

STAFF WORKSHOP  
BEFORE THE  
CALIFORNIA ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

In the Matter of: )  
Preparation of the 2009 Integrated Energy Policy Report ) Docket No.  
and ) 09-IEP-1G  
Implementation of Renewables ) Docket No.  
Portfolio Standard Legislation ) 03-RPS-1078  
RPS Proceeding )  
----- )

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

MONDAY, DECEMBER 1, 2008  
10:05 A.M.

**ORIGINAL**

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

COMMISSIONERS PRESENT

Jackalyne Pfannenstiel, Chairperson

Jeffrey D. Byron, Commissioner

Karen Douglas, Commissioner

ADVISORS PRESENT

Laurie ten Hope

Tim Tutt

Panama Bartholomy

STAFF and CONTRACTORS PRESENT

Mike Leao

Drake Johnson

Kevin Baker

Rachel Salazar

Joe Fleshman

Wilson Rickerson (via teleconference)  
Rickerson Energy Strategies  
KEMA Contractor

Robert C. Grace  
Sustainable Energy Advantage, LLC  
KEMA Contractor

Karin Corfee  
KEMA Contractor

ALSO PRESENT

Robert Kinosian  
California Public Utilities Commission

Ray Pingle  
Sierra Club

ALSO PRESENT

Steven Kelly  
Independent Energy Producers Association

Dan Patry  
Pacific Gas and Electric Company

John Kerrigan  
Los Angeles Department of Water and Power

Mary Lynch  
Constellation Energy Resources

Craig Lewis  
Greenvolts

Tom Faust  
Redwood Renewables

Marci Burgdorf  
Southern California Edison Company

David Townley (via teleconference)  
Infinia Corporation

Toby Couture (via teleconference)  
National Renewable Energy Laboratory

Andy Katz (via teleconference)  
Breathe California

Molly Sterkel (via teleconference)  
California Public Utilities Commission

Gregg Morris (via teleconference)  
Green Power Institute

Joseph Langenberg (via teleconference)  
Central California Power

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

2 10:05 a.m.

3 COMMISSIONER DOUGLAS: Welcome to the  
4 third of three staff workshops on the feed-in  
5 tariffs with the Renewables and IEPR Committees.

6 My name's Karen Douglas; I'm the  
7 Presiding Member of the Renewables Committee. To  
8 my immediate left is Chairman Jackie Pfannenstiel.  
9 And to her left Commissioner Jeff Byron. Chairman  
10 Pfannenstiel is a Member of the Renewables  
11 Committee. And both are Members of the IEPR  
12 Committee, which is fully represented here.

13 And then to Commissioner Byron's left we  
14 have Robert Kinosian, who is an Advisor to  
15 Commissioner Bohn at the PUC. To his left, Laurie  
16 ten Hope, Advisor to Commissioner Byron. And to  
17 my right Panama Bartholomy, my Advisor.

18 I appreciate everyone's participation  
19 here today. These feed-in tariff workshops are  
20 the result of the 2007 IEPR directing the staff to  
21 develop an assessment of feed-in tariffs for  
22 California.

23 The purpose of today's workshop is to  
24 take public comments on the recommendations and  
25 implementation issues in the California feed-in

1 tariff design policy options report, in order to  
2 assist the staff, the consultant, and Committee  
3 Members in making decisions related to the  
4 finalization of the report.

5 The recommendations were developed based  
6 on IEPR policy, Renewables Committee direction and  
7 stakeholder input from previous workshops.

8 The first workshop we had on July 30th  
9 focused on the 2007 IEPR recommendation that  
10 Energy Commission Staff explore the possibility of  
11 a feed-in tariff for facilities over 20 megawatts.

12 We took comments on the report, the  
13 consultant report, exploring feed-in tariffs for  
14 California, feed-in tariff design and  
15 implementation issues and options. That report  
16 has been finalized and is posted on our website.

17 The second workshop on October 1st  
18 reviewed the draft consultant report, California  
19 Feed-in Tariff Design and Policy options. It  
20 focused on tariff design and policy options  
21 building off of the first workshop.

22 The second report presented optional  
23 policy paths using drivers identified by the  
24 staff, consultant and the Renewables Committee.

25 Again, today's workshop will focus on

1 recommendations in the consultant's second draft  
2 of this report. The report that we will be  
3 looking at today, the draft that we'll be looking  
4 at today, as recommendations for the expansion of  
5 feed-in tariffs in California.

6 And, again, the recommendations are  
7 based on direction from the Renewables Committee  
8 and input from stakeholders.

9 We appreciate everybody's participation  
10 here today, and we very much look forward to  
11 hearing from you. Thank you.

12 Chairman Pfannenstiel.

13 CHAIRPERSON PFANNENSTIEL: I'd just like  
14 to observe that this is a very important subject  
15 for us as we are trying to make sure that we not  
16 just meet the renewables targets, even though the  
17 Governor has raised the bar on that, but that we,  
18 in fact, get all of the renewables that should be  
19 coming forward in the state.

20 And I would have to say that it's  
21 taking, the consideration of feed-in tariffs has  
22 taken sort of a strange turn from my perspective,  
23 from where I thought it was going to go. And  
24 that's largely because of the input from the  
25 stakeholders. All of your input has been heard,

1 listened to, accounted for, incorporated. So we  
2 appreciate people being here to help us with this.

3 COMMISSIONER BYRON: I'll be brief.  
4 Chairing the 09 IEPR going forward, we're going to  
5 be very interested in this topic. I'd note,  
6 having reviewed all the materials for the  
7 workshop, I think staff's put together what looks  
8 to be another very interesting workshop.

9 But I also think the contractor involved  
10 here, and comments received from all the  
11 stakeholders, have demonstrated that this  
12 Commission's probably done an excellent job of  
13 identifying the value of the feed-in tariff for  
14 implementing our energy policies around  
15 renewables.

16 And now the hard work is designing that  
17 tariff by the PUC. And that's where I think this  
18 workshop's extremely important. I'm really glad  
19 to have one of my colleague's representatives here  
20 in Robert Kinosian. And we look forward to  
21 working with them.

22 I'd also note that I just received a  
23 press release this morning that our Governor was  
24 down in southern California this morning, in  
25 Fontana, to announce the completion of the first

1 of 150 planned commercial rooftop solar  
2 installations in southern California.

3 And you may all recall that this is  
4 initiative that he undertook with the PUC and  
5 Southern California Edison to install about 250  
6 megawatts of peak generating capacity in southern  
7 California.

8 Of course, this will all be rate-based  
9 generation that'll be owned by Southern California  
10 Edison on the distribution side of the meter. But  
11 it shows that this kind of generating capability  
12 has a big role to play in California going  
13 forward.

14 I look forward to working with the PUC  
15 and figuring out how we're going to enable the  
16 feed-in tariff so that we can see a lot more of  
17 this kind of renewable generation.

18 Thank you, Commissioner. Sorry for my  
19 long comments.

20 MR. KINOSIAN: I'd just like to say  
21 that, you know, the PUC recognizes the importance  
22 in the feed-in tariff as a way to try and meet a  
23 33 percent RPS goal. We have an existing feed-in  
24 tariff program, and expanding it is, I would say,  
25 definitely one of the tools we're going to be

1 looking at it in trying to meet that 33 percent  
2 goal.

3 And as Commissioner Byron said, I think  
4 the issue is how best to do it, not whether to do  
5 it.

6 COMMISSIONER DOUGLAS: Thank you very  
7 much. At this point we will turn the workshop  
8 over to Mike Leason of the renewable energy office.

9 MR. LEASON: Thank you, Madam Chair. For  
10 the record, I'm Mike Leason, Supervisor, integrated  
11 energy and climate change units, renewable energy  
12 office.

13 Before I get to my introductory  
14 presentation there are a few housekeeping items I  
15 need to go over. First, in regard to our WebEx  
16 participants, I wanted to reiterate that you will  
17 be able to see the presentations. And if you  
18 would like to ask a question via WebEx you can use  
19 the raise-hand icon, or chat directly to the WebEx  
20 administrator.

21 WebEx users are muted on entry. And we  
22 will un-mute WebEx users during the question-and-  
23 answer portion of the workshop after lunch today.

24 Handouts are available at the entrance  
25 to the hearing room. Restrooms are located across

1 the foyer on the first floor here. There is a  
2 snack bar on the second floor up the stairs and  
3 directly across the atrium. There are several  
4 restaurants located within walking distance of the  
5 Energy Commission.

6 And in the event of an emergency the  
7 alarm will sound. And I would ask our guests to  
8 follow Energy Commission Staff out the main  
9 entrance onto 9th Street, and we will evacuate to  
10 the park that is kitty-corner from the Energy  
11 Commission at the intersection of 9th and P.

12 Regarding groundrules. We do ask that  
13 people who would like to make comments utilize the  
14 blue cards that are available on the table with  
15 the handouts at the entrance to the hearing room.  
16 And if you could bring those cards up to myself or  
17 Energy Commission Staff that is in the room. Make  
18 sure you indicate your name, organization, a brief  
19 message on what you would like to speak to.

20 And also if you could provide a business  
21 card to our court reporter, that would be very  
22 helpful.

23 And in addition, please make sure to use  
24 the microphone at the podium, as our WebEx  
25 participants won't be able to hear you speak if

1 you are not on the microphone.

2 During the afternoon's open discussion,  
3 the Q&A format, again we'll take blue cards in the  
4 room first. WebEx participants, we will take you  
5 after we've had a chance to get through all the  
6 blue cards in the room. And, again, if you want  
7 to chat directly to the host or submit a question  
8 using the raised-hand icon, you can do that, as  
9 well.

10 And finally, for those of you that are  
11 orally participating over the phone via WebEx, we  
12 will provide an opportunity prior to the close of  
13 the question-and-answer session to unmute the  
14 phone lines and take any questions we may have  
15 over the phone.

16 Today's agenda. We've had opening  
17 remarks from Commissioners. Covering the ground  
18 rules now. I'll follow this up with a brief  
19 introductory presentation. And then we'll hear  
20 from our KEMA team, contractors, who will be  
21 providing us an update on U.S. policy regarding  
22 feed-in tariffs. And also reviewing changes to  
23 the reports and the recommendation that was  
24 included in the report based on direction from  
25 Commissioners and feedback from stakeholders.

1           We'll break for lunch from approximately  
2 11:30 to 12:45; followed by an afternoon session  
3 where we'll take stakeholder comments from 12:45  
4 to 2:00. Have some time for closing remarks from  
5 the Commissioners from 2:00 to 2:15. And briefly  
6 wrap up and talk about next steps; and adjourn by  
7 2:20. And, if necessary, we can take additional  
8 time this afternoon for public comment.

9           Okay, with that I would like to move to  
10 my introductory presentation. And we're pulling  
11 that presentation up on WebEx.

12           Okay, briefly I'll be covering our goals  
13 for today in the workshop. Review reasons for  
14 having an expanded feed-in tariff. Also briefly  
15 review the policy drivers that were used to help  
16 craft the policy paths that were presented in the  
17 policy options report.

18           Briefly summarize some of the  
19 stakeholder feedback we received for those policy  
20 paths. Again, briefly review the actual  
21 recommendation in the report. Also briefly cover  
22 how this process influenced the recommendations  
23 that were included in the 2008 IEPR update.

24           Also, I'll briefly cover some of the  
25 feed-in tariff policy interactions with other

1 policies. And, again, briefly review  
2 implementation issues which will actually be  
3 discussed in more detail in Bob Grace's  
4 presentation. And briefly talk about next steps.

5           Regard to workshop goals for today, our  
6 goals for today are to review the latest  
7 developments in regard to feed-in tariff policies  
8 in the United States. Review changes to the two  
9 consultant reports, the Feed-in Tariff Issues and  
10 Options report, which was the subject of the June  
11 30 workshop; and the Design of Policy Options  
12 report.

13           To provide a final opportunity for  
14 stakeholders to comment on staff recommendations  
15 in the policy options report. And also provide  
16 stakeholders with a chance to share their  
17 insights, comments and suggestions in regard to  
18 implementation issues.

19           Why have an expanded feed-in tariff? An  
20 expanded feed-in tariff for California would offer  
21 a second financing strategy for renewable energy  
22 developers, in addition to the existing renewable  
23 portfolio standard, or RPS, competitive  
24 solicitation.

25           This additional funding approach offers

1 another tool for achieving the state's renewable  
2 energy objective of 33 percent renewable energy by  
3 2020.

4 If the state were on a track to meet the  
5 RPS' renewable energy objective of 20 percent by  
6 2010, we would likely not find ourselves here  
7 today considering a policy recommendation for an  
8 expanded feed-in tariff.

9 However, since we're not on track to  
10 meet that objective, and have an even higher  
11 objective to achieve by 2020, and since those  
12 renewable energy objectives are critical for  
13 meeting all the greenhouse gas reduction goals,  
14 and also to reduce risk to ratepayers' continued  
15 reliance on fossil fuels, it is necessary to adopt  
16 new approaches for developing renewable energy  
17 resources.

18 As demonstrated in Europe, the advantage  
19 of a feed-in tariff is its transparency through  
20 the establishment of a guaranteed price buyer and  
21 long-term revenue stream because feed-in tariffs  
22 can reduce the cost and complexity of the  
23 contracting process and guarantees a price,  
24 developers are better able to secure necessary  
25 project financing.

1           And expanded feed-in tariff adds another  
2 arrow in California's quiver to establish a  
3 diverse mix of sustainable renewable resources.

4           In regard to potential feed-in tariff  
5 policy paths for California, the policy paths that  
6 are presented in the policy options report were  
7 crafted using policy drivers that were developed  
8 based on direction from the Renewables Committee  
9 and stakeholder feedback.

10           These policy drivers relate strictly to  
11 the feed-in tariff policy options identified in  
12 the policy options report and do not have any  
13 policy applications beyond the context of this  
14 report.

15           The highest priority drivers increase in  
16 the quantity of renewable energy generation and  
17 providing financial security for developers  
18 reflect the need to increase the pace of renewable  
19 energy development, and the need to address the  
20 impediments to that objective associated with the  
21 existing RPS solicitation. Specifically the high  
22 rate of contract failure.

23           The other drivers, while an important  
24 consideration, are relatively lower priority than  
25 the first two drivers. Specifically, increasing

1 the diversity of renewable energy resources,  
2 supporting the development of sustainable  
3 technologies, and helping to stabilize the cost of  
4 generation through establishing a diverse mix of  
5 resources were identified as medium-level drivers.

6 And finally, reflecting policy direction  
7 from the Governor to achieve 20 percent of RPS  
8 targets through biomass, the policy driver to  
9 support biomass projects through an expanded feed-  
10 in tariff was also included.

11 In summary, these policy drivers, in  
12 addition to the feed-in tariff policy  
13 recommendations in the 2007 IEPR, shape the policy  
14 options that were analyzed in the feed-in tariff  
15 design and options report that was the subject of  
16 the October 1, 2008 staff workshop.

17 In regard to the stakeholder support for  
18 the feed-in tariff, at the October 1st workshop  
19 staff solicited comments from stakeholders  
20 regarding the proposed feed-in tariff policy  
21 paths.

22 Significant support for policy path  
23 number 6, a feed-in tariff for projects up to 20  
24 megawatts, cost-based and differentiated by  
25 technology and size, arose from the renewable

1 energy developers and environmental groups,  
2 including Infinia, SolFocus, Solar Alliance, Fuel  
3 Solar Energy, Union of Concerned Scientists, and  
4 Breathe California.

5 In addition, there was also stakeholder  
6 support, including from the Sierra Club and  
7 Windworks, for a full market feed-in tariff open  
8 to all technologies with no restrictions on  
9 project size.

10 However, stakeholder support primarily  
11 coalesced around an increased feed-in tariff for  
12 projects up to 20 megawatts, cost-based,  
13 differentiated by technology and size.

14 Investor-owned utilities provided mixed  
15 feedback to the proposed policy paths. PG&E  
16 believed the combination of the existing under 1.5  
17 megawatt program and the existing RPS program, in  
18 conjunction with their voluntary offerings as the  
19 best and most cost effective approach for  
20 achieving renewable energy goals.

21 They don't believe that an expanded  
22 feed-in tariff will address permitting and  
23 transmission barriers, which they see as the  
24 primary obstacles to attaining RPS goals.

25 SCE, however, has expressed support for

1 expanding feed-in tariffs up to -- for projects up  
2 to 20 megawatts, and have included a standard  
3 offer contract in their 2009 procurement plan to  
4 that effect.

5 Which brings us to the report  
6 recommendation. Based on consideration of  
7 stakeholder feedback and direction from the  
8 Renewables and IEPR Committees, staff included  
9 policy option 6 as the preferred recommendation in  
10 the revised California feed-in tariff design and  
11 policy options report.

12 Specifically this recommendation calls  
13 for expanded feed-in tariff for projects up to 20  
14 megawatts based on the cost of generation  
15 differentiated by technology and size.

16 In addition, the report also includes a  
17 recommendation that the Energy Commission and the  
18 CPUC continue to work together to evaluate feed-in  
19 tariffs for projects over 20 megawatts.

20 These report recommendations were also  
21 reflected in the 2008 IEPR recommendation for  
22 feed-in tariffs. Specifically, the 2008 IEPR  
23 recommends that the PUC immediately implement a  
24 tariff for projects up to 20 megawatts in size  
25 based on the cost of generation. And that the

1 Energy Commission and the CPUC continue to work  
2 together to evaluate a tariff for projects over 20  
3 megawatts.

4 The recommendations in these reports  
5 will continue to inform the IEPR process moving  
6 forward, and guide the development of a feed-in  
7 tariff as we move forward toward a potential  
8 implementation phase.

9 Feed-in tariff and other policy interaction.  
10 Implementation of an expanded feed-in tariff will  
11 impact other renewable energy policies including  
12 the Governor's recent executive order S-14-08, the  
13 existing RPS solicitation and greenhouse gas  
14 reductions mandated under the California climate  
15 change legislation.

16 In addition, the renewable energy  
17 transmission initiative process, the development  
18 of competitive renewable energy zones, would also  
19 be affected.

20 Regarding the Governor's executive  
21 order, staff believes that the report's  
22 recommendation will support the executive order's  
23 call for all retail sellers of electricity to  
24 serve 33 percent of their load with renewable  
25 energy by 2020, specifically by providing more

1 transparency and certainty for developers and  
2 financiers in the contracting process recommended  
3 in the feed-in tariff would support the executive  
4 order by expediting development of new renewable  
5 energy projects.

6 In addition the RPS solicitation would  
7 be another area of policy interaction. However,  
8 the feed-in tariff would act in parallel and in  
9 concert with the existing RPS solicitation.

10 Next slide. The recommendation to  
11 evaluate a tariff for projects over 20 megawatts  
12 also represents the opportunity to align tariffs  
13 for larger projects with the RETI process through  
14 which competitive renewable energy zones are  
15 identified.

16 These zones are intended to address  
17 transmission barriers to regions of high renewable  
18 resources which would help with the permitting and  
19 siting challenges.

20 Once transmission is established to  
21 these zones, a feed-in tariff could help to  
22 expedite project financing and development.  
23 Consequently, the combination of the two programs  
24 could contribute significant renewable energy  
25 capacity.

1           Regarding implementation issues, we will  
2           hear from Bob Grace more on these in his  
3           presentations, so I think we can skip to the next  
4           slide.

5           Next steps. The next steps are to  
6           revise the reports based on testimony from today's  
7           workshop. And our objective is to publish the  
8           reports by January of 2009. And then to begin  
9           moving towards an implementation phase in 2009  
10          based on further direction through the IEPR  
11          process and any possible legislation.

12          That concludes my presentation. I will  
13          be happy to answer any questions.

14          COMMISSIONER DOUGLAS: Thank you very  
15          much.

16          MR. LEAON: Okay. All right, thank you.  
17          With that, we'll hear from our first member of the  
18          KEMA team, Wilson Rickerson, who will be making  
19          his presentation via WebEx.

20          (Pause.)

21          MR. RICKERSON: Hello.

22          MR. LEAON: Can you hear us, Wilson?

23          MR. RICKERSON: Is my application up and  
24          running?

25          MR. SPEAKER: Yeah, you have something

1 in front of your application, though.

2 MR. RICKERSON: How about that?

3 MR. SPEAKER: You have something still  
4 in front of it. If you go to your screen, there's  
5 a screen in front of it that's coming up.

6 MR. RICKERSON: Okay, how about that?

7 MR. SPEAKER: Do you have like a chat-  
8 box in front or something?

9 (Pause.)

10 MR. SPEAKER: You know what, if you  
11 want, I don't exactly know why, but there's a box  
12 that's covering your slide. If you want I can  
13 just control the slides from this end.

14 MR. RICKERSON: Sure, sounds fine.

15 MR. SPEAKER: Okay.

16 MR. RICKERSON: Trying to do a  
17 (inaudible).

18 (Pause.)

19 MR. RICKERSON: (inaudible)?

20 MR. SPEAKER: Yeah, can you see it?

21 MR. RICKERSON: It's not (inaudible)  
22 just click.

23 (Pause.)

24 MR. SPEAKER: Wilson, I gave you the --  
25 again; go ahead and try it again.

1 MR. RICKERSON: Okay.

2 MR. SPEAKER: All right.

3 MR. RICKERSON: -- application. All  
4 right. How am I doing?

5 MS. CORFEE: Wilson, this is Karin.  
6 There's still a problem. I'm going to recommend  
7 that we flip the presentations and try to  
8 troubleshoot what's going on with you presenting  
9 your --

10 MR. RICKERSON: Sure.

11 MS. CORFEE: Okay, so.

12 MR. LEAON: All right, while we have  
13 technical difficulties with Wilson's presentation,  
14 we'll go ahead and have Bob come up and where we  
15 won't have similar technical difficulties.

16 MR. GRACE: Good morning, Commissioners,  
17 Advisors, stakeholders. Glad to be here wrapping  
18 up this project.

19 This report is really at the boundary  
20 between deciding what to do and all the, as was  
21 stated earlier, all the hard work, decisions and  
22 choices of how to implement it.

23 So, the purpose of my talk is to review  
24 the proposed final results of the design policy  
25 option exploration, the path that we took to get

1 here, and where we go from here.

2 So, in this presentation I will be  
3 reviewing the changes that were made to both  
4 reports, the feed-in tariff issues and options  
5 report, as well as the second draft report.

6 I will touch on the different phases of  
7 the process. The first phase in which the policy  
8 issues and options were identified and explored.  
9 The policy drivers, experience elsewhere, and  
10 stakeholder feedback that was taken from that  
11 phase.

12 The second phase which focused on the  
13 representative policy paths, which were built on  
14 lessons learned from particularly Spain and  
15 Germany. The division of the various issues and  
16 options and to core and noncore implementation  
17 issues, the interactions among those paths. And  
18 again, stakeholder feedback.

19 And then focus on the recommendations,  
20 which, as we've touched on, focus on a cost-based  
21 feed-in tariff for generation under 20 megawatts.  
22 And the potential broader application of feed-in  
23 tariffs in the future.

