assessment we
13 looked at in two ways. One was a deterministic
14 approach looking at various scenarios, and then a
15 probabilistic approach. And we did 12 different
16 scenarios for the ISO system and for the two zones
17 NP 26 and SP 26.

18 And this is a chart of the 12 different
19 scenarios for the system level, which shows that a
20 number of scenarios were shown for one and two
21 outages, which include both generation and
22 transmission outages all the way up to 1-in-10
23 outages. Along with a range of imports, as you
24 can see at the bottom of the chart.

25 And we also did that for NP 26 and SP

1 26. And as you can see in this particular chart,
2 that over half of the scenarios show that under
3 those contingencies, firm load would have to be
4 shed in SP 26. So it is a significant issue.

5 And this is a chart showing the
6 probabilistic analysis that was done. And it
7 shows what the probabilities of getting to various
8 operating reserve margin levels are. And on the
9 far right-hand side you see the three percent
10 operating reserve levels, which is after all
11 demand response interruptible load programs have
12 been utilized and shows that in SP 26 last summer
13 we were expecting about a ten percent probability
14 of having to shed firm load.

15 This is based on roughly a three percent
16 forced outage rate for the nuclear units. If you
17 had a prolonged outage of any of the nuclear units
18 these numbers would go up dramatically, the
19 probability of actually having to shed form load
20 in SP 26 and in NP 26.

21 So the real conclusion that I would draw
22 from the Summer Assessment is that if either
23 Diablo Canyon or SONGS were unexpectedly shut down
24 for an extended period of time during the summer
25 the probabilities of shedding firm load would

1 greatly increase, both in the near-term, and in
2 any realistic generation expansion scenario for
3 the future.

4 I do have handouts out there. This is
5 the link to the Summer Assessment area within the
6 California ISO web page if anybody wants to look
7 at the full report.

8 And with that that's all my comments and
9 I'll answer any questions you may have.

10 COMMISSIONER BOYD: Thank you. On your
11 last point. Since we just had a mini-event at one
12 of the two plants in question with the explosion
13 and fire of a major piece of equipment that did
14 unexpectedly take the system out of line. What
15 kind of ripples did you feel in the system and
16 were you overly concerned?

17 MR. EMMERT: Well real-time we were
18 having to deal with the situation. I am not an
19 operating engineer so I was not intimately
20 involved in that contingency when that happened.
21 So I can't really answer your question directly
22 but I could get back to you if you would like me
23 to do some further research on that.

24 COMMISSIONER BOYD: I would be
25 interested.

1 MR. EMMERT: Okay, I'll do that.

2 COMMISSIONER BOYD: I know we go to
3 great pains to assure the public that all is well
4 but so did Wall Street. Anyway, I'd be interested
5 in the data, thank you.

6 COMMISSIONER BYRON: Mr. Emmert, thank
7 you for your comments. Not having had the
8 opportunity to see them beforehand I want to make
9 sure I understand. And we will see them in
10 writing, correct?

11 MR. EMMERT: Yes.

12 COMMISSIONER BYRON: Good. Going back
13 to that comment that you pulled from the report.
14 I'm quoting from the report:

15 "The CAISO did not address
16 contingencies that occur in real-
17 time such as loss of a significant
18 amount of generation and/or
19 transmission and limited ability to
20 rely on imports from other control
21 areas."

22 But you said that your probabilistic
23 analysis does consider that, correct?

24 MR. EMMERT: That's correct. We
25 actually look at historical outages for generation

1 and for transmission and we also look at
2 historical levels of imports that we have seen in
3 previous summers under various conditions. But
4 typically under the peak load conditions. And
5 those we put into a probabilistic assessment that
6 we do.

7 So we look at an entire range from very
8 low levels of outages for both transmission and
9 generation to very high levels, which include
10 outages from these generating units. But the
11 outages for those units are fairly low so it
12 doesn't impact the scenarios very greatly except
13 for the very high end.

14 COMMISSIONER BYRON: Okay. I'm trying
15 to think if this was the other comment as well,
16 the one above, or is there a previous quotation
17 that we can go back to?

18 MR. EMMERT: There's a couple of them.
19 There's this one here.

20 COMMISSIONER BYRON: No.

21 MR. EMMERT: And then there's this one
22 here that talked about --

23 COMMISSIONER BYRON: No, please go
24 forward two. Where you state, actual imports are
25 frequently lower than the assumed amount in the

1 planning reserve calculation. Both of these seem
2 a little bit counter-intuitive to me and that's
3 why I am asking about them. One is that you can
4 typically plan for when you need the additional
5 imports. And the ISO does an excellent job of
6 doing that and that's the part I don't understand.
7 When you know you have high load demand imports,
8 you find them.

9 MR. EMMERT: If you look at this chart
10 here, this shows what I would portray as what the
11 transmission system coupled with surplus
12 generation in other control areas can typically
13 provide at time of peak. So this is a peak load
14 analysis. So this is really the upper end of what
15 we have been able to receive during peak load
16 periods. During off-peak periods it is obviously
17 much easier to bring in additional imports.

18 And if we know that an event has
19 occurred we can typically bring in additional
20 imports. But as time goes on as we move into the
21 future, and without having a good handle on truly
22 what is going to be the surplus condition of
23 balancing authorities surrounding the California
24 ISO that we can actually bring in that surplus
25 generation into the ISO, it is hard to continue

1 with the statement that this is actually what we
2 can actually bring in year after year, especially
3 on a prolonged outage.

4 Because as other control areas get into
5 their peak conditions as well some of those
6 surpluses can dry up. And so this is a look at
7 2008 and not a look into future years. There are
8 other reports that are out there that take a look
9 at those type of things. I'm involved in a WECC
10 committee that takes a look at a ten year power
11 supply assessment. Where we look over a ten year
12 period. And really that would probably be a
13 better report to refer to for this type of
14 analysis to understand what is going on more long-
15 term, rather than take a look at just the summer
16 of 2008, which now is just a historical time
17 frame.

18 COMMISSIONER BYRON: Right. Your
19 comments are rather limited. Are these the most
20 important ones or will this be the extent of your
21 comments?

22 MR. EMMERT: Well to be frank with you,
23 with the short time frame I had when I received
24 this report, this was the only area that I was
25 able to really review in detail. We may provide

1 more comments on the rest of the report but I
2 wanted to at least address this portion today.

3 COMMISSIONER BYRON: Good. That's a
4 good answer. And I hope you do provide more
5 comments, thank you very much.

6 MR. EMMERT: You're welcome.

7 COMMISSIONER BOYD: Thank you. Now I
8 think we will ask the two major operating
9 utilities to make their presentations. Because it
10 is written on my agenda that way I will call on
11 PG&E first.

12 MR. MULLEN: I believe this is on. Good
13 morning Commissioner Boyd, Commissioner Byron,
14 staff and members of the public. My name is Pat
15 Mullen with Pacific Gas and Electric Company. I
16 am the company's director of government relations
17 for generation. While I cover all of our service
18 territory I am headquartered and reside in San
19 Luis Obispo, California.

20 Before we get started I wanted to also
21 thank the Commission for your approval yesterday
22 of our Humboldt Repowering Project. I wasn't able
23 to be here but I was listening on-line. And I
24 also worked on that project. It was interesting
25 that some of the comments we heard about the

1 challenges on permitting, siting and bringing on-
2 line new resources.

3 That was one where we put a lot of hard
4 work and effort and it took actually just about 24
5 months from the month that we filed for that
6 application, in '06, until this month yesterday
7 when you approved that. So I just wanted to say
8 thank you for that. That was one that we really
9 looked forward and worked hard on and am anxious
10 to see moving forward.

11 COMMISSIONER BOYD: Thank you.
12 Commissioner Byron did the heavy lifting there.

13 MR. MULLEN: Well we appreciate it. And
14 the folks on the North Coast do as well, as you
15 know.

16 I know you probably have a lot of people
17 that come to your workshops and come to testify
18 before you that may have some anxiety. And I
19 would like to say that personally as PG&E's
20 project team lead on the AB 1632 effort I have
21 personally been looking forward to this workshop
22 today for some time and am pleased to be here and
23 anxious to share our comments with you and some of
24 our perspectives on the report. We think it is
25 incredibly important, obviously, not only for our

1 company but more importantly for our customers in
2 the state of California.

3 With me today, and really over the past
4 18 months, has been a team that we have assembled
5 that's helped us work on this, respond to data
6 requests, work with your staff, and I would like
7 to introduce those members that are here today.
8 Because in addition to the comments that we will
9 share with you orally today we will also be
10 providing written comments. But we wanted to make
11 sure, given this is a workshop format, that we had
12 the experts available in case you had any more
13 detailed questions that I may not be able to
14 answer. That we have folks available to discuss
15 different aspects and discuss it in some dealing
16 with some expertise.

17 To my right, many of you know Scott
18 Galati, one of the principals with the law firm of
19 Galati and Blek here in Sacramento. Scott has
20 been a key member of our team and will be sharing
21 some oral comments today along with me.

22 In addition to Scott I would like to
23 introduce Mark Krausse who is behind me. They can
24 wave or stand up if they would like. Mark is our
25 director of state agency relations and also has

1 developed some expertise in the area of once-
2 through cooling. So if you have additional
3 questions on that we can have Mark respond.

4 We also have PG&E's geosciences
5 department here today, represented by Doctors
6 Lloyd Cluff and Norm Abrahamson. Many of you are
7 familiar with Mr. Cluff and Mr. Abrahamson. They
8 have done quite a bit of work with the state
9 Seismic Safety Commission. And for PG&E,
10 obviously, have largely been responsible for a lot
11 of the geosciences and geotechnical information
12 that we have provided to the staff and was
13 referred to earlier.

14 We also have from our technical side at
15 the plant Mr. Dave Miklush. Mr. Miklush is a
16 former director of strategic projects at Diablo
17 Canyon and also head of our design engineering.
18 He is now on contract to us assisting the plant
19 and our license renewal feasibility team. He has
20 expertise in the area of plant aging, operations
21 and maintenance and can respond in-depth to
22 questions that you may have in those areas.

23 And then I would like to mention
24 Jennifer Post with PG&E's legal department. She
25 is our lead attorney for NRC issues, licensing

1 issues and our nuclear generation team and is
2 available to respond to questions in that area.

3 And finally, Patricia Wilmore who is our
4 government relations manager in San Luis Obispo
5 and the area down there. Works a lot with other
6 agencies in our emergency planning. In fact you
7 may be aware, we just had an emergency planning
8 drill yesterday and she was participating in that.
9 So I am pleased to have all of those members of
10 our team --

11 COMMISSIONER BOYD: Yes, I had to
12 apologize to the audience for my phone constantly
13 ringing or going off until I put it on silent.
14 But yes, it worked.

15 MR. MULLEN: So I just introduced those
16 members today because I just wanted you to be
17 aware, we obviously do take this seriously. We
18 have been working very hard for the past 18 months
19 to participate with your staff and overall we
20 think they have done a very credible job in really
21 addressing a lot of the issues that were raised
22 and going over a lot of the information.

23 We appreciate that much of the
24 information we provided in the data responses they
25 reviewed carefully and have incorporated a fair

1 amount of that in the draft report. We provided
2 approximately nine CDs worth of data and
3 information. Literally hundreds of documents,
4 studies and reports. And we appreciate their good
5 work in reviewing all of those.

6 I am going to make a few general
7 comments and then turn it over to Scott Galati who
8 will go through and share some specific items in
9 each of the chapters. And then at the end I am
10 going to ask Lloyd Cluff to respond to a couple of
11 questions that the staff provided to us and asked
12 us to share today our responses on. And that is
13 really related to some ongoing, current updates on
14 our seismic and tsunami reports. And he'll
15 provide that at the end of our comments.

16 In general, as I mentioned, we think the
17 staff has really worked hard, and their
18 consultants, and really done a fairly thorough job
19 in assessing all of the data and the information
20 that is out there and have come to some good
21 points in there and raised some very good issues.

22 We do have some comments and concerns on
23 some areas that may be a result of the fact that
24 we didn't get to meet directly and individually
25 with the consultants or members of the staff.

1 Barbara Byron mentioned that earlier. And I think
2 a number of the areas in the draft report where
3 additional studies are needed, additional
4 information is necessary and questions and
5 recommendations like that, may be answered by some
6 of the comments we'll make today and certainly
7 some of the written information that we will be
8 providing. Because we think some of those, a
9 number of those issues have already been addressed
10 or are being addressed.

11 Real quick. We think at one point --
12 One key item that we appreciate the consultants
13 and staff recognized. And that is that the
14 overall benefits of nuclear power in California,
15 and in particular Diablo Canyon, do provide --
16 although the report tends to get into so much
17 detail on some of these issues that it seems to in
18 some ways lose sight of what we think are some of
19 the real over-arching benefits that we have
20 already heard touched on today.

21 But that is, for PG&E and our customers,
22 Diablo Canyon represents one of the if not the
23 largest source of baseload greenhouse gas-free
24 electricity generation in the entire state of
25 California. And as you mentioned earlier,

1 Commissioner Boyd and Commissioner Byron, that's
2 an incredibly important asset, especially given AB
3 32 and climate change and frankly the carbon
4 constrained world that we are operating in and
5 moving into even more rapidly maybe than we
6 appreciate.

7 The second item on that is that Diablo
8 Canyon is one of our least-cost, and at times our
9 lowest cost sources of power for our customers,
10 those consumers in PG&E's service territory. At
11 different times it competes directly as one of the
12 lowest costs with our hydro. And in low water
13 years Diablo Canyon is often lower than our hydro
14 in cost to customers.

15 And then finally on reliability, which
16 was a big part of this study. Diablo Canyon is
17 one of the most reliable sources of power we have
18 in baseload. And in the report we will provide
19 more detailed comments but it does make a
20 reference to our capacity factors, that they are
21 in the 90s, 90 percent capacity factors. And
22 tends to somewhat infer that it may be
23 coincidental to the fact that the plant is only a
24 little over halfway through its current operating
25 license.

1 It doesn't really, in our opinion,
2 frankly give enough credence and recognize that
3 those capacity factors are not achieved by chance
4 at all. And in fact they are achieved by a very
5 focused, committed, ongoing and consistent effort
6 to upgrade systems continually. Structure,
7 systems, components, piping, steam generators that
8 you have heard about. To list just a few and
9 ongoing. We also invest heavily in our people.
10 In the personnel that operate that plant and in
11 their programs and human performance.

12 And all of the things that go into that
13 type of operational excellence. So we don't think
14 the report does an adequate job, in our view, of
15 capturing what really goes on to that and the
16 committed effort on the part of our people and
17 investment in the systems that allow us to
18 continue to operate not only safely but obviously
19 at those high capacity factors and reliability.

20 Lastly I wanted to touch on the safety.
21 We appreciate that they recognize the safety
22 culture at Diablo Canyon in the report. But
23 frankly again, the way it was phrased where it
24 says DCCP, or Diablo Canyon Power Plant, appears
25 to have a relatively adequate safety culture and

1 benefits from the Diablo Canyon Independent Safety
2 Committee.

