

EVIDENTIARY HEARING  
BEFORE THE  
CALIFORNIA ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

In the Matter of: )  
 )  
Application for Certification for) Docket No.  
The Ivanpah Solar Electric ) 07-AFC-5  
Generating System )  
\_\_\_\_\_ )

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

MONDAY, DECEMBER 14, 2009

9:08 A.M.

Reporter - Peter Petty, CER\*\*D-493  
Transcriber - Margo Hewitt, CET\*\*00480  
Contract No. 170-08-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMITTEE MEMBERS PRESENT

Jeffrey Byron, Presiding Member

James D. Boyd, Associate Member

HEARING OFFICER AND ADVISORS

Paul Kramer, Hearing Officer

Kristy Chew, Advisor

Kelly Birkenshaw, Advisor

STAFF AND CONSULTANTS PRESENT

John Kessler, Project Manager

Richard Ratliff, Staff Counsel

Jason Ricks  
Aspen Environmental Group

James Earl Jewell  
Consultant in Lighting

William Kanemoto

APPLICANT

Jeffery D. Harris, Attorney  
Greggory Wheatland, Attorney  
Ellison, Schneider and Harris, LLP

John Woolard, CEO  
Steve De Young, Vice President  
Yoel Gilon, Senior Vice President  
Bright Source Energy

John L. Carrier  
Wendy E. Haydon  
Loren Bloomberg  
Thomas Priestley  
CH2M HILL

INTERVENORS

Marc Joseph, Attorney (via teleconference)  
Adams, Broadwell, Joseph and Cardozo  
representing California Unions for Reliable Energy

Greg Suba  
California Native Plant Society

Lisa Belenky  
Center for Biological Diversity

Gloria Smith, Senior Staff Attorney  
Sierra Club

Joshua Basofin  
Defenders of Wildlife

Bart Brizzee, Deputy County Counsel  
(via teleconference)  
County of San Bernardino

Laura Cunningham (via teleconference)  
Basin and Range Watch

Michael Connor (via teleconference)  
Western Watershed Project

ALSO PRESENT

Tom Hurshman, Project Manager  
Bureau of Land Management

George Meckfessel (via teleconference)  
Bureau of Land Management

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

2 9:08 a.m.

3 PRESIDING MEMBER BYRON: Good morning  
4 and welcome. I'm sorry we're a little late  
5 getting started this morning. I'm Commissioner  
6 Jeff Byron, and I'm the Presiding Member on the  
7 Ivanpah Solar Electric Generating System  
8 evidentiary hearing that we're conducting this  
9 morning.

10 With me is the Associate Member on the  
11 Committee, our Vice Chairman, Commissioner Boyd.  
12 To his right, his Advisor Kelly Birkinshaw. And  
13 all the way to the right is my Advisor, Ms. Kristy  
14 Chew.

15 Our evidentiary -- our Hearing Officer  
16 is Mr. Paul Kramer. And for those of you that  
17 were at the prehearing conference we came up with  
18 a plan to try and get through this in an  
19 expeditious way. It's taken a long time for this  
20 case to get before us.

21 And this is what we endeavor to do, as  
22 Commissioners, is to get these things into the  
23 evidentiary process so that we can begin to take  
24 information and make a ruling. Or I should say,  
25 make a determination and recommendation to our

1           fellow Commissioners.

2                         We're committed to doing that. We've  
3 got an aggressive schedule today, I believe, is  
4 we're pretty much going to go through the  
5 uncontested issues with regard to this case.  
6 That's not to say that there won't be any  
7 disagreement, but we're here to begin hearing  
8 evidence.

9                         I'd like to thank you all for being  
10 here. We have a little bit of an odd arrangement  
11 with the table, but I think this is conducive to  
12 making sure that all the parties have a microphone  
13 in front of them. That's all we're trying to do,  
14 is make it easy to get everything on the record.

15                         Before I turn it over to our Hearing  
16 Officer, Commissioner Boyd, did you have any other  
17 comments you wanted to make this morning?

18                         ASSOCIATE MEMBER BOYD: No, I just want  
19 to echo your sentiments about I'm glad we're here;  
20 I'm glad we worked out some of the kinks in this  
21 process. I guess one of the first, if not the  
22 first, in line suffers from some of the working-  
23 out-the-process procedure. But I'm ready to roll.

24                         I spent the last three working days --  
25 well, actually two working days and a furlough

1 day, on the road doing a siting case in the  
2 southern California desert that involve solar  
3 applications.

4 So I'm ready to go.

5 PRESIDING MEMBER BYRON: Mr. Kramer,  
6 we've got lots of parties here and we're in your  
7 capable hands. Please do what you can to keep  
8 things moving, and I'll turn it over to you.

9 HEARING OFFICER KRAMER: Thank you.  
10 Good morning, everyone. We'll get to the folks on  
11 the telephone in a minute, but let's start by  
12 introducing the people, the parties here in the  
13 room with us today. We'll just go around the  
14 table.

15 For those of you who are new to our  
16 system here, you want, when you're speaking, the  
17 green light on your microphone to be on and just  
18 press the button in front of it.

19 MR. SUBA: My name is Greg Suba; I'm  
20 representing California Native Plant Society.

21 MS. BELENKY: Lisa Belenky with the  
22 Center for Biological Diversity.

23 MS. SMITH: Gloria Smith, Sierra Club.

24 MR. BASOFIN: Joshua Basofin  
25 representing Defenders of Wildlife.

1 MR. WHEATLAND: Good morning, I'm Gregg  
2 Wheatland. And I'll be representing the applicant  
3 this morning -- today on visual resources.