24 And finally, focusing on the  
25 implementation issues which include the process of

1        establishing initial tariff prices, adjusting  
2        those tariff prices over time, the procedures that  
3        would need to be implemented, as well as the  
4        philosophy behind them.

5                A number of choices that could be made  
6        in order to support efficient transmission  
7        distribution and supply portfolio planning; what  
8        can we do in building the feed-in tariffs to most  
9        efficiently interact with all the other needs of  
10       the system.

11               And identify possible legislative needs  
12       to move forward.

13               So, starting with the changes to the  
14       draft reports, the first paper, Exploring Feed-in  
15       Tariffs in California, Feed-in Tariff Design and  
16       Implementation Issues and Options, the changes  
17       were few. They were mostly editorial in nature,  
18       clarifying some dates, updating some references,  
19       and certainly making sure some of the references  
20       were current, since there have been further  
21       developments during the course, first as the  
22       CPUC's orders regarding the definition of RECs and  
23       the allowing (inaudible) RECs.

24               The second paper, California Feed-in  
25       Tariff Design and Policy Options, the changes also

1 include a number of minor edits and updates.

2 But more substantively addressed fine-  
3 tuning some of the chapter on policy interactions.  
4 In particular, some additional text was added to  
5 talk about the interaction of feed-in tariffs with  
6 the existing RPS. Noting that for under 20  
7 megawatt scale projects there was not a lot of  
8 concern since most of the RPS contracts had been  
9 with projects in excess of 20 megawatts.

10 But for those projects over 20  
11 megawatts, there may or may not be issues to  
12 wrestle with in terms of the interaction between  
13 feed-in tariffs and RPS. Whether there were  
14 concerns or not depended heavily on some of the  
15 design details yet to be determined.

16 So, really highlighting that the  
17 conditions under which there may or may not be  
18 issues or concerns, and some of the things to look  
19 out for.

20 In addition, a couple of appendices were  
21 added, basically staff summaries of the comments  
22 in workshop number one and number two, replacing a  
23 summary chapter that had been in there in the  
24 earlier draft.

25 And we added the last chapter to reflect

1 the recommendations for the feed-in tariff design  
2 and implementation, the core issues, and  
3 identifying the implementation issues to be  
4 considered in the IEPR process going forward.

5 I seem to have lost control of the --  
6 there we go. So, the first phase of the process  
7 started with articulating the goals, objectives  
8 and policy drivers. Now Mike earlier talked about  
9 the policy drivers. I won't reiterate that here.

10 But it's critically important in  
11 designing any policy to understand where you're  
12 going and why. So, the process started here by  
13 focusing on the overall goals and objectives, as  
14 well as the policy drivers that were driven by the  
15 Renewable Energy Committee input.

16 But also to consider the policy as  
17 subject to a number of important constraints.  
18 Available transmission, siting, permitting, the  
19 feasible buildout time, cost effectiveness, and  
20 environmental and resource sustainability.

21 So all of those really laid the  
22 groundwork and provided some criteria for  
23 considering options.

24 We took a look at experience elsewhere  
25 in feed-in tariffs, focusing on in particular the

1 experience to date in Europe, as well as Ontario  
2 and Prince Edward Island, Brazil, Korea. A number  
3 of different countries have already had a good  
4 deal of experience.

5 We focused in at a finer level on three  
6 countries, Denmark, Spain and Germany, in terms of  
7 their experience, as well as taking a look at what  
8 has been done to date in the United States.

9 Now, from there we developed something  
10 of a laundry list of the feed-in tariff policy  
11 design issues. I won't go through them all here.  
12 You've seen this slide and the following one in  
13 the October 1st workshop.

14 Just to review here, we had identified  
15 the full range of issues, potential options for  
16 those design issues, and included an analysis of  
17 pros and cons. For eligibility, setting the  
18 price, the tariff structure, contract duration,  
19 the approach to adjusting the price over time and  
20 when those adjustments would be made, the  
21 magnitude of price adjustments, issues that had to  
22 do with queuing, tariff differentiation and then a  
23 number of other implementation issues.

24 From the workshop number one, the June  
25 30th workshop, quite a number of stakeholder

1 comments were requested in response to questions  
2 that were in the workshop announcement.

3 There was also an online survey created  
4 to seek stakeholder input on very specific and  
5 targeted questions as regards to specific design  
6 options. All of that information is available on  
7 the Energy Commission's website.

8 The key takeaways from stakeholder  
9 feedback in the first workshop were, first, the  
10 nonutility stakeholders tended to support a broad  
11 range of different feed-in tariff options in order  
12 to grow the market and close the gap between net  
13 metering and the RPS.

14 The utilities, as a whole, at that point  
15 stated that feed-in tariffs would conflict with  
16 the RPS and would raise costs. So it had been  
17 raising some concerns.

18 And there was certainly a recognition by  
19 all parties that feed-in tariffs would not address  
20 all constraints. Nothing about a feed-in tariff  
21 was going to get transmission built, so this is  
22 not the tool that will solve all of the issues and  
23 barriers.

24 Moving on to phase two, which culminated  
25 in the October 1st workshop, we focused on lessons

1 learned from Germany and Spain. Some important  
2 lessons that were taken away from experience there  
3 were that long-term generation cost-based payments  
4 can rapidly grow the renewable energy markets and  
5 achieve, in that case, national targets. And that  
6 technology-specific tariffs can create diversity  
7 among different technologies when they're set at  
8 appropriate levels.

9 We've also learned that investor  
10 security is determined both by price certainty and  
11 policy certainty. So one without the other is  
12 insufficient.

13 Value-based incentives, we've learned,  
14 may not put the type of downward pressure I think  
15 we'd all like to see on renewable energy prices  
16 and costs. And have had less success than cost-  
17 based.

18 Feed-in tariffs, according to the  
19 European studies, have been shown to suppress  
20 wholesale market prices, as would any policy  
21 that's really increasing the penetration of  
22 renewables.

23 Both Spain and Germany ended up deciding  
24 to distribute the policy costs nationally.  
25 Because renewables tend to be geographically

1 concentrated, it was deemed reasonable to not  
2 unfairly burden a subset of consumers with the  
3 costs of a broad social policy.

4 Long-term payments therefore have been  
5 used successfully in both Germany and Spain. But  
6 it's been clear that implementing support for the  
7 emerging resources is particularly challenging.  
8 It's hard to get the price right; it's hard to  
9 control the rate at which resources will be built  
10 out. And it's also been learned that setting the  
11 correct price for biomass can also be challenging.

12 The second phase also focused on  
13 developing feed-in tariff policy design options.  
14 The issues and options report had identified the  
15 range of design issues and options, and there are  
16 lots of different combinations.

17 So, in order to try and cut through that  
18 clearly and quickly, first the issues were sorted  
19 into three categories. Core policy issues, and  
20 these really represented the high-level policy  
21 decisions that would dictate California's feed-in  
22 tariff strategy, as well as the critical  
23 characteristics of alternative feed-in tariff  
24 paths.

25 So these are really the differentiators

1 that created the forks in the road of different  
2 directions that could be taken.

3 In addition, there were noncore policy  
4 issues identified. These are important still to  
5 the design and they would modify the design, but  
6 they don't fundamentally alter its core structure.

7 They would require decisions to move  
8 forward, but really independent of the different  
9 policy paths selected, and therefore they've  
10 really been appended to each of the policy paths.

11 And then there was a third category of  
12 issues, the implementation details. All these  
13 need to be addressed if you decide to move forward  
14 with the feed-in tariff, but don't require major  
15 policy decisions at this point in time. And so  
16 the discussion on those was deferred.

17 The core design issues had been narrowed  
18 through consideration of all the things we've  
19 talked about, the policy drivers, the Commission's  
20 Renewables Committee input, the pros and cons that  
21 were laid out in the issues and options report,  
22 the practical constraints and California  
23 precedents that needed to be accommodated,  
24 particularly the stakeholder comments, as well as  
25 the Commission Staff -- analysis.

1           There were some issues that were found  
2           to have only a single viable choice, so those were  
3           basically incorporated into all of the policy  
4           paths going forward. And the remaining issues  
5           were used to craft a representative range of  
6           policy paths.

7           Now, these policy paths, we developed  
8           six of them in this second phase. And they were  
9           each fundamentally distinct. The idea was to put  
10          out six different strawmen which were each  
11          radically different and could elicit stakeholder  
12          feedback, and help us quickly steer in one  
13          direction or another.

14          These were constructed from the narrowed  
15          options. And represented models that were, in and  
16          of themselves, nothing magical about them, but  
17          they were intended to stimulate dialogue. And  
18          these have been guided by, again, all the things  
19          that we have talked about earlier.

20          The representative range of options  
21          spanned a wide range of direction, scope and  
22          timing. Again, representative forks in the road.  
23          Yet they were also crafted as paths that had  
24          potential interactions. Some were baby steps on  
25          the way to broader application, or had different

1 narrow application. And so some could be seen as  
2 steps along the way to a broader trajectory.

3 There was always an implicit seventh  
4 choice, which was not doing a feed-in tariff,  
5 maintain the status quo.

6 As we've seen all of these policy paths,  
7 I won't dwell on them in detail here. Just  
8 touching quickly on the six that were introduced,  
9 the policy path number one was really the full  
10 cost-based feed-in tariff, German style, unlimited  
11 size, cost-based and differentiated, using some  
12 competitive benchmarks to help establish the  
13 price.

14 But in this case it would not have been  
15 implemented until a later trigger based on actual  
16 RPS performance. And the role of emerging  
17 resources would have been capped.

18 The second path was focused on larger  
19 generators, in excess of 20 megawatts, but with a  
20 value-based price structure. Really what my  
21 colleague Wilson referred to as MPR on steroids.  
22 But it would have been implemented in a very  
23 narrow three-year pilot program, one utility. So  
24 it was an attempt to experiment with this on a  
25 limited basis before expanding it more broadly.

1           The third path focused on the German-  
2           style differentiated cost-based feed-in tariff  
3           approach, but would have been limited to within  
4           competitive renewable energy zones. And only  
5           focused on generation greater than 1.5 megawatts.  
6           So a very targeted application.

7           Policy path number four focused on a  
8           technology-specific application, in this case  
9           looking at a solar-only feed-in tariff. And  
10          policy path number five looked at a biomass-only  
11          feed-in tariff. Both of those cost-based.

12          The solar-only one was considered as a  
13          pilot program only within one utility, whereas the  
14          biomass would have been seen as across all  
15          utilities.

16          Finally, policy path number six, the one  
17          we'll talk most about today, was really the  
18          German-style, full-market, less-than-20 megawatt,  
19          cost-based differentiated tariff, differentiated  
20          by both technology and size.

21          So this basically was let's not wait,  
22          we'll move forward promptly, but we'll focus on  
23          generation only under 20 megawatts.

24          So, with each of these policy path  
25          designs we had also identified several options.

1 Who pays for the interconnection? The nature of  
2 the tariff as a fixed-price tariff. Who would be  
3 offering the tariff, the interconnecting  
4 utilities? Those were really single-option  
5 choices. None of the other options seemed viable  
6 in this market structure. So those  
7 characteristics were appended to each policy path.

8 And then a number of the other  
9 implementation issues or other core issues,  
10 rather, the method of adjusting the price, when to  
11 adjust the price and how much to adjust the price.  
12 These were choices that could be made, but were  
13 really independent of each of the policy paths.

14 So, putting all the core issues together,  
15 this is a map of what they look like.

16 Again, we touched on the timing and  
17 scope and the triggers in the policy paths that  
18 could create different implementation options. So  
19 while the policy paths were distinct, they were  
20 not all mutually exclusive independent  
21 alternatives.

22 They were interaction and trajectories.  
23 Some could be adopted in concert with others; some  
24 were partial market, could be pilot-scale or  
25 duration; could be thought of as potentially

1 working together along a policy trajectory. Some  
2 could be adopted while waiting for a specific  
3 trigger.

4 So, that being the summary of the phase  
5 two analysis and what was in the first draft of  
6 the paper we're talking about today. Stakeholder  
7 feedback. We had the workshop on October 1st and  
8 received written comments specifically on the  
9 policy paths.

10 Looking here for very constructive and  
11 targeted criticism or comment on which policy  
12 paths would have support and for which there would  
13 be lack of material opposition. And which could  
14 be effectively implemented in the short term.

15 We also sought comments on the specific  
16 basis of any opposition, specific barriers and  
17 concerns to each of the policy paths; challenges  
18 to a feed-in tariff coexisting with the current  
19 RPS solicitation process; as well as ways that  
20 those concerns might be mitigated. All of the  
21 comments are summarized again on the Energy  
22 Commission's website.

23 The key take-aways from phase two were  
24 that there was very strong support, and I think to  
25 some of us, rather surprising coalition around one

1 of the options, option six. Nearly all the  
2 stakeholders had supported option six or slight  
3 variations thereon with very limited dissent.

4 There was little support for a pilot  
5 policy, one in which we would have either limited  
6 use to one utility, or a window of time, or  
7 waiting to a future trigger.

8 The utilities, in general, still tended  
9 to favor the status quo with the current feed-in  
10 tariff for 1.5 megawatts and below. Although Mike  
11 touched on earlier that there was some openness to  
12 feed-in tariffs up to 20 megawatts.

13 So this brings us to the recommendation  
14 outlined in the second draft of the paper. And  
15 this is based on the direction from the Renewables  
16 Committee, the IEPR Committee and all of the  
17 stakeholder feedback basically to establish a  
18 feed-in tariff initially for projects up to 20  
19 megawatts that would be cost-based, that would be  
20 a must-take tariff offering long-term contracts.

21 It would be open to all RPS-eligible  
22 resource types. It would be focused on and  
23 eligible to new projects. Although a separate  
24 tariff certainly could be explored, targeted at  
25 repowering applications.

1           There would be no waiting to a future  
2 trigger. And a tariff would be differentiated by  
3 both technology and size.

4           The recommendations did not end there,  
5 however; it left open the possibility for  
6 considering a recommended feed-in tariff -- this  
7 recommended feed-in tariff as a potential bridge  
8 to feed-in tariffs for projects larger than 20  
9 megawatts in the future, as well as or in addition  
10 to projects in the competitive renewable energy  
11 zones. These could be considered if conditions  
12 merit in the future.

13           As greater experience is gained with the  
14 small project feed-in tariff there certainly are a  
15 number of implementation issues to wrestle with  
16 and lessons to be learned. And how to apply or  
17 whether to apply feed-in tariffs more broadly in  
18 California.

19           And certainly, as transmission and other  
20 barriers are addressed, the potential for focusing  
21 a feed-in tariff on larger projects becomes more  
22 interesting.

23           So, from there there are a number of key  
24 implementation issues which would require  
25 resolution in the IEPR process. These included

1 the high-level establishing the initial tariff  
2 prices; adjusting those prices over time. Tactics  
3 that could be taken to support efficient  
4 transmission distribution and supply portfolio  
5 planning.

6 Legislative issues that would need to be  
7 grappled with. And then all of the noncore policy  
8 issues and implementation level design issues that  
9 would need to be decided on in order to have a  
10 fully defined feed-in tariff.

11 So focusing first on establishing the  
12 initial tariff prices. There are a number of  
13 different options available. One could go down  
14 the path of a government-established set of  
15 prices. One could rely on studies or analysis  
16 from National Renewable Energy Lab, Lawrence  
17 Berkeley Lab or other experts to come up with  
18 tariffs based on analysis.

19 Alternatively one could use current  
20 applicable market information. For some  
21 technologies and project sizes there may be a lot  
22 of information available, if that good information  
23 is available, for instance on solar. So you might  
24 be able to establish the feed-in tariffs based on  
25 information already available or in hand, at least

1 for some technologies.

2 But there are a number of alternative  
3 approaches that would include stakeholder input,  
4 and we feel that that's probably advisable to get  
5 stakeholder input going forward. But there are a  
6 number of different models that could be pursued.

7 One is to open an MPR type of a docket  
8 in which parties would propose and support  
9 different tariff rates. The Public Utilities  
10 Commission would set various parameters to perhaps  
11 narrow that, but that would be one potential  
12 approach.

13 Another might be to create technology  
14 working groups. Get different stakeholders  
15 together and try to develop this to be similar to  
16 the procurement working groups and the California  
17 RPS program that could potentially review industry  
18 cost data and come up with recommendations.

19 An alternative branch would be having  
20 the Energy Commission and/or the CPUC prepare a  
21 proposal, straw proposals, based on publicly  
22 available data, and put them forth for reaction.

23 Perhaps the Public Interest Energy  
24 Research platform would be the proper  
25 institutional home here rather than creating a new

1 structure. But this would be putting forth a  
2 strawman for reaction.

3 Another approach which might be useful  
4 and applicable, at least for a subset of  
5 technologies, might be to start by having some  
6 technology-specific auctions where you would have  
7 a competitive process create the information that  
8 would be used to establish the initial feed-in  
9 tariff price. And from there on you would adjust  
10 it as we'll talk about in a few minutes.

11 Finally, we might be able to tap into  
12 some aggregate price information available from  
13 the RPS solicitations at a starting point. Again,  
14 this would probably only be useful for a subset of  
15 the technologies.

16 So, several of these options are  
17 discussed at a conceptual level in the paper.

18 The next issue is adjusting tariff  
19 prices. And here we're really trying to balance  
20 two important objectives, getting the price right,  
21 that means not having ratepayers pay too much; and  
22 not setting the price too low so that projects  
23 can't profitably be developed at those prices.

24 But you also need to consider leaving  
25 sufficient time for generators to respond,

1 maximizing the degree of market certainty and  
2 minimizing the administrative complexities. So,  
3 that's a balancing act.

4 One recommendation was to, whatever you  
5 do, leave the initial tariff prices alone for two  
6 to three years; give the market time to respond  
7 and get some experience before the prices started  
8 to evolve.

9 So, what are the options available here?  
10 The IEPR process should consider a few different  
11 approaches, a few different issues and approaches.  
12 One is the method of adjusting the price which is  
13 designed to place downward pressure on renewable  
14 energy costs and prices.

15 The options available include a  
16 scheduled set of price decreases which referred to  
17 in feed-in tariff parlance as digression.

18 Alternatively, simply leaving the prices  
19 fixed over time at a fixed nominal rate.  
20 Effectively that means that we're shrinking the  
21 price in real terms. But that seems like perhaps  
22 an overly simplistic approach.

23 I've x-d out the value index basis.  
24 We're not going with the -- we're going down the  
25 path of cost based.

1           So, once you've focused on the method of  
2     adjusting the price, the question is when to  
3     adjust the price. Several options are available  
4     there. Do you create a periodic schedule so every  
5     x years you would simply adjust prices downward?

6           Do you have a capacity-dependent block  
7     trigger similar to the California Solar Initiative  
8     where once a certain number of megawatts of each  
9     technology had been put in the ground that's a  
10    signal to the market that that price is viable and  
11    that maybe it's time to move the prices down. So  
12    we have some experience with that.

13          A third approach is to have a periodic  
14    review. You'd have a timetable set up to consider  
15    whether to either make a change or keep on  
16    whichever trajectory you had decided.

17          And finally, a hybrid which might start  
18    with a capacity-dependent revision schedule, but  
19    acknowledge that at day one we don't have perfect  
20    foresight. There may be some changes that we  
21    could not have foreseen, and it may be appropriate  
22    to review that from time to time.

23          The final adjusting price category here  
24    is how much to address the price. The available  
25    options include effectively setting a schedule

1 ahead of time using what we refer to as experience  
2 curves. This takes into account information from  
3 both the particular technology and technologies  
4 more broadly, what is the rate at which we would  
5 expect their cost to decrease over time and with  
6 greater penetration. Or, alternatively, to take a  
7 series of small uniform steps over time.

8 One of the issues with experience  
9 curves, of course, is that they are  
10 administratively determined and predictive. And  
11 as with most things of that sort, they are  
12 inevitably wrong, at least much of the time.

13 One option that was not presented in the  
14 paper but that I thought I would mention here that  
15 relates to adjusting the price is particular to  
16 this point in history, when we have the federal  
17 production tax credits slated to expire and we  
18 don't really know, going forward, today whether  
19 those tax credits will be extended, when they will  
20 be extended, for how long they will be extended.  
21 Or whether there would be fundamental changes in  
22 their structure.

23 This uncertainty in production tax  
24 credits has led to a well-documented boom-and-bust  
25 cycle, particularly in the wind industry. And

1       it's possible that you could use feed-in tariff  
2       design to help address some of the issues here.

3               That uncertainty has been a barrier to  
4       many projects that are participating in  
5       solicitation processes, not just in California but  
6       all over the nation, when the timetable of  
7       contracting and development is beyond the current  
8       known expiration date.

9               This creates a lot of uncertainty and  
10       difficulty in projects being able to put forward  
11       firm prices. So, one could create a feed-in  
12       tariff that was a two-tier tariff. One set of  
13       prices if the production tax credit was in place,  
14       another set if it wasn't.

15               So the IEPR might wish to consider  
16       whether having something like that in place could  
17       take away one of the major logs in the road that  
18       has been slowing down momentum for a lot of  
19       projects.

20               Now the next slide here, supporting  
21       efficient T&D and supply portfolio planning.

22               CHAIRPERSON PFANNENSTIEL: Excuse me,  
23       Bob, --

24               MR. GRACE: Sure.

25               CHAIRPERSON PFANNENSTIEL: -- may I just

1 interrupt before we lose that, the last two  
2 contexts about how you set the price and how you  
3 reduce it.

4 You talk in the paper about the German  
5 government sets the price; that they do so based  
6 on some consultant input in terms of the  
7 technology. How does the Spanish government and  
8 the Danish government do that?

9 MR. GRACE: I would have to defer to my  
10 colleague, Wilson, if he's still on the phone, who  
11 headed up our research on that. Wilson, are you  
12 out there?

13 MR. RICKERSON: I am. It's a bit more  
14 complicated in the German system. In fact, we  
15 know less about it than -- we could look into.

16 CHAIRPERSON PFANNENSTIEL: Okay.  
17 Because it just seems to me that that was -- I  
18 think, as we had discussed this previously, it was  
19 sort of the assumption that some combination of  
20 the PUC and the Energy Commission would get  
21 together and decide what that price would be. And  
22 so I just wanted to know if that's generally the  
23 standard practice.

24 And sort of the same with the reducing  
25 the price over time. You know, that would just be

1 a process, I assume, the government would have to  
2 go through to decide what the trajectory would be  
3 downward. I mean there isn't any special guidance  
4 on that.

5 MR. GRACE: All of these approaches have  
6 been taken and they all have their pros and cons.  
7 One issue, I think, with the capacity-dependent  
8 trigger, for example, is -- and this, again, is my  
9 personal opinion, that that approach has a lot of  
10 merit to it because the filling of a block is a  
11 signal that the industry has been able to  
12 successfully and profitably execute at a higher  
13 price.

14 And so that should be a signal that if  
15 the economics of the industry are doing what we  
16 expect them to, that it would be time to take an  
17 incremental step down.