3 We don't disagree with that but we feel
4 it understates, frankly, the commitment of the
5 people at Diablo Canyon that operate the facility
6 and the company. Because we feel that appears to
7 have a relatively adequate safety culture doesn't
8 really capture the focus that we put on safety and
9 on operating that plant safely and efficiently.

10 And while the focus of the hearing is
11 not to discuss the Independent Safety Committee
12 and the work they do, we believe that separate and
13 independent of the Independent Safety Committee we
14 have a very high safety culture at Diablo Canyon.
15 And again, that is because of management focus and
16 the employees that operate that facility and how
17 they conduct the work in their day to day
18 interactions at the plant.

19 With that I really would rather conclude
20 my comments and not take too much time and turn it
21 over to Scott Galati to go through some of the
22 chapters with some specific examples. Thank you.

23 MR. GALATI: Thank you, Commissioners.
24 And uncharacteristically, I'll be brief.

25 Chapters 2, 3 and 4 deal with seismic

1 vulnerabilities. And we basically, I am just
2 going to give you sort of an overview so that the
3 consultants are not surprised when they get our
4 written comments that there is a general theme
5 behind them. And so we will be providing very
6 detailed, written comments on each of those that
7 have been prepared by our geosciences department.
8 And should there need to be some additional
9 discussion we certainly have them here. I
10 certainly cannot capture all of those technical --
11 the technical information and I don't want to bore
12 you with it.

13 But basically our first comment would be
14 is the report seems to focus on this absolute,
15 worst possible event without taking into account
16 the probability of its occurring, how the plant
17 has been designed. And, for example, gives, in
18 our opinion, doesn't fully capture how the plant
19 was designed. There was a lot of information
20 available. And while there is new information
21 available now it really does not, in our
22 perspective, warrant designing the plant for
23 something significantly higher.

24 For example, the design basis earthquake
25 and the credible earthquakes are not really even

1 analyzed as to what would happen during those.
2 Because we think the plant has been designed well
3 and that during those events the plant will
4 perform very well.

5 For example, the report does recognize,
6 for example, that the Japan safety systems
7 operated as they should. But for some reason the
8 report concludes that Diablo Canyon is going to be
9 shut down for four years because they use a very,
10 very extreme case. So we are going to provide
11 some more technical comments on how we think that
12 should be evaluated but that is some of the
13 general theme of our comments on 2, 3 and 4.

14 On Chapter 5, which is the Plant Aging
15 Vulnerability Assessment. We think the report did
16 a very job in identifying that PG&E has
17 specifically developed criteria and programs that
18 identify, manage and address systems and
19 components that are susceptible to aging
20 vulnerabilities.

21 The report does recognize that we have a
22 good safety culture. And the report does
23 recognize that Diablo Canyon, like other workers
24 at nuclear powerplants are aging. And the report
25 does mention that PG&E is actively engaged in

1 addressing the work force issue with our
2 collaboration with community colleges, community-
3 based organizations. We have work force
4 investment boards and labor unions.

5 But we think that the report could do a
6 better job of describing what effect we have had
7 by actually putting those things in place. For
8 example, it could lay out a little bit more about
9 what PG&E has done to address aging components.
10 And mention the replacements and how that has been
11 addressed. We think that outlining the success
12 that we have had on addressing our aging work
13 force I think shows Diablo Canyon is addressing
14 this issue and that it isn't something that is
15 just happening without a response.

16 One of the things we submitted in our
17 response to a data request that we think was very
18 persuasive and we didn't incorporated in the
19 report but -- I don't know how many of you would
20 like to live in San Luis Obispo County but that is
21 a beautiful place to live and work. And one of
22 the things that Diablo Canyon has an advantage, we
23 believe, of attracting workers from across the
24 nation is that we do have a good location. So
25 even from that perspective, being able to track

1 the newest and brightest engineers, we believe we
2 have an advantage. We have high salaries and we
3 have a great place to live and work.

4 Lastly, when it comes to vulnerability.
5 I just wanted to assure. I'm sure the
6 Commissioners are aware and I just wanted to make
7 sure that the report recognizes. As you know,
8 PG&E is conducting a feasibility study to
9 determine whether or not it is going to pursue
10 relicensing of Diablo Canyon. And as part of that
11 study there is certainly a robust look and
12 assessment of components that would need to be
13 replaced to further reduce any vulnerability due
14 to aging.

15 So I think our overall comment here is,
16 aging isn't a static concept. There is a response
17 to aging and we want the report to acknowledge and
18 at least identify that the responses are being
19 successful.

20 I am going to move to Chapter 6, which
21 are Impacts of a Major Disruption at Diablo
22 Canyon. First of all we agree with much of what
23 Mr. Emmert said of CAISO. We think that the
24 report does underestimate the ability of
25 replacement power to be available. And a couple

1 of points we wanted to make and we'll make these
2 in more detail.

3 You know, higher load projections and
4 plan projects from our 2004 long-term RFO that
5 have been cancelled or are at risk, it is
6 anticipated to reduce our planning reserve margin
7 in 2012 close to 15 percent. That is our
8 assessment. We know two of the 2004 long-term RFO
9 failed to get permits. We know that two of them
10 experienced some delays in permitting and have a
11 different on-line date. Those are things that are
12 sort of ongoing from the perspective of how you
13 manage your planning reserve margin.

14 An important fact to know is, if Diablo
15 is not available, just giving an example on the
16 2012 planning reserve margin. It would fall, our
17 planning reserve margin would fall to about five
18 percent. That's not enough to cover typical
19 resource forced outages and load deviations above
20 the expected peak demand forecast. Having only
21 five percent planning reserves available will
22 practically, practically guarantee service to
23 customers will be interrupted.

24 One of the things that I know this
25 Commission has struggled with in other settings is

1 I think that the report has failed to recognize
2 the uncertainty and maybe the length of time it
3 takes to bring a project on-line, both through
4 permitting, regulatory and market uncertainties.
5 These take the form of the PUC approvals.

6 I'll give you an example that we are not
7 having to address but certainly Southern
8 California Edison is, the lack of credits in the
9 South Coast. The idea that it new generation is
10 just going to come in and step forward and take
11 the place of these I think is -- maybe understates
12 the difficulty of new generation coming on-line.

13 In addition to that, the tightening
14 credit markets makes it difficult for those to
15 build these plants.

16 There is a statement in the report about
17 the aging gas-fired power plants could replace
18 power reliably. And we don't believe that that
19 was really assessed, the reliability of some of
20 these older power plants.

21 And lastly we will make a more specific
22 comment on there was, we believe, an over-counting
23 of the wind available because the nameplate
24 generating capacity was used instead of taking
25 into account its intermittent nature.

1 Chapter 7, I don't have any general
2 comments. We have a few comments in our written
3 submittal.

4 On Chapter 8, Land Use and Economic
5 Implications of the On-site Waste Storage. I
6 think the report made a leap as to what would be
7 the reuse of the Diablo Canyon site should it be
8 shut down. From our perspective there doesn't
9 seem to be any justification to state that the
10 recreation or the open space or the renewable uses
11 would in any way generate the level of hundreds of
12 millions of dollars annually provided by Diablo
13 Canyon.

14 One of the comments in the report talks
15 about tax revenues and mentions renewable
16 development. And as you may know, solar
17 development does not generate the same type of tax
18 revenue. And we'll be, we'll be providing you
19 with that detail in our comments. So the idea
20 that these additional facilities could somehow
21 make up or even generate the kinds of revenues
22 locally we think is overstated.

23 I just wanted to make sure the report
24 does recognize the breadth of the economic
25 positive impact that Diablo Canyon has. We have

1 \$600 million in annual economic benefit to the
2 county. There's \$24 million in property tax. The
3 head of household salaries are 60 percent higher
4 than the county average, with a payroll of \$100
5 million. And we have somewhere around 1400 jobs.

6 To give you an idea. If you were to
7 build enough baseload combined-cycle power plants
8 to generate the 2200 and change megawatts out of
9 Diablo Canyon, typical power plant, 550 megawatt
10 that you might be familiar with, typically has
11 somewhere between 30 and 35 employees. So we
12 would be talking about four to five of those as
13 far as economic impacts.

14 My understanding is with solar thermal
15 is it is slightly higher but not very much higher.
16 And with PV it is lower. So we do have a huge
17 economic impact and we would like to make sure
18 that the report recognizes that more fully.

19 Chapter 9, Power Generation Options.
20 There's a couple of things that we want to make
21 sure the report does. One is, the report should
22 compare the cost of the renewable resources with
23 alternative, conventional resource costs to
24 determine which renewable resources are cost-
25 effective. I'll give you a couple of examples.

1 The cost-effective metric that the
2 report currently use is sort of megawatts, dollar
3 per megawatts. And what is really important to us
4 is dollars per megawatt hour, is deliverability.
5 So the cost-effective metric should reflect only
6 the renewable resource cost. Not only the
7 renewable resource cost but there are some other
8 costs there that haven't been reflected and that
9 is the additional transmission cost to get those
10 renewable resources.

11 Integration costs needed to meet the
12 incremental operating requirements associated with
13 an intermittent resource and any conventional
14 generation that is needed to firm up intermittent
15 renewables. We think that those costs need to be
16 at least if not an amount put to them at least
17 recognized that those are costs that are hidden
18 and we don't believe are accounted for in the
19 report.

20 We do appreciate the report accurately
21 recognizing replacement power for Diablo Canyon
22 would come at a higher cost to consumers. But as
23 we just outlined, we think because of those
24 factors it underestimates at how much higher cost.

25 You mentioned greenhouse gas emissions

1 and AB 32 and Mr. Mullen mentioned that as well.
2 I just wanted to give you a couple of things.
3 Closing Diablo Canyon and SONGS would effectively
4 increase the target necessary to reduce carbon by
5 40 to 50 percent from the electricity sector
6 alone.

7 This equates to -- Right now Diablo
8 Canyon and SONGS equates to 169 million tons of
9 CO2-equivalent emissions that would need to be
10 generated somewhere else. We do not -- I stated
11 that wrong. What I mean to say is, those are the
12 avoided greenhouse gas emissions from the
13 operation of these facilities.

14 I think that concludes our general
15 comments. If you have any more specific questions
16 about any of those points we will certainly here
17 at the panel or with our resource behind us try to
18 answer them.

19 COMMISSIONER BOYD: I do have two
20 questions. One, there was a brief reference to
21 the Diablo Canyon Independent Safety Commission.
22 And I am just wondering if you might want to
23 elaborate on the value of that commission to you
24 and to Diablo Canyon, if you see value.

25 And I ask that question because it has

1 been noted by me for some time now, as we have
2 dealt with difficulties at SONGS with regard to
3 safety culture. They lack any such independent
4 commission. You have such a commission. You are
5 quite proud of your culture and safety record.
6 You did say the consultant only said appears but I
7 don't know how else he could say anymore unless he
8 virtually lived inside the facility. So maybe we
9 can say something different, those of us more
10 familiar. But in any event, I wonder if you would
11 comment on that.

12 MR. MULLEN: I don't have a lot of
13 comments to share regarding the Independent Safety
14 Committee other than obviously we do work well
15 with them. But we think that our safety culture
16 and our safety record is really a result of how we
17 operate the plant and the safety focus that PG&E
18 and our employees have, aside from and separate
19 from the Independent Safety Committee.

20 Obviously we participate in the
21 meetings, provide information studies and report.
22 Review the reports that they provide. I think at
23 times the cost of some of the follow-up work or
24 management focus we've considered and looked at.
25 You know, was that adding to our safety culture.

1 And I think the response that we have had and the
2 results that we found is that our safety culture
3 and our safety and operational performance are
4 really a result of the programs that we have.

5 I don't know if that adds much. We feel
6 that it is separate and independent. If you like
7 I can provide more follow-up in our written
8 comments.

9 COMMISSIONER BOYD: I guess as an
10 advocate of trust but verify I find that the
11 Independent Safety Committee seems to represent an
12 interesting fact of your, and thus our, life.
13 Since we are responsible to the people it perhaps
14 make the people feel a little more comfortable
15 having that there. Enough said, thank you.

16 The other question is on --

17 MR. MULLEN: I wouldn't argue that point
18 with you.

19 COMMISSIONER BOYD: Another question is
20 on cost. And this isn't criticism. But as one
21 who could wear the T-shirt of I too survived the
22 electricity crisis in California, and not having
23 any of my fingerprints on the creation of
24 restructuring in California, thank goodness, I do
25 though --

1 COMMISSIONER BYRON: They're on now.

2 COMMISSIONER BOYD: Yeah, well we are
3 still redesigning the hybrid, aren't we. At least
4 we think we are.

5 There's no question that the current
6 cost of electricity generated at the nuclear
7 facilities in California is fairly inexpensive.
8 But I am constantly reminded that the people of
9 California helped pay off significant capital
10 costs. I believe they were calling them stranded
11 costs during the great debate over restructuring.
12 Which helped put these plants in that, in that
13 operating position.

14 So it is no criticism of those plants
15 and I am not going to any more criticize the
16 failed experiment in California. But it does shed
17 a different light on the subject of nuclear power
18 in general. And I only say that as it relates to,
19 we are dealing with two existing facilities in
20 this report. We are not dealing with the idea of
21 building more in the future.

22 But people hear the extremely low cost
23 of California's nuclear power plants and the
24 general unwashed public probably relates that to
25 the whole general subject of generating

1 electricity in a nuclear plant, without enough
2 thought to the incredible capital costs and the
3 economics and what have you.

4 I am not sure this is a question that
5 necessitates a response unless you want to make
6 one other than an observation I am making based on
7 the comment that you made. Feel free to comment
8 if you'd like.

9 MR. MULLEN: I can't resist,
10 Commissioner, so I will. But I appreciate that
11 comment in perspective. I am obviously no
12 economist so I can't speak to the history of how
13 the capital costs, obviously, and those stranded
14 costs roll into the current costs I am aware of.
15 But my understanding is our fully loaded costs for
16 power out of Diablo Canyon are consistently less
17 than half of the market referent price or right
18 around there.

19 I think right now we are generating at a
20 little less than four cents a kilowatt hour fully
21 loaded. I think the market referent price --
22 well, I don't know that currently but I believe it
23 is over eight cents. Maybe someone else may be
24 able to clarify that. So I think even with that
25 my understanding is when you consider the fully

1 loaded costs and the capital, that it still has
2 turned out to be a very economic source of power
3 for our consumers and our customers.

4 And I guess that gets to the comment
5 where regardless of that in the history, looking
6 currently at those facilities and specifically
7 Diablo Canyon, and in the future. I noticed one
8 of the last slides referenced that for
9 considerations on license renewal, cost and
10 reliability will be key factors. And I think that
11 is absolutely true.

12 Even if PG&E were to decide to pursue
13 license renewal, which we are currently studying.
14 But if we were to pursue that it doesn't
15 guarantee, it gives the option. And that would
16 really be probably dictated when you look at the
17 cost that those facilities would continue to be
18 able to operate.