4 MR. HARRIS: Hi, I'm Jeff Harris and I'm  
5 representing the applicant on the other remaining  
6 issues today.

7 MR. DE YOUNG: I'm Steve De Young, Vice  
8 President of environmental safety and health with  
9 BrightSource Energy.

10 MR. WOOLARD: I'm John Woolard, CEO of  
11 BrightSource.

12 MR. KESSLER: John Kessler, Project  
13 Manager for the Energy Commission Staff.

14 MR. RATLIFF: Dick Ratliff, Counsel for  
15 Staff.

16 HEARING OFFICER KRAMER: And there are  
17 no parties seated in the audience, I believe. So,  
18 let's go to the telephone. Earlier I got a few  
19 names, so I'll call out the people I remember.

20 County of San Bernardino.

21 MR. BRIZZEE: Yes, Bart Brizzee,  
22 B-r-i-z-z-e-e, Deputy County Counsel.

23 HEARING OFFICER KRAMER: And Basin and  
24 Range Watch?

25 MS. CUNNINGHAM: Laura Cunningham, Basin

1 and Range Watch.

2 HEARING OFFICER KRAMER: Could you spell  
3 your last name for our court reporter?

4 MS. CUNNINGHAM: C-u-n-n-i-n-g-h-a-m.

5 HEARING OFFICER KRAMER: CURE.

6 MR. JOSEPH: Marc Joseph for CURE.

7 HEARING OFFICER KRAMER: And your first  
8 name is spelled M-a-r-c, do I recall?

9 MR. JOSEPH: You recall correctly.

10 HEARING OFFICER KRAMER: And I'm sorry,  
11 the fourth person I forgot who you represented.

12 MR. CONNOR: Michael Connor with Western  
13 Watershed Project.

14 HEARING OFFICER KRAMER: Please spell  
15 your last name.

16 MR. CONNOR: C-o-n-n-o-r.

17 HEARING OFFICER KRAMER: Okay, do we  
18 have anyone else on the telephone? Okay, for you  
19 folks on the telephone, if you got the agenda I  
20 emailed out last week, you'll see on there I  
21 believe I put the reminder that you want to use  
22 star-6 to mute or unmute your phone.

23 And please don't place us on hold,  
24 especially if you're in an office setting because  
25 quite often your phone system will play music to

1 us. And that would be very disruptive. So try to  
2 use the mute and unmute feature to avoid  
3 unnecessary noise here in the hearing room.

4 Do we have anyone in the audience who's  
5 representing an agency that wishes to introduce  
6 themselves?

7 MR. HURSHMAN: Tom Hurshman with BLM.

8 HEARING OFFICER KRAMER: Thank you, Mr.  
9 Hurshman.

10 Okay, that takes care of the  
11 introductions. We have a couple preliminary  
12 matters, housekeeping matters to discuss. The  
13 first was Mr. Ratliff, last week, circulated via  
14 email a request that the hearings today -- I don't  
15 recall clearly if it was just one of the issues or  
16 all of the issues -- be held in an informal  
17 format.

18 That would be where all the witnesses  
19 would be kind of seated as a discussion panel, if  
20 you will. And they would conduct a dialogue both  
21 with the attorneys and the Committee and among  
22 themselves to discuss the evidence and the issues.

23 The Committee is open to doing that  
24 provided that the parties do not have any  
25 objections. So do I hear any objections to that

1 format?

2 MR. HARRIS: We replied to Mr. Ratliff.  
3 We have some concerns about using that format  
4 exclusively. And I haven't even -- to think about  
5 this last part yet, either.

6 I think it's important that we be able  
7 to put on our witnesses and follow a line of  
8 cross-examining without interruption to the end.  
9 And so we would prefer to be able to use the  
10 traditional format for the presentation of our  
11 witnesses and for cross-examination of staff.

12 And this is the new part, Dick. We're  
13 not opposed to the idea of having closed out  
14 everybody's witnesses, that they put them as a  
15 panel, have a more informal discussion thereafter,  
16 for clarification. But we prefer to use the  
17 traditional format at least for the opening  
18 testimony.

19 HEARING OFFICER KRAMER: When you say  
20 opening testimony you mean the project description  
21 part, or --

22 MR. HARRIS: I'm sorry, for --

23 HEARING OFFICER KRAMER: For each topic?

24 MR. HARRIS: -- for each topic I'd like  
25 to follow the traditional subject matter. And I

1           actually think, with ten parties, the informal  
2           format may be a little unwieldy. And, in fact, I  
3           think it's very important that during the  
4           traditional testimony that the applicant be  
5           allowed to cross-examine last.

6                         And let me explain why. I think it's  
7           important that we get a full opportunity to  
8           present our case, since we have the burden of  
9           proof. I also think it's important that we go  
10          last; in some cases some of the cross-examination  
11          will be friendly, cross-examination akin to  
12          redirect. And so we would request to be able to  
13          give our cross-examination last for each of those  
14          topics, as well.

15                        HEARING OFFICER KRAMER: Do you want to  
16          respond, Mr. Ratliff?

17                        MR. RATLIFF: Well, Mr. Kramer, as you  
18          suggested, the Administrative Procedure Act allows  
19          the use of informal hearing procedure where  
20          adjudicatory hearings are required. The degree of  
21          formality is one that can be fashioned by the  
22          Committee, itself, with witnesses being sworn or  
23          unsworn, as the Committee would prefer.

24                        And it allows for the conversion of the  
25          proceeding to a formal hearing if the Committee

1           should decide that it would prefer to do it that  
2           way.

3                         The reason we were favorable to such a  
4           format is because, in particular, we had hoped  
5           that we would be able to workshop issues of glare  
6           under traffic and transportation, and perhaps  
7           other issues under traffic and transportation,  
8           with the hope that there might be some resolution  
9           of those issues, and certainly some greater  
10          enlightenment regarding them.