18 So that one is one that may require  
19 somewhat less analysis, especially --

20 CHAIRPERSON PFANNENSTIEL: Although it  
21 does seem that that plays against the price  
22 certainty that the developers would want, knowing  
23 that they're coming on in a year, they're not sure  
24 what that price would be in a year, because they  
25 don't know how many of their competitors would

1 beat them --

2 MR. GRACE: Absolutely.

3 CHAIRPERSON PFANNENSTIEL: -- to the  
4 punch.

5 MR. GRACE: And that's why when you go  
6 down that path you are inevitably needing to deal  
7 with some queuing procedures.

8 CHAIRPERSON PFANNENSTIEL: And, again,  
9 do we have experience from Europeans to guide us  
10 there?

11 MR. GRACE: Again, I would need to defer  
12 to Wilson on the European experience details.

13 MR. RICKERSON: Am I still on?

14 CHAIRPERSON PFANNENSTIEL: Yes.

15 MR. GRACE: Yes, you are.

16 MR. RICKERSON: All right. Just  
17 (inaudible) price settings, our colleague from  
18 National Renewable Energy Lab, Toby Couture,  
19 within the letter -- Spanish feed-in tariffs  
20 (inaudible). And I was reading that.

21 What was the second question you had?

22 CHAIRPERSON PFANNENSTIEL: I was  
23 wondering, the same question about stepping down  
24 the price over time, whether the European  
25 experiences can help us there.

1           MR. RICKERSON: Again, they've tried  
2 several different approaches, including, you know,  
3 the experience curve (inaudible) and just kind of  
4 seeing how things go. And so we can look at each  
5 one of those in great detail. Definitely.

6           CHAIRPERSON PFANNENSTIEL: Thank you.

7           MR. GRACE: Okay. So, now we're back on  
8 the slide supporting efficient T&D and supply  
9 portfolio planning.

10           These issues were really added and  
11 addressed in the paper. It was important to  
12 recognize that stakeholders had raised a number of  
13 real issues of concern, some of them are really  
14 renewables policy issue with or without a feed-in  
15 tariff; and others are particular to  
16 characteristics of a feed-in tariff as something  
17 that's less planned than the RPS procurements.

18           But they, each recognize that it's  
19 important to help make feed-in tariffs or not make  
20 feed-in tariffs blind to their impact on the  
21 system. So, we identified several different  
22 issues here.

23           The possibility that you may wish to  
24 incorporate design tariffs with a responsive  
25 digression. In other words, when system issues

1 are identified either in the positive we could  
2 sure use more renewables in this area; or in the  
3 negative, our penetration of intermittent  
4 renewables in this area starting to become  
5 problematic with respect to integration issues of  
6 reliability.

7 You could effectively tweak the feed-in  
8 tariff prices to encourage generation with the  
9 highest system value by setting those tariff rates  
10 more aggressively and sending the price signals to  
11 encourage feed-in tariff there.

12 As well as discouraging generation with  
13 the lowest system value. So this could be applied  
14 really broadly to really replace or augment some  
15 of the least-cost/best-fit concepts. Or it could  
16 be applied on a very targeted basis.

17 Another issue is the concern that today,  
18 with the RPS solicitations, system planners can  
19 see what's coming and plan the wires and other T&D  
20 capabilities accordingly.

21 So in a feed-in tariff that's must-take,  
22 yes, there still needs to be interconnection  
23 notification. But there is a concern that there  
24 would be a lot less visibility to system planners.

25 And so it might be appropriate to

1       develop, in the feed-in tariff process, some form  
2       of notification provision in order to provide  
3       greater visibility of what's coming down the  
4       pipeline as early as possible.

5                 Further, and really taking this concept  
6       a step further, even if you have projects that  
7       have notified that they are in the development  
8       pipeline because it's a must-take provision, those  
9       projects may or may not ever materialize.

10                It might be helpful to provide system  
11       planners with a reasonable level of certainty as  
12       to what generation will ultimately interconnect  
13       and when. And this means developing some manner  
14       in which to solidify those commitments.

15                Or, alternatively, at least identify  
16       nonperforming projects. If you have an open-ended  
17       feed-in tariff where a project can simply even  
18       notify early, but if it never materializes you  
19       don't want to have the system overbuilt to  
20       accommodate projects that don't show up. So,  
21       again, here this may go to both queuing and  
22       security provisions in order to manage that  
23       concern.

24                And finally, expanding on that  
25       particular topic, are there preoperational or

1 operating performance requirements that might be  
2 necessary within tariff or contractually.

3 So, each of those issues, there are  
4 tools available to help address some of the  
5 concerns that were raised. And some of these  
6 options are discussed at a conceptual level in the  
7 paper.

8 As far as legislative issues go, the  
9 paper included some discussion of the degree to  
10 which additional legislation may or may not be  
11 required. And so posed the question of whether  
12 legislation would be required so that investor-  
13 owned utilities could exceed the 20 percent RPS  
14 that didn't serve as a cap on the expanded feed-in  
15 tariff. I think the executive order that Mike  
16 described earlier may get us part of the way  
17 there.

18 In addition, the question was raised as  
19 to whether legislation would be required to give  
20 the CPUC or the Energy Commission authority to  
21 require feed-in tariffs for up to 20 megawatts,  
22 expand the RPS past 20 percent, authorize cost-  
23 based as opposed to the currently authorized MPR-  
24 based tariffs. And specifically with respect to  
25 the recently passed SB-380 to provide the CPUC

1 with authority to implement the feed-in tariff  
2 that would exceed 1.5 megawatts, be cost-based,  
3 and exceed potentially a statewide cap of 500  
4 megawatts.

5 Another question, an issue that was  
6 identified in the European best practices  
7 assessment was that statewide, or national in the  
8 European case, statewide here, cost reallocation  
9 was deemed a best practice.

10 And here in California the question  
11 would be raised this would be important under a  
12 subset of conditions. It may or may not be  
13 desirable, but if you have a situation which  
14 caused, say, one of the utilities to be exceeding  
15 its targets while the others were lagging behind,  
16 there's a reallocation of the cost or the RECs may  
17 be something worth considering.

18 In addition, if there's a really  
19 disproportionate cost impact to one utility over  
20 another, some degree of reallocation may be worth  
21 considering. And finally, if there's a uneven or  
22 disproportionate impact in terms of integration  
23 costs.

24 All of those would be reasons to  
25 consider a redistribution of the cost and

1       legislation may be required to accommodate that  
2       relative to where we stand today.

3               And finally, the issue of making the  
4       feed-in tariff statewide available to any  
5       generator regardless of where located in  
6       California, would legislation be required to  
7       create an opportunity for generation that would be  
8       located in publicly owned utility territory. May  
9       require statutory activity.

10              Finally, the noncore policy issues and  
11       implementation level issues would need to be  
12       addressed. These are all laid out in the paper in  
13       table 4. The noncore issues have to do with  
14       generation eligibility as a function of location.  
15       Generally address issues for generation that is  
16       not located in an IOU territory.

17              Some of the price-setting details. How  
18       would you establish the appropriate profit level  
19       that goes into the cost basis of feed-in tariffs;  
20       and the degree to which you would make an  
21       individual tariff aggressive or conservative are  
22       some of the choices to be made.

23              There are a number of interconnection  
24       issues. Most of the issues are fairly well  
25       understood, but there may be some opportunities

1 for streamlining or modifying some of the  
2 parameters and structures that are in place  
3 today. Those choices are laid out in the  
4 first paper.

5 What is being purchased? Is this a  
6 fully bundled purchase, RECs, energy, all avoided  
7 emissions or does the feed-in tariff account for  
8 and procure a subset of those unbundled  
9 characteristics now that we're moving down a path  
10 of allowing unbundling?

11 Again, cost allocation and distribution.  
12 We already talked about why you would do that, and  
13 so there are decisions to be made there of whether  
14 and how.

15 Integration into the power supply of the  
16 utilities. If there is reallocation, would you  
17 have all of the power incorporated into the power  
18 supply of the interconnecting utility? Or would  
19 some of the electricity be rerouted, reallocated,  
20 either among utilities or even to the other load-  
21 serving entities, the community choice aggregators  
22 and ESPs?

23 And finally, some of the development  
24 security requirements, particularly as they may  
25 relate to queuing procedures which may be

1 necessary. Anytime you're going to be dropping  
2 the price over time you will have a desire by  
3 generators to rush to get in at the higher prices.

4 And then there are a number of  
5 implementation details, some of the operational  
6 security requirements, if at all, some of the  
7 management and oversight decisions. Would there  
8 be changes to rule 21 to further streamline I  
9 think in the 10 to 20 megawatt range. And again,  
10 just defining some of the queuing procedures.

11 So, that is where the current draft of  
12 the second paper has brought us to.

13 And I am happy to take any questions.  
14 Thank you.

15 COMMISSIONER DOUGLAS: Any questions?

16 COMMISSIONER BYRON: Mr. Grace, good  
17 presentation. And I think, as I said earlier, I  
18 think KEMA's done a very good job on these  
19 reports.

20 I'm going to go back to your slide 24 --  
21 I'm sorry, I think it's 24. No need for you to,  
22 I'll just read from it. One of the key takeaways  
23 was strong support for option number six with  
24 limited dissent.

25 And I'm not sure I'd characterize it

1 that way. As I read some comments there was some  
2 pretty significant comments, a number from the  
3 investor-owned utilities, around concerns about  
4 reliability, doing potential harm to the existing  
5 RFO process. There were some implicit concerns  
6 about cost to consumers.

7 I thought there was some good comments  
8 from Constellation about concern that a feed-in  
9 tariff would stifle competition and innovation.

10 So, let me ask you this. Is there  
11 anything else that you included in your report  
12 that addresses some of these concerns?

13 MR. GRACE: Excellent observation.  
14 First of all, I think what was meant by limited  
15 dissent I think was limited in the number of  
16 stakeholders. For the most part I think you've  
17 accurately touched on the parties that addressed  
18 concerns, many of them quite valid and reasonable.

19 As far as the reliability-related  
20 concerns, a number of those we did attempt to  
21 address in some of the issues that were on slide  
22 30 that were discussed, really recognizing that  
23 these issues are valid and real, although  
24 potentially, in some cases accurate, and in some  
25 cases perhaps overstated.

1           But that it's appropriate to consider  
2 all of these issues and look to come up with  
3 specific design tactics to best address and  
4 accommodate those.

5           So the report does, within this section  
6 of the report on supporting efficient T&D and  
7 supply portfolio planning, address those issues.

8           As far as the interaction with the RPS  
9 RFOs there was in, I believe it's chapter six,  
10 some additional language that addressed those  
11 concerns explicitly.

12           In considering those concerns I think we  
13 came to the tentative conclusion that for  
14 generation under 20 megawatts there really wasn't  
15 much of a concern of interaction since the vast  
16 majority of RFO responses were for projects  
17 greater than 20 megawatts.

18           So we're not completely, but largely,  
19 with usually exclusive sets. So therefore the  
20 interaction concerns would be minor, if any.

21           And the concerns that were raised really  
22 would be more material if the Commission were to  
23 move forward and implement feed-in tariffs for  
24 projects in excess of 20 megawatts.

25           Now, in that case the paper laid out a

1 couple of different perspectives. There are  
2 situations in which the design details really  
3 matter quite a bit here. The timing, the nature  
4 of the tariffs at the level of their prices would  
5 really ultimately dictate the degree to which  
6 there were interactions of concern or not.

7 And so it's difficult to address those  
8 in specific without having greater detail. So the  
9 report kind of laid out at a high level  
10 conceptually the situations under which there may  
11 or may not be concerns. And provided some  
12 guidance for that consideration.

13 I think once there is greater flesh on  
14 the bones for some of the design details it will  
15 be quite appropriate to then look very  
16 specifically at, given this strawman, what are the  
17 potential interactions of concern.

18 COMMISSIONER BYRON: Good answers, thank  
19 you.

20 COMMISSIONER DOUGLAS: Other questions?  
21 No? Okay, well, thank you very much.

22 MR. LEAON: All right, let's see if we  
23 can get Wilson's presentation queued up. And,  
24 Wilson, if we still are having problems what we  
25 can do is run the slides here, if we're still

1       having challenges with giving you control.

2               MR. RICKERSON:  Okay.

3               (Pause.)

4               MR. RICKERSON:  Are we online?

5               MR. JOHNSON:  Just a second.  Just a  
6       clarifying thing.  We inadvertently put up, made  
7       copies, and also in your binders, a presentation  
8       that was not this one.  And we will be providing  
9       you with copies and put them on the table.

10              We've got it already, okay.  We'll make  
11      copies for everybody out in the back and they'll  
12      be available later.

13              So we'll be going with Wilson's  
14      presentation now.

15              MR. JOHNSON:  Go ahead, Wilson.

16              MR. RICKERSON:  So (inaudible) start  
17      statement one?

18              MR. JOHNSON:  Yes.

19              MR. RICKERSON:  All right.  Then I'll  
20      start about these big brown blobs, as I understand  
21      it was earlier one.  We're going to go ahead and  
22      move into the presentation here.

23              To kind of put everything that Bob was  
24      talking about in context, we started these  
25      proceedings back in June.  We flashed this map of

1 Europe to just kind of show what else is going on  
2 around the world and what were some of the best  
3 practices we were reviewing, or at least practices  
4 we were reviewing both in Europe and elsewhere  
5 around the world.

6 Since -- October renewable energy  
7 policymaking around the world, specifically as it  
8 relates to feed-in tariffs, has remained fairly  
9 dynamic. The green countries here around the  
10 periphery of the EU are those that have added  
11 feed-in tariffs within the last three, four or  
12 five months, in addition to the -- EU that already  
13 had feed-in tariffs in place.

14 Next slide. Of those Israel and  
15 Switzerland were two of the most recent. And  
16 their feed-in tariffs were similar in structure to  
17 Germany's, being cost-based and technology-  
18 differentiated.

19 Both the Ukraine and Algeria also  
20 recently passed feed-in tariffs. And South Africa  
21 recently announced just a few weeks ago that it,  
22 too, is exploring feed-in tariffs.

23 So it seems a continual spread and  
24 diffusion of feed-in tariffs around the world.  
25 And it seems to continue to be the most prevalent

1 national renewable energy policy out there.

2 Of course, with a myriad of different  
3 designs, not all of them like Germany's or Spain's  
4 or France's, for example.

5 At the same time we've seen new feed-in  
6 tariffs. We've also seen existing feed-in tariffs  
7 be adjusted. There have been several high-level  
8 announcements over the past several months about  
9 solar adjustments, in particular.

10 Spain, as we mentioned at the last  
11 workshop, actually reduced its solar feed-in  
12 tariff levels after it significantly exceeded its  
13 solar energy targets.

14 In the same timeframe Germany actually  
15 also increased the rate of its feed-in tariff  
16 decline. So Germany's feed-in tariffs, the rate  
17 that you lock into declines each year. And it has  
18 previously been on about a 5 percent or 6.5  
19 percent annual decline. But they accelerated that  
20 a little while ago to take into account the fact  
21 that their solar energy markets there were moving  
22 fairly rapidly, very rapidly.

23 Just last week, however, we saw, even as  
24 Spain and Germany have been adjusting their feed-  
25 in tariffs downward, France actually added a feed-

1 in tariff for solar power, specifically for  
2 commercial generators doing higher than previous  
3 rates.

4 So it will be interesting to see how  
5 things continue to move in Europe. But many of  
6 the adjustments have been focused primarily around  
7 solar.

8 Another very interesting adjustment,  
9 however, was that the United Kingdom, which has  
10 been kind of the primary representative of  
11 tradeable credit mechanisms, what's very similar  
12 to a U.S. RPS, and they've actually led the EU  
13 charge on going to a tradeable credit system PV-  
14 wide, just, I guess in the last few weeks again,  
15 the U.K. now is going to be switching from  
16 tradeable credits to feed-in tariffs for at least  
17 those 5 megawatts and under.

18 And so against this backdrop of  
19 continual feed-in tariff policy development and  
20 that -- and -- policy switching, we've also seen  
21 decreased momentum for feed-in tariffs in the  
22 United States.

23 Of course, that's not the only thing  
24 we've seen since October, if you'd go to the next  
25 slide. We also had elections with not a lot of

1 renewable energy industry stakeholders -- for  
2 future development. President-Elect Obama  
3 announced that as part of his platform he's  
4 maintained that commitment to 10 percent renewable  
5 electricity by 2012; and 25 percent by 2025. Not  
6 only for electricity generation, but also  
7 presumably he maintains his commitment to plug-in  
8 hybrids, energy independence -- plug-in hybrids  
9 and electrical vehicles, that 25 percent by 2025  
10 will be more challenging to meet.

11 What's interesting right now is that  
12 although we have the target, there is no mechanism  
13 in place, or a mechanism that's been announced  
14 publicly as to how we're going to get to this  
15 future scenario.

16 And since the Obama campaign has been  
17 one of new ideas, there's the potential that --  
18 state level be what are some of those recent  
19 developments and (inaudible) bill.

20 So, moving on to the next slide, we're  
21 going to look out to what's been going on the U.S.  
22 to date in terms of feed-in tariffs, if feed-in  
23 tariffs are, in fact, one of the emerging new  
24 renewable energy policy mechanisms, the last two  
25 or three months, seeing they are, or at least

1 they're heavily under consideration.

2 So, at the federal level, as been  
3 mentioned in previous workshops, introduced a  
4 federal feed-in tariff, but it's not yet been  
5 voted on. And we're not really sure (inaudible).

6 Next slide. Although we haven't had  
7 progress at the federal level to date, at the  
8 state level we're seeing a sharp uptake in the  
9 number of feed-in tariffs being considered, feed-  
10 in tariffs being voted on or feed-in tariffs at  
11 least being talked about.

12 To date we've had six states introduce  
13 feed-in tariff legislation, and one -- and another  
14 12 states have introduced it at least in terms of  
15 gubernatorial recommendations or regulatory  
16 proceedings. The concept is definitely on the  
17 table.

18 So we're going to go into each of those  
19 very quickly to bring it up to speed. Next slide,  
20 please.

21 The original round of feed-in tariffs  
22 that are out there look very similar to --  
23 legislation, anyway, look similar to Germany's.  
24 They were cost-based and technology-  
25 differentiated. They were Michigan, Rhode Island,

1 Minnesota and Illinois. For wind and biomass they  
2 range from 8 to 14 cents per kilowatt hour. And  
3 for PV they range from 48 cents to 71 cents per  
4 kilowatt hour. And -- 20-year contract. None of  
5 these, however, have passed to date.

6 Next slide, please. In addition, bills  
7 under the Michigan model, those are all look very  
8 similar. Hawaii considered four separate bills  
9 that were just specifically for PV, with a premium  
10 rate of between 40 and 70 cents per kilowatt hour.  
11 But, again, none of these passed, either, during  
12 2006-2008 legislative sessions.

13 Next slide, please. That said, although  
14 the legislation didn't pass, some of you have been  
15 monitoring the news recently. The Hawaii utility  
16 and the consumer advocates and the Governor --  
17 Hawaiian clean energy initiative whereby they  
18 agreed that -- the taxpayers, they would design  
19 the feed-in tariffs to cover the renewable energy  
20 costs of energy production -- unreasonable profit.

21 The last bullet there, these feed-in  
22 tariffs will be developed by 2009. Significant  
23 about this, they also spelled out in the agreement  
24 that the State of Hawaii -- benefits of oil  
25 imports, increasing energy security, increasing

1 both jobs and tax base to the state, exceeded the  
2 potential -- would exceed the potential  
3 incremental paid for cost-based feed-in tariffs.

4 Also, to the question of how feed-in  
5 tariffs interact in Hawaii, anyway they agreed the  
6 utility purchases under feed-in tariffs would be  
7 counted towards the utilities requirement.

8 So, that's what sort of action out  
9 there, and also the Hawaii clean energy initiative  
10 called for several recent gubernatorial  
11 initiatives where they looked at feed-in tariffs.

12 Of course, Wisconsin, the Wisconsin  
13 Governor's had (inaudible); recently came back  
14 recommending feed-in tariffs for distributed  
15 generators who were 15 megawatts and under.  
16 Again, based on a specific production cost of each  
17 particular generation technology, including a  
18 return comparable to the utilities return.

19 Again, this year in Oregon, the  
20 Governor's legislative proposal included a  
21 suggestion to create a production incentive pilot  
22 program that would pay for electricity produced by  
23 a solar project. This would be limited to solar  
24 projects, but they referenced it would be known,  
25 also known as a feed-in tariff similar to those

1 that had been rolled out in Germany.

2 And finally, out of Virginia, and I was  
3 surprised to see this, but the Virginia Governor's  
4 Commission on Climate Change, the draft  
5 recommendations recently included a feed-in tariff  
6 feasibility study to see how a feed-in tariff  
7 (inaudible).

8 All those things are what is currently  
9 being discussed on the table. None of them, to  
10 date, have actually been implemented or passed.  
11 The one exception to all this so far is in  
12 Gainesville, Florida.

13 They recently established a feed-in  
14 tariff; it's going to be for PV only. They took a  
15 cost-based approach to developing this feed-in  
16 tariff. But they recognized that in light of the  
17 federal production tax credit and other extended  
18 federal and state levels, 26 cents per kilowatt  
19 hour would be the appropriate level rather than  
20 60, 70 cents we've seen in place elsewhere. The  
21 26 cent per kilowatt hour was going to be  
22 incremental (inaudible).

23 Unlike some, like Hawaii where the feed-  
24 in tariff will be for -- generation, the feed-in  
25 tariff in Gainesville will replace both the

1 municipal metering, and also replace net meters.  
2 So 100 percent of the power would go into the  
3 grid. And the feed-in tariff -- would be  
4 available for -- the payments will last for 20  
5 years.

6 Moving on to the next slide. The  
7 (inaudible) the fact that they've actually  
8 established a feed-in tariff (inaudible) feed-in  
9 tariff is that they explicitly tied in the  
10 experience of Aachen, Germany. And in 1993 was  
11 the first German municipal utility to establish  
12 a -- feed-in tariff, at \$1.34 per kilowatt hour,  
13 which was fairly high.

14 (Laughter.)

15 MR. RICKERSON: After Aachen, the next  
16 slide was after the first feed-in tariff -- a  
17 number of other municipal utilities around Germany  
18 ultimately jumped onboard. And that model then --  
19 the federal level in 2000 and 2004. By the time  
20 that happened they were up to 60 municipal  
21 utilities that had feed-in tariffs.

22 It's interesting, I think, primarily to  
23 what happened in Florida. Also, beyond that,  
24 (inaudible) but the Los Angeles Department of  
25 Water and Power, the Mayor of Los Angeles recently

1 announced that they'd be developing a feed-in  
2 tariff there for 150 megawatts of solar power.  
3 What (inaudible) is yet to be determined.

4 So, moving on to conclusions on the last  
5 slide here. We're definitely seeing diffusion in  
6 feed-in tariff concept during this last 24 months,  
7 not necessarily with its implementation, but  
8 California is definitely not alone and (inaudible)  
9 mutually exclusive. Today most feed-in tariffs,  
10 feed-in tariff proposals, anyway, target their  
11 technologies such a PV, -- or Hawaii, which has  
12 legislation.