19 Assuming our forecasts and where they
20 operate, we think they will continue to operate
21 well below that market referent price, even with
22 the capital investments that we are currently
23 making. And those capital investments, and the
24 programs that we have down there, we think will
25 also continue to keep the reliability and the

1 capacity factors at very high levels.

2 So to me the question when we read the
3 report, and it kind of gets back to the first
4 question and I'll close with this. Is it seems to
5 try to find how you might be able to operate the
6 system in the state without the nuclear power
7 plants operating, or keep the lights on. And
8 while it looks at that in a number of different
9 ways it really doesn't ask the question of why.
10 Why you would want to operate without these
11 sources of greenhouse gas-free electricity that is
12 very economical to produce. And historically it
13 has shown it is very safe and with very high
14 operational efficiencies.

15 COMMISSIONER BOYD: Thank you.

16 Commissioner Byron.

17 COMMISSIONER BYRON: Thank you.

18 Mr. Mullen, I just want to respond to your
19 question immediately, if possible, in that it
20 doesn't ask why we would want to look at -- sorry.
21 Your question is why is it that we would want to
22 look at operating the state's electric grid
23 without these units.

24 And I think it is pretty clear the
25 example, the best example is the Kashiwazaki-

1 Kariwa plants. You know, they survived their safe
2 shutdown earthquake. And it has been a year and
3 they are still not operating, as they go through
4 their inspections and, you know, equipment
5 replacements, upgrades, et cetera.

6 And in fact that's the gist of my
7 question, maybe for Mr. Galati. Because I was
8 just surprised to hear him talk about the low
9 reserve margin of less than five percent after
10 2012. In my mind that's exactly why we are
11 concerned about these units.

12 It is not an effort to shut them down,
13 it is an effort to say, what happens if there is
14 the unexpected event such as the seismic? Or the
15 event that happens in Illinois that affects us
16 here. As you know, any kind of licensing event
17 elsewhere could have its impact here.

18 And I think that is the intent, having
19 met with the author. The primary intent is, what
20 do we do. So in a sense Mr. Galati's comments
21 make the case for why this is important. I hope
22 it's clear -- It's clear in my mind. I hope it's
23 clear in yours that it is not my intent or the
24 intent of this Commission to look at, you know,
25 how do we get rid of these units. It is, what do

1 we do if they are shut down unexpectedly. Does
2 that make sense?

3 MR. MULLEN: It does. And thank you, I
4 appreciate that clarification. That's helpful. I
5 agree that good planning is important. And
6 obviously, being able to operate if there were a
7 problem is important. So I appreciate that
8 clarification.

9 COMMISSIONER BYRON: And particularly I
10 want to acknowledge your earlier comments,
11 Mr. Mullen, about the sensitivities, if you will,
12 around how well these units have been operated.
13 The high capacity factors. Both the numerical --
14 The numbers are good. And also there is a
15 professional sensitivity around that too and I can
16 appreciate that. It is not just a culture of
17 safety, there's a culture of satisfaction and, you
18 know, we are doing a good job.

19 For God's sakes, I'm nearing the end of
20 my first license renewal period in my life and I'm
21 a little sensitive. Particularly those who I know
22 well and know me, my productivity and capacity
23 factors too. So I think that's a point well
24 taken. And the report should more accurately
25 reflect how well these units are operating

1 compared certainly throughout the rest of the
2 country and the world.

3 Having said that I would like to go back
4 to Mr. Galati's abbreviated comments. A couple of
5 quick questions, Scott. I am not sure if you are
6 the right person to answer them. Let's see. You
7 had made a comment, I believe, that there's not
8 much probabilistically done in this report about
9 the likelihood of some of these severe events that
10 are discussed. But I thought I recall seeing that
11 there were some reduced probabilities for safe
12 shutdown earthquakes, et cetera. So I am just
13 curious as to what you mean by the lack of
14 characterization. Wasn't there an effort in this
15 report to characterize some of these events?

16 MR. GALATI: There certainly was. But
17 what we think is that there was less emphasis put
18 on those more credible earthquakes then there are
19 as in the conclusion section on this highly
20 unlikely, more extreme case. Our point is the
21 balancing that should be done in the report. We
22 are not saying that you shouldn't look at that.
23 We are just saying you should also make sure that
24 there is some balancing and talk about the more
25 credible and more probable.

1 And I may be, I may not be capturing
2 that perfectly. And so to the extent that our
3 geosciences people can hear me say anything that
4 is making them cringe in the back I would invite
5 them to come up to this microphone and correct me
6 on that.

7 COMMISSIONER BYRON: I'll go back to
8 your earlier, some of your earlier comments about
9 the reserve margin being reduced after 2012 as a
10 result of the number of units that are not coming
11 on line. What do we do if these units are shut
12 down. You are making a case, in my mind, for the
13 importance of this study. I would like you to
14 make sure you balance your comments with that
15 understanding.

16 MR. GALATI: I don't think that -- Well
17 first, PG&E believes it is an important study.
18 And we don't disagree that it shouldn't be done.
19 We just want to make sure that when it is written
20 it can somehow give the false impression that
21 things are likely to happen that may not happen.

22 COMMISSIONER BYRON: One of the things
23 you did not address in your comments that I was
24 curious about, and this is the one that you may or
25 may not be able to address. There are some

1 findings in this report that talk about
2 potentially lower margins, lower design margins as
3 a result of, and I may say this incorrectly, the
4 potential for larger earthquakes. I don't think
5 you addressed that in your comments at all.

6 MR. GALATI: Not in the general ones.
7 And I'll invite our geosciences group up if they
8 have a comment on that.

9 COMMISSIONER BYRON: Do we find any
10 disagreement with these findings? Do you have any
11 disagreement?

12 MR. GALATI: I just can't answer that at
13 this point.

14 MR. MULLEN: You know, Commissioner
15 Byron, I think a concern is, and I would like to
16 invite Lloyd Cluff to come up and maybe clarify
17 that. The concern I think you may have heard us
18 referring to is when there is a broad cross-
19 section and body of evidence and the majority of
20 the scientific community tend to have an opinion.

21 It seemed like there was equal weight
22 given to maybe a minority opinion, an extreme
23 minority opinion. As opposed to, in our view,
24 when there was -- such as on the type of faulting
25 of the Hosgri. When it seems like there has been

1 much scientific debate and the broad preponderance
2 of scientific opinion on the type of faulting and
3 how it is characterized that we have referenced in
4 our comments that we have submitted. I don't know
5 if that makes anything clearer?

6 COMMISSIONER BYRON: But of course, you
7 know, as I read this report, if indeed there has
8 been new scientific evidence that is discovered
9 during the course of time that might indicate we
10 do have a higher likelihood or a higher severity
11 of an earthquake. I assume you would embrace that
12 and say, let's have it, rather than say, no, we
13 closed the book on that a lot time ago.

14 MR. MULLEN: Absolutely. In fact, I
15 think that's a good segue. I would like to ask
16 Lloyd to come up and he can talk about some of the
17 work we have done, not only historically but
18 ongoing throughout the life of the plant and that
19 we are currently conducting to update those
20 seismic hazard scenarios and risk assessments,
21 both seismic and tsunami. He can also at the same
22 time -- Lloyd, if you would.

23 COMMISSIONER BYRON: Yes, you've called
24 him twice. He's reluctant.

25 (Laughter)

1 MR. MULLEN: I keep wondering the same
2 thing.

3 MR. GALATI: I was wondering if he was
4 still here.

5 MR. MULLEN: And also as I mentioned,
6 there were some questions that the staff had and
7 this would be an appropriate time for Lloyd to
8 also mention what we are doing currently to update
9 our seismic program and tsunami hazard.

10 COMMISSIONER BOYD: I still can't get
11 over Scott's comment that aging is not a static
12 concept. I don't know why that hit me so hard.
13 But in any event, thanks.

14 (Laughter)

15 COMMISSIONER BYRON: Lloyd, you are not
16 related to Ray Clough, are you?

17 DR. CLUFF: Ray Clough spells his name
18 the wrong way, C-L-O-U-G-H.

19 COMMISSIONER BYRON: Okay.

20 DR. CLUFF: I'm C-L-U-F-F.

21 COMMISSIONER BYRON: Okay. I learned
22 everything I know about dirt from that Ray Clough.

23 DR. CLUFF: Yes, he's a phenomenal
24 engineer. I've worked with him a lot.

25 My name is Lloyd Cluff and I am director

1 of the geosciences department at PG&E. And while
2 the geosciences is in charge of the long-term
3 seismic program for Diablo Canyon we manage
4 earthquake risks for all parts of the PG&E
5 corporation. And our offices are in San Francisco
6 and we spend about half of our time on Diablo
7 Canyon.

8 COMMISSIONER BYRON: Because you would
9 rather be in San Luis Obispo?

10 DR. CLUFF: We like San Luis Obispo, a
11 wonderful place. But all of our heart of our
12 system is in the Bay Area. We work on the largest
13 hydroelectric, privately owned system in the
14 United States and all of our transmission and
15 distribution. So we serve the entire corporation
16 in that regard. Let me just say that our comment
17 -- With me is Norm Abrahamson who is our
18 engineering seismologist. He will be here to get
19 into that design margin question in a few moments.

20 But let me just start off by going into
21 our general comments, describe what Pat asked me
22 to look at. And there were three questions that
23 Barbara Byron sent to us two or three weeks ago
24 and asked us to be prepared to address this in our
25 written comments and here today. Let me just read

1 those, they are very short.

2 Number one: Please describe the field
3 work and seismic investigations, including
4 geologic, seismologic, tsunami and ground motion
5 studies that PG&E is conducting or has conducted
6 in the vicinity of Diablo Canyon or along the
7 central coast of California over the past three
8 years.

9 Two: Please provide copies of completed
10 studies and estimated dates of completion for
11 studies currently underway. And three: Please
12 also describe field work and seismic
13 investigations that PG&E plans to complete over
14 the next five years. They are really asking the
15 same thing in three different ways so I am just
16 going to address them conceptually.

17 Let me go back and put some context on
18 it. I joined PG&E in 1985 to become the program
19 manager of the long-term seismic program, which
20 was required by the Nuclear Regulatory Commission
21 to address four elements of our operating license
22 that they wanted to have resolved before the final
23 full-power license was totally clear. That's what
24 this whole program was about.

25 That program lasted seven years. The

1 first three years was PG&E's evaluation. The rest
2 of the time was in responding to NRC and their
3 consultant's questions. And that program resolved
4 all the conditions on the license. And the NRC
5 was so impressed with the comprehensiveness. This
6 is the most comprehensive seismic reevaluation and
7 probabilistic risk assessment of any facility in
8 the world. It is the benchmark that everyone
9 refers to from Germany, France, Japan and
10 everywhere else and they come to talk to us quite
11 often.

12 And so at that time the NRC asked PG&E
13 that since there were still issues that might come
14 up, they asked PG&E if they would make a
15 commitment to continue the process that we used
16 with the staff that I have in the geosciences
17 department to stay abreast of evolving seismic
18 issues and to continue to keep the NRC informed of
19 that progress. We have done that. We made a
20 formal, legal commitment in our agreement with the
21 NRC and we have been doing that. So these three
22 questions kind of address what we are doing.

23 The work that is underway right now and
24 has been since 1991 addresses all of the questions
25 and we are in the end of the second year of a

1 five-year program that was funded under a GRC 1996
2 rate case for PG&E. And we started that last year
3 and that report will be completed in 2012.

4 COMMISSIONER BYRON: It took 11 years
5 after the GRC to start the study?

6 DR. CLUFF: No, no, it was 2006, I'm
7 sorry. The GRC funding came in 2006, I'm sorry.

8 COMMISSIONER BYRON: Thank you.

9 DR. CLUFF: I'm sorry, I mis-spoke.
10 Thanks for clarifying that.

11 And we are addressing a lot of the
12 recommendations that the consultant's report asked
13 us and SONGS to do and we are into the second year
14 of doing that. Let me just quickly tell you what
15 they are.

16 Geophysical reevaluation and geophysical
17 surveys. We have a cooperative agreement with the
18 US Geological Survey called the CRADA that has
19 been in place since 1992 where PG&E works
20 cooperatively in a partnership. And since the US
21 Geological Survey has been working along the
22 coastline, this year was the time when they would
23 be doing geophysical surveys offshore and onshore
24 in the central coast of California.

25 We updated our agreement with them to

1 address this area, particularly because of the
2 occurrence of the San Simeon earthquake and the
3 Parkfield earthquake. And so we are into that
4 program, which includes geophysical work, data
5 collection, GPS programs. We have got a whole
6 slew of GPS stations that are installed, more that
7 are going in. We have upgraded our seismic
8 network. PG&E is the only nuclear power plant in
9 the world that has its own seismic network. We
10 are upgrading that to a full response network.
11 And out of this we will develop new tectonic
12 models.

13 Dr. Abrahamson has been the leader in
14 the world on revising what's called new generation
15 seismic ground motions. All that data has been
16 published so we are bringing that into the hazard
17 models. And we will provide the result of that in
18 2012 to the Nuclear Regulatory Commission. Once
19 that is done then we will provide that to any
20 other interested party.

21 So with that maybe Dr. Abrahamson and I
22 could respond to questions, including the question
23 about the design margin area.

24 COMMISSIONER BYRON: I am very
25 impressed. That is my question if you wouldn't

1 mind trying to answer it. I am not sure I
2 formatted it very well.

3 DR. CLUFF: Okay, I am going to ask Norm
4 if he would --

5 DR. ABRAHAMSON: When we talk about
6 reliability our usual -- I'll introduce myself.

7 COMMISSIONER BYRON: Please do.

8 DR. ABRAHAMSON: I am Norm Abrahamson, I
9 am a seismologist with PG&E's geosciences
10 department and involved in a lot of the seismic
11 hazard and seismic risk calculations that we do.

12 When we talk about reliability we are
13 generally looking at the performance of the plant
14 for a below design basis earthquake that is
15 actually likely to happen. For example, at Diablo
16 Canyon we would be concerned with a magnitude say
17 6.25 earthquake on the Hosgri Fault that might
18 give us .2 or .3 Gs of peak accelerations. Less
19 than half of what our design basis is. But it is
20 the non-safety-related systems that are
21 potentially being damaged, would be damaged by
22 those and then would put us out of operation, even
23 though all our safety systems performed properly.

24 So part of what we are referencing to
25 the report is it hasn't got into that. Really

1 reliability is going to be driven by a more
2 frequent but lower level of shaking for which our
3 non-safety-related systems are not designed for.

4 COMMISSIONER BYRON: That can take the
5 unit down for an extended period of time.

6 DR. ABRAHAMSON: Correct.

7 COMMISSIONER BYRON: And that is my
8 primary interest in this as well. I am quite
9 satisfied with the Nuclear Regulatory Commission's
10 oversight on nuclear safety aspects. But this is
11 the, this is the part of it that I think we need
12 to get to.