11                        But we are not going to have the  
12          opportunity to do that at tomorrow's workshop if  
13          we adjudicate traffic and transportation today.

14                        We have certain questions about the  
15          glare issue which we hope can be resolved, but  
16          have not been resolved, as yet. And it just  
17          seemed like an issue of the technical nature, that  
18          particular one, would be a more amenable to a less  
19          formal format, so we could try to understand some  
20          of the issues involved.

21                        But I would note, as I did in my email  
22          -- electronic suggestion of this process to all  
23          the parties that if any of the parties object to  
24          an informal process today, I think we should  
25          probably do it formally. Because the provisions

1 in the Administrative Procedure Act require that  
2 the hearing be noticed as such in the notice. And  
3 it was not noticed as such. So the other parties  
4 would have to waive any objection to that for us  
5 to proceed that way.

6 HEARING OFFICER KRAMER: Mr. Harris was  
7 offering, I'll call it a hybrid approach, where  
8 you begin formally but end informally. Would that  
9 still meet some of your needs?

10 MR. RATLIFF: Perhaps so. Perhaps we  
11 can try some kind of hybrid, if we will. Keeping  
12 in mind, of course, that the Committee can always  
13 ask whatever question it wants of any of the  
14 applicants to try to get its questions satisfied.

15 So I don't know how much of a departure  
16 that is, but we're actually happy to have less  
17 formality rather than more in these hearings.

18 HEARING OFFICER KRAMER: Okay, well,  
19 let's try this. Mr. Harris?

20 MR. HARRIS: One more suggestion that  
21 maybe will help the staff. I think would it be  
22 helpful if, in the traffic issue, that we put our  
23 witnesses on first? So you get a chance to hear  
24 their presentations and potentially cross-examine  
25 them, as opposed to start with the staff

1 witnesses.

2 MR. RATLIFF: I think it would be more  
3 helpful if we went first so we could raise the  
4 issues that we hope that you will be able to  
5 answer for us.

6 We have tried to identify the issues  
7 that we are not completely -- we don't feel have  
8 been resolved yet. And we'd like to have you guys  
9 address that when you get the opportunity.

10 MR. HARRIS: Thank you.

11 HEARING OFFICER KRAMER: Okay, well,  
12 let's go with -- let's try to evolve a hybrid  
13 approach as we go, then. Today might be a good  
14 test for its potential applicability in January to  
15 some of the issues.

16 The second housekeeping matter was last  
17 week staff circulated, via email, a number -- I  
18 don't recall counting them, but approximately 20  
19 photographs. And we need to find some way of  
20 having a common way of referring to those, by  
21 number.

22 I had a discussion with Mr. Kessler  
23 about this early this morning, and to us it seemed  
24 it would be very workable to have one exhibit and  
25 then subparts would be photographed numbers within

1 that. But we need a common language that we know,  
2 and when people read the transcript they can go  
3 and figure out which picture we were speaking  
4 about at the moment.

5 So, Mr. Kessler, do you have any further  
6 report about how that effort is going, or an  
7 alternative approach?

8 MR. KESSLER: We have a draft, Mr.  
9 Kramer, that we'll be able to finalize, if I can  
10 get back upstairs during a break, and hopefully  
11 can be able to present that later this morning if  
12 that would be acceptable.

13 HEARING OFFICER KRAMER: Okay. Also I  
14 heard that your witness has a PowerPoint  
15 presentation that contains a combination of these  
16 slides and some photographs from the applicant,  
17 from the AFC, and maybe some data responses.

18 If that's going to be the sole -- if  
19 that encompasses all the photographs you intend to  
20 discuss and have as part of the record, that might  
21 be an alternative to use that PowerPoint.

22 MR. RATLIFF: Mr. Kramer, the record  
23 already will contain all of the photos that the  
24 applicant has submitted as part of its data  
25 responses. And it will also contain all of the

1 photos that were used in the final staff  
2 assessment, many of which were taken by the  
3 applicant as part of its AFC filing, or to satisfy  
4 data requests.

5 I think most of the photos, if not all  
6 of them, that will appear today in the PowerPoint,  
7 are those photos. There may be one or two that  
8 are additional to that. But they're principally  
9 the photos that are already going to be in the  
10 record, or going to be exhibits that presumably  
11 will become part of the record anyway.

12 HEARING OFFICER KRAMER: My point is  
13 simply about having a common language so we all,  
14 especially when we try to read this two months  
15 from now, know which photo we were describing.

16 So it probably won't work to say that it  
17 was in the AFC, unless your witness is going to be  
18 referring to it by a reference to the AFC.

19 MR. RATLIFF: All of the photos that are  
20 part of the AFC or that are submitted pursuant to  
21 data requests have identifiers on them as to what  
22 they are.

23 The only exception would be -- and even  
24 ones that the staff submitted in its most recent  
25 submittal. And so maybe I would suggest that for

1 those we will have some other means of  
2 identifying.

3 John's clarifying it for me here, I  
4 didn't get it. I guess it's going to be one  
5 exhibit then, with different page numbers for each  
6 photo. Is that what you're suggesting then?

7 HEARING OFFICER KRAMER: That would  
8 certainly work.

9 MR. RATLIFF: Okay.

10 HEARING OFFICER KRAMER: Mr. Harris.

11 MR. HARRIS: Are those just for the new  
12 materials that were filed last week, is that  
13 right? So it would be a single exhibit on all  
14 those? Will there be some kind of identification  
15 about -- I mean some of these are Daggett,  
16 obviously, because the file's labeled Daggett.  
17 Figured that much out.

18 The sooner we can get that the better,  
19 because I'd like our visual witnesses to be able  
20 to start looking at those things. I mean I don't  
21 know, for example, if the Daggett facility has  
22 fixed mirrors or mirrors that track the sun. And  
23 my experts probably do, and I'd like to be able to  
24 let them start looking at those photos and making  
25 those kind of critical evaluations. So, obviously

1 the sooner the better for those photos.