13 Specific sizes generally under 20  
14 megawatts; under 15 megawatts proposals; under 10  
15 megawatts. And there are certain ownership  
16 structures like community ownerships, which you  
17 saw the proposal for Minnesota.

18 And finally, this is something that  
19 bubbled between the last workshop and this one,  
20 probably the feed-in tariff dialogue is now taking  
21 place in direct response to the credit crunch.  
22 There have been some commentators who have said  
23 are we for feed-in tariffs because of the  
24 investor security they provide in a period where  
25 on the one hand we've seen some -- financing and

1 interest rates creeping higher for financing  
2 projects. Feed-in tariffs have been the closest  
3 way to keep interest rates lower for project  
4 financing because of the security of investors.

5 And secondly because they can be debt  
6 financed, they are typically debt financed with  
7 large, 80 percent or higher, debt financing. They  
8 may be a stopgap measure for tax equity financing  
9 situations. Where generally our federal policies,  
10 especially for wind, have been very tax heavy, and  
11 for solar have been very tax heavy and relied on  
12 tax -- ventures and the tax financing.

13 With the credit crunch we've seen that  
14 tax financing base shrink to some degree, so these  
15 feed-in tariffs can help plug that hole, as an  
16 alternative moving forward.

17 I think that's it for me at the moment.  
18 Thanks very much.

19 COMMISSIONER BYRON: Quick question?  
20 Mr. Rickerson, another excellent presentation.  
21 Thank you. I wanted to make sure I understood  
22 something correctly when you were talking about  
23 the Gainesville, Florida approach.

24 MR. RICKERSON: Yes.

25 COMMISSIONER BYRON: I believe you said

1       it replaces net metering. So does that mean, and  
2       maybe you said this and I just didn't grasp it,  
3       does that mean they're getting credit for all the  
4       PV they generate as renewable? And therefore  
5       they --

6                   MR. RICKERSON: Yeah, we've seen a  
7       couple of different approaches to this in U.S.  
8       proposals. Some, you know, you just get credit  
9       for the excess; some propose some kind of premium  
10      that rides on top of net metering.

11                   In Gainesville it's you're connect --  
12      100 percent of the time your PV system generates  
13      gets credited with the 26 cents per kilowatt hour  
14      payment because you do not get net metering. You  
15      do not actually offset (inaudible).

16                   COMMISSIONER BYRON: Interesting. Thank  
17      you. A lot of new and interesting information you  
18      provided in this presentation. I'm fearful that  
19      California may be losing its leadership edge here  
20      in this particular area.

21                   So I turn to my PUC colleague, Mr.  
22      Kinosian, and say we'd better get going here.

23                   (Laughter.)

24                   COMMISSIONER BYRON: We may be behind  
25      soon. Thank you.

1           CHAIRPERSON PFANNENSTIEL: May I just  
2 clarify something, though, just on that basis.  
3 Other than Gainesville, Florida, is there anyplace  
4 in the United States that's actually using feed-in  
5 tariffs right now? I see that you have six states  
6 where there is legislation. But are those  
7 actually in effect right now?

8           MR. RICKERSON: No. California is the  
9 only one with the current feed-in tariff for 1.5  
10 megawatts and below.

11           CHAIRPERSON PFANNENSTIEL: All right.  
12 And Gainesville, Florida?

13           MS. CORFEE: This is Karin --

14           MR. RICKERSON: I believe -- I think -

15           MS. CORFEE: Wilson, --

16           MR. RICKERSON: Go ahead.

17           MS. CORFEE: This is Karin Corfee. New  
18 Mexico has a feed-in tariff.

19           CHAIRPERSON PFANNENSTIEL: And what are  
20 the characteristics of that, do you know offhand?

21           MS. CORFEE: It's to purchase RECs for  
22 small DG systems.

23           CHAIRPERSON PFANNENSTIEL: For small  
24 systems, so it was under what size?

25           MS. CORFEE: Do you recall, Wilson?

1                   MR. RICKERSON: I believe, was that the  
2 PNMP --

3                   MS. CORFEE: Yes.

4                   MR. RICKERSON: -- I believe it's two  
5 kilowatts and below.

6                   MS. CORFEE: We can get back to you on  
7 that, Jackie.

8                   CHAIRPERSON PFANNENSTIEL: All right,  
9 thanks very much.

10                   MR. RICKERSON: There are definitely  
11 some around the U.S. where there are fixed price  
12 contracts in place such as PNM or Wisconsin Energy  
13 had 22 cents per kilowatt hour purchase for that  
14 green power program.

15                   There are several other things you can  
16 point to (inaudible) discussed.

17                   CHAIRPERSON PFANNENSTIEL: They look a  
18 lot like feed-in tariffs but they may not actually  
19 be the same as what we're talking about?

20                   MR. RICKERSON: Correct.

21                   MS. CORFEE: In New Mexico they're  
22 paying 13 cents per kilowatt hour, and it's really  
23 a mechanism to purchase RECs to comply with their  
24 DG carve-out under their RPS.

25                   CHAIRPERSON PFANNENSTIEL: All

1 technologies at 13 cents?

2 MS. CORFEE: I believe it's PV, and I'd  
3 have to get back to you on that.

4 CHAIRPERSON PFANNENSTIEL: All right,  
5 thanks.

6 MS. CORFEE: And the other comment is  
7 Hawaii is moving there very fast, and we're likely  
8 to see feed-in tariff policy and tariffs  
9 established by July 2009. That's their timeline  
10 at this point in time.

11 MR. LEAON: Okay, thank you, Wilson.  
12 This is Mike Leacon. We're scheduled to break for  
13 lunch at this point, but if the -- Commissioner  
14 Douglas, if you'd like to propose an amendment to  
15 that schedule, we're certainly open to that.

16 COMMISSIONER DOUGLAS: Well, let's break  
17 for lunch now. And should we give lunch a full  
18 hour, or should we cut lunch short by the ten  
19 minutes that we've --

20 CHAIRPERSON PFANNENSTIEL: Well, I think  
21 the schedule had us coming back at 12:45.

22 MR. LEAON: Yes.

23 COMMISSIONER DOUGLAS: Oh, perfect.  
24 Well, let's come back at 12:45.

25 MR. LEAON: All right, we will break for

1 lunch and reconvene at 12:45 and move to the  
2 stakeholder comment period at that time.

3 (Whereupon, at 11:40 a.m., the workshop  
4 was adjourned, to reconvene at 12:45  
5 p.m., this same day.)

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## 1 AFTERNOON SESSION

2 12:50 p.m.

3 MR. LEAON: This is the California feed-  
4 in tariff design and policy options workshop. We  
5 are moving towards the stakeholder comment period.  
6 And, again, as far as protocol, in the room we'll  
7 start with blue cards. So if you have blue cards,  
8 if you'd like to make a comment, if you could get  
9 those filled out and turn those in, we'll get you  
10 in the queue for blue cards.

11 After we get through the blue cards in  
12 the room we'll then see if we have any questions  
13 submitted via email or through chat via WebEx.  
14 And lastly, we will open up the phone lines to see  
15 if we have any folks on the phone that would like  
16 to make comment.

17 And with that, I'd like to turn it over  
18 to our Chairperson, Karen Douglas, to kick off the  
19 stakeholder portion of the workshop.

20 COMMISSIONER DOUGLAS: Thank you very  
21 much. So far I have four blue cards. And the  
22 first one is Ray Pingle of the Sierra Club.

23 MR. PINGLE: Thank you, Madam Chair,  
24 Commissioners and others. My name is Ray Pingle  
25 and I'm a volunteer representative of the Sierra

1 Club California.

2 We do support the tremendous effort  
3 that's gone into this program. And we do support  
4 the policy path six with one notable exception.  
5 And that is the 20 megawatt cap on project size.

6 So we recommend that there be no cap on  
7 project size. It would be unlimited project size.

8 And, of course, there's a lot of reasons  
9 for us supporting this, but our most important  
10 objective for doing all of this is to hit the 33  
11 percent objective by 2020. We failed with the RPS  
12 standard, we're three years behind. And now --  
13 which was, in one sense, kind of a timid approach  
14 that's not been successful. And now we're taking  
15 another timid approach.

16 Time is not on our side. We see every  
17 day, we read the paper, I just read yesterday huge  
18 sections of Antarctic ice are breaking away. Some  
19 of the things we're experiencing is that global  
20 warming is progressing at a more rapid rate than  
21 the UN IPCC had forecast. Even their worst  
22 scenario. So time is not on our side. We've  
23 really got to get after this.

24 I think Governor Schwarzenegger is to be  
25 highly commended for taking a very bold step. And

1 everything he's done with AB-32 with his recent  
2 executive order on the 33 percent standard. And  
3 he's done that because he recognizes the magnitude  
4 and the urgency of us getting after this problem  
5 and solving this problem.

6 On the one hand it might seem like this  
7 approach of going small, getting our feet wet,  
8 learning how this works, and then maybe we can  
9 remove the caps later is a rational approach, but  
10 I would argue it's not a rational approach.  
11 Because I think it's going to increase our  
12 probability of failure.

13 And I think basically going faster  
14 certainly has some risk associated with it.  
15 There's no doubt about that. But I think the  
16 choice that we face is going faster, maybe having  
17 some marginally suboptimal results in some senses,  
18 but ultimately succeeding as opposed to taking a  
19 lower risk but failure-prone approach.

20 There's many positive economic effects  
21 to an unlimited cap system. One is that it would  
22 allow us to obviously put larger, more cost  
23 effective projects into the mix, keeping the  
24 overall costs lower. It would also help  
25 accelerate the production of more kinds of scale

1 for more cost effective manufacturing,  
2 installation of renewables, and for improving the  
3 technology curve. So get more cost effective  
4 things online sooner.

5 As Commissioner Byron mentioned, it  
6 appears from the earlier presentation we're not  
7 leading on this. You know, I think we have the  
8 potential. I was at a CARB meeting a couple weeks  
9 ago, fantastic things California's doing, but the  
10 fact is we're not leading in many areas. We have  
11 the potential to, but we won't achieve that  
12 leadership position and accelerate that position  
13 without being bold and taking some risk to move  
14 forward quickly.

15 And I think it also can affect our  
16 economy in a lot of ways. Obviously if we can be  
17 bold and we can move forward quickly, it'll  
18 attract more and more green industry to the State  
19 of California, to the extent that we can be  
20 effective in our large economy and in our  
21 leadership role in the country and the world.

22 We can mitigate some of the other global  
23 warming that will occur, which will mitigate some  
24 of the costs associated with adaption to global  
25 warming. So I think there's a lot of benefits

1       there.

2                   And I think especially one example of  
3       having an unlimited cap will promote larger  
4       thermal solar projects which have the potential of  
5       using thermal storage capabilities which would  
6       mitigate some of the intermittency of some of the  
7       projects that we're trying to do.

8                   So, for all these reasons and many more,  
9       I won't take too much more time, I really think  
10      it's critical. And I think it's going to take  
11      leadership, a willingness to take a little bit  
12      more risk to do what's the right thing so we can  
13      succeed on our overall objective there.

14                  I've got two other quick points I wanted  
15      to make. One is that we want the projects as  
16      they're implemented to be sensitive to  
17      environmental values. Certainly environmental  
18      reviews are one of the things that we'll have to  
19      look at on how we can streamline those. But we  
20      still have to be cognizant of preserving our  
21      environmental values, not destroying wildlife  
22      habitat, some of the most beautiful areas in the  
23      state and so on.

24                  Secondly and lastly is to look at those  
25      kinds of projects that we're defining as

1 renewable, and are they truly renewable; are they  
2 sustainable; have they been manufactured in an  
3 environmentally sensitive way; or are they adding  
4 to the problem.

5 So, for example, photovoltaic cell  
6 manufacturers. They use highly toxic products;  
7 waste a lot of resources in their manufacture;  
8 should not be qualified as, you know, renewable  
9 for this program.

10 Things like the Geysers project in  
11 northern Napa where they create a geothermal  
12 project, but they let the steam evaporate and  
13 vented to the atmosphere, which added toxicity.  
14 Lost all that steam, now they're having to pump  
15 water back in there, as opposed to designing a  
16 closed-loop system.

17 So I know this is a detail area, but  
18 just wanted to get on the record that as you move  
19 forward to be careful in defining what qualifies  
20 as a renewable type project.

21 So, those are my comments. Thank you  
22 very much for the opportunity.

23 COMMISSIONER DOUGLAS: Thank you, Mr.  
24 Pingle.

25 Our next speaker is Steven Kelly of IEP.

1           MR. KELLY: Thank you, Commissioner  
2 Douglas and Commissioners Byron and Pfannenstiel.  
3 I wanted to talk about next steps, as well,  
4 following up on the last speaker's comments.

5           IEP has been an organization that has  
6 been a strong supporter of open, transparent,  
7 competitive procurement processes. And we still  
8 maintain that position, particularly if they're  
9 working well.

10           But we do have some concerns about the  
11 performance of the RPS over the last seven or  
12 eight years, which has been primarily a  
13 procurement-oriented tool for bringing on new  
14 renewables.

15           And we actually do think now that it is  
16 timely to be looking at a feed-in tariff for  
17 renewables. And particularly renewables that are  
18 sized above 20 megawatts.

19           And I encourage you to be looking at  
20 this in the IEPR process for next year. I would  
21 like to see a robust debate about that issue and  
22 the programmatic mechanisms to implement that tool  
23 in the first quarter of 2009 so that we can get  
24 started in the discussion.

25           If it turns out that the procurement

1 process that's in place today, that it primarily  
2 RFO-based, proves successful and actually  
3 resulting in interconnected generation, and that's  
4 the way that we measure success. If it proves  
5 that that's moving forward, we'd be relatively  
6 comfortable with that mechanism. But there is not  
7 a lot of proof today that that mechanism is  
8 resulting in renewables that are being  
9 interconnected.

10 And one of the advantages to a feed-in  
11 tariff, as you're well aware, is that the  
12 definition of success in there is generation that  
13 can be interconnected.

14 And the payment mechanisms and all the  
15 other things that we talk about that are complex  
16 and need to be worked out are secondary to the  
17 recognition that it's what you're going to do once  
18 generation gets interconnected. And we can move  
19 off the debate hopefully about the potential for  
20 speculative phantom projects.

21 So I would encourage you, as soon as  
22 possible, and certainly hopefully in the first  
23 quarter of 2009, to expand your perspective on the  
24 role of the feed-in tariff to include the  
25 generation that it could exceed 20 megawatts, and

1 bring that into the discussion fold for purposes  
2 of analysis.

3 I think program design is obviously  
4 going to be key. And I think if the KEMA reports  
5 identifies a number of important issues, that  
6 we're prepared to work with you on in 2009, if you  
7 choose to put that on your agenda. We've got some  
8 ideas on how this could work, be perhaps more  
9 effective. And work for the consumers, the  
10 ratepayers, as well as the state in terms of  
11 meeting its RPS goals.

12 But importantly, because it might take  
13 one to two years to actually get that kind of  
14 policy tool in place, particularly in coordination  
15 with the Public Utilities Commission, in  
16 coordination with the municipal utilities, we  
17 think that the work needs to start sooner rather  
18 than later.

19 And that might help send some of our  
20 signals to both buyers and sellers about where the  
21 state is heading. And hopefully even the  
22 procurement process may improve because of those  
23 signals that we send.

24 I do have a couple issues that I would  
25 put on your plate that you might consider as we

1 move forward and have that discussion. One is --  
2 and this goes back to actually the report that was  
3 on the topic of presentation this morning about  
4 some of the key issues.

5 One of the policy drivers that I think  
6 is missing from the report discussed today, and  
7 certainly needs to be talked about, is the need  
8 for regulatory certainty. Whatever program the  
9 state moves forward on in terms of feed-in tariff  
10 or whatever, we need to be cognizant of the need  
11 to send relatively stable policy signals to the  
12 development community so that they can start  
13 getting the financing, designing the projects,  
14 with some assurance that the program is not going  
15 to be dramatically changed over time.

16 We have a 2020 goal of 20 percent. It  
17 might be 33 percent soon. Which gives us an  
18 opportunity of about 12 years. But what's really  
19 needed is stability there from a policy  
20 perspective to show people certainly where you're  
21 going and where you're going to end up.

22 Secondly, I want to make the observation  
23 that in the design and implementation of a feed-in  
24 tariff I think it's important to not wait until  
25 new transmission is built before we start

1 designing this thing.

2 The focus of a feed-in tariff is to pay  
3 generation when they become interconnected. That  
4 interconnection is a function of existing  
5 transmission.

6 There's a lot of concerns about  
7 integration costs and the cost of integrating  
8 renewables, but almost by definition in a feed-in  
9 tariff you are integrating by -- interconnecting  
10 by using available transmission capacity.

11 We have a lot of discussions going on in  
12 the RETI process about new transmission, and  
13 that's well and good. I actually am participating  
14 in that. But there's available transmission today  
15 that might be able to benefit from a feed-in  
16 tariff.

17 And the recognition that they can only  
18 take available transmission capacity to begin  
19 with, it might be a tool if we implemented it  
20 prior to the new transmission being built to  
21 actually maximize the utilization of the existing  
22 infrastructure today while we build the new  
23 transmission.

24 Likewise, in a similar vein, I think  
25 it's important that we have the new generation

1 coming online at the time that the new  
2 transmission is being developed, so we don't  
3 sequence this so that we actually build  
4 transmission that takes five to seven years, and  
5 then we go out to buy the renewables that are  
6 going to backfill that kind of transmission. I  
7 think this can be kind of a parallel mechanism in  
8 some sense, and a policy tool, to make those come  
9 together in a more coincident timeframe so we  
10 don't waste time in bringing the renewables onto  
11 the grid to meet the RPS goals.

12 Third, I'd just say that, and reiterate  
13 the point that only generation that is built is  
14 going to take advantage of a feed-in tariff.  
15 That's something a little different than the  
16 paradigm that we have today where the RPS is  
17 pretty much contingent on contracts being  
18 executed. But there's no real certainty whether  
19 the generation is actually going to be built or  
20 not.

21 We've been an advocate for  
22 incorporating, in a transparent fashion,  
23 milestones and reliability, or viability criteria  
24 in our process. But one of the advantages of a  
25 feed-in tariff is that somebody's got to be built

1 before they actually get paid, under that design,  
2 and interconnected at whatever rate the state  
3 establishes.

4 So there's an advantage there, I think.  
5 And I don't think the Commission needs to be  
6 concerned at this point early in the game of over-  
7 building the system.

8 And finally, I've heard comments about  
9 integration issues and integration costs, and  
10 certainly the integration of renewables is  
11 something that, from a grid-planning perspective,  
12 needs to be taken into consideration. And I think  
13 it is today. Certainly the ISO is focused on  
14 that.

15 But I don't think there are any  
16 integration issues that are insurmountable, that  
17 would suggest that we have to pause today from  
18 developing a policy tool like the feed-in tariff  
19 because of potential integration concerns down the  
20 road.

21 I'll just note that renewables have been  
22 going backward as a percentage of retail sales  
23 over the last few years. I think we started at 12  
24 percent, we're now at 11. Most reports that I've  
25 read suggest that integration issues, from a

1 system-operations perspective don't arise until  
2 you reach 20, 25 percent. Xcel had a big study  
3 that suggested that.

4 Which would mean we'd have to double the  
5 renewables we have installed today before we start  
6 to see those problems emerge from a planning and  
7 operational perspective.

8 We have plenty of cushion time now at  
9 the rate people are developing projects to deal  
10 with those issues down the road. And I don't  
11 think they should be -- are insurmountable.

12 So, those are the comments that I have  
13 now. We look forward to working with you in 2009  
14 hopefully in the IEPR, if that's your pleasure, on  
15 the specific design issues that might be afforded  
16 electric generation up to 20 megawatts, and then  
17 beyond in order to meet the RPS goals.

18 And I'd be happy to answer any questions  
19 if you have any.

20 COMMISSIONER BYRON: Mr. Kelly, I always  
21 get a lot out of your comments. I'm not sure, did  
22 we see any in writing for any of this time,  
23 because I may have missed them if we did.

24 MR. KELLY: You did not. I actually was  
25 hoping to be at your October 1 workshop, but I was

1 out of the country. And I have not -- here I am.  
2 If you need something in writing we'll be able to  
3 put something together very quickly.

4 COMMISSIONER BYRON: Well, it's always  
5 valuable because everybody gets to see them and  
6 read them that way.

7 MR. KELLY: Okay.

8 COMMISSIONER BYRON: But I got the gist  
9 of what you're saying and it's very helpful. I  
10 don't have any further questions.

11 COMMISSIONER DOUGLAS: Please.

12 MR. KINOSIAN: Good afternoon, Steve.  
13 I've dealt with you a lot on QF issues, so I just  
14 had to ask the question. How do you see feed-in  
15 tariffs overlaying with QF contracts going  
16 forward?

17 MR. KELLY: Many of the QF contracts are  
18 going to terminate over the next four to five  
19 years. I think something like 80 percent of the  
20 existing QF contracts will terminate.

21 Either the IOUs will enter into  
22 bilateral contracts with those terminated  
23 contracts, or those entities are going to have to  
24 have a place to go.

25 Now, they're already on the system. And

1 they already are using available transmission  
2 capacity. So, as a practical matter, I don't  
3 really see the feed-in tariff, per se, having a  
4 physical issue with existing infrastructure for  
5 renewables.

6 It could be a tool that existing  
7 renewables that no longer have contracts would be  
8 able to sell to the state; because they're  
9 energized you don't need new transmission.

10 I think a lot of renewables, if they're  
11 prudent and operating under the existing contracts  
12 today, are probably looking four or five years  
13 down the road and thinking about what they can do  
14 with their energy capacity and renewable  
15 attributes.

16 And since you've raised the issue, there  
17 are problems with the existing QF structure at the  
18 PUC that are there today, retroactive payment --  
19 treatment of payments to QFs is a huge problem  
20 from a business perspective. And I would be  
21 surprised if that were in place from the business  
22 side of existing renewable infrastructure that  
23 they would want to re-up contracts with the  
24 utilities under that present structure implemented  
25 by the PUC.

1                   So, this kind of structure of a feed-in  
2                   tariff is going to create a helpful alternative to  
3                   them, I believe.

4                   MR. KINOSIAN: I guess what I'd really  
5                   like to hear is the Public Utilities Commission  
6                   has required utilities to sign standard offer  
7                   contracts, --

8                   MR. KELLY: Yeah.

9                   MR. KINOSIAN: -- which are not that --  
10                  it's not that dissimilar, I think, from requiring  
11                  a feed-in tariff. I guess I'm just wondering, in  
12                  your view, do you think a feed-in tariff is a  
13                  better way to go in terms of a must-take  
14                  requirement the QF contracts?

15                  MR. KELLY: Yes.

16                  MR. KINOSIAN: And if so, why?

17                  MR. KELLY: Yes, I think it is. The  
18                  existing contracts that the Commission has in  
19                  front of them today for QFs, whether they're from  
20                  expiring contracts or new QFs, at this point in  
21                  time look to have a opportunity for the utilities  
22                  to look back on the payment structure and claw  
23                  back on some of the revenue streams under the  
24                  retroactivity thing. That applies as a broad PUC  
25                  policy to any QFs.