13 DR. ABRAHAMSON: And the NRC has been
14 focused on safety. And they were arguing, what is
15 our design basis. But again, we think reliability
16 is going to be driven by a much more frequent,
17 smaller magnitude earthquake for which our non-
18 safety-related systems would be damaged.

19 COMMISSIONER BYRON: So are you doing
20 this kind of evaluation right now for non-safety-
21 related systems?

22 DR. ABRAHAMSON: We are beginning that.
23 That has not been addressed by the industry in
24 general. It has been so focused on safety that we
25 have let that part go. And the experience in

1 Japan is really telling. It's all of their non-
2 safety-related systems that's keeping them down.

3 COMMISSIONER BYRON: Are all seven units
4 in Kashiwazaki down?

5 DR. CLUFF: Yes.

6 DR. ABRAHAMSON: They are still down.

7 DR. CLUFF: We have made several trips
8 advising Tokyo Electric in that KKNPS --

9 COMMISSIONER BYRON: I hope you are
10 learning too.

11 DR. CLUFF: Yes, we are.

12 COMMISSIONER BYRON: Well, you know,
13 this is what I think is the key issue that we are
14 trying to get to. And of course it is not just
15 confined to the nuclear power plant. It just
16 happens that the legislation was written such that
17 these are the two, these are the four units that
18 qualify in excess of the size. And the size is
19 what is important because it is the replacement
20 power and the reliability issues that we are
21 concerned about.

22 What is your general assessment, if you
23 have had opportunity, Dr. Abrahamson, to read the
24 report in terms of evaluating these non-safety-
25 related systems?

1 DR. ABRAHAMSON: I think that is where
2 the report comes up short in addressing it. And
3 partly it is because the information isn't
4 available. So they identified --

5 COMMISSIONER BYRON: It wasn't available
6 on one of those nine CDs that PG&E sent?

7 DR. ABRAHAMSON: No, because again, our
8 focus has been on all of the safety-related
9 issues. And the non-safety, the reliability of
10 non-safety -- the vulnerability, excuse me, of the
11 non-safety-related equipment and systems just has
12 not been a topic that any of the nuclear industry
13 plants have taken on.

14 So they would find -- There's not much
15 in the report on that and yet there is not a lot
16 for them to go and collect immediately. They did
17 identify the switchyard as a vulnerable spot and
18 we realize that as well. There are other pieces
19 of equipment as well that we think are potentially
20 vulnerable that we need to start to address.

21 From my point of view a conclusion in
22 the report should be, there is not enough
23 information available and we would request the
24 utilities to collect or provide that information.

25 COMMISSIONER BYRON: So we can do

1 further analysis. Consultants love those kind
2 of --

3 DR. ABRAHAMSON: That's right.

4 MR. MULLEN: Commissioner, one of the
5 things that may be helpful to hear as -- before
6 you leave, Norm and Lloyd. As they mentioned, we
7 have looked at primarily, at the plant obviously,
8 safety-related systems.

9 But once you get outside of the plant
10 then we have our switchyard, which we have already
11 done some upgrades with switch gear and other
12 things. But when you get further from that then
13 you are into essentially the system throughout the
14 grid and it is not really related to just the
15 nuclear plants. Like you say, it is important to
16 plan for what if they are down.

17 But there's also some very significant
18 differences, which maybe Lloyd can mention, on
19 what's happened in Japan because of their site
20 that are very different than our site.

21 And while we could have an outage from a
22 reliability standpoint that could delay restart
23 based on switchyard and equipment that could fall
24 down there or transmission towers, those are
25 things that we can actually repair and put up

1 relatively quickly.

2 Some of the things that are causing the
3 longer term outages in Japan, I think I'll let
4 Lloyd speak to that because it really goes to the
5 seismic site characteristics and why they are
6 different there than at Diablo.

7 COMMISSIONER BYRON: Before you do --
8 Point well taken. But, Commissioner, I'm
9 interested in this subject but I don't know how
10 far you want to go here in the workshop.

11 COMMISSIONER BOYD: Well, since you and
12 I were precluded from going to Japan I'd like to
13 hear a little bit.

14 DR. CLUFF: We were ready to go with
15 you.

16 MR. MULLEN: We'll ask Lloyd to keep it
17 brief, how is that?

18 DR. CLUFF: Let me just tell one story
19 that will only take a couple of minutes from our
20 visits to KKNPS. And we were there a month after
21 the earthquake at the invitation of TEPCO
22 Electric. Their site as Pat said, and I am really
23 impressed with you remembering what Norm and I
24 have taught you. The site is quite different from
25 Diablo Canyon.

1 MR. GALATI: Is that opposed to him not
2 remembering what you told him?

3 DR. CLUFF: Our site is a hard rock site
4 and their site is a soft rock to soil site. Their
5 site is built on a huge dune field closest to --
6 Nipomo Dunes would be an identical. This is where
7 Diablo Canyon was first proposed to be built. But
8 our site at Diablo Canyon is on rock. And the
9 non-safety damage was related to the site
10 conditions. TEPCO Electric did not pay attention
11 to compaction of the dune sands when they replaced
12 it so they had differential settlement and it was
13 a royal mess.

14 Nothing of safety was affected but the
15 non-safety was. The one story was they had an
16 emergency response facility in their main
17 administration building for all seven units and
18 that was designed to protect against radiation
19 with big steel doors. But it was not designed for
20 earthquakes. So when this earthquake occurred the
21 doors jammed and their committed telephone systems
22 to the regulators and the governor and the mayor
23 and so forth, they could not get access to them.
24 It took them two-and-a-half hours to bring a ram
25 in to ram down the door so they could get into

1 their dedicated system.

2 Now our system, we have redundancy for
3 that. We have a fire brigade at Diablo Canyon,
4 they did not have a fire brigade. So there are a
5 lot of lessons that we have learned that we
6 brought back. And we are reexamining to make sure
7 that our safety systems in interaction with the
8 non-safety-related systems are adequate. And that
9 needs to take a while to do.

10 COMMISSIONER BYRON: Unless you have
11 additional comments I really don't have any
12 specific questions. But I am very pleased. This
13 is very encouraging to hear that this kind of work
14 is going on at Diablo Canyon. And I really
15 appreciate the expertise that you brought here
16 today to help address some of these questions and
17 give us some assessment, a general assessment of
18 the report. And we look forward to detailed
19 comments on the report and I am certain you are
20 going to give them to us.

21 MR. MULLEN: You bet. Thank you very
22 much.

23 MR. GALATI: I just have one correction.
24 I mis-spoke when I said 160 million tons of CO2-
25 equivalent emissions.

1 COMMISSIONER BYRON: That's a lot.

2 MR. GALATI: Diablo Canyon and SONGS is
3 14 to 18. 160 million tons I believe is the
4 baseline so we are 14 to 18 million tons. I
5 wanted to make that correction, thanks.

6 MS. BYRON: Commissioners, could I ask
7 one question real quickly?

8 COMMISSIONER BOYD: Certainly. More
9 than one even if you want, Barbara.

10 MS. BYRON: We were just wondering if
11 the Japanese plants are remaining shut down
12 because of need for additional time for repairs
13 and replacement or is it some -- is part of that
14 regulatory delays? Is it equipment or regulatory?

15 DR. CLUFF: It's a complicated answer
16 but let me go ahead and make it simple. PG&E has
17 working relationships with all of the power
18 companies in Japan, we have had them for years.
19 And in the Kobe earthquake and other earthquakes
20 we sent teams over there to work with them. So we
21 have been working with TEPCO.

22 And as I understand it, they have
23 realized that shallow crustal earthquakes that
24 they have generally ignored, which the one a
25 little more than a year ago occurred that caused

1 them all this trouble. They had designed their
2 facilities for deep, distant earthquakes. And
3 Norm and I knew that they had ignored shallow
4 crustal earthquakes. So they are looking at a
5 master program not just --

6 COMMISSIONER BYRON: That have higher
7 ground, higher ground motion.

8 DR. CLUFF: Yes, right. Higher ground
9 motion for close. Maybe lower earthquakes.
10 Because their big distant earthquakes are
11 magnitude eight-plus but they may be 200
12 kilometers away. But the shallow ones are only
13 magnitude six to six-and-a-half. And it kind of
14 comes to the point that Dr. Abrahamson was making.
15 These are the ones that challenge you.

16 And so they are looking at a whole
17 revision and bringing up their design bases to
18 retrofit not only KKNPS but other of their nuclear
19 power plants to a significantly higher hazard
20 level. And that's what is taking the time to get
21 that through. I am invited as a keynote speaker
22 in January to give them our experience in how we
23 would deal with this. And quite frankly I think
24 they are going too far. They are up to about 1.2
25 or 1.5G now.

1 DR. ABRAHAMSON: One-point-five G.

2 DR. CLUFF: One-point-five G. They
3 don't need that. We know that that system can
4 take it. So we think -- Our advice to them, you
5 are going too far, it will take you too long.

6 COMMISSIONER BYRON: Which brings to
7 mind another question, Barbara, if I may. I think
8 that's almost 8,000 megawatts power that has been
9 out.

10 DR. CLUFF: Eight-point-two.

11 COMMISSIONER BYRON: So how have they
12 been replacing all that power?

13 DR. CLUFF: I can answer that. We have
14 a map that we can provide in our response to you
15 on that topic. They have a whole slew of
16 hydroelectric in the vicinity. And then around
17 Tokyo and Yokohama Bay they have units that were
18 shut down but are reserve capacity that are coal-
19 fired and LNG-fired. Those have all cranked back
20 up.

21 It costs a lot more money for them to
22 produce it. I think TEPCO's losses in the one
23 year since the earthquake occurred is about \$9
24 billion. Because they have long-term contracts to
25 provide power to all the car manufacturing in that

1 Niigata area and they are eating the difference by
2 using higher priced fuel.

3 And then they are probably going to miss
4 their Kyoto Protocol commitment because they are
5 polluting the environment with coal-fired plants.
6 So it's a difficult problem.

7 COMMISSIONER BYRON: There is your cost
8 issue, Commissioner, right there.

9 COMMISSIONER BOYD: Well, all I recall
10 from the earthquake is the Japanese went and
11 bought up all the propane on the world market and
12 we in California had a problem with the farmers
13 and the propane-powered wind machines they use to
14 save their citrus crops. So it trickles down
15 everywhere.

16 I hate to protract this any longer but I
17 do have just one question. And it almost doesn't
18 bear on what we are trying to do here but -- Were
19 you surprised that the Japanese did not consider
20 the types of earthquakes that you say they did
21 not, in that Japan has been such a rich heritage
22 of earthquakes and so on and so forth. or is this
23 just scientific progress?

24 DR. CLUFF: It's a cultural problem
25 within their public culture and their

1 seismological culture. The Japanese are into
2 earthquake prediction like you can't believe.
3 They spend 100 times more than we do. We think
4 it's a loss item that you shouldn't spend money on
5 because we will never be able to predict
6 earthquakes. And they had focused on the Tokyo-
7 Yokohama area for a repeat of the 1927 Tokyo
8 Earthquake.

9 And when Kobe occurred and when these
10 other earthquakes have occurred their
11 seismologists even are surprised that they are
12 these shallow, crustal earthquakes. Norm and I
13 have been working with them. I have been there.
14 In 40 years the active fault map of Japan, helped
15 them develop. And their seismologists have
16 generally ignored shallow crustal earthquakes.

17 TEPCO came to us four months before the
18 earthquake in July of last year and they said they
19 had been having these small, shallow crustal
20 earthquakes, what would PG&E do? And we laid out
21 a program. And they got the earthquake that we
22 advised them they should be prepared to deal with
23 and now we see the consequences.

24 COMMISSIONER BOYD: Thank you. Barbara,
25 did you have another question?

1 MS. BYRON: We had one other question.
2 Recently when the transformer fire and explosion
3 and the unit was down, it was in the summertime.
4 And we were wondering the same question that
5 Commissioner Byron had asked CAISO. How difficult
6 was it for PG&E to find replacement power?

7 DR. CLUFF: Dave Miklush is the best guy
8 to --

9 MR. MIKLUSH: Not on replacement power.

10 DR. CLUFF: On replacement power I am
11 not the one to do that.

12 MR. MULLEN: I can give you a little
13 information on that. Fortunately it didn't happen
14 at a time when we had sustained heat waves or real
15 high temperatures across the broad section of our
16 service territory. That's when the system really
17 seems to get strained. So partly it was fortunate
18 that that wasn't occurring. And we had the
19 ability to turn on some of our hydro systems and
20 source additional market power.

21 One clarification on that incident that
22 we had. The transformer caught fire. And the
23 bushing on the top of the transformer is what
24 shattered and caused the projectiles to go to the
25 building. We are now looking at actually putting

1 some coatings on those windows to add some
2 additional personnel protections as well as some
3 walling around where those main bank transformers
4 are.

5 We think we are going to be able to
6 actually repair that transformer and use it for a
7 spare. The transformer itself was not destroyed,
8 it was the bushing on top that shattered because
9 of an internal failure. And then that caused the
10 arcing that caused, lit some of the oil on fire
11 and that's what caused the fire. But we think we
12 are going to be able to reuse that as a spare in
13 the future.

14 I don't know if that helped. Probably
15 more information than you needed.

16 COMMISSIONER BOYD: No, it was actually
17 interesting to hear. I have been wondering if the
18 transformer industry is going to work on its
19 equipment.

20 MR. MULLEN: We are talking to a lot of
21 them right now.

22 COMMISSIONER BOYD: I'll bet. Thank you
23 very much.

24 MR. MULLEN: Thank you very much,
25 appreciate the time.

1 COMMISSIONER BOYD: Southern California
2 Edison, Gary.

3 MR. SCHOONYAN: Good morning, Vice Chair
4 Boyd, Commissioner Byron and others. My name is
5 Gary Schoonyan. I am with the Southern California
6 Edison Company. And I would like to thank the
7 Committee for the opportunity to provide an
8 overview of Edison's observations and concerns
9 regarding the draft report prepared by MRW.

10 What I am going to do is I am going to
11 go through my prepared remarks and then I am going
12 to try and address individually some of the, some
13 of the items that came up during the presentation
14 of Barbara and Steve earlier and just kind of go
15 through those if I could.

16 As you can imagine, there's a lot of
17 information and statements in the report of which
18 we will be providing detailed responses in our
19 comments. Overall, from our perspective, most of
20 the factual presentations in the report are
21 accurate and tend to convey a positive outlook.

22 One of the concerns we have is that
23 these tend to be followed by somewhat negative
24 conjecture in some instances and that is a little
25 bit of a concern. I think Scott kind of got to

1 that in his discussion of bouncing with regards to
2 some of the tone within the report.

3 As you are aware, and the report
4 acknowledges, SONGS has a well established history
5 or safe and productive operation. Indeed the NRC
6 in its most recent annual assessment letter, and
7 that was of July 31 of this year, stated overall
8 San Onofre Nuclear Generating Station operated in
9 a manner that preserved the public health and
10 safety and fully met all cornerstone objectives.