2 MR. RATLIFF: Yeah, I don't know the  
3 photos of Daggett that we submitted are a subset  
4 of the photos that you submitted as part of your  
5 AFC and the appendices. Because you did include a  
6 number of photos of the Daggett project in the  
7 appendices.

8 And so I'm not sure if there's overlap  
9 there, or if these are an entirely different set  
10 of pictures.

11 MR. HARRIS: We talked about some kind  
12 of table or description of what each of the photos  
13 are. Will your exhibit include just the photos,  
14 or will there be some description of what each  
15 photo is?

16 MR. KESSLER: To the extent we have that  
17 information, Mr. Harris, it will include that.

18 MR. HARRIS: Okay, --

19 MR. KESSLER: For example, the source is  
20 the Sandia Labs, and we don't have that level of  
21 detail.

22 MR. HARRIS: Okay, but you can reference  
23 the Sandia report or whatever it came from, so,  
24 okay. And are you intending to -- I think there  
25 were 20 pictures -- again, use all 20 of them in

1 this exhibit today, or have you culled them back  
2 to a lesser number?

3 MR. RATLIFF: I believe it's the same  
4 that you've seen.

5 MR. HARRIS: Okay. Yeah, the sooner we  
6 can get that, or have some discussion among our  
7 experts, the better it would be for us, obviously.

8 HEARING OFFICER KRAMER: Okay. Visual  
9 is basically the last item today. Who knows, we  
10 may get there by lunch, we'll see.

11 That brings us then to the evidentiary  
12 hearing. And the first topic was project  
13 description, which is meant to be just an opening  
14 of this topic. We're not planning on closing this  
15 today.

16 The applicant asked that it put on one  
17 witness to set the context for the rest of our  
18 discussions throughout these hearings. And  
19 because that witness will be testifying we think  
20 it's appropriate to allow cross-examination, if  
21 the party wishes to make that.

22 But we're not intending to have anything  
23 by way of additional testimony from either the  
24 applicant or the other parties, or any rebuttal  
25 testimony today.

1                   So, why don't we try to swear in our  
2 witnesses as a group, so we don't have to keep  
3 stopping to do that along the way. So, anyone in  
4 the audience or at the table who is going to  
5 testify today, potentially, if you would please  
6 stand and take the oath from the court reporter.

7                   THE REPORTER: If you'd all just  
8 collectively raise your right hand.  
9 Whereupon,

10                   PROSPECTIVE WITNESSES  
11 were called as witnesses herein, and after first  
12 having been duly sworn, were examined and  
13 testified as follows:

14                   HEARING OFFICER KRAMER: Okay, Mr.  
15 Harris, your witness.

16                   MR. HARRIS: Thank you. Pleasure to be  
17 here this morning. I'm going to start with Mr.  
18 Woolard.

19                   DIRECT EXAMINATION

20 BY MR. HARRIS:

21                   Q     Could you please state your name for the  
22 record, and spell your name for the court  
23 reporter.

24                   MR. WOOLARD: John Woolard, J-o-h-n  
25 W-o-o-l-a-r-d.

1                   MR. HARRIS:  And what subject matter  
2                   testimony are you here to sponsor today?

3                   MR. WOOLARD:  The project description.

4                   MR. HARRIS:  Were the documents that are  
5                   -- you being sponsored part of your prefiled  
6                   testimony?

7                   MR. WOOLARD:  Yes.

8                   MR. HARRIS:  And we won't, I guess, be  
9                   moving any documents into evidence at this point  
10                  since we're keeping this subject open?  So.

11                  Are there any changes, corrections or  
12                  clarifications to your testimony?

13                  MR. WOOLARD:  No.

14                  MR. HARRIS:  And were the documents  
15                  prepared either by you or at your direction?

16                  MR. WOOLARD:  Yes.

17                  MR. HARRIS:  Are the facts stated  
18                  therein true to the best of your knowledge?

19                  MR. WOOLARD:  Yes.

20                  MR. HARRIS:  And are the opinions stated  
21                  therein your own?

22                  MR. WOOLARD:  Yes.

23                  MR. HARRIS:  And do you adopt this as  
24                  your testimony for this proceeding?

25                  MR. WOOLARD:  Yes, I do.

1                   MR. HARRIS: Can you begin by  
2 summarizing your qualifications for the panel?

3                   MR. WOOLARD: Sure. I started back in  
4 -- my academic career started with some  
5 undergraduate work in economics, but then I did a  
6 masters degree in environmental planning at the  
7 University of Virginia in -- I finished in 1992.

8                   A lot of the work there was on, some  
9 work on forestry and plants, biodiversity. Did  
10 some work with the environmental sciences program,  
11 as well, on climate change. And started to look  
12 at the impact of energy on climate change and what  
13 was going to happen to species migration, wildlife  
14 corridors.

15                   And left that program to focus on the  
16 nexus of energy and climate change, and to see  
17 what that could do, if anything, to make a  
18 difference.

19                   I then came to -- California was the  
20 center of all things related to energy, so I came  
21 out here. I did an MBA at Berkeley. In addition,  
22 I did some work at PG&E, mainly on demand side  
23 management and energy efficiency.

24                   And I would be compelled to say that I  
25 think energy efficiency is still one of the most

1 important levers that we need to pull and focus  
2 on.

3 I left PG&E to form a company called  
4 Silicon Energy that did -- we provided about 2 to  
5 3 gigawatts of demand response and energy  
6 efficiency programs. Worked with large energy  
7 users, as well as major utilities, to help them  
8 reduce and mitigate -- reduce their energy  
9 consumption.