1                   Under that structure I don't see any QFs  
2                   or CHPs, for example, signing up under those  
3                   deals. Because it's too uncertain about what your  
4                   revenue stream is going to be.

5                   The feed-in tariff would become an  
6                   alternative to that, and would be a much more  
7                   attractive alternative, I think, for existing QFs.

8                   MR. KINOSIAN: Okay, thank you.

9                   COMMISSIONER DOUGLAS: Thank you very  
10                  much.

11                  MR. KELLY: Sure.

12                  COMMISSIONER DOUGLAS: The next blue  
13                  card I have is from Dan Patry of PG&E.

14                  MR. PATRY: Good afternoon. My name's  
15                  Dan Patry. I'm the State Agency Relations  
16                  representative with PG&E. PG&E wishes to thank  
17                  the Commissioners, Staff and consultants for the  
18                  opportunity to speak today regarding feed-in  
19                  tariffs.

20                  I was hoping to pose a few questions to  
21                  Mr. Grace and/or Mr. Rickerson regarding their  
22                  work if that's okay.

23                  Their work provides a number of options  
24                  within policy path six, and given your consulting  
25                  experience, what would work best among these

1 options both from European experience in the  
2 prevention of influence from market players.  
3 Essentially, what's your vision of the methodology  
4 by which developer cost would be ascertained, and  
5 how we might assure a fair target?

6 MR. GRACE: Wilson, are you out there?

7 MR. RICKERSON: I am.

8 MR. GRACE: Okay. Just to make sure I'm  
9 understanding the question, then, are you focusing  
10 at this point on the process of establishing the  
11 price, the initial establishment of a price?

12 MR. PATRY: Yes.

13 MR. GRACE: Wilson, why don't you start  
14 by talking about the European experience, and let  
15 me follow up with some specific thoughts here on  
16 the California perspective.

17 MR. RICKERSON: You mean how they've set  
18 the price thus far?

19 MR. GRACE: And what you see from that  
20 experience best translating here.

21 MR. RICKERSON: Actually, I'm sorry.  
22 Maybe you could you restate the question one more  
23 time. You want to know what the European  
24 experience, as it has been thus far as it relates  
25 to the options we've laid out? Or what that

1 experience then has good, or what are we getting  
2 at?

3 MR. PATRY: That, and then essentially  
4 what I'm trying to understand from your  
5 consultant's perspective here, what the  
6 methodology would be. Sure.

7 MR. RICKERSON: Sure. Which methodology  
8 would be the best or --

9 MR. PATRY: Right. Correct.

10 MR. RICKERSON: -- to consider?

11 MR. PATRY: Correct.

12 MR. RICKERSON: So, you're talking about  
13 the first part there, that a variety of different  
14 approaches have been taken. The German  
15 government, as I understand it, has worked with  
16 its federal registry. In turn worked with both  
17 their own data source and consultants who have  
18 then tasked with (inaudible) answer.

19 I think in France there's a methodology  
20 called the profitability index that (inaudible)  
21 using, I believe. But also at one point,  
22 (inaudible) using another alternative to get  
23 there.

24 And, again, (inaudible) methodology  
25 used. But there's several different methodologies

1 that have been tried.

2 I think ultimately the (inaudible) is  
3 one of the most complex; and also because it rides  
4 on what the consumer price index and also you have  
5 the opportunity to switch over to the stock market  
6 price plus a premium which is also determined  
7 through, you know, one of the methodologies.

8 It's been very interesting (inaudible)  
9 more than they expected and they've kind of had  
10 their (inaudible) adjusted their solar prices  
11 downward.

12 You know, I'm not sure at this point we  
13 can say which one we'd probably do, but I'd  
14 imagine that based on the recommendations thus  
15 far, we would not do the Spanish method to get  
16 there.

17 In terms of which one, the consultants  
18 think we've personally not found it. We have much  
19 -- this point. There are a variety of different  
20 options that were laid out. You know, cross-  
21 referencing a number of them could get really  
22 close to a good answer.

23 I don't know, Bob, do you want to take  
24 it from here?

25 MR. GRACE: Thank you, Wilson. I think

1 the specifics there are really beyond the scope of  
2 what we've wrestled with so far. But that being  
3 said, I think a process that has stakeholder input  
4 rather than one that doesn't is probably  
5 preferable. There's an awful lot of expertise in  
6 California to take advantage of. And, you know, a  
7 whole lot of good and valid perspectives.

8 So, I guess I have a slight preference  
9 in a situation in which there's some time urgency  
10 for getting to decisions, to start with a strawman  
11 and get a reaction to it, rather than take a  
12 process that would take a large degree of  
13 consensus to arrive at a starting place.

14 And so that would tend to narrow you  
15 down to a subset of the options that were laid out  
16 in the report and the presentation.

17 Within that I think we may have the  
18 opportunity to take slightly different approaches  
19 for different technologies. There's a lot of  
20 understanding of the cost of PV systems, for  
21 example, that could be built on and utilized as a  
22 starting point.

23 Whereas wind, for example, there are  
24 such strong scale economies and sensitivity to  
25 wind speeds and other factors that a more

1 analytical approach may be appropriate in there.  
2 I think you're probably getting into some policy  
3 decisions in terms of how aggressive or  
4 conservative. It's hard to be completely divorced  
5 from those decisions.

6 While there's been very little, if any,  
7 experience in going down this path, I am  
8 personally still intrigued by the opportunity to  
9 find a subset of technologies where some kind of  
10 initial competitive benchmark would be able to be  
11 utilized. But, again, that's a -- there's been  
12 very little industry experience to lean on to date  
13 there. And so that's a concept that needs further  
14 consideration.

15 MR. PATRY: Thank you. And on a related  
16 note, do you have any suggestions as far as what  
17 you think of the structure for development of  
18 milestones would look like? You know, in terms of  
19 what your opinion might be on development,  
20 security, performance, assurances, delivery  
21 obligations, things of that nature.

22 MR. GRACE: I think it's important to  
23 have some degree of clarity and certainty, and the  
24 queuing issues, especially, if we have a price  
25 structure that will be dropping over time, are

1 very real.

2 I think the need to have some clarity  
3 and rigidity so that all parties understand the  
4 timetables that they have to work with is  
5 important, but flexibility is equally important.  
6 I think if we have projects that get to the point  
7 of 90 percent developed and are slightly delayed  
8 because of something that's beyond their control,  
9 to kick them out of the queue and send them back  
10 to the beginning is, I don't think, in anybody's  
11 best interest.

12 I have worked with the State of New York  
13 in coming up with a milestone structure that's  
14 used in their RPS central procurement, and  
15 variations of that has been recommended or being  
16 considered in a number of other states that I  
17 think incorporates a best practice in terms of  
18 pre-operational milestones where there would be  
19 increasing -- an opportunity to effectively extend  
20 a deadline by putting additional security on the  
21 table as something that will tend to sort out  
22 those projects that aren't real. And therefore,  
23 wouldn't be willing to put more capital at risk  
24 than those that are.

25 So, I would be inclined to focus on a

1 process that would have graduated requirements.

2 MR. PATRY: Thank you. We just wanted  
3 to know for the record that we do agree with the  
4 report's recommendations that legislation would be  
5 one of the routes by which these measures would be  
6 adopted. And if so, we do hope that feed-in  
7 tariffs would be available for customers, for  
8 POU's, as well as our use.

9 CHAIRPERSON PFANNENSTIEL: Mr. Patry,  
10 does PG&E agree on a feed-in tariff for greater  
11 than 20 megawatts?

12 MR. PATRY: Well, we'd have to refer  
13 back to our streamlined RPS proposal that we  
14 submitted to the CPUC recently.

15 CHAIRPERSON PFANNENSTIEL: I'm, sorry, I  
16 didn't get a chance to review that. What did that  
17 say relative to a greater than 20 megawatt feed-in  
18 tariff?

19 MR. PATRY: Well, the 2009 RPS form PPA,  
20 it would be offered year-round for renewable  
21 generators of any size. Essentially the CPUC  
22 would preapprove a contract that PG&E elected to  
23 submit and does not modify this form PPA.

24 Essentially this would negate their  
25 requirement to participate in the RFO process.

1       Essentially what it does, it cuts costs both on  
2       the utility and the CPUC and the regulatory end.

3                So that's available for generators of  
4       any size above 1.5.

5                CHAIRPERSON PFANNENSTIEL:  The PPA would  
6       be standard with the price being the same.  And  
7       would it be the same across all technologies?

8                MR. PATRY:  You know, I'm not sure --

9                CHAIRPERSON PFANNENSTIEL:  And all  
10       sizes?

11               MR. PATRY:  -- about that.  We can --

12               CHAIRPERSON PFANNENSTIEL:  You didn't  
13       address that?

14               MR. PATRY:  -- I understand it's an  
15       issue.  We can address it in our written comments.

16               CHAIRPERSON PFANNENSTIEL:  Thank you.

17               COMMISSIONER BYRON:  I'm not aware of  
18       the proposal that you're discussing.  How recent  
19       is this?

20               MR. PATRY:  It's within the last two  
21       months, I believe, is when it was submitted to the  
22       CPUC.  I can run down a list of this pilot  
23       proposal, if you'd like.

24               COMMISSIONER BYRON:  I would.

25               MR. PATRY:  Sure.  It's essentially

1 streamlining our RPS pilot program. The  
2 components are this: There's the form PPA that  
3 would be offered year-round for renewable  
4 generators of any size.

5 The CPUC would preapprove this contract.  
6 The signed contracts requests will be accepted by  
7 PG&E on a first-come/first-serve basis up to the  
8 program cap of about 800 megawatt hours, which is  
9 akin to about a 1 percent of retail sales.

10 The cap is limited in the first year,  
11 and if PG&E reaches this cap it would submit  
12 contracts for formal CPUC approval unless the CPUC  
13 decides to increase the cap at a later date.

14 We would retain the right to reject  
15 offer projects. And parties are encouraged to  
16 submit contracts with prices at or below the MPR.

17 The project must commence operations  
18 within five years of contract submittal. And no  
19 modifications or re-negotiation of the PPA would  
20 be accepted. It would be a standard offer.

21 CHAIRPERSON PFANNENSTIEL: So just to  
22 make sure I understand. So it would not be at a  
23 standard price, because you're asking for  
24 contracts below MPR, so it's whatever people  
25 want to --

1 MR. PATRY: That's my understanding.

2 COMMISSIONER BYRON: And what's the cap?

3 MR. PATRY: Eight hundred megawatt hours  
4 a year, about 1 percent.

5 COMMISSIONER BYRON: Eight hundred  
6 megawatt hours?

7 MR. PATRY: Oh, I'm sorry, gigawatt. My  
8 apologies. Eight hundred gigawatt hours.

9 COMMISSIONER DOUGLAS: Thank you.

10 MR. PATRY: Thank you.

11 COMMISSIONER BYRON: Oh, since he asked  
12 a few questions of the contractors, I was hoping  
13 maybe I could ask a couple questions.

14 COMMISSIONER DOUGLAS: Absolutely.

15 COMMISSIONER BYRON: I was looking at  
16 your comments earlier and, you know, I'm trying to  
17 understand this also. And really my questions  
18 precede my knowledge of this proposal that's been  
19 made.

20 But, if I got it correctly it's at or  
21 below MPR, capped 800 gigawatt hours, and, of  
22 course, it's a power purchase agreement, it's a  
23 contract.

24 MR. PATRY: Correct.

25 COMMISSIONER BYRON: But some of the

1 comments that you provided, or that your company  
2 provided, you know, I don't know that it's worth  
3 getting into the details on this, but one of the  
4 concerns expressed by PG&E is that you have no --  
5 that there be no incentive for anyone to bid lower  
6 than the current MPR in an FIT.

7 Are you seeing bids in your current RFO  
8 process that are below the MPR?

9 MR. PATRY: I'm not familiar at this  
10 point if we do, but I --

11 COMMISSIONER BYRON: Just wondering how  
12 realistic that is.

13 MR. PATRY: It's something we can look  
14 into. We'll address it in our written comments.

15 COMMISSIONER BYRON: Forgive me one  
16 second.

17 MR. PATRY: Sure.

18 COMMISSIONER BYRON: And this concern  
19 that was expressed in comments about needing a cap  
20 to avoid over-subscription, I believe, was the  
21 term PG&E used. What are we worried about there?  
22 Over-subscription. Why is over-subscription of  
23 renewables, particularly when we're so far below  
24 our goal, why is that a bad thing?

25 MR. PATRY: I'm not sure if I can -- I

1 think it's something we're going to have to  
2 address in written comments. We're going to get  
3 back to our subject matter experts and address it  
4 there.

5 COMMISSIONER BYRON: I'll forego my  
6 other questions, thank you.

7 MR. PATRY: Thank you very much.

8 COMMISSIONER DOUGLAS: The next card we  
9 have is from John Kerrigan of LADWP.

10 MR. KERRIGAN: Thank you very much.  
11 Appreciate all the hard work that's been done by  
12 the Commissioners and the staff and the  
13 consultants on this.

14 And we'd like to say we prefer that any  
15 legislation does not include POUs, if possible,  
16 regarding feed-in tariffs. And I know that  
17 earlier we mentioned leadership on this, and Los  
18 Angeles Department of Water and Power and the City  
19 of Los Angeles has taken a leadership role with  
20 regards to solar energy, starting with AB-2269,  
21 which unfortunately was vetoed.

22 You probably heard the news today that  
23 the Mayor has approved 150 megawatts of feed-in  
24 tariff as part of an overall solar, what's called  
25 a solar L.A. program, which we hope to put

1 forward.

2 The City of Los Angeles will be placing  
3 an initiative on the March 2009 ballot that will  
4 amend the Los Angeles Administrative Code to  
5 authorize the creation of a Los Angeles Department  
6 of Water and Power program to require production  
7 of at least 400 megawatts solar energy by 2014.

8 This measure will also establish a jobs  
9 program and training academy to meet program  
10 participation demand and provide contract bid  
11 preferences for local solar power equipment  
12 manufacturers.

13 This is in addition to another customer  
14 solar program of 380 megawatts by 2020. The 150  
15 megawatts of feed-in tariff will be part of this  
16 380.

17 We also have plans for large-scale solar  
18 projects 500 megawatts, probably out in the  
19 desert, which will require transmission, by 2020.

20 Now, we hope that with this 400  
21 megawatts of local -- solar panels put on city  
22 facilities, reservoirs, all sorts of areas, will  
23 provide up to 440,000 permanent jobs and it'll  
24 also be a \$325 million investment, by 2016.

25 So, we are moving forward with this.

1 This will be a 1.3 gigawatts of solar energy that  
2 we're looking to attain. And we have an overall  
3 goal of 35 percent by 2020 for renewable energy.

4 And as we said in our previous comments,  
5 we'd like to see more study done on feed-in  
6 tariffs. There's been extensive study and your  
7 work is very well appreciated by all of us. And  
8 we'd like it better that we can have our own feed-  
9 in tariff and not be subject to a statewide feed-  
10 in tariff. But we still appreciate the merits of  
11 the goal.

12 CHAIRPERSON PFANNENSTIEL: I'm sorry, I  
13 did not see the announcement this morning, so  
14 thank you for sharing it with us.

15 MR. KERRIGAN: No problem.

16 CHAIRPERSON PFANNENSTIEL: Tell me a  
17 little more about the 150 megawatts feed-in  
18 tariff. Is it any size? Did you say that, is  
19 there a size limit?

20 MR. KERRIGAN: No, there's no size  
21 limit. Let me -- excuse me if I get my notes on  
22 it. The feed-in tariff, it will allow a solar  
23 developer in the city to sell wholesale power  
24 directly to LADWP through a long-term contract  
25 between the private seller and LADWP.

1           These third-party sellers can take  
2           advantage of tax incentives of 30 to 60 percent of  
3           the installation costs. And after five to eight  
4           years may choose from several options including  
5           selling the solar systems to LADWP.

6           This is our -- the FIT goal is to  
7           install 150 megawatts of solar systems by 2016.

8           CHAIRPERSON PFANNENSTIEL: I didn't hear  
9           anything about the price, though. Now, what price  
10          would they --

11          MR. KERRIGAN: Well, yeah, given all  
12          available incentives and availability of tax  
13          credits, volume discounts, enhanced performance  
14          and technological innovations, economies of scale,  
15          17 to 30 cents per kilowatt.

16          CHAIRPERSON PFANNENSTIEL: Seventeen to  
17          30 cents per kilowatt.

18          MR. KERRIGAN: Correct.

19          CHAIRPERSON PFANNENSTIEL: And that  
20          would be the same across all technologies? Or is  
21          this just solar?

22          MR. KERRIGAN: This is just solar. This  
23          is an estimate, of course.

24          CHAIRPERSON PFANNENSTIEL: It's an  
25          estimate. So how would that be calculated?

1       Somebody's going to have to set that in order to  
2       be a standard price, I assume.

3               MR. KERRIGAN:  Yes.  We have our solar  
4       experts there, subject matter experts who gave it  
5       quite a bit of study and review.  And we're  
6       hoping, we estimate that over time, as solar  
7       technology advances, as new production methods  
8       become available, greater economies of scale, that  
9       this will bring the price within that range, which  
10      is --

11              CHAIRPERSON PFANNENSTIEL:  So, it will  
12      start at -- the feed-in tariff would start at 30  
13      cents a kilowatt hour, and then decline?  I'm just  
14      not understanding how it's working.

15              MR. KERRIGAN:  That's the hope.  That's  
16      the hope.

17              COMMISSIONER DOUGLAS:  But you have  
18      decided that it will start at 30 cents a kilowatt  
19      hour, or it's that there's a range and --

20              MR. KERRIGAN:  That's the range, that's  
21      what we estimate, given a perfect world, where all  
22      the incentives are available.

23              CHAIRPERSON PFANNENSTIEL:  When will it  
24      start?

25              MR. KERRIGAN:  I don't have a start date

1 on that. I will follow up in my comments, my  
2 written comments with more information. This is  
3 still being worked out, but this is our plan right  
4 now. The details have not all been worked out  
5 yet.

6 But one of the good things is, is that  
7 we've got it to the ballot in March, so the people  
8 of the City of Los Angeles can decide to pursue  
9 this.

10 COMMISSIONER DOUGLAS: And the ballot  
11 measure is necessary for the City to be able to  
12 implement this?

13 MR. KERRIGAN: This enables the  
14 Department of Water and Power to establish this  
15 program utilizing Power funds. And the L.A.  
16 Administrative Code has to be amended to be able  
17 to do this. And that's why it's on the ballot.

18 COMMISSIONER DOUGLAS: Is the City  
19 looking at a different price for solar thermal  
20 versus PV, or is it looking at one price?

21 MR. KERRIGAN: I have an estimate.  
22 Sorry, forgive me.

23 COMMISSIONER DOUGLAS: Well, this is all  
24 very interesting. Thank you for providing us the  
25 information that you've been able to provide us

1 today. We look forward to hearing more as details  
2 are developed and --

3 MR. KERRIGAN: Okay, just -- just to  
4 answer your question. With regards to solar  
5 thermal, once again with all the wonderful  
6 incentives and tax benefits and so-on and so-  
7 forth, a capacity factor of 25 to 35 percent,  
8 we're looking at 8.5 to 21 cents per kilowatt  
9 hour.

10 COMMISSIONER DOUGLAS: Okay.

11 MR. KERRIGAN: Yeah, we have some big  
12 ideas, too.

13 COMMISSIONER DOUGLAS: That's great.  
14 We're glad to see you moving forward --

15 MR. KERRIGAN: Any questions?

16 COMMISSIONER DOUGLAS: -- on this issue.

17 MR. TUTT: Yes, I have a question. How  
18 would you determine in any individual project  
19 where it would fall within that range? Is that  
20 figured out yet?

21 MR. KERRIGAN: No, it hasn't been. And  
22 as the details unfold, as we move forward I can  
23 probably get those details. The Mayor is very  
24 determined to get to these goals. We're  
25 definitely going to make that 35 percent by 2020.

1 And this is part of the overall picture of  
2 reaching that goal. We're very determined and  
3 we're very excited about this project going  
4 forward.

5 COMMISSIONER BYRON: Thanks for being  
6 here to share this new developing information with  
7 us today. It is very interesting that LADWP is  
8 making this transition. We certainly encourage  
9 it.

10 MR. KERRIGAN: Thank you.

11 COMMISSIONER DOUGLAS: All right, the  
12 next card I have is Mary Lynch with Constellation.

13 MS. LYNCH: Good afternoon. I'm Mary  
14 Lynch with Constellation Energy Resources. I'm  
15 very appreciative of this opportunity for these  
16 few brief remarks, observations, as I listened to  
17 the presentation this morning. And want to thank  
18 Bob and his team, Bob an old colleague of mine  
19 from many years ago, on the very thorough report  
20 that they've submitted.

21 But I would like to offer a few comments  
22 on an area where we think there has not yet been  
23 enough analysis. And that is with respect to how  
24 a feed-in tariff program is truly going to  
25 interact with an RPS. And whether it is really

1 something that can work in tandem with it, or  
2 whether it is an alternative.

3 And so I think the best way that I  
4 thought of it as I was listening to the report  
5 this morning was to tee up some additional  
6 questions that we would offer perhaps need to be  
7 answered before we continue down this path.

8 And that's first, do we have any  
9 analysis of whether there have been any  
10 jurisdictions that have had an RPS standard onto  
11 which a feed-in tariff structure has been  
12 overlain. I don't think that either Spain or  
13 Germany has had an RPS of the type where entities  
14 that are mandated to execute the tariffs and  
15 administer the tariffs are also subject to an RPS  
16 standard for the amount of energy that they're to  
17 be delivering from renewable resources.

18 And so I don't think that we have any  
19 good sense of what the interactions of these two  
20 programs are going to be.

21 And we would suggest, Constellation  
22 would suggest that that interaction is probably  
23 not likely to be a very good one. It seems to us  
24 that a program that is looking for investment to  
25 come from two very different sources, one from a

1 competitive market source and one from a mandated  
2 investment management source, is one that is  
3 probably going to see the market-based one fall by  
4 the wayside.

5 Investors will always look for the sure  
6 investment and the regulated return type of  
7 investment before they will be able to go out into  
8 the marketplace and manage the risks associated  
9 with those investments.

10 So we're not confident at all yet that  
11 we know that an FIT program really will work side  
12 by side with an RPS program, or whether it would  
13 supplant it.

14 And this becomes particularly even more  
15 acute if the FIT program is expanded beyond the  
16 1.5 megawatt that it applies to now. But  
17 particularly if it applies to something that's  
18 bigger than 20 megawatts.

19 At that point we don't see that an RPS  
20 solicitation has much meaning at all if we're  
21 going to allow investors to submit -- or  
22 developers I should say, to submit their projects  
23 for tariff treatment, as opposed to an RFO. It's  
24 hard for us to imagine how many developers would  
25 be able to see their way clear to the risks

1 associated with a contract under an RFO as opposed  
2 to a mandated tariff.