11 The draft report further recognizes that
12 comprehensive plant maintenance and reliability
13 programs successfully managed the impacts of aging
14 of plant components to ensure continued reliable
15 and safe operation of SONGS.

16 Despite this the draft report then goes
17 on to hypothesize and leave the impression that
18 the plant performance may not continue at this
19 high level due to plant aging. From our
20 perspective there is no credible reason to
21 postulate the plant's performance will not
22 continue at the same level given the ongoing
23 maintenance, testing, equipment repair, equipment
24 replacement and systems evaluation efforts that
25 exist at SONGS.

1 From our perspective, the report's
2 discussion on plant aging needs to reflect that
3 these programs will continue into the future and
4 will result in a very high likelihood of ongoing
5 safe and productive operation.

6 Also in the report is the oft-repeated
7 theme that more studies of seismology and plant
8 aging are needed. So you understand, Edison is
9 not opposed to performing additional studies when
10 such are warranted and appropriate.

11 Regarding seismology. As the draft
12 report acknowledges, the plant was engineered with
13 a large margin of safety. It is likely to
14 withstand earthquakes of greater magnitude and
15 frequency than originally expected.

16 Further, when new seismic information
17 becomes available, as has in the past, SONGS
18 evaluates the information to determine if re-
19 analysis is needed. To date, the last information
20 that triggered a reassessment of our seismic
21 analysis occurred in 2001 when the identification
22 of blind thrust faults and that concern rose.
23 This was cited in the draft report. I might add
24 that the results of that assessment showed
25 negligible impact on the seismic risk.

1 The draft report further inappropriately
2 characterizes SONGS lack of long-term seismic
3 programs similar to Diablo as a deficiency and
4 recommends additional studies. Although it may be
5 worthwhile to use different analytical tools,
6 doing so does not change the fact that seismic
7 margin for SONGS, including the independent spent
8 fuel storage installation, is more than adequate
9 to protect public health and safety.

10 I might add, and it sort of piggybacks
11 off of what Dr. Cluff was talking about briefly,
12 is that one of the things that we are looking into
13 now is evaluating the next generation attenuation
14 equations. It is the new approach for basically
15 analyzing and assessing seismic activity and what
16 have you.

17 Similarly, the discussion on tsunami
18 hazards states that SCE has not reassessed the
19 tsunami hazard at SONGS since the plant was
20 designed. That is correct. However, the report
21 then goes on to suggest that maps, maps I might
22 add that are not yet in existence, be used to
23 incorporate expected hazards from near-shore
24 landslides.

25 Rather than recommend that additional

1 studies be commenced we suggest that the report
2 indicate that when the maps and the new models are
3 available that consideration be given to updating
4 the analysis. And I might add that the analysis
5 that was done, and as I had mentioned it was done
6 some time ago, not only looked at the maximum
7 tsunami that could be expected given the
8 information that was there, but assumed that it
9 would occur during high tide and during a six-foot
10 storm surge. So it was a pretty -- from a
11 probabilistic perspective, a pretty remote
12 occurrence. And even there the wall was three
13 foot higher, built three foot higher than that.

14 Finally I would like to briefly discuss
15 what appears to be conflicting statements
16 regarding the reliability impacts from an extended
17 outage at SONGS. In one section the draft report
18 states that a prolonged shutdown of SONGS could
19 result in serious grid reliability shortfalls
20 unless transmission infrastructure improvements
21 are completed. While later in the draft report it
22 suggests that no electricity supply shortages
23 would occur as a result of either Diablo or SONGS
24 being unexpectedly shut down for an extended
25 period in 2012. Nor would remedial action such as

1 additional demand response, energy efficiency or
2 additional capacity be needed for reliability
3 purposes.

4 From Edison's and others' perspectives,
5 including our reports and review of the ISO work,
6 a prolonged outage of SONGS could cause grid
7 reliability concerns without significant
8 mitigation.

9 In closing I want to reiterate SCE's
10 commitment to safe, reliable and sustainable use
11 of nuclear power at San Onofre. Power from SONGS
12 provides substantial environmental, fuel diversity
13 and reliability benefits, both regionally and
14 locally. It further represents one of the key
15 elements of our state's needs to meet our
16 greenhouse gas emission levels.

17 I would also like, and I had mentioned
18 this briefly to Barbara before the hearing today
19 or the workshop today. I would like to request,
20 if possible, a little additional time available to
21 us to respond to the report. Presently the
22 comments are due October 2 and we would appreciate
23 an extension until Monday, October 6, if at all
24 possible.

25 With that I would like to just kind of

1 move and briefly discuss some of the things that
2 were brought up during the presentation, I believe
3 this was Steve's presentation, with regards to the
4 report.

5 One of the items, and I'm sure you would
6 have probably ended asking me if I didn't bring it
7 up anyway was the comment that recent developments
8 point to safety culture concerns at SONGS. There
9 have been some lapses in the plant safety culture,
10 we recognize that. And although the instances
11 involved, as indicated by the NRC, had very low
12 safety significance they still need to be
13 corrected.

14 We have basically embarked upon
15 aggressive programs to do that. New
16 accountability training for all managers,
17 replacement of personnel at the manager level.
18 There's been a number of things that have gone on
19 to try and turn the ship around, so to speak, with
20 regards to the safety culture. We had one of the
21 highest safety cultures in the nation for years
22 and unfortunately the last several years it has
23 kind of diminished a little bit. And we have
24 programs in place and efforts in place to turn
25 that around.

1 One of the other things Steve brought up
2 was the plant work force is aging. And it is and
3 there is concerns on that. And I wanted to just
4 piggyback off what Scott said with some of the
5 things that PG&E is doing with community colleges
6 and other things to try and basically develop an
7 ongoing, qualified work force for San Onofre.

8 There was also an indication that SONGS
9 will run out of spent fuel storage capacity just
10 prior to the plant's current license expiration.
11 That is correct. However, that's roughly about 14
12 years away. We have existing site space available
13 to fully accommodate this so that's really not
14 much of a concern from our perspective. It's
15 basically being planned for and what have you. We
16 have the land, we have the systems and everything
17 capable of doing that.

18 COMMISSIONER BYRON: You mean you would
19 look at increasing your spent fuel storage?

20 MR. SCHOONYAN: Well to the extent -- I
21 mean, obviously, if at present production rates
22 there isn't sufficient amount then we are going to
23 have to to carry it on through the duration of the
24 operating license. Which is --

25 COMMISSIONER BYRON: Have you made a

1 determination on license renewal yet?

2 MR. SCHOONYAN: No. I mean, we are a
3 little bit behind PG&E on this. We hope to
4 receive some monies from our general rate case
5 this year and start pursuing that, an
6 investigation of that particular. We haven't made
7 any decisions with regards to do it beyond 2022 at
8 this point in time. However, we are in the mode
9 of moving forward with that assessment at this
10 point in time.

11 I might add too that one of the reasons
12 that the fuel storage capacity might potentially
13 or it looks like it is going to be fully used up
14 prior to the license expiration without doing
15 anything is that we reduced our fuel cycles down
16 from roughly 21 months down to 18 months. And
17 this creates -- As a result of that it creates
18 some additional fuel.

19 Now we did this primarily and solely to
20 better time our outages to coincide with peak
21 demands on our system. So with the 21 months
22 unfortunately we were projected to get into
23 situations where we would have a nuclear unit off
24 during the summertime and thought that that
25 probably wasn't the most appropriate.

1 The final thing that was brought up
2 today that I wanted to comment on was this idea
3 that California could rely on renewable energy to
4 replace the energy from Diablo and SONGS.
5 However, and I think the report correctly
6 identifies it, backup power supplies would be
7 required to maintain a reliable energy supply.

8 I want to point out that that would
9 require a significant amount of new renewable
10 energy to do something along those lines. I think
11 as Vice Chair Boyd pointed out at the beginning,
12 12 percent of the state's energy production comes
13 from nuclear. It just so happens that 12 percent
14 is the amount of renewables that we presently have
15 in operation within the state. So you can
16 basically see just doubling that just to replace
17 San Onofre and Diablo.

18 Furthermore, the vast majority of other
19 renewables is remote to the service territories or
20 remote to the load centers of both Edison and PG&E
21 and significant amounts of new transmission would
22 have to be developed in order to do this and I'm
23 not sure whether the report reflected that.

24 Anyway, those are my comments. I look
25 forward to any questions.

1 COMMISSIONER BOYD: Thank you, Gary.

2 This is the second nuclear hearing, I notice,
3 where you have been the representative. The now-
4 nuclear representative of Edison. Commissioner
5 Byron, questions?

6 COMMISSIONER BYRON: Did you want to ask
7 him about his transformers?

8 COMMISSIONER BOYD: You broach it, I'll
9 let you.

10 COMMISSIONER BYRON: No. A little
11 professional competition there between the
12 utilities. I was just having fun. And in the
13 same light vein, where's your attorneys and your
14 seven backup people, Mr. Schoonyan?

15 (Laughter)

16 MR. SCHOONYAN: I do have one
17 individual, Caroline McAndrews from the plant
18 that's here to answer any really detailed
19 questions to the extent --

20 COMMISSIONER BYRON: I knew you did
21 bring someone so thank you for introducing her.

22 MR. SCHOONYAN: All right.

23 COMMISSIONER BYRON: Let's see, in terms
24 of questions. You already addressed the one with
25 regard to exceeding the spent fuel storage, which

1 I noted in the report as well.

2 And I didn't bring this up earlier with
3 PG&E but I'll bring it up with you because I saw a
4 presentation a couple of months ago that was given
5 by an SCE engineer that will remain nameless, I
6 think, about once-through cooling and how that may
7 be affecting your plans going forward. So it
8 doesn't necessarily relate to safety here but we
9 do have an issue that obviously could impact your
10 decision-making going forward as well. Would you
11 care to comment on that?

12 MR. SCHOONYAN: Well with regards to the
13 once-through cooling. My understanding of it is
14 that a lot of it gets back to land to put the
15 cooling towers there necessary. There is only
16 sufficient space, is my understanding, to probably
17 erect one cooling tower -- cooling towers
18 sufficient so support possibly just one of the,
19 one of the units themselves.

20 Furthermore, there's virtually no water
21 supply to, to really support the cooling. You
22 would have to use salt water and there's
23 environmental concerns to the extent of that. If
24 you had a salt water plume over San Clemente or
25 what have you with regards to that. So the once-

1 through cooling issues as far as the remedies for
2 doing that, namely going to cooling towers, really
3 doesn't provide a reasonable alternative from our
4 perspective. Although we are looking at it and
5 what have you. It just doesn't make at this point
6 in time a lot of sense.

7 But one of the things that we have done
8 that I think you are well aware of is we have done
9 a number of major environmental projects. The
10 kelp bed, the restoration of wetlands in the Del
11 Mar area. The fish hatchery. A number of these
12 things. Which the Coastal Commission has
13 acknowledged have basically offset totally if not
14 more so the entrainment, the entrapment and all
15 the other impairments associated with the once-
16 through cooling issue. So from our perspective we
17 have fully mitigated the impacts of once-through
18 cooling at San Onofre. And it would be very
19 difficult if we had to go with the cooling towers.
20 At this point in time it would be a very difficult
21 process.

22 COMMISSIONER BYRON: And really that
23 question, I apologize, doesn't necessarily belong
24 in this setting but I appreciate your answering
25 it. There's a number of conclusions in the

1 report, or findings in the report, with regard to
2 seismic programs. I may state it incorrectly but
3 I think there's an oversight committee that exists
4 at Diablo Canyon that doesn't exist at San Onofre.
5 Some of the same kinds of findings, I believe,
6 with regard to reduced margins of safety possible
7 as a result of higher magnitude earthquakes, those
8 kinds of things. Are we going to hear responses
9 from you on those particular findings?

10 MR. SCHOONYAN: Yes you are. I got to a
11 couple of them with regards to, I think in general
12 terms with my overview comments. With regards to
13 the safety committee. It's our understanding --
14 It sounds like it is functioning quite well at
15 Diablo from what I've heard, the testimony and
16 what have you. I am not that familiar with that.

17 But it is my understanding that that is
18 the only facility in the nation that has such and
19 there are obviously other nuclear facilities
20 throughout the nation that have very, very high
21 safety records. So I don't think it is a
22 necessary requirement to have a very high safety-
23 type of record you have to have one of these
24 committees.

25 COMMISSIONER BYRON: Have you done any

1 other seismic upgrades in recent years other than
2 adding the three foot to the tsunami wall?

3 MR. SCHOONYAN: Pardon me, we did not
4 add, that was part of the original design. As far
5 as improvements I don't know, I don't have
6 personal knowledge of that. I assume that we
7 have.

8 COMMISSIONER BYRON: The question that I
9 could have asked PG&E as well but I'll ask you,
10 and maybe PG&E would like to add to it as well. I
11 have always been somewhat concerned with -- I
12 mean, this is California for gosh sakes. We take
13 on issues like this and don't concern ourselves
14 with the NRC's oversight. Are we running into any
15 legal concerns or usurping their responsibilities
16 when we take on a study like this?

17 MR. SCHOONYAN: The NRC's
18 responsibilities and what have you?

19 COMMISSIONER BYRON: Yes.

20 MR. SCHOONYAN: From my perspective, no.
21 We supported 1632 when it was going through the
22 Legislature. Basically, I mean, the state has a
23 right to better understand all of the types of
24 facilities that basically are within its territory
25 and what have you. So we had no problems with the

1 commencement of the study and what have you.

2 I guess our only concern, and it gets
3 back to my very initial comment, is that if at all
4 possible it would be nice if the recommendations
5 and what have you were a little more balanced.
6 That's at least our view of the report. The
7 factual presentation was done very accurately.
8 And I think if you read the factual portions of
9 the report it tends to look positive. However,
10 some of the recommendations tend to be a little
11 more negative.

12 COMMISSIONER BYRON: Right. I can
13 appreciate those sensitivities, as I said, with
14 PG&E. But looking past those. And I hope that we
15 will correct those as well in the report. Looking
16 past those there will be findings and
17 recommendations in all likelihood from this report
18 that could result in increased evaluations and/or
19 upgrades that may be required of the plant. Isn't
20 that a possibility here?

21 MR. SCHOONYAN: There is a likelihood.

22 COMMISSIONER BYRON: Okay. Did PG&E
23 want to comment on that at all, Mr. Mullen?

24 MR. MULLEN: Thank you, Commissioner
25 Byron, I'd be happy to. In general I think as

1 long as the study and the recommendations are
2 outside of the NRC's jurisdiction on radiological
3 safety and radiological areas and the operations
4 and licensing of the plant we don't see a problem
5 with it.

6 COMMISSIONER BYRON: Thank you. Thank
7 you, Commissioner.

8 COMMISSIONER BOYD: Gary. If I were
9 sitting in your seat I would probably come in the
10 same way with regard to having pride in and
11 defending my safety record. But this Commissioner
12 remains concerned, almost getting beyond the scope
13 of this study, with the safety culture issue that
14 the NRC just finished having hearings on with you.