10 And I think everybody here thinks in  
11 terms of energy fairly fluidly, but 2 to 3  
12 gigawatts is the size of, you know, a couple of  
13 nuclear or large coal plants. It's a fairly  
14 significant -- it was a fairly significant effort  
15 there on the efficiency side.

16 Once we finished and sold Silicon Energy  
17 to a company called Itron, where it's still, I  
18 believe, 80 of 85 employees are still there to my  
19 knowledge. It continues to do well.

20 I then went and did some work with a --  
21 went back up to Lawrence Berkeley Labs; started to  
22 look at other, more of the supply side and ways to  
23 help make some impact at scale, because I was  
24 fairly daunted by the scale of the challenge we  
25 were facing from a climate change perspective.

1                   And then after leaving Lawrence Berkeley  
2                   Labs, I started to look at large-scale solar as  
3                   one of the few levers that was relatively land  
4                   efficient. Wind consumes about three times, three  
5                   to four times the land of solar. And biofuels is  
6                   about 40 times the land consumption of solar.

7                   So started to look at solar as the  
8                   smartest ways to deal with this challenge. And  
9                   then we formed BrightSource Energy with a team out  
10                  of Israel in 2006.

11                  MR. HARRIS: Talk a little bit about  
12                  your experience with BrightSource and with the  
13                  Ivanpah Project, please.

14                  MR. WOOLARD: Well, I think it's  
15                  important when you look at when BrightSource  
16                  formed we set forth several key design principles  
17                  and key themes that we wanted to focus on.

18                  So when we looked at how to take some  
19                  lessons learned, I would be reticent to not note  
20                  that the team that built -- that has now designed  
21                  the Ivanpah Project and the tower-based approach  
22                  we've got now, also did design the trough  
23                  projects. They were the engineering team behind  
24                  the original nine SEGS projects back in the 1980s.

25                  There were a lot of lessons learned from

1       those that we incorporated into the design  
2       philosophy from the beginning. Several of them  
3       were around -- there's an oil in the trough that  
4       is fairly problematic in two ways. One is the  
5       environmental issue; and the other is the  
6       inability to get to greater temperature and  
7       pressure. That's limiting.

8                 So, the engineering and design  
9       principles were how do we take advantage of the  
10      more efficient steam turbines that are now  
11      available today that were not available in the  
12      1980s.

13                And focused on -- efficiency really  
14      matters a lot in energy. It has for the last 100  
15      years. And not only the efficiency today, but the  
16      efficiency into the future, because that allows  
17      you to have a smaller footprint of the plant over  
18      time. The more efficiently you convert your  
19      thermal energy to electrical energy, the more you  
20      can reduce the actual footprint of a plant.

21                The parabolic trough plants are fairly,  
22      there's at about 36 percent efficient. We start  
23      at 42. That's 20 percent less surface area of  
24      glass, less steel, less concrete. And it allows  
25      for a lower impact design.

1                   The other key issue was around  
2                   constructability and how do you do this in the  
3                   lowest impact possible. When you build power  
4                   plants before, and you've seen -- you want to  
5                   avoid pouring of concrete; you want to avoid  
6                   grading; you want to do it in as sensitive a way  
7                   as possible.

8                   So these design principles were brought  
9                   in from the very beginning. And the final  
10                  principle that we brought in at the very beginning  
11                  was also can we do this all from the beginning,  
12                  without being forced to, but just as a way to  
13                  demonstrate what's possible with air cooling and  
14                  dry cooling. And avoid the water consumption of a  
15                  wet-cooled parabolic trough in a particular plant  
16                  is fairly intensive. So we're down at about one-  
17                  twentieth to one-thirtieth the water consumption  
18                  of a parabolic trough by virtue of using that dry-  
19                  cooled approach.

20                  So these principles came in very early.  
21                  The engineering team was focused on how to work  
22                  this into a design that was low impact, and that  
23                  was dry cooled.

24                  And then the company had come together  
25                  in 2006 officially as BrightSource changed from

1 the old name, LUZ, to BrightSource.

2 MR. HARRIS: So you're obviously well  
3 aware of California's policies related to RPS and  
4 renewable energy. Can you talk a little bit  
5 about, you know, why California for this company?  
6 There's a lot of places you could be in the world,  
7 and California's sometimes one of the more  
8 difficult places to get things started. So, why  
9 California?

10 MR. WOOLARD: Well, California's driven  
11 by the, right now there's the 20 percent standard,  
12 RPS standard. And that's one of the few, frankly,  
13 compelling drivers anywhere in the country.

14 As we look at, if we're going to  
15 decarbonize the power supply and start to look at  
16 how we are more efficient with the way we produce  
17 energy, we're already behind.

18 The International Energy Association  
19 calculates that we need to build 4900 gigawatts of  
20 carbon-free power between now and 2050. And  
21 that's about one and a half -- that's a gigawatt  
22 every 1.5 days; 245 a year. That's a worldwide  
23 number, but you can size that down in the U.S., as  
24 well.

25 So a gigawatt and a half every -- a

1 gigawatt every other day basically is the  
2 challenge that we face on a global basis. And two  
3 days ago we didn't put another gigawatt on. And  
4 two days before that we didn't put another  
5 gigawatt on. So we're falling dramatically  
6 behind.

7 And I think that's one of the things  
8 where California has actually started to show some  
9 leadership, or try to, in terms of having some  
10 forcing mechanism through RPS to at least take  
11 some action.

12 The effects of climate change are, as we  
13 know, very dramatic on everything from human life  
14 on the planet, as well as all the species that are  
15 now going to be -- make sure they migrate north/  
16 south, or up in altitude. And so I think this is  
17 something that somebody has got to solve. And I  
18 think California has tried to set leadership on  
19 one side with RPS standards. And we're trying to  
20 work through the system so we can actually  
21 construct and start some power plants.