3           So it doesn't seem to us that those two  
4 will co-exist peacefully. And neither one of them  
5 is particularly supportive of competitive market  
6 approaches. It seems to us that we have had  
7 problems with the RPS, but most of those problems  
8 seem to be rooted in the availability of  
9 transmission. And the feed-in tariff, by its own  
10 admission, throughout the areas where it's been  
11 practiced, does nothing to solve the problems  
12 associated with transmission.

13           So it seems to us that with the efforts  
14 that are ongoing in that regard, and along with  
15 some of the very real strides that we're making in  
16 terms of market initiatives here in California, it  
17 seems to us that the FIT approach is likely to be  
18 a step backwards.

19           And some of those additional  
20 improvements that I think will do more to enhance  
21 RPS than would an FIT are things like the  
22 establishment of the renewable energy credits,  
23 which we think will bring a lot of transparency to  
24 investment, a lot of transparency for entities  
25 such as my company that serves retail load, in

1 order to allow them to actively participate in  
2 this market.

3 That, along with proposed market-based  
4 initiatives to meet greenhouse gas standards, as  
5 well as the ongoing proceeding to reopen retail  
6 access, which would bring a multiplicity of buyers  
7 into this market, as well, we think are events  
8 that should be given a chance to work before we go  
9 layering on another element of command and control  
10 techniques that are represented by feed-in  
11 tariffs.

12 So, those are our comments. It's sort  
13 of a threshold matter with respect to FITs. But  
14 beyond that, I did want to also offer just a  
15 couple of additional questions that perhaps get  
16 down a bit more into the weeds.

17 If we are going to go down this path of  
18 FITs, we need to think a little bit about how an  
19 FIT -- well, one of the comments that we've heard  
20 is that FITs would be very helpful in the 1 to 20  
21 megawatt area -- space, because there's isn't a  
22 lot of support, and we're not seeing a lot of that  
23 in the RPS solicitations.

24 And while I will take that as a fact  
25 that that's true, because I'm sure that it is

1 true, I think the comment that therefore this  
2 won't impact the RPS is somewhat misplaced.

3 If all entities who have projects in  
4 those 1. -- or in the zero to 20 megawatt space  
5 are able to get tariffs to do that, we have to  
6 step back and then say, how does that feed into  
7 the RPS requirements. Are those going to be  
8 megawatts taken off the top? And therefore what  
9 the utilities are seeking in their RPS  
10 solicitations are reduced by that amount?

11 This becomes particularly acute if the  
12 program is not capped at any megawatts. Because  
13 entities coming into the RPS solicitation are  
14 going to have an additional risk that their  
15 investments, their analysis of the supply side  
16 dynamic can be undone by the number of megawatts  
17 that come in through the FIT structure.

18 So, I think, from an implementation  
19 standpoint, we have to think very carefully about  
20 what those interactions are going to be to make  
21 sure that if we really want both, if we want RPS  
22 solicitations and we want FITs, we need to be  
23 clear about how these two mechanisms are going to  
24 interact.

25 And then finally the one issue that I

1 haven't heard discussed at all either with respect  
2 to FITs is how will these costs be allocated. If  
3 it's intended that the tariffs that are entered  
4 into by each utility, if that is going to be for  
5 bundled customers only, then that would mean that  
6 retail customers that aren't served by the  
7 utilities aren't going to see any of those costs.

8 But if all of the facilities in the zero  
9 to 20 megawatt regime are committed to the  
10 utilities through these tariffs, they could create  
11 additional difficulty for retail suppliers to meet  
12 their RPS goals, because those facilities would,  
13 by and large, be looking to execute tariffs rather  
14 than participating in a competitive market  
15 environment. And it could compromise our ability  
16 to meet our goals.

17 On the other hand, if those costs are  
18 going to be spread to all customers, what we have  
19 to recognize is that we're now adopting an  
20 additional element of socialized cost recovery  
21 among all retail load servers in the state, which,  
22 as we know, there's already a large degree of that  
23 from the conventional generation that the  
24 utilities enter into. And it's not, at the end of  
25 the day, supportive for retail competition.

1           So I bring you these comments in the  
2           spirit of a company that looks at California from  
3           the standpoint of wanting to keep the momentum  
4           moving for robustly competitive wholesale and  
5           retail markets.

6           We think that FITs represent a layer of  
7           command and control approach that won't be  
8           supportive of competitive markets. We think that  
9           there are enough improvements on the horizon for  
10          the renewable program, that those should be given  
11          a chance to work before we layer on this  
12          additional mechanism.

13          Thank you.

14          CHAIRPERSON PFANNENSTIEL: Mary, first  
15          of all, I think that there's a cognitive  
16          dissonance between your discussing the FIT as  
17          being a separate, maybe even competing, program  
18          with the RPS.

19          Whereas I'm looking at it, and I think  
20          the staff report is looking at it, as, in fact,  
21          part of the RPS, a mechanism for helping us meet  
22          the RPS.

23          So the question, I guess, is would we  
24          continue having the kind of procurement that goes  
25          on now and a feed-in tariff. And you said well,

1       you didn't see how they could both work. I guess  
2       I sort of agree with you; I'm not sure that the  
3       procurement that is currently being done would be  
4       needed under the feed-in tariff.

5               The feed-in tariff, as envisioned, would  
6       be a way of the utility accepting all kilowatt  
7       hours generated by qualifying renewable facilities  
8       at a given price. And that price would go down.

9               So, I'm not sure why there would be  
10       still a separate renewables procurement. The  
11       point being to promote very deliberately and very  
12       overtly and very consciously and measurably, to  
13       promote the renewable industry and develop the  
14       economies of scale and the cost reductions that  
15       would be presumably seen if there was sufficient  
16       price stability, such that then the -- eventually  
17       that industry could stand on its own.

18               We've heard from a number of renewable  
19       developers, really not today, but in past  
20       workshops, that many of them believe this would be  
21       helpful to them because of the issues they've had  
22       with contracting and securing PPAs with utilities.  
23       And that this is a way to go.

24               Now, many others -- I don't want to put  
25       a value judgment in terms of how many of one and

1       how many of the others, but certain others of  
2       developers, renewable developers, have said  
3       exactly the opposite. Have said just what you  
4       said, that transmission is really the problem.  
5       And the contracts with the utilities at a price  
6       that the utilities pay really is not so much the  
7       problem.

8                   But where we are right here is to say,  
9       well, on balance, the recommendations have been  
10      that at least up to 20 megawatts should be on a  
11      feed-in tariff, and the larger ones are yet to be  
12      determined.

13                   But that would then, I guess, obviate  
14      the need for further procurements of the existing  
15      type.

16                   So, it's a long way of saying I believe,  
17      at least in my view, the feed-in tariff should be  
18      a way of allowing us to replace the existing  
19      procurements.

20                   MS. LYNCH: Okay, well, I think that's  
21      -- I think not what was specified in the reports.  
22      And I think you're right, I think it will replace  
23      the existing procurements. I think that it would  
24      have to.

25                   I think that it's not that dissimilar to

1 the current procurements because at the end of the  
2 day both the utility solicitations and a feed-in  
3 tariff impose all the risks of the investment on  
4 ratepayers. There's very little risk management  
5 going on with that type of cost socialized  
6 investment.

7 And that's where we see things like  
8 RECs, even the implementation of MRTU, the  
9 implementation of cap-and-trade. All of these  
10 things we had hoped, our company's perspective is  
11 that these would move us towards market mechanisms  
12 where investors, working with load-serving  
13 entities in a competitive market space would find  
14 ways to manage the risks of all these investments  
15 so that ratepayers wouldn't be directly on the  
16 hook for these long-term 20-year contracts.

17 And that we could design procurement  
18 practices in a way that would allow more active  
19 risk management of the full lifecycle costs of all  
20 of these facilities.

21 And in that regard, as I said, where we  
22 see things like RECs and greenhouse gas cap-and-  
23 trade programs, and MRTU that brings transparency  
24 to locational price signals for energy, all of  
25 those things would help move us in that direction.

1           But something like FITs, where we're  
2           executing tariffs for fixed prices for fairly  
3           lengthy time periods are not --

4           CHAIRPERSON PFANNENSTIEL: I don't think  
5           that has been determined.

6           MS. LYNCH: Okay. All right. Well,  
7           I've heard 20 years, and maybe they'd be shorter,  
8           and maybe there would be some market risk  
9           component to it. I think a lot of that is in the  
10          implementation details, which is why I offered  
11          what do we do when we do this. Are these the  
12          first megawatts through the meter? Are they the  
13          last megawatts through there?

14          How are we going to structure all these  
15          things so that, as Steve Kelly said, we have a  
16          level of market certainty there about what the  
17          rules are going to be for all investors who are  
18          looking at different ways of managing the costs of  
19          their facilities?

20          Those are the points that I was trying  
21          to make.

22          CHAIRPERSON PFANNENSTIEL: I see. Thank  
23          you.

24          MS. LYNCH: Thank you.

25          COMMISSIONER BYRON: Mary, if I may.

1 Are you a member of -- is Constellation a member  
2 of IEP?

3 MS. LYNCH: No.

4 COMMISSIONER BYRON: I was just curious  
5 because obviously your comments are very  
6 different. Let me ask another general type  
7 question. Is this more a case of you'd rather  
8 stick with the devil you know rather than the  
9 devil you don't know?

10 Because, I mean, you can't really argue  
11 that the current RFO process is accomplishing the  
12 goals that we've set out here for renewables.

13 MS. LYNCH: I can't argue that it's not  
14 working, is that --

15 COMMISSIONER BYRON: Yes. It's  
16 difficult to make the case that it's working well.

17 MS. LYNCH: Well, agreed. I mean --

18 COMMISSIONER BYRON: And, as  
19 policymakers, you know, we initiate the renewable  
20 energy transmission initiative because we really  
21 want to try and move forward there.

22 MS. LYNCH: Um-hum.

23 COMMISSIONER BYRON: We want to clean up  
24 -- clean up is not the word I mean -- we want to  
25 perfect the renewable procurement process so that

1 that works.

2 But as policymakers we can't put all our  
3 eggs in those baskets. I mean the FIT affords a  
4 wonderful opportunity to see smaller projects get  
5 onto the distribution side of the system without  
6 the need for large renewable transmission; without  
7 the need for a great deal of -- I'll stop there.

8 MS. LYNCH: Well, --

9 COMMISSIONER BYRON: So, as  
10 policymakers, help me out here a little bit. Do  
11 you see the advantages that FIT affords us in  
12 reaching a higher renewable goal?

13 MS. LYNCH: I think from a -- if we are  
14 expecting load to be served from a rate-regulated  
15 perspective, FITs probably fit the bill very well.

16 Our vision for California is one where  
17 infrastructure is supported through competitive  
18 market forces, and where we have price signals  
19 that tell investors here's what, we have  
20 requirements that we must meet and we have price  
21 signals that tell us what the value of those  
22 commodities is.

23 And when we have those price signals out  
24 there, we're confident that investors will respond  
25 with what's needed to meet the requirements of the

1 state.

2 To impose a 20 percent requirement and  
3 then tell the utilities you must sign a contract  
4 with every entity that comes to you wanting to  
5 provide a renewable megawatt doesn't allow those  
6 competitive market price signals to be revealed in  
7 the marketplace.

8 In fact, done to an extreme, or done in  
9 a very large quantity, they undermine those price  
10 signals because it gives you a whole set of assets  
11 out there that are operating totally outside your  
12 market structures. And therefore serve, in the  
13 long run, to undermine them.

14 So, --

15 CHAIRPERSON PFANNENSTIEL: Well, may  
16 that not be true generally of the RPS or any other  
17 policy prescriptions that the policymakers in  
18 California impose on the utilities where the  
19 utilities may not have purchased 10 percent, 11  
20 percent, certainly 20 percent of RPS without a  
21 policy mandate to do so.

22 And so wouldn't that then have the  
23 fundamental issue that you're raising, and now  
24 it's just a question of how to implement that?

25 MS. LYNCH: It is a question of how to

1 implement it. And up until now what we've said is  
2 we have a 33 -- well, now we're saying we have a  
3 33 percent requirement by some date.

4 But now when we're layering on -- and  
5 here's exactly how we are going to bring  
6 investment in, by giving it a fixed guaranteed  
7 cost recovery at a certain price. It's something  
8 that goes beyond telling the marketplace, here's  
9 the requirement, figure out how to meet it; here's  
10 how we value it; here are the price signals you  
11 see through RECs and everything else. That's one  
12 way to achieve those goals.

13 It's a different way to achieve those  
14 goals to say to require an entity, whether it's a  
15 central procurement entity or a utility, we  
16 require you to pay all of these entities a certain  
17 price.

18 CHAIRPERSON PFANNENSTIEL: But two  
19 points. One is that, but it wasn't happening  
20 under what you're calling the market mechanisms  
21 that were currently in place.

22 The other point I would make is the  
23 whole QF program in California with the standard  
24 offer contracts back in the early '80s, which I  
25 think we would all -- we all know were over-priced

1 and caused a lot of higher utility rates for a  
2 number of years than they would have been.

3 And at the end of the day, however, that  
4 did propel the independent power industry in  
5 California way ahead of where it was elsewhere.

6 And, so, again, it was more painful than  
7 it needed to be. And I hope we don't make that  
8 mistake with the feed-in tariff.

9 But the policy objective was to promote  
10 the independent generating business in California.  
11 And that seemed to have worked.

12 MS. LYNCH: Well, --

13 CHAIRPERSON PFANNENSTIEL: Do you agree  
14 with that?

15 MS. LYNCH: I know my understanding of  
16 the QF regime, and I wasn't here when that was  
17 implemented, we certainly have a strong component  
18 of QF facilities here in California. In fact, my  
19 company owns some of them here in California.

20 But the fact of the matter is they do  
21 operate outside a competitive market regime. They  
22 have a guaranteed fixed price that they're going  
23 to get paid regardless of what happens in the  
24 marketplace. And, as such, if we add more and  
25 more megawatts of that type to our mix, we won't

1 get megawatts in this market that don't have that  
2 guarantee because they won't be able to take the  
3 risk to build.

4 So, in our view, markets that support  
5 investment, there's not too many cutting corners  
6 you can do in terms of supporting that paradigm.  
7 Either you support that paradigm or you want to go  
8 a command and control approach.

9 And that's what concerns us about FITs.  
10 That it's going to create a bifurcated asset  
11 ownership in the state that will crowd out  
12 competitive investment at the end of the day.

13 I don't think that we've seen market  
14 based renewable investment because we're so  
15 willing to support renewables in many other ways,  
16 through mandated investments.

17 I think that the advent of RECs and of  
18 regional market for renewables could change that.  
19 And that's the thrust of my message. I think  
20 we're on the cusp of being able to support truly  
21 competitive investment where risks are managed if  
22 we don't undermine it with more command and  
23 control approaches.

24 COMMISSIONER BYRON: Ms. Lynch, I thank  
25 you for your comments. I think they're very

1 thoughtful. I'm moved by the concern about  
2 stifling competition and the other one that I'm  
3 not sure you even mentioned, that I read in your  
4 comments earlier, about deterring innovation.

5 I also am concerned about those. So I  
6 thank you for bringing those forward here today.

7 MS. LYNCH: Thank you.

8 COMMISSIONER DOUGLAS: All right, next  
9 we have Craig Lewis of Greenvolts.

10 MR. LEWIS: I appreciate the opportunity  
11 to speak here today. I had the pleasure of  
12 sitting on the panel during the October 1st feed-  
13 in tariff workshop, which I think was extremely  
14 productive.

15 Just to reintroduce Greenvolts.  
16 Greenvolts is a solar technology company and we  
17 are also a developer of solar power projects using  
18 our technology.

19 And we have the unique distinction of  
20 being the very first solar project to successfully  
21 navigate the CPUC RPS solicitation process. So we  
22 know quite a bit about that process. And we also  
23 know that it doesn't really work for under 20  
24 megawatts.

25 So, I want to make a couple of comments

1 here, and I want to start with thanking the Energy  
2 Commission for its incredible leadership. I am so  
3 happy with what I've seen here today based on  
4 where we've come from October 1st to December 1st.  
5 It is really exciting.

6 And I want to thank you for taking the  
7 leadership really to shift away from a paradigm  
8 that has dominated in California for decades. And  
9 that is the central station paradigm.

10 What we're talking about here with the  
11 20 megawatt and under feed-in tariff is unleashing  
12 the market for what we call wholesale distributed  
13 generation. That's distribution interconnected  
14 generation that's project size 20 megawatts and  
15 under. That market is not happening right now.

16 And so the comments from Constellation,  
17 I can appreciate where they're coming from.  
18 They're operating under the central station  
19 paradigm. Obviously they're successful with that  
20 paradigm; they'd like it to continue.

21 But from a standpoint of California,  
22 California ratepayers and the RPS mandate, we need  
23 to open up the whole distributed generation  
24 marketplace so that we can hit 20 percent by 2010,  
25 or at least as soon thereafter as we possibly can.

1 There's no other way that we're going to come  
2 anywhere close to achieving 20 percent by 2010.

3           Greenvolts, if not obvious already,  
4 we're very supportive of the policy path number  
5 six. We think that that is, you know, really the  
6 right way to start with a feed-in tariff in  
7 California. We think that it is completely  
8 disjointed from the RPS program.

9           The RPS program, again, is a central  
10 station paradigm created process that is all about  
11 large, central station power. And the feed-in  
12 tariff is not going to overlap with that.

13           But in the future Greenvolts is open  
14 minded about extending the feed-in tariff if it  
15 plays out the same way it has in other countries  
16 around the world, and proves itself to be the most  
17 effective policy mechanism in the history of  
18 mankind for bringing renewables online, which is  
19 what it has done in other countries.

20           I've got to say I'm very happy that the  
21 consultants did not forget about the mandate for  
22 20 percent by 2010. I think we really have to  
23 keep our eye on that mandate. There's been a lot  
24 of talk about 33 percent by 2020. To me that  
25 diverts the issue. If we can't figure out how to

1 do 20 percent by 2010, there's not a lot of hope,  
2 from my perspective, that we're going to figure  
3 out how to do 33 percent by 2020.

4 Also, the fact that must-take was really  
5 emphasized. Greenvolts looks at must-take as a  
6 fundamental feature of this. This makes the  
7 process transparent, predictable. It allows the  
8 developers to get funding early in the process.  
9 It also allows the funding to be acquired or to be  
10 established at very favorable terms.

11 So you add transparency and  
12 predictability into the process and you really  
13 help facilitate the whole financing element of  
14 project development.

15 Also want to touch on assurance  
16 obligations. This isn't something that was really  
17 touched on here in this proceeding, but it is  
18 something that's being discussed in the long-term  
19 procurement planning proceeding and other  
20 proceedings at the CPUC.

21 There's a lot of questions about how do  
22 you make sure that there's assurances that this  
23 generation comes online and stays online and  
24 doesn't move over from one customer to another  
25 customer.

1           And basically I just want to throw out a  
2       couple of things there, probably for the benefit  
3       of the consultants and the staff more than anybody  
4       else. But the PIRP process, the participating  
5       intermittent resource program, is going to apply  
6       to solar projects. It already applies to wind in  
7       California. Cal-ISO monitors that program, or  
8       runs that program. It will apply to solar  
9       projects as soon as the MRTU goes live, which is  
10      anticipated to be in the first quarter of 2009.

11           But PIRP basically handles all the  
12      performance requirements that would be associated  
13      with a renewable energy project, either wind or  
14      solar.

15           Also, in terms of the interconnect issue  
16      the timing of the interconnect, when you're  
17      talking about a feed-in tariff where you have a  
18      standard must-take contract you don't have to  
19      worry about, you know, whether a project's going  
20      to interconnect because you don't have to -- the  
21      developer doesn't have to worry about that until  
22      the project's ready to interconnect.

23           So, they build the project; they know  
24      that they -- they can get the financing before  
25      they sign a contract with the customer because

1 they know that the contract is, it's a done deal.  
2 It's a standard, must-take contract.

3 And so the customer, the utility doesn't  
4 have to worry about getting that energy online  
5 until the energy's ready to come online. So just,  
6 you know, the contract gets signed at the time  
7 that the interconnect is ready. And it really  
8 removes a lot of obstacles.

9 I want to just address something that  
10 was early on, Commissioner Byron. You talked  
11 about, or I think you alluded to something where  
12 there's maybe a little bit of mixing up of  
13 California Solar Initiative and the feed-in  
14 tariff. And this is something that Greenvolts is  
15 very sensitive about. Because there are some  
16 people within the renewable energy industry,  
17 SunPower being one of them, that's very nervous  
18 about messing up the California Solar Initiative  
19 program. And we don't want to do that.

20 So, a very simple solution is to make  
21 sure that feed-in tariff facilities have a  
22 dedicated meter. You never put it -- never  
23 interconnect it to the retail meter. And you've  
24 eliminated any potential mixing of CSI and feed-in  
25 tariffs. Done. Very easy.

1           Also, just two quick comments on  
2 pricing. One thing that can help inform the feed-  
3 in tariff program here in California is the  
4 national feed-in tariff bill which was introduced  
5 about six months ago by Congressman Jay Inslee.  
6 He's a very energy-focused congressman out of  
7 Washington State, Seattle district.

8           And it is a feed-in tariff that provides  
9 for a 10 percent internal rate of return to  
10 renewable energy project developers. That's an  
11 unlevered, meaning no debt in that 10 percent  
12 internal rate of return calculation.

13           And it basically says, you know, it  
14 understands that there are different resource  
15 quality levels in different places. So it says  
16 that 10 percent IRR is calculated at the 70  
17 percent resource quality level.

18           So, for example, in California you would  
19 have your 100 percent level would probably be, for  
20 solar would probably be out in the Mojave Desert.  
21 So you take 70 percent of that level; you run your  
22 10 per IRR calculation; and you've come up with  
23 your rate that you need to set your feed-in tariff  
24 at.

25           So, I would encourage KEMA and the staff

1 consultants to definitely take a look at the  
2 Congressman Jay Inslee's national feed-in tariff  
3 bill.

4 And, by the way, we've run the numbers  
5 on that, and that calculation for California would  
6 result in about a 30 cent per kilowatt hour for  
7 PV. Just to throw a number out there that  
8 actually matched pretty well with what the  
9 gentleman from LADWP said.

10 And then finally, I just want to let you  
11 all know that Greenvolts is working on an analysis  
12 with a team out of UC Berkeley to basically show  
13 that the cost impact to the ratepayer is  
14 neutralized when you implement a feed-in tariff.

15 And what we're doing is we're basically  
16 running the numbers using about a 25 cent per  
17 kilowatt hour price for PV. We're assuming that  
18 we've reached the 20 percent by 2010 obligation by  
19 2012. So we're giving a couple extra years there.  
20 And we're saying we're going to get -- we're at 12  
21 percent, we need to get to 20, so we need to grow  
22 the use of PV by 8 percent of total delivered  
23 energy, that's 2 percent a year.

24 So we're saying 2 percent additional PV  
25 is offsetting 2 percent of natural gas usage in

1 California. And if you look at the elasticity  
2 impact of the natural gas, the reduced demand, it  
3 drives the price down. A small price reduction,  
4 but over a large volume that overwhelms the price  
5 premium that you're paying, even at 25 cents a  
6 kilowatt hour for all PV, over a very small  
7 volume.