15 And as you may recall many, many months
16 ago, the only letter I have ever written to a
17 utility on that subject was to your utility. And
18 I got the assurances when we visited the facility
19 that everything is being taken care of and you
20 have assured us again today that everything is
21 being taken care of. And I hope and trust indeed
22 that's the fact.

23 But I remain concerned and a question
24 remains in my mind about trust but verify and the
25 value of an Independent Safety Committee. So that

1 remains on my agenda as something of interest,
2 let's put it that way. With that I don't have any
3 other questions or comments.

4 MR. SCHOONYAN: Well, I mean, we are
5 equally as concerned. In essence what I tried to
6 indicate with regards to that is we are putting
7 things in place to rectify that. And to say it is
8 solved and resolved now, I don't think we can say
9 that. But we are aggressively pursuing things to
10 make sure that we turn the safety culture and what
11 have you around.

12 Again, all of the instances that
13 percolated up really didn't involve any
14 significant safety concerns. However, the mere
15 fact that they existed is a significant concern on
16 our part.

17 COMMISSIONER BOYD: Thank you. To quote
18 my boss, I'll be back.

19 (Laughter)

20 COMMISSIONER BOYD: Barbara, did you
21 have any questions for Edison or Steve?

22 MS. BYRON: No.

23 COMMISSIONER BOYD: All right. Thank
24 you, Gary.

25 MR. SCHOONYAN: Thank you.

1 COMMISSIONER BOYD: Now we'll turn to
2 public and stakeholder comments. And I have a
3 stack of blue cards here, which is a request to
4 speak from that helps our process out. So if
5 anybody did want to speak today and didn't fill
6 out a card I suggest you avail yourself of that.
7 Cards are on the table near the entrance or
8 Suzanne or Barbara could help you find one.

9 The first card in my stack is Rochelle
10 Becker, Alliance for Nuclear Responsibility.

11 MS. BECKER: Good morning. David
12 Weisman is probably the next on your list. So I
13 am going to ask him to go first and just stand
14 next to him and then take the next spot. Is that
15 okay?

16 COMMISSIONER BOYD: That's okay. He was
17 at the bottom of the list.

18 MS. BECKER: Well he wasn't when he did
19 his card.

20 COMMISSIONER BOYD: Like I said, I just
21 took the cards in the order. But you two
22 represent the same organization so if you would
23 like to reverse your order that's fine.

24 MS. BECKER: That would be great, thank
25 you.

1 MR. WEISMAN: Good morning,
2 Commissioners. David Weisman, outreach
3 coordinator, Alliance for Nuclear Responsibility.
4 Indeed the reversing of the order, which seems
5 only was happenstance, actually happened to be the
6 first sentence I had written for this morning,
7 which was that it may indeed be unusual to begin
8 at the end, speaking out of turn, so to speak.

9 But then as a high school English
10 teacher I once had, who I recall as being a rather
11 severe and strict instructor told me, the best way
12 to proofread any document is to read it backwards,
13 from the beginning to the end, as it would make
14 any inconsistencies more evident because our
15 attention would be focused on the details and not
16 the style.

17 Therefore I would like to begin by
18 briefly quoting from the back of the study for us
19 today, from the Conclusion. Which is, quote:

20 "The decision whether or not
21 the Diablo Canyon and SONGS
22 operating licenses will have
23 significant impact on the state's
24 power supply portfolio and on
25 communities located near the

1 reactors. Unfortunately, the full
2 implications of this decision are
3 unknown. Even the most
4 straightforward question of how
5 much power would be impacted by
6 this decision cannot be answered
7 with any certainty. While current
8 production levels from the plants
9 are known, it is unclear how
10 performance will change as plants
11 age, for no reactor has operated a
12 full 60 years."

13 Now as I read those words something went
14 off in my head that I have heard them before
15 somewhere recently in the not-to-distant past.
16 And then I remembered, and the quote I remembered
17 was this. Quote:

18 "There are no knowns. These are things
19 we know that we know. There are unknown unknowns.
20 That's is to say, there are things that we know we
21 don't know. But there are also unknown unknowns.
22 These are things that we don't know that we don't
23 know."

24 And I think as there is a chuckle or two
25 in the room perhaps you may recognize those words

1 from the former Secretary of Defense. The words
2 that were used in the early days of the current
3 war in Iraq which have come to haunt an
4 administration and indeed a nation which embarked
5 on an endeavor that relied upon inadequate
6 intelligence or unsubstantiated assumptions,
7 hastily devised strategy and apparently no exit
8 plan. The result --

9 COMMISSIONER BYRON: Mr. Weisman, we
10 refer to that at the dais here as the Full
11 Rumsfeld.

12 MR. WEISMAN: The Full Rumsfeld. I like
13 that, that's very good.

14 COMMISSIONER BOYD: I was going to say
15 it's a Yogi Berra quote.

16 MR. WEISMAN; I'm afraid Yogi Berra used
17 up his --

18 COMMISSIONER BOYD: He couldn't take it
19 that far.

20 MR. WEISMAN: Yogi got his in this past
21 Sunday, if you'll recall, when watching the
22 wrecking ball hit Yankee Stadium. He really could
23 say, it ain't over 'til it's over, but it was.

24 COMMISSIONER BOYD: And it was.

25 MR. WEISMAN: But I make this parallel

1 here today because the challenges facing the state
2 of California in ensuring a secure and sustainable
3 energy future supply are no less daunting. And
4 the planning required to make this a reality no
5 less challenging than that aforementioned
6 international endeavor. And like that endeavor it
7 is not one to be entered into or taken lightly
8 with any questionable assumptions and the lack of
9 an exit strategy.

10 The people of California need to know
11 the outcomes and what they may be or at least be
12 presented with a complete menu of the potentiality
13 or the potential outcomes and the possibilities.
14 We need to know what we can know and we need to
15 honestly admit there is much we can't know. And
16 knowing that, make the most prudent decision, but
17 only if our intelligence and data are accurate.

18 The good news is the draft study before
19 us today is a very major step in that direction.
20 And I as both a ratepayer and a taxpayer
21 appreciate its candor in admitting the unknowns as
22 a preamble. We at the Alliance for Nuclear
23 Responsibility hope that subsequent iterations
24 will focus on those facts so that our state has an
25 energy exit strategy.

1 And one that future generations, the
2 same generations whose grade school drawings grace
3 these walls, and this is now my third appearance
4 before this Commission and I am happy to note that
5 the drawings change every year. They actually
6 have new contestants every year.

7 And happen to note that the drawings,
8 still as they did when I did was here and noticed
9 them for the first time in 2005, continue to
10 reflect a future that seems to be one of sun and
11 wind and water. And that one day these children
12 when they reach voting age and the age of maturity
13 will be able to look back and see that decisions
14 were made in the past with someone who wasn't
15 asleep at the switch, so to speak, at the time.

16 So I thank you for your time and
17 consideration and we look forward to providing
18 detailed comments for this ground breaking study.
19 And again, to put our emphasis on the concern for
20 what we can know and these unknowns. And my
21 colleague Rochelle Becker will elaborate in
22 somewhat more detail on those concerns. Thank
23 you.

24 COMMISSIONER BOYD: Thank you,
25 Mr. Weisman. Now Rochelle.

1 MS. BECKER: Yes. The draft analysis
2 released mid-September has done an excellent job
3 identifying many of the unknowns that will require
4 further analysis for responsible energy planning.
5 The Alliance is preparing a more detailed analysis
6 of certain areas where unanswered questions
7 remain. It will be submitted in writing by
8 October 2, or if there is an extension, October 6.

9 However, there appear at first glance
10 several distinct issues that are of particular
11 relevance to the Alliance. To wit, page 19 of the
12 draft report states that "Diablo Canyon benefits
13 from the oversight of the Diablo Canyon
14 Independent Safety Committee" unquote. The
15 Alliance questions what objective data was used in
16 determining this conclusion?

17 Regardless of whether this statement is
18 valid or not, the Alliance for Nuclear
19 Responsibility can assure the California Energy
20 Commission that without close scrutiny and active
21 participation from concerned local citizens in all
22 phases of Diablo Canyon's oversight, Diablo Canyon
23 would not have been sited at Diablo Canyon but in
24 the Nipomo Dunes. It would have been constructed
25 to seismic standards -- standards that were not

1 equal to the Hosgri Fault.

2 Security would not have been challenged
3 of the on-site high level radioactive waste
4 storage facility on California's coast. And the
5 Diablo Canyon Independent Safety Committee would
6 not have been formed. These are all the result of
7 community involvement, community review, community
8 activism, community organization.

9 This list of community oversight is not
10 all-inclusive but serves to inform the California
11 Energy Commission and any other agency looking at
12 the safety record of Diablo Canyon that it is the
13 public's participation in the democratic process
14 that has greatly influenced the safety of Diablo
15 Canyon.

16 The Diablo Canyon Independent Safety
17 Committee itself benefits from community
18 participation. It is unfortunate that the San
19 Onofre reactor communities do not have nearly the
20 four decades of concerned citizen participation in
21 nuclear facility oversight that exists at San Luis
22 Obispo.

23 However, I will now illustrate one such
24 example of citizen participation that could be
25 applied to the San Onofre site. When I toured San

1 Onofre on May 20, 2008 I asked Mr. Russell
2 Harding, who led my tour, whether Southern
3 California Edison had room to store at their
4 current on-site storage facility all highly
5 radioactive waste generated during its current
6 license. I then asked him if the storage capacity
7 also applied if a license renewal was granted.
8 His answer was yes to both questions.

9 This question was a follow-up to a data
10 request of the Alliance for Nuclear Responsibility
11 and a written reply from SCE of March 5, 2008,
12 which corroborates the statement in writing.

13 I had asked the question because PG&E
14 has stated that it will not have room at its
15 current site to store high level radioactive waste
16 generated beyond its current license period. And
17 that a new storage location at Diablo Canyon would
18 be required for on-site storage of any additional
19 high-level radioactive waste generated beyond its
20 current license period.

21 The statement and the data request by
22 Mr. Harding of Southern California Edison is
23 contradicted in the assessment provided today by
24 Barbara Byron and Steve McClary on slide number 13
25 of the assessment which states, SONGS will run out

1 of spent fuel storage capacity just before the
2 plant's current licenses expand.

3 Had SCE's employee been truthful in is
4 response when previously questioned the Alliance
5 for Nuclear Responsibility would have questioned
6 this issue in the current Southern California
7 Edison general rate case proceeding. Because we
8 were led to believe that storage was adequate
9 through 2042 a series of questions important to
10 ratepayers is absent from the record of the
11 current PUC proceeding.

12 I also asked about low-level radioactive
13 waste and was told by Mr. Harding that Energy
14 Solutions was accepting this waste. Again from
15 slide 13 of the assessment we now learn a low-
16 level waste disposal facility is no longer
17 available to accept low-level waste from SONGS.

18 These blatantly misleading statements by
19 SCE's Mr. Harding lead us to question the accuracy
20 of other information provided by SCE personnel,
21 both in the current GRC and in the consultant's
22 draft.

23 For concerned ratepayers and citizens
24 who may find themselves increasingly skeptical of
25 corporate misinformation and malfeasances, both

1 large and small, this is disturbing. Because as
2 we see on Slide 7, this assessment was a study
3 based on existing scientific studies, other
4 documents in the public domain, and information
5 provided by plant owners in a response to data
6 requests.

7 Now it appears for no lack of intent and
8 dedication on the part of the California Energy
9 Commission and it's consultants, that the authors
10 of this study will have to carefully scrutinize
11 for veracity, at the very least, all information
12 submitted by SCE as a result of the contradictory
13 information they provided to both the public and
14 to the state agencies.

15 It is also interesting to note that in
16 their CPUC general rate case PG&E has been granted
17 \$15 million in ratepayer funding to conduct their
18 own internal study of license renewal for Diablo
19 Canyon. And SCE has requested of the CPUC \$17
20 million in ratepayer funding for the same.

21 If a major corporate utility cannot
22 provide consistent information to a state agency,
23 which is using public tax dollars to create the
24 study, how can they be trusted to provide credible
25 information for an internal study that will not be

1 subject to the same oversight that we are
2 demonstrating here today.

3 It would seem at the very least only
4 fair to the public, who is fitting the bill for
5 these studies, that some of the money approved for
6 the internal utility studies be redirected to
7 addressing any inconsistencies and deficiencies in
8 the CEC analysis.

9 In principle this study was to analyze
10 the costs, risks and benefits of continuing to
11 rely on aging nuclear power plants in California
12 beyond their current licenses. There is still
13 much work to be done.

14 But if it will save time there is at
15 least one cost that won't need to be analyzed. It
16 will not be found as a line item in any budget you
17 survey. And that is the price of public
18 oversight, which we are here to provide as
19 ratepayers, as taxpayers, as citizens of the state
20 of California. We thank you for the consideration
21 of our request and I have a copy of the data
22 request sent to SCE and their response and our
23 statement for you.

24 COMMISSIONER BOYD: Thank you. Any
25 questions?

1 COMMISSIONER BYRON: None.

2 COMMISSIONER BOYD: Thank you, thanks to
3 both of you. Next I have Bernadette Del Charo.

4 MS. DEL CHARO: Hi, thank you,
5 Commissioners. My name is Bernadette Del Charo, I
6 am the clean energy advocate with Environment
7 California and the Environment California Research
8 and Policy Center. We are a statewide nonprofit,
9 non-partisan environmental advocacy organization
10 representing roughly 70,000 members throughout the
11 state.

12 We are glad to see this study. We think
13 it is a very important study. Probably not
14 surprising to you and the folks in the audience
15 here, we are opposed to nuclear power. We believe
16 California should have a future in which nuclear
17 power is phased out. Not only should we not build
18 more nuclear power plants but we should phase out
19 the existing ones.

20 You know, for a variety of reasons.
21 Probably one of the few absolutes in human
22 existing, one being age, static or otherwise, is
23 inevitable. But the other is that humans make
24 mistakes. Safety concerns regarding nuclear
25 power, which has been touched upon today, are a

1 cause alone for us to start to phase out these use
2 of these aging nuclear power plants.

3 Tons of other reasons, as you all are
4 aware of. Waste transportation, the mining
5 impacts, environmental impacts of nuclear power
6 make it a technology of yesterday and not of the
7 future. We think California is headed in the
8 right direction with regards to conservation,
9 efficiency and renewable energy. And for us to
10 continue in to rely on these plants is heading in
11 the wrong direction.

12 The two utilities made comments that the
13 study is not balanced. Maybe for you to decide
14 that it is would be the fact that we actually
15 think that the section on renewables and
16 alternatives is not actually positive enough in
17 terms of the potential for California to replace
18 our nuclear power capacity with conservation,
19 efficiency and renewables.

20 You know, just a couple of examples. I
21 think the biggest thing to say about this, and we
22 will put comments in writing, but a lot is going
23 to change between now and 2022, 2024. A couple of
24 policies that we hope will be in place with the
25 help of this Commission's direction include things

1 like building of zero energy buildings to cut down
2 on our energy usage.