22 MR. HARRIS: Now, I know you have some  
23 contracting positions with PG&E and Edison and  
24 some of those other folks. Without going into too  
25 much detail about those commercial issues, can you

1 just talk about where you're positioned in terms  
2 of the ability to deliver power to California's  
3 ratepayers?

4 MR. WOOLARD: Sure. So, we started with  
5 a 500 megawatt contract with PG&E. And that was  
6 in 2008 that that was signed.

7 Earlier this year, after we had  
8 demonstrated that our facility in Israel that we  
9 -- they put us through a very rigorous performance  
10 test. Said, you have to meet certain  
11 specifications. It would be monitored by  
12 independent engineers.

13 As we got through that and PG&E started  
14 to see a few other groups not delivering on their  
15 milestones, they expanded that contract from 500  
16 megawatts to 1.3 gigawatts.

17 I can tell you that PG&E and Edison are  
18 both very focused at this point on trying to work  
19 with groups that can actually build and construct  
20 plants, because they do see a lot of -- they do  
21 see some degree of failure.

22 So we've been very -- we now have 1.3  
23 gigawatts from PG&E and 1.3 gigawatts from  
24 Southern California Edison as the first part of  
25 our power purchase agreements.

1                   I think one thing that's important to  
2                   note that the utilities think about is if you look  
3                   at putting PV on every rooftop in all of  
4                   California, every south-facing rooftop in all of  
5                   California, you can get about 6 gigawatts of  
6                   renewable power that way.

7                   But we need to do 24 gigawatts just to  
8                   meet the 2020 goal. And the 2020 goal is only an  
9                   intermediate step towards a much larger goal,  
10                  which is to decarbonize by 80, 85 percent.

11                  So while it's very important that we do  
12                  everything we can on photovoltaics, it can  
13                  basically get to about 20, 25 percent of the  
14                  problem if you could do it on every single rooftop  
15                  everywhere in the state.

16                  So we do have a big challenge. And the  
17                  utilities are aware of it and very focused on it.

18                  MR. HARRIS: I want to talk a little bit  
19                  about the technology, and you mentioned the  
20                  demonstration project in Israel. Can you talk  
21                  generally about the technology and also about that  
22                  demonstration project and your experiences with  
23                  that.

24                  MR. WOOLARD: Sure. I think, you know,  
25                  some of the key technology fundamentals are, once

1       again, higher temperature, higher pressure steam.  
2       And I can't really over-state how important that  
3       is, because that gives you efficiency. And  
4       efficiency gives you less waste. Less waste gives  
5       you less concrete, less steel, less stuff in the  
6       ground, which is something I think we all share  
7       here.

8                   What we also did from the very beginning  
9       was take a very simple approach to the  
10       construction at very low impact. And if you go to  
11       the pilot facility in Israel you'll see a post in  
12       the ground. No grading, we actually kept the  
13       natural contours of the site. No earth movement.

14                   And basically if you go to the site  
15       you'll see, on average you'll see sort of an  
16       undulating terrain that moves back from the tower  
17       without disrupting any of the natural contour of  
18       the land.

19                   That was important to us to demonstrate  
20       because ultimately what we're striving for is to  
21       make the design as low impact as possible. And  
22       the ability to prove that was one of the core  
23       elements of the pilot facility.

24                   The pilot is 6 megawatts thermal. And  
25       it is now producing the highest temperature,

1 highest pressure steam to our knowledge anywhere  
2 in the world by a significant degree.

3 If you think about parabolic trough, it  
4 produces 370 to 400 degree C steam; we're at 550  
5 degree C, and higher pressure, which is 164. Once  
6 again, that's what drives the efficiency and  
7 decreases the footprint overall.

8 MR. HARRIS: Let's talk about some of  
9 the specific design features. You mention, you  
10 know, dry cooling and the decision by the company  
11 to start out with a dry cool design as opposed to  
12 being drug there.

13 Talk about a little of what that does in  
14 terms of your capital costs and your efficiency in  
15 making that choice.

16 MR. WOOLARD: Yeah, this was one of the  
17 most -- turned out to be one of the most important  
18 decisions we made as a company. And we made it  
19 back in 2006. So we didn't wait to be asked. I  
20 think that's very important to note.

21 We said, how do you build, from the very  
22 beginning, the lowest impact plants out there; had  
23 to be dry cooled; had to be low impact on the  
24 terrain and on the ground. And the dry cooling  
25 element was really important.

1                   We do lose money when you do this. It's  
2                   not free. It's not a free choice. It was, in  
3                   fact, a very heavily debated choice. We had to  
4                   push and explain and educate our board that this  
5                   was important. It was fundamental.

6                   And if you go into the building of power  
7                   plants over many decades, that water is already a  
8                   very important issue, and it's going to become  
9                   more important. And we need to treat it as  
10                  something that you focus on and design around.

11                  The economic penalty is significant.  
12                  What happens with dry cooling is you basically  
13                  have a air-cooled radiator out in the desert. So  
14                  you don't have the ability to use water to cool  
15                  your steam and condense your steam at the end.

16                  It's easy to just take water from either  
17                  a river or groundwater, cool and condense your  
18                  steam. But you end up consuming a significant  
19                  amount of water.

20                  So as I mentioned earlier, we're at  
21                  about one-twentieth to one-thirtieth, depending on  
22                  what benchmark you start with, of other wet-cooled  
23                  plants. And the dry cooling -- I think it's also  
24                  very important to note that whereas others have  
25                  been sort of slowly coerced, dragged or forced

1           that way, this was a fundamental design principle  
2           from the very beginning. And I think it's a very  
3           important one.