8 So, we're going to share that analysis  
9 when we have the results in a more formalized  
10 form. But preliminary results are very very  
11 favorable to basically neutralize cost impact.

12 CHAIRPERSON PFANNENSTIEL: Who's doing  
13 the analysis?

14 MR. LEWIS: A team from UC Berkeley.

15 CHAIRPERSON PFANNENSTIEL: It will be  
16 interesting to see that. We'll look forward to  
17 that.

18 MR. LEWIS: Great. So, that concludes  
19 my comments. Again, I appreciate the opportunity  
20 to share them, and I thank you for your  
21 leadership, again.

22 COMMISSIONER BYRON: You're to be  
23 commended, having navigated the RFO process. I  
24 believe your project, you told me once, was a  
25 megawatt or a megawatt and a half?

1 MR. LEWIS: It's 2 megawatts.

2 COMMISSIONER BYRON: Two megawatts.

3 Forgive me. But it's very difficult, obviously.

4 And so here you are coming out in favor, have been  
5 in favor of feed-in tariffs for awhile.

6 Not wanting to jeopardize your  
7 contractual arrangement with the IOU or any future  
8 ones, you're now saying that you'd rather go down  
9 this path than go down the competitive path?

10 MR. LEWIS: We don't see that doing  
11 project development at 20 megawatts and under in  
12 California is a viable path for renewable project  
13 developers without a feed-in tariff type of  
14 approach. It's got to be standardized, got to be  
15 must-take.

16 You've got to take that risk of, you  
17 know, is that project actually going to be taken  
18 by the time you build it. You've got to take that  
19 risk off the table. And that's what a standard --  
20 that's what a must-take feature does.

21 And then obviously standard contract  
22 eliminates all the proposing and negotiating and  
23 contracting time, energy and money that's involved  
24 in that process. And that process also delays the  
25 point in time at which you can actually get your

1 financing done. Because you can't get financing  
2 done until you've got a contract.

3 The beautiful thing about a feed-in  
4 tariff is that the contract is de facto. You  
5 don't have to have a signed contract because  
6 everybody knows that's playing in this market,  
7 including the investors, that you build the  
8 project and it will get taken.

9 COMMISSIONER BYRON: You indicated  
10 you're the first to negotiate that process. Do  
11 you know, are you the only one thus far?

12 MR. LEWIS: There was another project  
13 that got approved from the CPUC at the same time  
14 in December 2007. So just about a year ago. But  
15 we're ahead in terms of the build-out process.

16 COMMISSIONER BYRON: Well, yeah, I  
17 didn't mean to look at it from that competitive  
18 point of view. Just really that there's not very  
19 many of those projects --

20 MR. LEWIS: Well, yeah.

21 COMMISSIONER BYRON: -- that are making  
22 it through.

23 MR. LEWIS: Yes, really there's two that  
24 I know of for sure. And Greenvolts being one of  
25 them. So not very many.

1                   COMMISSIONER BYRON: Thank you for being  
2 here with your comments.

3                   COMMISSIONER DOUGLAS: Just so folks  
4 know, I have two more cards from people in the  
5 room, and two from people on WebEx. The next card  
6 is Tom Faust with Redwood Renewables.

7                   MR. FAUST: Good afternoon. Thank you  
8 for letting me present. I come from Marin, and  
9 the name of our company is Redwood Renewables.  
10 You can see it on the web, [www.redwoodrenewables](http://www.redwoodrenewables).  
11 We do integrated solar roofing.

12                   And just this last week, Tuesday, in  
13 Marin County I was there at a Marin County Board  
14 of Supervisors' meeting. And a utility company  
15 was there with a last-minute proposal. And what  
16 happened is the utility company hired the  
17 consultants, former supervisors, former  
18 assemblymen, to represent them.

19                   And what happened is five supervisors in  
20 Marin County voted against the utility last-minute  
21 proposal. And they all said, we're going to have  
22 a countywide clean energy. They were so desperate  
23 they wanted to stop global warming.

24                   The most recent scientific evidence that  
25 I've read is the parts per million is in excess of

1 388, almost 390, parts per million. And they say  
2 we're only 12 points away from reaching the  
3 tipping point which pushes us into a point where  
4 all of California will be jeopardized. All of our  
5 streams and snowfall and water will be put in a  
6 crisis mode. There will be year-round forest  
7 fires.

8 We need not to put off or curtail action  
9 on doing ever step possible to get a renewable  
10 energy system, just like Europe. The tactics such  
11 as Constellation Energy, they were arguing fear,  
12 uncertainty and doubt in the commercial markets.

13 Craig from Greenvolts was saying the  
14 exact opposite, and he has personal experience --  
15 his company has personal experience. I would  
16 argue that Craig Lewis' arguments are extremely  
17 believable.

18 The auto manufacturers fought California  
19 for ten years, and the people of California didn't  
20 believe them. The people of California, right now  
21 80 percent of cars, according to NPR this morning,  
22 are foreign built because we rejected the pleas  
23 from Detroit.

24 The status quo is not changing fast  
25 enough. We've kind of danced around what are the

1       probable rates that will be possible with a feed-  
2       in tariff in California. And this morning it was  
3       brought to our attention that Gainesville would be  
4       28 cents a kilowatt hour for everything.

5       Gainesville, Florida is about ten degrees latitude  
6       further south than Los Angeles. So their solar  
7       radiation is higher than it is in California.

8               So I would argue that a rate system  
9       would be just like the Europeans where they have  
10      broken down the rates into wind, solar,  
11      terrestrial, and BIPV. And a system like that has  
12      been footnoted in the consultant's report.

13             Australia has a system where it's 36  
14      cents for BIPV in Australia. And so does New  
15      Zealand. And surprisingly France and Spain.  
16      Germany's a lot higher, but those countries -- for  
17      example, Spain is closest to our latitude and they  
18      have -- let me just toss this out.

19             They have a rate system of 36 cents for  
20      BIPV on rooftop. For field farms something like  
21      around 22 cents, or 25 cents. Concentrating solar  
22      around 24 cents. And with each year it goes down,  
23      there's a digression rate where it goes down.

24             So, 42 percent of the energy in Germany  
25      is generated from solar rooftops. And what you do

1 is you have farmers, you have homeowners, everyone  
2 wanting to produce energy because it helps on  
3 their bottomline. They use their property, their  
4 land to generate electricity.

5 This is the greatest motivating force in  
6 the world to use your own property to generate  
7 electricity. You don't have to use expensive  
8 distribution lines. And what you do is you create  
9 power that goes out to your local community. It  
10 is the most efficient, and it's clean power as  
11 opposed to carbon-based central utility systems.

12 So, that's -- the central utility system  
13 is from the dinosaur age, distributed power, as  
14 Craig Lewis has argued, that's the way of the  
15 future.

16 And that's the way that 450 million  
17 people have aligned their economies. Just this  
18 last week the Queen of England gave her  
19 endorsement for a feed-in tariff for England. Not  
20 that the Queen of England has the ultimate say  
21 here in California, --

22 (Laughter.)

23 MR. FAUST: -- but what I'm saying is  
24 societies that have older beliefs change and adopt  
25 modern strategies for selling electricity.

1           So, I don't want California to turn into  
2           Detroit. I want California to be a leader. And  
3           that means implementing feed-in tariffs not next  
4           year. On a small scale why not this next month in  
5           December implement for anything under 5 megawatts  
6           immediately as a start incentive.

7           Just this last month, six weeks ago  
8           Senator Baucus and the rest of Congress voted to  
9           put homeowners, commercial businesses and  
10          utilities all on a level playing field. They gave  
11          everyone a 30 percent ITC.

12          Now, the French are even more  
13          interested, although they have 80 percent nuclear  
14          power they gave a 50 percent ITC this last week.  
15          So they have the highest incentive, and they also  
16          get a feed-in tariff of 36 cents. So the French  
17          are the most aggressive, I would say, in the whole  
18          world for incentivizing.

19          But, anyway, those are my comments. Any  
20          questions? I'd be happy to answer your questions.

21          COMMISSIONER BYRON: No. It's very nice  
22          of you to come and provide these comments. I  
23          appreciate you not using the word paradigm again  
24          as our previous two speakers did use it.

25          Thank you very much.

1                   COMMISSIONER DOUGLAS: Our next speaker,  
2 the last card I have from somebody in this room is  
3 Marci Burgdorf with Southern California Edison.

4                   MS. BURGDORF: Hi, good afternoon. My  
5 name's Marci Burgdorf with Southern California  
6 Edison. Thank you for the opportunity to be here.

7                   We also wanted to say thank you to the  
8 consultants. We appreciate the effort that's been  
9 put into developing this report. That's quite a  
10 task to take all the comments and feed everything  
11 together into a readable document. And it is  
12 that.

13                   We continue to support policies for  
14 renewable growth. I think, as outlined in the  
15 report, this is evident by the development of our  
16 biomass standard contracts.

17                   And as also mentioned, we have proposed  
18 expansion of these contracts to all renewable  
19 generators up to 20 megawatts. So we are  
20 continuing to move forward.

21                   There's a few comments that I have.  
22 Just a couple comments on the report, itself. In  
23 terms of any tariff, particularly the feed-in  
24 tariff, one of the biggest concerns that we have  
25 is insuring that there's performance obligations

1 tied to the tariff.

2 You know, if the goal is to reduce risk  
3 to ratepayers and actually serve as a mechanism to  
4 contribute to the RPS, there should be certainty  
5 that these generators are going to deliver the  
6 power that's expected. So that's of critical  
7 importance, especially in terms of our planning  
8 and scheduling, as well.

9 Secondly, with regard to cost, in terms  
10 of spreading the cost equally to all customers,  
11 and users that actually benefit from the tariffs,  
12 so the State of California in general. This is a  
13 feature that was discussed earlier and seen in the  
14 German feed-in tariffs where it was spread  
15 nationally, the costs were spread nationally.

16 And then also I know there was some  
17 discussion of the activity on feed-in tariffs here  
18 in the United States. And we started doing a  
19 little bit of research ourselves on what's  
20 happening in other states.

21 And in Michigan, even though the bill  
22 hasn't passed through yet, they have proposed a  
23 non-bypassable surcharge that would be paid by all  
24 classes of customers. So it's somewhat of a  
25 similar model that we would propose to see here in

1 terms of the feed-in tariffs.

2 And that's it.

3 COMMISSIONER BYRON: If I may. One of  
4 the comments that I remember seeing was that --  
5 and, of course, thank you for reminding us about  
6 the biomass standard offer contracts, which you've  
7 done before.

8 As I recall, you got, what, about 11 or  
9 12 megawatts in place, and I forget how many  
10 projects that are being considered.

11 I thought I read that there was a  
12 megawatt limit by the end of this year, whichever  
13 came first, you were going to probably no longer  
14 do these contracts. Has Southern California  
15 Edison agreed to continue to do these standard  
16 biomass contracts into '09?

17 MS. BURGDORF: Well, what we proposed is  
18 that we would expand those contracts; we would  
19 develop contracts in 2009 that would expand that  
20 program to all generators. So, feasibly it would  
21 just carry over into those contracts.

22 COMMISSIONER BYRON: So you're going to  
23 continue doing them?

24 MS. BURGDORF: Yes.

25 COMMISSIONER BYRON: You're not going to

1 stop them. The other thing that you said just a  
2 moment ago, Ms. Burgdorf, is about performance  
3 standards for renewables. How do you propose to  
4 have performance standards for intermittent  
5 generation?

6 MS. BURGENDORF: Well, that's definitely  
7 been challenging, but there are certain provisions  
8 that can be written into the contract that insure  
9 a certain percent of the contract capacities  
10 delivered. Or that there is notification for  
11 nonperformance. If there's maintenance or  
12 scheduling that has to be done. There is -- I  
13 know communication so that we are aware if there  
14 is an unscheduled flow of electricity, or if there  
15 is a considerable drop in electricity. So that  
16 we're able to make up for that and accommodate it  
17 in the long run.

18 So it's written into the contract. I  
19 believe penalties are in the form of a cost per kW  
20 in terms of what's lacking. And it's something  
21 that's reviewed on an annual basis.

22 COMMISSIONER BYRON: There was also a  
23 comment in, I believe, that came from Southern  
24 California Edison about concern for grid  
25 reliability. So I had a little trouble with that

1 one, given the press release that I read earlier  
2 this morning about the 250 megawatts of  
3 photovoltaic that's being added on SCE's system  
4 over the next number of months or years, I don't  
5 know.

6 I doubt that you addressed grid  
7 reliability when you entered into that agreement.

8 MS. BURGDORF: I'm not familiar with  
9 that application, so I don't know in terms of how  
10 grid reliability was addressed. I know that those  
11 are connecting at the distribution level in  
12 different areas. So, it's a little bit different  
13 than a large project that is transmitting quite a  
14 long distance to get power to the grid.

15 COMMISSIONER BYRON: Okay. I believe  
16 the grid reliability comment by SCE had to do with  
17 a feed-in tariff which would have likely been more  
18 on the distribution side. So, I just --

19 MS. BURGDORF: Well, I --

20 COMMISSIONER BYRON: -- I had a little  
21 problem matching those two things up, that comment  
22 and the fact that obviously SCE had no problem  
23 accepting this rather large project.

24 MR. KINOSIAN: Maybe I can jump --

25 COMMISSIONER BYRON: And whether or not

1 it addressed grid reliability when it accepted it.  
2 Go ahead.

3 MR. KINOSIAN: Maybe I can jump in here.  
4 I think you're referring to the proposal Edison  
5 has for its -- photovoltaics. That project has  
6 not been approved by the PUC yet. They are still  
7 moving ahead with the pieces, looking at it.

8 One aspect of what Edison would be  
9 looking into, if the project is approved, is grid  
10 reliability at these various locations where they  
11 might have 1, 2, 3, or 4 megawatts at a site  
12 hooking up to the distribution system.

13 So, grid reliability is a part of the  
14 project they've put forth at the PUC.

15 COMMISSIONER BYRON: Okay, so that's  
16 included in the proposal?

17 MR. KINOSIAN: Right. Their proposal is  
18 for up to 250 megawatts. One of the things  
19 they'll be looking at as they implement it is the  
20 impacts on grid reliability and whether or not  
21 there are problems with distributed generation  
22 resources at these sites.

23 COMMISSIONER BYRON: Thanks. Thank you.

24 COMMISSIONER DOUGLAS: Thank you. All  
25 right, we're moving on to our WebEx comments,

1 beginning with David Townley.

2 MR. TOWNLEY: Can you hear me?

3 MR. LEAON: Yes, we can hear you. If  
4 you could state your name and organization.

5 MR. TOWNLEY: Very good. Thank you for  
6 this workshop and the opportunity to speak. I'm  
7 David Townley with the Infinia Corporation.  
8 Infinia is a solar electric technology  
9 manufacturer, specifically of a modular dish  
10 Stirling system, headquartered in Kennewick,  
11 Washington. We have California-based -- and  
12 service organization.

13 Five quick points. One. Infinia  
14 supports the draft recommendations in this report  
15 to immediately implement the cost-based  
16 technology-specific feed-in tariff for projects up  
17 to 20 megawatts, connected to the existing T&D  
18 system.

19 And certainly we would support going  
20 beyond 20 megawatts as conditions warrant, and as  
21 soon as practical.

22 Two, utility must-take feature is very  
23 important. With any T&D system upgrades then it's  
24 handled by rate-based processes.

25 Three, Infinia will certainly be pleased

1 to respond to a proposal from the CEC or PUC for  
2 the tariff pricing and any adjustments. And we  
3 think that's an expeditious manner to handle that,  
4 through a proposal with your staffs and response  
5 from interested parties.

6 Four, Infinia believes that the proposed  
7 feed-in tariff approach is complementary to the  
8 existing RPS. It does require the utilities to  
9 respond to the market must-take, rather than the  
10 utility controlling the market development through  
11 RFPs and bilateral negotiations.

12 And finally, on a lighter note I'd say  
13 that Infinia certainly thanks the Commission and  
14 the staff for reinforcing the use of solar  
15 electric and solar electric systems, rather than  
16 referring to a specific solar electric technology  
17 such as PV as a euphemism for solar electric.

18 Infinia plans to submit comments on the  
19 draft report, certainly supporting the draft  
20 recommendations. Thank you for the opportunity to  
21 speak.

22 COMMISSIONER BYRON: Mr. Townley, this  
23 is Jeff Byron, and I acknowledge your point and I  
24 apologize for only referring to photovoltaic.  
25 Actually Chairman Pfannenstiel and I, just this

1 last Monday, were in southern California visiting,  
2 doing an initial site visit on a rather large  
3 Stirling engine project. And so I apologize for  
4 that.

5 MR. TOWNLEY: No apology necessary.  
6 Thank you for using solar electric, we like that.

7 COMMISSIONER DOUGLAS: Very good. The  
8 next speaker from WebEx is Toby Couture of NREL.

9 MR. COUTURE: Is this --

10 MR. LEAON: Yes, go ahead, Toby.

11 MR. COUTURE: Okay. I have just a  
12 comment -- the National Renewable Energy Lab.

13 Very interested to see these workshops  
14 taking place and I've been following since they  
15 started in June. And I think California is  
16 sending a pretty powerful signal with these  
17 workshops, on the hand, and to implementing a  
18 feed-in tariff on the other.

19 We've been tracking feed-in tariffs,  
20 trying to keep up with developments both in Europe  
21 and in the U.S., the progress taking place --  
22 proposed, as well as some of the developments.

23 I'll try to keep my comments relatively short  
24 and succinct.

25 Just a few quickly about the

1 transmission issues area. There was discussion of  
2 the feed-in tariff not addressing some of the  
3 transmission concerns. And just two good points  
4 on that.

5 First things that some of the research  
6 in Europe has started to show is that FIT can  
7 actually help defer some of the transmission and  
8 distribution upgrades that are required. So it  
9 can actually help solve some of those problems  
10 instead of creating more. So that's one point to  
11 bear in mind, that it can actually defer those  
12 upgrades by using existing capacity that is under-  
13 utilized.

14 And other advantages with the smaller  
15 scale systems that it incentivizes. You get  
16 renewables closer to load centers, which has good  
17 qualities and properties for utility serving loads  
18 in that area.

19 Another one that was on transmission,  
20 real quickly, is a lot of it can be addressed  
21 through guaranteed cost recovery. If utilities  
22 are granted cost recovery for any upgrades that  
23 they do have to make, based on project proposals,  
24 then there should be no opposition to these --  
25 utilities, provided they can be insured that they

1 will be recovered costs.

2 Those are probably a legal issue, I  
3 guess, or a regulatory one. It's similar to  
4 what's happening in Texas with the -- zones, the  
5 renewable energy zones, where they've essentially  
6 gotten around that by guaranteeing cost recovery.

7 Something similar could be included in the  
8 FIT bill.

9 A second issue, and this is perhaps the  
10 more important, as a point that hasn't been raised  
11 yet, though there's been some allusion in that  
12 direction, is the issue of costs.

13 One of the things that we've been struck  
14 by here at NREL is that when you do the research  
15 and the analysis on some of the cost differences  
16 between an RPS and a FIT, research has  
17 consistently shown that FITs deliver lower cost  
18 renewable development. And that, I think, is a  
19 pretty crucial insight, crucial fact that the  
20 evidence has started to bring forth.

21 There's recent reports from the  
22 International Energy Agency that outline cost  
23 differences as large as 30 to 40 percent between  
24 jurisdictions using RPS -- policies and those  
25 using feed-in tariffs.

1           So, in particular, if you look at  
2 countries that have used RPS as a renewable  
3 obligations, they've been contracting power in as  
4 large as 13 to 17 U.S. cents per kilowatt hour.  
5 Whereas, countries (inaudible) about 9 to 11.  
6 There's a sizeable difference there in the actual  
7 delivery costs of energy.

8           And we started doing research into why  
9 that might be. And started to find a lot of it  
10 hinged upon risk. One of the things that an RPS  
11 might create is a lot more risk for the developer,  
12 which actually drives up the cost of capital.

13           So we start -- it actually makes it  
14 harder to draw on debt financing, which  
15 significantly drops the actual cost of developing  
16 projects.

17           As Wilson Rickerson mentioned earlier,  
18 from KEMA, in the European case most of the  
19 projects are financed by debt capital instead of  
20 equity, which is the predominant mode in the U.S.  
21 here.

22           So, shifting, by offering stable terms  
23 included within feed-in tariffs, you can actually  
24 dramatically reduce the cost of capital for  
25 developing renewable energy technology, which is a

1 powerful incentive to move in that direction for  
2 jurisdictions that want least-cost renewable  
3 development.

4 So that starts to conflict with some of  
5 the comments raised by Mary Lynch from  
6 Constellation Energy. I was very appreciative of  
7 those, and I think she had a number of crucial  
8 issues in her comments.

9 But I think when you start to take a  
10 step back and you actually look at the delivered  
11 cost of energy, FITs are found to be more  
12 effective and cost effective.

13 And comparing some other countries like  
14 the U.K., Belgium and Italy, that are still using  
15 RPS-style policies for their wind development,  
16 they've actually not only paid more for it, in  
17 some cases up to twice as much, they've had lower  
18 levels of development. Partly for the same  
19 reasons that are plaguing California's RFO  
20 process.

21 And some of those issues can be resolved  
22 by having a more streamlined procedure. And with  
23 a streamlined procedure that the state offers, you  
24 actually do make it a lot easier for project  
25 developers which has all those cost reduction

1 impacts for the actual kilowatt hours delivered.

2 One more point that's worth underscoring  
3 is that from a societal perspective FITs a lot  
4 more inclusive; and this has been one of the  
5 dramatic things in Europe is it's driven, one of  
6 the reasons why it's effective in such dramatic  
7 job creation and deployment impacts is that  
8 anybody can participate.

9 And so from homeowners to business  
10 owners to utilities, there are no limitations.  
11 And as far as the utilities can participate, that  
12 got around a lot of the opposition there. And  
13 they can be guaranteed the same purchase prices  
14 that are guaranteed to other developers. So it  
15 sort of levelized the playing field between who  
16 can participate or be eligible for project  
17 development, to meeting all the protocols and the  
18 interconnection requirements.

19 So, by leveling that playing field you  
20 actually are able to leverage capital from a wider  
21 diversity of investors, which can also help reduce  
22 the cost of capital.

23 And in the U.S., now just one final  
24 point really is that with the dependence on the  
25 PTC, ITC structure for renewable development

1       there's an incentive to -- we see tax equity  
2       essentially dried up, with a number of different  
3       energy and research forums on that with different  
4       companies, different investors on that front.

5               And one of the threats against the  
6       renewable energy industry, which is quite  
7       significant in California, of all states, is that  
8       tax equity drying up due to financial crisis could  
9       actually jeopardize some of the renewable target  
10      objectives.

11             So, with all those considerations in  
12      mind, it seems to create an even more compelling  
13      argument in favor of implementing a lower risk and  
14      a more stable policy forcing renewables to move  
15      forward.