3 Combined central station solar power
4 plants are available. They are baseload, they
5 don't need fossil fuel backup to provide that
6 baseload generation capacity. You know, NREL
7 estimates there's a 7,000 gigawatt potential of
8 solar thermal in the southwestern deserts. We
9 believe we will get beyond the barriers related to
10 transmission to get that renewable energy on-line
11 and providing that electricity to California.

12 One other example is, of course,
13 distributed generation. California has embarked
14 on, of course, the Million Solar Roofs Initiative
15 to build 3,000 megawatts of distributed solar
16 power between now and 2017. That is only the tip
17 of the iceberg when it comes to the potential for
18 rooftop solar power to shave off our peak demand
19 here in the state. We believe we can more than
20 double that by 2022, 2024.

21 Again just to put a real number on the
22 potential of these programs. We have in the past
23 two years since the start of this initiative
24 installed 200 megawatts of solar capacity in the
25 state. That's, of course, two to four peaker

1 units. These are real megawatts, it is real
2 potential. And we believe with just any one of
3 these technologies and/or clean energy solutions
4 we can replace our reliance on nuclear power and
5 do it in a way that is way more safe and actually
6 provides way more benefits to the state.

7 I do want to comment. PG&E noted that
8 the job potential for nuclear power is higher than
9 renewable energy, I think, if I heard them
10 correctly. I think all the studies point in the
11 opposite direction. For example, one of the
12 recent studies shows that 1,000 megawatts of
13 central station power will provide 3,000
14 construction jobs and notably 1800 ongoing
15 operational jobs. That is way more than the 1400
16 jobs I think were cited for Diablo. Again,
17 photovoltaics create five to seven times more jobs
18 than nuclear and fossil fuel.

19 So at the end of the day there's way
20 more benefit to shifting toward renewable energy,
21 energy efficiency and conservation from an
22 environmental as well as an economic perspective.

23 So in conclusion. Again, we think this
24 is a very important study. We are glad that it is
25 underway. We think it needs a lot more time,

1 resources, attention to answer not only the safety
2 questions but also what the better alternatives
3 are for the state of California. Thank you.

4 COMMISSIONER BOYD: Thank you. Michael
5 Cannon. It says, San Luis Obispo County citizen.

6 MR. CANNON: Good afternoon. Is it
7 afternoon yet? Not quite.

8 COMMISSIONER BOYD: Not quite.

9 MR. CANNON: Good morning,
10 Commissioners.

11 COMMISSIONER BOYD: It may seem that
12 way. Did you drive up here this morning?

13 MR. CANNON: No I didn't, thankfully.
14 But it does seem like it is somewhere near five
15 o'clock. We're withering back there. I am
16 president of Cannon Associates. We are an
17 engineering firm that provides services in Energy
18 and infrastructure. I am also a board member for
19 the Economic Vitality Corporation for SLO County,
20 San Luis Obispo County, and a resident of San Luis
21 Obispo County and obviously a concerned citizen.

22 I just have a couple of items in the
23 report that I want to address to make sure that
24 they are clear. Some of the facts as they are
25 presented may be a bit misleading concerning the

1 economic impact of the plant on our community.

2 From two perspectives. One, that plant
3 contributes I think somewhere around \$25 million
4 in revenues into, in tax revenues into San Luis
5 Obispo County. That is a significant amount of
6 money. It has been doing that since it was --
7 actually it was doing a great deal more when it
8 was built. This is now in its depreciated form.

9 But that \$25 million. Of that I think
10 \$10 million goes to the San Luis Obispo, San Luis
11 Coastal School District. I have a child in the
12 San Luis Coastal School District and I can't
13 fathom that if you were to strip that \$10 million
14 away by the loss of the plant, what we would do.
15 We have 400 teachers in the district. We would
16 lose possibly up to 80 of those. So what would
17 that do to my classroom sizes? what would that do
18 to the quality of the teachers in the area? All
19 of that would have a significant effect on me as a
20 citizen and my family and the community.

21 And I say strip away because if you do
22 bring in solar projects, and I am sure you realize
23 this, that because of the investment tax credit
24 that you get there won't be that same tax flow
25 into the community if they are able to build the

1 solar plants. I think the name of the company is
2 Solar -- I can't remember the two names of the
3 companies.

4 MS. MCMURRY: OptiSolar.

5 MR. CANNON: Yes, OptiSolar, OptiSolar
6 is one of them.

7 COMMISSIONER BYRON: And SunPower.

8 MR. CANNON: And SunPower. And I think
9 both of those will readily acknowledge that part
10 of the incentive to build is obviously the tax
11 savings.

12 With regards to safety. I have a
13 personal perspective on this. I have provided
14 service out at the plant for awhile and I have a
15 deep appreciation for the members of the staff at
16 the plant. They are rigorously devoted to safety.
17 They are highly educated, highly trained staff out
18 at the plant. I have a great deal of respect.
19 And I observe on a regular basis a great deal of
20 pride in each and every one of them in how they
21 conduct that plant and its spotless safety record.
22 So I definitely want to, I can't comment enough on
23 how much I respect the people of that organization
24 out there.

25 One more item and I think it may have

1 been mentioned already. The long-term jobs that
2 are offered by the solar facilities, probably in
3 the neighborhood of 20 to 30 jobs permanent.
4 Whereas Diablo provides 1400 permanent jobs, head
5 of household jobs. These are good jobs. The loss
6 of those jobs in the community would also have a
7 dramatic ripple effect in the entire community if
8 we were to lose those jobs. So I want to make
9 sure that your Board hears those items from
10 someone who is living right in the community.

11 And then lastly I have to, I have to
12 make a comment. I don't know if it is appropriate
13 to make it here but I strongly support the
14 construction of nuclear facilities as a citizen of
15 the United States. I think it is a way to get us
16 off dependence on foreign oil. I think it is a
17 brilliant way to create an economic boom through
18 the construction of the plants.

19 I think the safety and new construction
20 techniques and the attention paid in the oversight
21 of these facilities makes it a very viable option
22 for generation of power in the United States. I
23 can't urge you strongly enough to advocate the
24 construction of more and the maintenance of these
25 facilities.

1 I have a business partner that has some
2 operations in Australia. He mentions that there
3 is a mine in Australia where they have I think
4 it's a uranium mine. They have -- One of their
5 mines is close to two kilometers deep and they
6 haven't found the bottom of the mine yet. There
7 is a huge amount of available fuel.

8 And I believe we have come to a time
9 where we don't have the luxury of not exploring
10 all viable options of power generation and nuclear
11 seems to be safe, reliable and very, very
12 environmentally friendly. So thank you for your
13 time.

14 COMMISSIONER BOYD: Thank you. Rebecca
15 McMurry, Pismo Beach Chamber of Commerce.

16 MS. McMURRY: Good afternoon,
17 Commissioners. At least I think we have arrived
18 at afternoon now.

19 COMMISSIONER BOYD: We've still got five
20 minutes.

21 MS. McMURRY: I would like to thank you
22 for this opportunity to speak before you today.
23 And I will keep my comments very brief and they
24 will pertain mainly to the economic impact to San
25 Luis Obispo County and all of our local

1 communities there.

2 Of great importance to our county is the
3 employment opportunities that Diablo Canyon has
4 provided to thousands of men and women. Over 90
5 percent of these employees live and recreate in
6 San Luis Obispo County. These are head of
7 household jobs that represent over \$100 million in
8 annual salaries. The average salary being \$88,000
9 a year, which is 60 percent above the median
10 salary in San Luis Obispo County.

11 That does not represent the additional
12 \$10 million to \$12 million in wages that are paid
13 during times of scheduled outages and special
14 projects such as the steam generator replacement
15 project currently going on at Diablo. During this
16 time an additional 1,000 to 2,000 workers are also
17 employed.

18 While speaking with some business owners
19 in the city of Pismo Beach who served Diablo
20 Canyon outage workers I was informed that this
21 transient population represents nearly 65 percent
22 of their total receipts during the time that these
23 workers are in town. That only represents the
24 lodging paid by these transient workers in town,
25 it doesn't cover their dining or other goods and

1 services that they are also purchasing and
2 consuming while they are in San Luis Obispo
3 County.

4 In addition to the jobs and work force,
5 PG&E provides the cheapest form of greenhouse gas-
6 free power. My chamber members in these economic
7 times would be very hard pressed to endure the
8 massive rate impacts that would occur should PG&E
9 have to replace this power with a new form of
10 generation.

11 In summary, San Luis Obispo County would
12 suffer a great economic loss if Diablo Canyon
13 experienced an extended, unplanned outage or were
14 decommissioned. While the study does recognize
15 this loss, it is the opinion of the Pismo Beach
16 Chamber of Commerce that it discounts the severity
17 to our local economy greatly.

18 Again, I thank you for this time today
19 and we hope the Diablo Canyon is continued to be
20 supported and is a part of our county.

21 COMMISSIONER BOYD: Thank you. Carl.
22 And I believe it is Dudley but I may be saying it
23 wrong.

24 MR. DUDLEY: Unlike one of the previous
25 speakers I do get to say good afternoon. I am

1 Carl Dudley, I am a resident of San Luis Obispo
2 County. I am here basically as a citizen of San
3 Luis Obispo County. I am a past business owner as
4 well as now a senior vice president of a local
5 community bank, which has given me the opportunity
6 to work with many different nonprofit agencies
7 within the county that are benefactors.

8 But first I would like to talk about the
9 number of employees that Diablo Canyon does have
10 that does make an impact within our community.
11 Both with the small business industries, also with
12 the consultants that are hired on all sides of the
13 generation of power at Diablo Canyon. All the
14 ones that are behind me as well that enjoy a
15 living because of the power plant.

16 And then the involvement of the staff of
17 Diablo Canyon within the community compared to the
18 -- with the nonprofit organizations. San Luis
19 Obispo County has well over 1100 nonprofit
20 agencies within the county. We are one of the
21 highest per capita within the country, the second-
22 highest in the state. Santa Barbara would be the
23 first and then us. So there is a very active
24 community trying to do good and caring about where
25 we live.

1 Many of these people that form these
2 nonprofit agencies come from PG&E and Diablo
3 Canyon, both from the time and talent. They
4 donate their time, they are involved in the
5 communities, and then also they are very
6 supportive. With their talent comes matching
7 donations from PG&E, who also has been a very
8 active and positive citizen within our community.

9 And any long-term outage at the plant
10 would have a severe economic impact. And that is
11 the part that I am here to address that I don't
12 believe the report really got into. Obviously I
13 can't talk to the seismic and all those aspects.
14 But when you start looking at the recirculation of
15 funds and the quality of life that we have being a
16 rural community we have to, we have to all be
17 involved in it.

18 And when you start taking out a major
19 section of the work force that is 60 percent
20 higher salary-wise than the average, and you start
21 replacing those jobs within the community, you
22 start replacing them with much lower wages. We
23 all, our quality of life starts to go down. And
24 with that, that would have a very negative impact.

25 PG&E realized that they had many

1 defibrillators out at the plant. But then they
2 saw that the government hadn't supplied the
3 sheriff's department with any. So they offered a
4 \$25,000 grant for them to buy defibrillators so
5 the first responders would be able to have the
6 same equipment that was at the plant.

7 A couple of other things that have been
8 done. They just recently -- PG&E just recently
9 installed solar for our rehabilitation farms so
10 costs could be lowered by this nonprofit
11 community. And then they even got into recycling
12 by taking some of their poles and using them to
13 form a hog pen for the 4-H. So they are being
14 very active.

15 I am probably the least skilled at being
16 up here so I will cut it short. And I do want to
17 say thank you for your time. I do appreciate all
18 sides being represented and speaking because it
19 does create a safe, positive environment for us to
20 where we live and where we work.

21 But PG&E and Diablo Canyon in particular
22 has been an excellent citizen of our community and
23 our county for many years and I hope that this
24 will continue. And this exercise is just an
25 exercise and that the future will be positive and

1 bright for all of us. Thank you.

2 COMMISSIONER BOYD: Thank you very much.
3 Fred Giffels.

4 MR. GIFFELS: I want to thank the
5 Commission. My name is Fred Giffels and I am a
6 management consultant. I drove down from Reno
7 along I-80 this morning and I am a ratepayer of
8 PG&E's.

9 We have experience in a lot of due
10 diligence work. We have worked at both nuclear
11 plants. We don't represent nor are we party of
12 either utility here so my comments are
13 predominately three sections.

14 One is process. Which I think -- I
15 always love coming to California and hearing the
16 debate and I applaud it. I think it should be
17 more fair and balanced. Second I am going to give
18 you some comments specifically on the report
19 itself. On some items I think are overlooked and
20 should be readdressed. And lastly, I think the
21 utilities have done a pretty good job as far as
22 balance.

23 First, process. I think the report
24 itself -- I consider myself an expert. I have
25 been recognized as such in other municipalities,

1 other states, other jurisdictions. The report
2 currently needs to be structured so a stakeholder
3 can look at it and determine from a ranking
4 standpoint what is important, what is not. What
5 we do about it, what we can't do about it.

6 The report has got many, many good
7 factual observations, some very good
8 recommendations. But it is not structured so an
9 outsider, someone that doesn't have nuclear
10 experience, or even some of the utilities can
11 actually address it. It is basically a laundry
12 list.

13 The utilities have alluded to this but
14 both utilities use individual plan examinations
15 risk analysis. So you take a risk and you rank it
16 based upon its significance, its outcome. And
17 ultimately for the Commission, what it costs.
18 What it means to the ratepayers and shareholders.
19 This could easily be done in the current report
20 and note items that can't be addressed.

21 Second in process is really what you are
22 doing here at the Commission is providing all the
23 stakeholders an option study. So you could look
24 at this and say, here is our base case, the plants
25 are operating. What if we shut the plants down.

1 What if we extend the license, as you have alluded
2 to. What if we sell the plants, which I haven't
3 heard come up at all, to somebody that is larger.
4 Which I'll address in my specific comments. Or,
5 what if we just continue our existing operations
6 with certain scenarios that the Commission has
7 already asked the utilities.

8 These could be done next year.
9 Obviously you can't do it in the current report.
10 But at least from a process standpoint, a reader
11 and a stakeholder could look at this and say, what
12 is important, what do we need to do to get better,
13 what do we need to do to be more informed.

14 Specific comments. I don't think the
15 costs with respect to the current report are
16 accurate at all. I agree with a lot of the
17 utility comments and some of the other comments
18 from the CAISO. We have worked in trading, we
19 have supported other clients. I noticed
20 Commissioner Boyd mentioned the Rumsfeld impact.
21 Well let me tell you, you take those plants out of
22 service and you look at the effect on your reserve
23 margin. I don't think the report is accurate at
24 all. Let alone the price.

25 I am an advocate of renewable energy.

1 We looked at a lot of wind, solar. I am also an
2 advocate of safe, reliable nuclear power. You've
3 got to balance these things. The report I don't
4 think really correctly addresses the impact of
5 taking these nuclear stations out of service to
6 the stakeholders of California. And I will
7 mention other states, like my state.