4                       MR. HARRIS: You mentioned the low-  
5           impact design and the ability to keep the natural  
6           contour. Can you elaborate on that just a little  
7           bit for folks who are probably more used to seeing  
8           a trough, you know, solar system where you have to  
9           have a completely level constant grade so that it  
10          sits flat on all four points.

11                      So, why that design and what do you  
12          think the advantages are that you've seen in  
13          Israel?

14                      MR. WOOLARD: Well, it's important that  
15          it's not just trough, there are some tower designs  
16          that grade the land, and then you have soil runoff  
17          and a lot of the other issues.

18                      So, some of the tower designs that are  
19          modular require that same grading as trough. So,  
20          it's not just a trough issue, it's a philosophy or  
21          design approach.

22                      But basically what's happening is you've  
23          got to grade land to about less than a 1 percent  
24          slope if you're going to be using -- if you think  
25          about a parabolic trough, you're taking the tube

1 that has to go back and forth 70 kilometers for  
2 100 megawatts. And that carries the oil in it.  
3 And if you're pumping you don't want to be pumping  
4 that uphill, so you have to minimize your slope  
5 and to keep it all very flat.

6 One advantage, if you do it properly, of  
7 tower is the ability to have a tower and then work  
8 with the contours of the land. So we are  
9 comfortable in a, without grading at all, keeping  
10 a 2, 3, 4 percent slope to the land.

11 And if you look even at Ivanpah, we're  
12 going to do it with such minimal disturbance  
13 there, we'll have -- there will be roads. There  
14 will be other access points into the field. But  
15 the majority of the field we're actually able to  
16 keep and then cut the plants at what, Steve, a  
17 foot, basically. So we're actually able to keep a  
18 lot and not disturb it and not grade it.

19 If you grade you have -- not only are  
20 you, there's the vegetation piece, but there's  
21 also the issue of the runoff and the impact of  
22 drainage in stormwaters is very significant.

23 MR. HARRIS: I want to talk a little bit  
24 about specific site selection here. And there's  
25 been a lot written about this site and the quality

1 of its habitat.

2 So can you talk a little bit about site  
3 selection, just in general, for the company; and  
4 then this particular site, you know, why site  
5 selection, why are we here at this particular  
6 site?

7 MR. WOOLARD: Sure. So when we looked  
8 at Ivanpah as a site, and we have a lot of people  
9 that look every day at land inside of California,  
10 and frankly, it says a lot that Ivanpah's the only  
11 site that we think we're able to build on right  
12 now inside of California.

13 There's been a massive rush for sites,  
14 and some by people who will never build power  
15 plants. There's a lot of speculation out there  
16 that is, frankly, a little concerning.

17 But when we looked at Ivanpah we looked  
18 for access, you know, transmission lines cut  
19 across it. So when you go out to the site you'll  
20 see high-voltage transmission from LADWP. You'll  
21 see medium-voltage transmission for Cal-ISO.

22 Distribution lines. There's scars from  
23 the natural gas pipeline that comes down through  
24 the mountains. But it's near highway, rail, so  
25 it's a very -- and it's actually, the last time we

1           were there you were going back through the casino  
2           parking lot and then driving maybe a mile or two  
3           from the casinos that you could still see from the  
4           site to get to it.

5                        So, it's close to highway, close to  
6           rail, and already, you know, got transmission and  
7           other fairly -- it's pragmatic from a project-  
8           siting perspective, and it's also already fairly  
9           -- and it's golf course, as well.

10                      If I can continue, one important piece  
11           of that on water, since this is obviously  
12           something we think about a lot, is the golf course  
13           there consumes about 1600 acrefeet of water every  
14           year. This project will consume about 100  
15           acrefeet of water every year.

16                      So if you look at impact and you look at  
17           -- I think that's an important thing to remember,  
18           is what some of the relevant impacts are of some  
19           of these other alternatives.

20                      MR. HARRIS: You also, I'm sure,  
21           consulted the BLM's land management plans. I  
22           believe this is a level three area for desert  
23           tortoises. Was that an important part of your  
24           consideration of this site?

25                      MR. WOOLARD: Oh, clearly. I mean when

1 we looked we looked for species, any species that  
2 could be on the site. And if there are any  
3 endangered species you basically -- you're very  
4 careful or you can't develop at that site.

5 The desert tortoise, this was a level  
6 three or category three, I might get that  
7 confused, a level three classification, which is  
8 the lowest of the desert tortoise classifications.  
9 And very minimal. I believe there were a total of  
10 25 by the time we'd done our survey.

11 But with that said, we're aware that the  
12 tortoise is important. We want to make sure that  
13 we mitigate properly and that we actually are able  
14 to move them in a responsible way.

15 But I think you want to make sure there  
16 are a lot of places in California that are a lot  
17 worse, from a tortoise perspective, significantly  
18 worse. And some of them are actually in process  
19 at this point in time in front of the -- trying to  
20 get permitting.

21 MR. HARRIS: The BLM ranked this as an  
22 area outside of DWMA that would basically be a  
23 one-to-one mitigation ratio. The company's  
24 decided to offer more than one-to-one. Can you  
25 talk briefly about that offer of three-to-one

1 mitigation.

2 MR. WOOLARD: Yeah. Well, when we  
3 looked at mitigation we started to look at what we  
4 needed to do. I think one of the most important  
5 elements of Ivanpah is that it's now viewed as a  
6 fairly significant -- it's got significant impact  
7 for PG&E and their ability to meet their RPS  
8 standards. I don't think they can meet it without  
9 it.

10 Edison, as well, is counting on this.  
11 Because a lot of other projects have fallen apart  
12 and aren't getting done.

13 So when we started to look at what we  
14 needed to do to move this forward, we ended up  
15 making an agreement -- the federal government  
16 actually told us we need one-to-one mitigation.