16             And this is all just from research that  
17      we've been conducting here, and finding that  
18      momentum around the world is increasing. And how  
19      we're trying to track a lot more closely what is  
20      happening in the U.S. So it's interesting to see  
21      that this is at the stage that it's at in  
22      California.

23             And one final note on that. We are  
24      currently wrapping up a report, a comprehensive  
25      report, on policy design options for feed-in

1 tariffs. So that should be out by January for  
2 stakeholders interested in researching these  
3 issues further, and some of the questions that  
4 have been raised, and some of the concerns are  
5 treated, are addressed in that report. So, again,  
6 that's scheduled to be out at this point in  
7 January.

8 So, I'll leave it at that for now and  
9 let the discussion continue.

10 COMMISSIONER DOUGLAS: Thank you for  
11 your comments. Our last commenter is Andy Katz  
12 with Breathe California.

13 MR. KATZ: Hi, thank you. Can you hear  
14 me?

15 COMMISSIONER DOUGLAS: Yes.

16 MR. KATZ: Thanks. Andy Katz, Breathe  
17 California. I served on the panel in the last  
18 workshop and I made an observation that the  
19 (inaudible) and I want to congratulate them for  
20 making some excellent recommendations. So in  
21 response I will be relatively brief.

22 One of our concerns with enhancing the  
23 tools for deploying renewable energy as soon as  
24 possible. The impacts on the climate, our  
25 environment and our health.

1           Problems with the current system, as  
2           have been stated today, high barriers to entry for  
3           projects, particularly small projects. A lot of  
4           risk and uncertainty, lack of incentive for  
5           renewable energy, delivery prior to the RPS  
6           guidelines, perhaps even after the deadline.

7           California's not generating renewable  
8           energy fast enough. And not leveraging potential  
9           resources -- projects that can fit in under 20  
10          megawatts.

11          There's some great advantages to a feed-  
12          in tariff program, reducing transaction costs,  
13          reliable funding streams for projects, and more  
14          rapid development of renewable energy.

15          Just to respond to some of the  
16          criticisms of interfering with the market. I  
17          think feed-in tariff is a market-driven policy.  
18          It does use market signals to provide incentives  
19          for renewable energy. So in that way it is  
20          working with the market.

21          But renewable energy is policy, and  
22          we're looking to the Energy Commission to develop  
23          this important policy direction for more renewable  
24          energy.

25          Point out that for considering ratepayer

1 -- that consumer protection and equity measures  
2 that this would (inaudible) those are also  
3 important policies. It would be a good idea for  
4 further work would be as to how those translate to  
5 a FIT program or it's just a good place for carbon  
6 credit revenue (inaudible), as well.

7 To comment on some of the issues that  
8 came up. I think the report covers many of these  
9 issues very well. To paraphrase, I think cost of  
10 production is the best indicator of (inaudible).  
11 Many of the other factors are (inaudible) which is  
12 the big reason why it has so many advantages.

13 For future innovation of which -- come  
14 up, digression rates and experience -- the  
15 European experience which the digression rates  
16 would be a way to look at how those rates  
17 incorporated for future research and innovation.

18 Interconnection. While -- point out  
19 that most factors point to having interconnection  
20 beyond the project developer side. I want to  
21 raise that, you know, Ontario, there was a problem  
22 in this area. And I think what we can learn from  
23 Ontario's experience is that if interconnection is  
24 not properly factored into FIT rates, or if it's  
25 not properly perceived by the project developer,

1 then interconnection does become an issue. But I  
2 think that this can be solved by making sure that  
3 these are properly communicated and internalized.

4 The report discusses legislation. And I  
5 think it is appropriate that the Energy Commission  
6 recommend legislation in the area. But I think  
7 it's also important to recognize that the Public  
8 Utilities Commission has broad constitutional  
9 authority.

10 And so while legislation is very  
11 important for showing clear policy direction, it  
12 may also be a good idea to recognize that there is  
13 this constitutional authority out there.

14 As far as scope, trigger mechanism, to  
15 avoid arbitrary limits on the program. I think  
16 the advantages of providing a greater amount of  
17 certainty. And so I think having a full scale  
18 where (inaudible).

19 Another issue brought up in the revised  
20 report is cost sharing among utilities. This is a  
21 factor (inaudible) multiple utility service areas.  
22 It wouldn't be fair for one service area to  
23 experience a lot of feed-in tariffs charges, but  
24 for another service area to have the renewable  
25 energy benefits, but to not have the costs shared.

1                   So I think this would be an important  
2                   area to continue to study. I don't think it's  
3                   easy to come up with an answer for how to  
4                   integrate (inaudible) utilities do a cost sharing  
5                   idea. But I think, you know, that may not be  
6                   necessary, but I think it's worth a discussion of  
7                   what is cost sharing, what are the options for  
8                   cost sharing among utilities.

9                   Also with regard to performance  
10                  standards, Germany has an interesting way of  
11                  looking at performance standards (inaudible).  
12                  They take into account the first two years of  
13                  energy generation at the baseline. And that  
14                  becomes a major factor in how the rates are set.  
15                  So I would encourage a further look at that  
16                  mechanism if performance standards are of  
17                  interest.

18                  Clearly, I think it's about setting  
19                  rates that are projected to generate the  
20                  appropriate amount of energy, and that sets the  
21                  goals for performance standards. But it's about  
22                  setting the rates. I don't think it's interfering  
23                  with project development.

24                  So other than that I would like to --  
25                  for the recommendation for the staff report and

1 encourage the Energy Commission's excellent work  
2 on this.

3 COMMISSIONER DOUGLAS: Thank you very  
4 much. We do have one more card; it's from Molly  
5 Sterkel of the CPUC.

6 MS. STERKEL: Hi. Good afternoon,  
7 everybody. Sorry to chime in here at the last  
8 minute when you all thought that the last speaker  
9 was the last to hear.

10 I wanted to just say I know that Bob  
11 Kinosian, I heard was in the room earlier. And I  
12 just wanted to say thank you very much for the  
13 report. And although I'm not with you in person I  
14 was in person at the last workshop. It's a  
15 reflection of our interest in the issue, and more  
16 of a reflection of the California Energy  
17 Commission's excellent remote participation  
18 technology capability that I didn't join you  
19 today.

20 And we have been enjoying the WebEx and  
21 being able to listen to all the callers. And I  
22 just wanted to make sure that in particular, since  
23 the California Public Utilities Commission has  
24 often been referred to in today's and other  
25 hearings, but at least you know from the staff

1 level that we are listening. And that we are  
2 interested in the revised report, as well as in,  
3 you know, the future recommendations that come  
4 from the Energy Commission.

5 I did want to -- I don't have time,  
6 obviously, to comment on every comment I heard  
7 today, but there was one particular issue that  
8 Wilson mentioned in his update about the  
9 Gainesville feed-in tariff that I wanted to bring  
10 to your attention.

11 And that is that the Gainesville feed-in  
12 tariff is for 1 megawatt of solar in Florida. And  
13 California has installed 111 megawatts of customer  
14 and -- generation in 2008. And if we do anything  
15 on a feed-in tariff it's going to be on an order  
16 of magnitude never before seen or contemplated.

17 So, with all due respect to my  
18 colleagues in Gainesville, who I applaud them for  
19 taking the big step forward that they took for  
20 Gainesville, keep in mind that it's only for 1  
21 megawatt.

22 And so when we talked about a feed-in  
23 tariff in California, we're talking about  
24 billions, not millions, of dollars. And hundreds,  
25 not 1 megawatt. And so it's an order of scale.

1                   And it brings me to sort of the last  
2 point that I want to make which is -- really only  
3 one thing that I see. I wish I had made this  
4 comment. I apologize to KEMA, to my colleagues at  
5 KEMA -- I really wish that this report had  
6 commented a little bit more about California's own  
7 experience with feed-in tariffs. Because we did  
8 the feed-in tariff in the 1980s. And I know I  
9 made some comments about a fact -- last workshop.  
10 But we did it. And there's a huge California  
11 history there with feed-in tariffs.

12                   And so while this report is very  
13 purposely looking at what our colleagues are  
14 currently doing in other countries, I really think  
15 that it would have been nice if we could have  
16 contextualize that with our own experience here in  
17 California.

18                   And it's just something that comes up  
19 constantly as we actually try to consider a feed-  
20 in tariff in California, is what happened the last  
21 time. And so I don't know that there's any chance  
22 to revise it at this point, but that's something  
23 that I wish, in retrospect, I'd made that comment  
24 a little bit clearer at the last workshop.

25                   But, again, even that comment

1       notwithstanding, this is an excellent piece of  
2       work, and it's very helpful and clear. And I kind  
3       of echo the other comments saying to that regard.

4               So, thank you for letting me chime in at  
5       the last minute. I hope everybody has a great  
6       afternoon.

7               COMMISSIONER DOUGLAS: Thank you for  
8       that comment. We do have one more card, and I  
9       guess I wanted to point out sometimes in  
10      California we get carried away with talking about  
11      the greatness and far-reaching leadership that we  
12      provide.

13              In the case of feed-in tariffs I  
14      wouldn't say that what we're looking at is an  
15      order of magnitude greater than ever has been  
16      done. It's certainly an order or several of  
17      magnitude greater than what's been done in  
18      Gainesville. But we also have the examples of  
19      Germany and Spain and other countries that have  
20      gone considerably further than our draft  
21      recommendation that's before us today.

22              I did want to --

23              (Parties speaking simultaneously.)

24              COMMISSIONER BYRON: And, Ms. Sterkel,  
25      Jeff Byron. I daresay there's no one in this room

1 that remembers back to the '80s and the feed-in  
2 tariffs. You're certainly not old enough to  
3 remember that, either.

4 MS. STERKEL: I know, I'm not old enough  
5 to --

6 CHAIRPERSON PFANNENSTIEL: Speak for  
7 yourself, Jeff.

8 MS. STERKEL: -- remember it. However,  
9 I did move to the beautiful state. Out of the  
10 trend of respect I had learning about the strides  
11 forward that California had taken in the 1980s to  
12 implement more renewable energy than any other  
13 state in the country.

14 And upon arriving in the state I learned  
15 from all my elders, but there was some  
16 consternation that the renewable energy  
17 development had stopped.

18 And so I spent a lot of the beginnings  
19 of my career trying to figure out why that had  
20 happened. So that's the only reason I know  
21 anything about it. But I've learned a lot from  
22 others. And just hope we don't make any of those  
23 mistakes again.

24 Thanks.

25 COMMISSIONER DOUGLAS: Very good. Thank

1       you, thank you for your comments. We had one more  
2       card trickle in from Gregg Morris at Green Power  
3       Institute.

4               MR. MORRIS: I want to thank you,  
5       Commissioners, for the opportunity to talk. It  
6       took me a little while to figure out how to get  
7       into the queue.

8               I just have a couple of brief remarks.  
9       One is in comment to the people who say let the  
10      competitive market process do the job.  
11      Unfortunately, the competitive market process so  
12      far is not doing the job. And I think it's a good  
13      time to look at these feed-in tariffs as an  
14      opportunity to provide maybe -- that will do the  
15      job. So I think I want to encourage everybody  
16      very much to continue to pursue this option.

17              I want to put in a special word for  
18      option five, which is the biomass option. We  
19      still haven't done much in California to implement  
20      the Governor's biomass executive order. And the  
21      feed-in tariff program is an excellent opportunity  
22      for doing this.

23              Now one can say that in option six you  
24      have the opportunity to go technology-specific,  
25      but one of the advantages of five is that you can

1 go beyond 20 megawatts for biomass, which is also  
2 necessary to produce a project that's big enough  
3 to have its economies of scale.

4 But no matter what you do, I always like  
5 to make or emphasize the bottomline of these  
6 things, which is that a feed-in tariff program,  
7 like any other program, only works if the prices  
8 and the terms and conditions are conducive to  
9 project development.

10 And unfortunately we just talked a few  
11 minutes ago about the SCE program in biomass.  
12 It's wonderful that they have a program for  
13 biomass, but it hasn't really accomplished very  
14 much, maybe four small contracts, as I understand  
15 it, because they're not offering the kind of terms  
16 and conditions that would be conducive to the  
17 development of biomass projects. And I just say  
18 that apparently based on the market response.

19 So we have to be realistic about what it  
20 will take. We hear a lot about we don't want to  
21 over-burden the ratepayer. And certainly I don't  
22 want to over-burden the ratepayer, as an  
23 environmental consumer advocate.

24 But then, again, I think we're greatly  
25 hurting the ratepayer by not accomplishing the

1 goals of the RPS program. So there's two sides to  
2 the coin. And it's really very simple, you get  
3 what you pay for.

4 So we have to be realistic. I don't  
5 want to be overpaying at very high levels that the  
6 German and Spanish programs began with. But then,  
7 again, we have to take an amount that will solicit  
8 a market response.

9 And it's not fair to say that  
10 transmission is the only thing that is impeded in  
11 our development of renewables. Transmission is  
12 only one of the problems.

13 Finally, I'd like to close by saying  
14 that I want to disagree with the previous speaker  
15 who said that if we can't make 20 percent by 2010,  
16 we shouldn't even think about 33 percent by 2020.

17 I just have to disagree with that.  
18 First of all, unfortunately there's no way we're  
19 going to make 20 percent by 2010. Everybody knows  
20 that at this point. There's only two years left.  
21 And you can't do things that quickly considering  
22 where we are today.

23 On the other hand we have 12 years to  
24 make 2020, and in 12 years a great great deal can  
25 be done. So I encourage people to keep looking

1 beyond the fact that we haven't really gotten off  
2 the ground very much right now. Hopefully the  
3 feed-in tariff program can give us that  
4 opportunity.

5 Thank you very much.

6 COMMISSIONER BYRON: I don't know that  
7 the pervious speaker was actually saying that we  
8 wouldn't make 2020 if we can't make 2010. I think  
9 it was more of a "remember the Alamo" kind of  
10 statement.

11 MR. MORRIS: Okay.

12 MR. LEAON: Okay. At this point I would  
13 like to ask staff to unmute the phone lines. And  
14 if there is anyone that's listening over the  
15 phone, this would be your opportunity to chime in  
16 and offer any comments you might have.

17 And if you would like to speak, if you  
18 could identify yourself and your organization.

19 MR. LANGENBERG: Joseph Langenberg,  
20 Central California Power.

21 MR. LEAON: Hello, Joseph.

22 MR. LANGENBERG: How are you this  
23 afternoon?

24 MR. LEAON: Very good, thank you.

25 MR. LANGENBERG: Okay, all I want to do

1 is amplify the fact that feed-in tariffs should be  
2 expanded to include any size generation. We  
3 shouldn't stop at 20 megawatts.

4 Again, other people have mentioned  
5 economics of size, and I don't want to dwell on  
6 things that anyone else has said.

7 So I just wanted to support my  
8 colleagues who have said that the feed-in tariffs  
9 should be expanded beyond the 20 megawatt limit.  
10 And we should do it now.

11 We should be bold; we should take the  
12 steps now because evidently the system of  
13 procurement we have has not done the job.

14 Also I'd like to compliment Mr. Morris.  
15 The statement he made -- he is making has a great  
16 deal of merit. That renewable energy is going to  
17 cost. They found this out in Europe, I think.  
18 California found this out years ago back in the  
19 80s when the cost of renewable energy was quite a  
20 bit in excess of what we're trying to get it for  
21 today. And certainly I believe the success rate  
22 for renewable energy was a whole lot better than  
23 it is today.

24 And that's just about all I have to say  
25 because just about everyone else has said

1 everything, I think, that had to be said.

2 I thank the Commission for taking this  
3 step and getting the people together in this  
4 workshop, getting the quality of report. And  
5 thank Mr. Rickerson for his comments. The  
6 gentleman has certainly given me a complete  
7 understanding of what feed-in tariffs are all  
8 about. And the progress that has been made when  
9 they have been used in other lands.

10 All I'm saying is that I believe that  
11 California should immediately adopt the feed-in  
12 tariff program, and expand it, as I've said. And  
13 that's just about it.

14 Thank you for letting me speak.

15 MR. LEAON: Thank you, Mr. Langenberg.  
16 Any questions for the speaker? All right.

17 Do we have anyone else on the phone that  
18 would like to make any comments?

19 MR. COUTURE: This is Toby here again  
20 from National Renewable Lab. Just the point  
21 that -- to get around to the size issue, and I  
22 realize I left it out at the other of my  
23 comments. And I think I -- the previous point  
24 about that, removing the size requirement.

25 I think that that's on for a number of

1 reasons, going back to some of the cost issues  
2 that Joe was talking about, that is you can  
3 deliver kilowatt hours, as you can differentiate  
4 the tariffs properly, I guess this is really where  
5 the crucial element comes in -- if you can  
6 properly differentiate the tariffs, feed-in  
7 tariffs can encourage projects at all sales, and  
8 not limited arbitrarily to a 20 megawatt ceiling.

9 I guess that's a question I would  
10 attribute strictly is where does that 20 megawatt  
11 threshold come from. Is that a distribution cap.  
12 But just as a parenthesis there.

13 But if the projects can be developed  
14 more cost efficiently, both small and large  
15 scales, under feed-in tariff, why limit it at 20  
16 megawatts. If you can capture it for all project  
17 sizes, and that goes for biomass, CSP projects,  
18 wind projects, some of the other technologies  
19 included in European feed-in tariffs, if the  
20 tariffs are differentiated appropriately for  
21 taking into account economies of scale, then you  
22 can have a more cost-efficient policy.

23 One of the consequences of introducing  
24 caps that happened in Ontario in Canada, is that  
25 some developers have actually broken up their

1 larger projects into smaller ones, so under the 10  
2 megawatt cap in Ontario. And by doing that  
3 they've actually increased the cost efficiency of  
4 the renewable development. Because instead of  
5 having one 40 megawatt or 50 megawatt project,  
6 they've broken it up into three or four or five 10  
7 megawatt projects, which makes more substation  
8 interconnection points, which actually increases  
9 the overall cost of renewable development.

10 So, it could be argued, based on  
11 evidence that we've seen, that introducing a cap  
12 on actual project size is less cost efficient than  
13 just removing the cap all together. Because you  
14 can actually benefit from those economies of  
15 scale.

16 MR. LEAON: Yes. Basically the thought  
17 was, in response to your question on the cap, was  
18 that it would help projects that don't require new  
19 transmission to connect to the grid. That would  
20 help facilitate development of projects that could  
21 connect at the distribution level.

22 But your comments on that point are  
23 appreciated.

24 MR. COUTURE: Okay, thank you.

25 MR. LEAON: Any other comments on the

1 phone?

2 Okay, hearing none I just have a couple  
3 of points to make, and then I'll turn it over to  
4 the Chairman Douglas for closing remarks from the  
5 Commissioners.

6 For written comments we would like the  
7 stakeholders to submit written comments by 5:00  
8 p.m. on Wednesday, December 10th. And we'll be  
9 taking your feedback from today, and in addition,  
10 direction from our Commissioners, and revising the  
11 reports based on today's testimony.

12 We hope to have the final consultant  
13 reports published sometime in January. I would  
14 like to thank the KEMA team for their excellent  
15 work on this project. Karin Corfee, Bob Grace,  
16 Wilson Rickerson. Would also like to thank CEC  
17 Staff, Drake Johnson, the Project Manager, as well  
18 as Kevin Baker, Rachel Salazar and Joe Fleshman in  
19 the renewable energy office.

20 And with that, I turn it over to  
21 Commission Douglas.

22 COMMISSIONER DOUGLAS: Thank you very  
23 much. My closing comments will be very brief. I  
24 was -- Chairman Pfannenstiel and I were with the  
25 Governor and a large group of people, as he signed

1 the executive order calling for 33 percent RPS in  
2 2020, to mobilize, to achieve that target. As  
3 well as get as close as we can to our 2010 goal  
4 really requires us to look at all of the tools at  
5 our disposal. And think about how they can be  
6 applied, and how they will make sense in terms of  
7 helping us reach that target.

8 I think I didn't hear any disagreement  
9 in the room really that the status quo isn't  
10 getting us there. And so I also commend the staff  
11 and the consultant for their hard work in helping  
12 us develop and better understand how feed-in  
13 tariffs might fit into this system. And how they  
14 might help us to get there, whether it's for the  
15 large utility-scale projects; whether it's for the  
16 more distributed wholesale distributed generation,  
17 as one of our commenters classified it, the 20  
18 megawatt and under.

19 Or a transitional strategy where we  
20 continue to look at feed-in tariffs for  
21 everything, but begin with something like under 20  
22 megawatts.

23 So I think it's essential that we all  
24 think hard about how we really make this work.  
25 And feed-in tariffs very well may have an

1 important role to play. They certainly have in  
2 other settings. And the evidence that has been  
3 brought to us on that has been very helpful and  
4 very revealing to a lot of us.

5 So, again, I appreciate your work. And  
6 I very much appreciate the involvement of  
7 stakeholders, and look forward to seeing your  
8 comments as we finalize this report.

9 Other closing comments?

10 CHAIRPERSON PFANNENSTIEL: No.

11 COMMISSIONER BYRON: You know, I really  
12 commend the Renewable Committee here at the  
13 Commission for carrying the water on this issue  
14 for a long time. I think before I came to this  
15 Commission.

16 And there's a number of excellent IEPR  
17 recommendations that have been made in the past.  
18 I think the body of this work is extremely  
19 helpful. The staff's done an excellent job.  
20 There has been legislation to move forward on  
21 FITs. And as was presented today, we now also see  
22 it at the federal level, as well.

23 So, I think demonstrated by today's  
24 workshop we're going to continue to see a mix of  
25 interests represented in all the commenters here.

1 But I'd like to thank all of you for your very  
2 thoughtful comments. I found most all of them  
3 very constructive and helpful.

4 But we are committed to moving  
5 renewables forward in the state. As Commissioner  
6 Douglas indicated, the Governor, having just  
7 signed this executive order, makes it very clear.

8 And feed-in tariffs are a proven and  
9 effective way to doing that. So, I think for the  
10 most part, this Commission's work is about done in  
11 this area. Except that I am committed, as Chair  
12 of the IEPR Committee this next year, to continue  
13 to work with the Public Utilities Commission and  
14 the Legislature, if necessary, to see that we  
15 implement FITs well.

16 So, I'd like to make my commitment to  
17 the representative from the PUC's Commissioners  
18 here, that my office will certainly be working  
19 with the PUC Commissioners. And Ms. Sterkel, I'm  
20 sure staff will be more than available to assist.  
21 But I think we all know that the feed-in tariffs  
22 are going to be an extremely important part of  
23 implementing the Governor's, and possibly very  
24 soon, the Legislature's renewable portfolio  
25 standard.

1                   COMMISSIONER DOUGLAS: Very good.

2                   MR. LEAON: All right. I'd also like to  
3 thank the Commissioners for your input and  
4 guidance during this process. And I hope we've  
5 delivered reports that will help through the IEPR  
6 process in developing a feed-in tariff for  
7 California.

8                   And also I want to thank the  
9 stakeholders for your thoughtful comments. And  
10 with that, the workshop is adjourned.

11                   (Whereupon, at 3:00 p.m., the workshop  
12 was adjourned.)

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## CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Staff 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 16th day of December, 2008.



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PETER PETTY