8 I think the management processes. You
9 hit San Onofre pretty hard on that, Diablo not.
10 But one of the things the report doesn't do, which
11 I can tell you dramatically impacts the cost and
12 the impact in the perception of your stakeholders,
13 is INPO rankings and NRC are alluded to in the
14 report. But what is the cost of not performing in
15 the top quartile or even the top tier.

16 Both plants I think for the record have
17 been very well run historically. And I think when
18 the renewable advocate came the question is, can
19 they continue. Well they can, and the question
20 is, at what price.

21 Second on a specific comment. The
22 impact of a lot of these specific issues that you
23 brought up, seismic, nuclear fuel, both wet
24 storage and dry storage, et cetera, easily can be
25 covered in the process of an option study. You

1 basically evaluate the current situation, look at
2 its ranking, determine what the impact is on the
3 stakeholders, the public, the community, et
4 cetera, the tax base. You look at it with and
5 without. It is quite easy to do. And again, the
6 report doesn't rank these issues in terms of
7 importance, which could really help clarify for
8 the reader.

9 Plant aging has been addressed many
10 times during this proceeding. I totally disagree
11 with some of the comments that were made. Nuclear
12 plants, because of the NRC, because of the
13 utilities and their license commitments.

14 And I have been in both of these plants.
15 We have done due diligences on San Onofre many
16 times, I have worked at Diablo Canyon. They have
17 to when they do an upgrade, they have preventive,
18 corrective maintenance programs. And as you
19 mentioned, capital requirements. The question
20 becomes, can they extend these licenses? Well
21 that's an option. At what cost? How do you
22 replace the power?

23 The Union of Concerned Scientists, which
24 I haven't heard any comments from either utility,
25 sent the Commission a letter, which I downloaded

1 last night, and they have many, many good points
2 in here. The probability of any one of the
3 nuclear plants having an extended outage is not
4 high but it has happened. It has happened over 40
5 times in the United States.

6 That's something the Commission should
7 be looking at. What could cause an extended
8 outage? Clearly you are looking at the non-safety
9 structures, the substation, transformers, et
10 cetera. There are many more issues.

11 The utilities should have programs in
12 place. They already have them for safety systems
13 such that if these outages happen what is the
14 impact. Then go to the Commission and say, these
15 are the costs to address those impacts. Those
16 should be factored back in the option study and
17 compared to, as the renewable advocate said, what
18 if we replace it with wind, solar, et cetera.
19 That would provide me as a ratepayer, and a lot of
20 the advocates, some clear insight into what are my
21 choices, what is the cost and what is the
22 probability.

23 Lastly to wrap up. I think this is a
24 phenomenal forum. And I think the Commission
25 should be applauded and the state of California.

1 Keep the dialogue going. I think you should be
2 addressing process, structure, transparency,
3 credibility in your future dealings.

4 And I think this report is very good.
5 If it was organized a little better or cleaned up
6 I think it would be easier to read and easier for
7 the public to digest. And in the next revision of
8 this, in 2009 I guess that you have got to do, it
9 might be even better. And I think it would help
10 the utilities. I applaud both. Thank you.

11 COMMISSIONER BOYD: Thank you. Comments
12 or questions?

13 COMMISSIONER BYRON: Well those are very
14 good comments. I was struck by the last one. I
15 think we are, have some responsibility to update
16 this analysis as well in future years, which
17 Mr. Giffels reminded me of. Those are all very
18 good comments and we welcome your written comments
19 as well if you will provide them. Thank you.

20 COMMISSIONER BOYD: That's the end of
21 the request cards that we have up here. Is there
22 anyone else in the audience who -- Yes.

23 MS. McANDREWS: I am Caroline McAndrews
24 from San Onofre, director of special projects.
25 And I just wanted to clarify what seems to be an

1 apparent confusion over the independent spent fuel
2 storage facility. Just so you know, there is
3 plenty of real estate out there to store spent
4 fuel. In terms of the Unit 1 decommissioned plant
5 or decommissioning plant, there is a large
6 platform there to store spent fuel. Not a lot of
7 room for a cooling tower but for the spent fuel.

8 Until we made a change in the fuel cycle
9 length we were able to store through the end of
10 our license. Recently we made the change in our
11 fuel cycle length and that is why when we were
12 asked the question from the CEC, do you have
13 storage capacity for our spent fuel we said, no,
14 not at this time.

15 We believe in a build as you go, hoping
16 that the federal government will come up with
17 plans and agreements to accept our fuel. We are
18 not anticipating building storage capacity out
19 through the end of our license if we don't have
20 to. Or through any other period of time if we end
21 up going to license renewal.

22 So I just wanted to clarify that to you.
23 That right now our current design does not have
24 capacity for all our spent fuel but it can if we
25 decide to go forward. So there was an apparent

1 misunderstanding and I think it had to do with the
2 question that's asked. Thank you.

3 COMMISSIONER BOYD: Thank you.
4 Appreciate the clarification.

5 Anyone else in the audience? I don't
6 think we have phone capability.

7 MS. KOROSSEC: Yes we do.

8 COMMISSIONER BOYD: We do?

9 MS. KOROSSEC: Yes.

10 COMMISSIONER BOYD: Do we know if there
11 is anyone on?

12 MS. PARROW: There is no one on the
13 phone.

14 COMMISSIONER BOYD: Nobody on the phone
15 who wants to ask a question.

16 Well with that I want to thank all of
17 you for being here. And I want to give thanks to,
18 and I'll probably leave some people out, but in
19 particular the Department of Conservation and the
20 California Seismic Safety Commission folks have
21 worked very closely with our staff and with the
22 consultant on this report. They were in an
23 advisory capacity to us. And I understand they
24 did a lot of work for us and I appreciate that.
25 Now Barbara, have I left anybody out?

1 MS. BYRON: The California Coastal
2 Commission.

3 COMMISSIONER BOYD: The Coastal
4 Commission as well had folks working on this
5 project.

6 As was mentioned at the beginning the
7 task before the two commissioners sitting here is
8 to take into account this consultant report, to
9 take into account all that we have heard today and
10 all the written comments. And in the process of
11 finalizing this Commission's point of view
12 recommendations and what have you we will be
13 preparing a document that we will provide to the
14 Legislature in accordance with the requirements of
15 the legislation.

16 So you have all been very helpful to us
17 in what it is we have to do. And I am sure our
18 consultants are appreciative of the input on their
19 draft report, which I guess they will soon provide
20 as a final, if they don't just take word draft off
21 of it and hand it to us shortly.

22 And we will, of course, be integrating
23 what takes place in this process and what our
24 ultimate recommendations are into the 2008 IEPR,
25 which is something Commissioner Byron will

1 definitely be involved with along with
2 Commissioner Pfannenstiel, who represent the
3 current Integrated Energy Policy Report Committee.

4 So with that, Commissioner Byron,
5 anything more you would like to add?

6 COMMISSIONER BYRON: Thank you. There's
7 been some questions about extending the comment
8 period.

9 COMMISSIONER BOYD: Yes.

10 COMMISSIONER BYRON: And I thought I
11 would just go ahead and ask Ms. Korosec. First of
12 all, Ms. Korosec, I will ask you publicly. Are we
13 going to get the draft IEPR out today?

14 MS. KOROSEC: Yes we are, absolutely.

15 PRESIDING MEMBER BYRON: Okay, good. As
16 you can see there's a lot of pieces that come
17 together and she has been working so very hard on
18 all of this. And the schedule for this report is
19 quite tight and that's why there is a limited
20 comment period. Do we have any latitude to extend
21 the comment period to October 6 and still meet our
22 obligations under the legislative requirement?

23 MS. KOROSEC: It would be very
24 difficult. We need to release this report on
25 October 10 for an October 20 hearing. And if we

1 were to wait to get public comments until the 6th
2 that would make it very difficult to incorporate
3 those into the document.

4 PRESIDING MEMBER BYRON: So we apologize
5 very much. There was a great deal of controversy,
6 as I understand it, from the advisory committee
7 with regard to this report. A great deal of
8 effort has gone into it. We even met with
9 Assembly Member Blakeslee to make sure we
10 understood his wishes. And as it stands right
11 now, those wishes are to make sure that the report
12 is part of this IEPR. So I do need to ask that we
13 hold that comment period firm and I apologize for
14 that. Did you want to say anything else about the
15 IEPR schedule? I have a few other things.

16 MS. KOROSEC: No.

17 COMMISSIONER BYRON: You know, I do have
18 some concerns that were echoed as well by the
19 investor-owned utilities here today around the
20 scope and tone and maintaining a high level of
21 objectivity in this report. And Commissioner Boyd
22 and I will be doing some work together in terms of
23 recommendations to go with the findings.

24 I think the investor-owned utilities
25 have also demonstrated a real responsiveness and a

1 good showing here today and I really look forward
2 to seeing, or I should say I expect some very
3 constructive comments on this report.

4 You know, this industry has a terrible
5 track record at times in terms of, how can I say
6 it, in their ability to enhance public concerns
7 about nuclear safety and it always seems to
8 dissolve into an argument about nuclear or no
9 nuclear. So I am glad to see the utilities
10 embrace this report and the outcomes from it in a
11 positive way. Certainly it provides California
12 with a better handle on the impact of a major
13 outage for these four large power plants. And
14 that is my primary concern in this report. And I
15 think the legislation goes further than that and
16 we will address those additional concerns as well.

17 So clearly the study is going to
18 contribute to the safety of California's nuclear
19 plants and we are going to make some additional
20 recommendations towards improving safety and
21 public confidence. As I said, I am really glad to
22 see the utilities see this as an opportunity to
23 address both of those issues, safety and public
24 confidence. And I guess my conclusion from this
25 would probably be that even cash cows need to have

1 a facelift every once in a while.

2 And that is what we see this as, as n
3 opportunity for California to address concerns
4 that we may not be satisfied are addressed at the
5 national level.

6 Commissioner, I would like to thank
7 everybody for being here. I wouldn't say I am
8 surprised by the turnout but I am certainly
9 pleased. Particularly those that came to us from
10 San Luis Obispo, I am not sure that we have any
11 from the SONGS service territory, but thank you
12 very much for being here. Yes.

13 MEMBER OF THE AUDIENCE: I'm from there.

14 COMMISSIONER BYRON: Thank you for being
15 here also.

16 COMMISSIONER BOYD: I have just been
17 advised that Assemblyman Blakeslee would like to
18 make a few comments. Are you there, Assemblyman.

19 ASSEMBLYMAN BLAKESLEE: Yes, I am, thank
20 you for the opportunity. Is this a good time.

21 COMMISSIONER BOYD: We hear you fine.
22 Now is a good time.

23 ASSEMBLYMAN BLAKESLEE: Well first I
24 want to say I really enjoyed listening to the
25 proceedings from San Luis Obispo. The webcast

1 worked perfectly through the utility's
2 presentation and it then ceased operating, I think
3 through a defect on my side. But I will say I
4 certainly enjoyed the portion I listened to.

5 Second, I wanted to thank everyone who
6 has been so instrumental in helping all of us make
7 so much progress on this complex issue of
8 reliability, particularly in the most seismically
9 active state in the lower 48. It is an issue of
10 great importance to me personally, obviously,
11 because I do, in fact, represent a district which
12 has one of these very large baseload facilities
13 which is in very close proximity to a large and
14 relatively poorly known fault system.

15 And I applaud both those stakeholders
16 who have been arguing for more information and for
17 the utilities which, as I heard in comments
18 earlier in this meeting, suggest that yes more
19 information is useful for all of us. And I think
20 it demonstrates how California again is taking a
21 leadership position on these larger questions of
22 safety and reliability, costs, renewables,
23 transmission and a whole collection of issues
24 which are attached to this matter.

25 I wanted to say that I think there's an

1 enormous opportunity over the coming years to lay
2 to rest some of the questions or concerns.
3 Obtaining the information we need I think will
4 increase our confidence and reliability on the
5 decisions we make.

6 And I wanted to also say a special hello
7 to Mr. Cluff and Mr. Abrahamson who were
8 colleagues of mine at an earlier point in my life
9 and make one comment to Mr. Cluff. In particular
10 he cited the failure of Japan to consider certain
11 types of earthquakes in proximity to the largest
12 nuclear power plant in the world, the one that is
13 now off-line.

14 And I would simply say that our
15 continued analysis of potentially unconsidered
16 tectonic activity that had a potential for
17 convergent motion that's unexpected type of
18 faulting will be an important next step in our
19 long-term seismic analysis of the Central Coast in
20 the vicinity of the Hosgri.

21 And I also wanted to thank Pat Mullen
22 for all of his work. He has been a dear friend
23 for many years and he has done a tremendous job in
24 terms of pulling the community together to make
25 sure that our community feels a strong sense of

1 connection to the safe operation of our facility.

2 Pat has been a real hero in that regard.

3 I also wanted to tip my hat to Rochelle
4 Becker and Union of Concerned Scientists who have
5 been deeply involved in this issue over the years
6 and many of the advances that have been made
7 almost certainly would not have occurred without
8 their steady involvement.

9 And I want to thank the Commissioners
10 and the staff in particular for the seriousness
11 with which they have taken this matter. I
12 consider it a privilege to work with them. I have
13 been consistently impressed by their
14 professionalism.

15 And I again thank everyone for their
16 involvement. I think this is important work which
17 will ultimately see real standard setting, similar
18 sorts of questions regarding safety and
19 reliability. Not just in the country but around
20 the world.

21 COMMISSIONER BYRON: Assembly Member,
22 this is Commissioner Byron. While we are handing
23 out so many thanks I would also like to thank you
24 for passing a budget last week. That was great.

25 (Laughter)

1 COMMISSIONER BOYD: Commission Byron is
2 feeling quite good because we started getting paid
3 again, we think.

4 COMMISSIONER BYRON: It is extraordinary
5 to have you listening in and I hope we didn't say
6 or do anything we shouldn't have.

7 ASSEMBLYMAN BLAKESLEE: Hey, who is
8 going to remember?

9 (Laughter)

10 ASSEMBLYMAN BLAKESLEE: It's between us,
11 a group of friends.

12 COMMISSIONER BOYD: Thank you for your
13 attention to this matter and your willingness to
14 commit so much of your time to this subject.

15 COMMISSIONER BYRON: It says a lot.

16 COMMISSIONER BOYD: With that, are there
17 any other folks on the line? No.

18 Well thank you, everybody, we can
19 adjourn this workshop. Thanks for your input.

20 (Whereupon, at 12:23 p.m., the Joint
21 Committee Workshop was adjourned.)

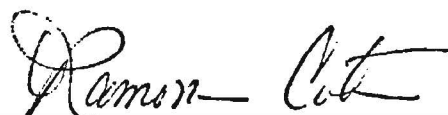
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CERTIFICATE OF REPORTER

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 3rd day of October, 2008.

A handwritten signature in cursive script, appearing to read "Ramona Cota", is written over a horizontal line.

RAMONA COTA