17 And rather than fight this forever, as a  
18 lot of others are doing, we said, well, we'll move  
19 to this three-to-one, mainly to get the project  
20 moving. Because we're actually very concerned  
21 about just the ability to get the projects built  
22 and coming close to meeting the RPS, the renewable  
23 standards.

24 HEARING OFFICER KRAMER: Mr. Harris,  
25 could you expand the acronym DWMA for --

1                   MR. HARRIS: Desert wildlife management  
2                   area.

3                   HEARING OFFICER KRAMER: Thank you.

4                   MR. HARRIS: I heard a bell go off in  
5                   the back, so I think I got DWMA right. We'll hear  
6                   DWMA and ACECs in January, but I apologize for the  
7                   acronym.

8                   I think we want to condense the last  
9                   part a little bit here, John, and just can you  
10                  confirm for the Committee that you have an  
11                  obligation to restore this land at the end of the  
12                  project.

13                  MR. WOOLARD: Yes. When we look at  
14                  restoration, and it's interesting it commingles,  
15                  or it butts up against mitigation in a fairly  
16                  interesting way.

17                  We are mitigating now, we're committing  
18                  to mitigate at three-to-one. And I will tell you  
19                  that there are a lot of our competitors that are  
20                  not happy with us because now they're very  
21                  concerned about that precedent. But that's the  
22                  mitigation piece.

23                  And then on the restoration we've also  
24                  got a plan in place to bond and then to restore  
25                  the site at the end of its full lease.

1                   So actually when this is turned back  
2                   over, I believe the calculation would be the land  
3                   goes back to BLM and is restored and there's been  
4                   three-to-one mitigation pursued elsewhere. So,  
5                   again, it's a fairly interesting or fairly -- the  
6                   dynamic between those two should be considered, I  
7                   think.

8                   MR. HARRIS: And you also have an  
9                   obligation to pay rent on this land during the  
10                  time of the project, is that right?

11                  MR. WOOLARD: We do. We pay rent on the  
12                  land, as well.

13                  MR. HARRIS: I think we probably want to  
14                  start closing up, but I guess a couple things.  
15                  You know, we've been very aggressive in trying to  
16                  move this project along. And I know you've been  
17                  very appreciative of the efforts of the staff.

18                  So, let me just go back to you one last  
19                  time to see if there's any more comments you'd  
20                  like to make, or any closing comments for the  
21                  Committee.

22                  MR. WOOLARD: Well, first I'd like to  
23                  thank the Commission for moving this forward and  
24                  making sure that we can have a hearing and make an  
25                  effort to help the project move forward.

1 I think the staff's done a very thorough  
2 review. And certainly we spent quite a bit on  
3 collecting data and collecting information.

4 I believe the process has been, it's  
5 been longer than, I think, any of us expected.  
6 And we're hoping that we can bring it to closure.

7 But it has been, I think, we do have a  
8 lot of good information in this. We've got a lot  
9 of good testimony and experts that we can call on.

10 And I'm open for questions.

11 MR. HARRIS: Thank you. We make the  
12 witness available for cross-examination at this  
13 point.

14 HEARING OFFICER KRAMER: Why don't we go  
15 around the table in order. Mr. Suba.

16 CROSS-EXAMINATION

17 BY MR. SUBA:

18 Q Good morning, Mr. Woolard.

19 MR. WOOLARD: Good morning.

20 MR. SUBA: You had mentioned that the --  
21 that you'll be paying rent on the land during the  
22 course of the project. Has that fee been  
23 established, the right-of-way fee?

24 MR. WOOLARD: The rent is, I believe,  
25 under -- I'm going to have to defer to Steve on

1           that. I think it's still under discussion to  
2           finalize.

3                       MR. SUBA: With the BLM?

4                       MR. WOOLARD: With the BLM.

5                       MR. SUBA: Thank you.

6                       MS. BELENKY: Thank you. Good morning.

7                       MR. HARRIS: Could you all introduce  
8           yourselves so that he --

9                       MS. BELENKY: Yes, my name is Lisa  
10          Belenky; I'm with the Center for Biological  
11          Diversity.

12                                       CROSS-EXAMINATION

13          BY MS. BELENKY:

14                       Q     I had a couple of questions. First to  
15          the degree that this testimony went beyond project  
16          description, I just want to say that we object to  
17          that, as a general matter.

18                                       I had a few specific questions. You  
19          discussed desert tortoise issues. Are you a  
20          desert tortoise expert?

21                       MR. WOOLARD: No.

22                       MS. BELENKY: Okay. Thank you. And you  
23          also discussed the amount of photovoltaic energy  
24          and if it was on every rooftop that would be  
25          established. Are you an expert on that issue, as

1 well?

2 MR. WOOLARD: I believe that that  
3 actually came from -- I do a lot with  
4 photovoltaics, and I spent quite a bit of time  
5 with it, relative to the efficiency. A lot of  
6 this comes from Nate Lewis' work out of CalTech.

7 And this, I believe the number that I  
8 gave, was out of either the CEC or the PUC, who --

9 MS. BELENKY: Have you introduced that  
10 into evidence?

11 MR. HARRIS: It's a PUC or CEC document.  
12 We'll make it available and the Committee can take  
13 official notice of that document. But we'll get a  
14 reference for you, Lisa.

15 MS. BELENKY: Thank you. And one of the  
16 things we object to is your discussion of  
17 mitigation. It has not yet been decided what the  
18 mitigation would be, is that correct? On this  
19 project?

20 MR. WOOLARD: Right.

21 MS. BELENKY: Thank you. And then could  
22 you discuss a little bit the project description  
23 in terms of the powerline, the powerline upgrade  
24 and the substation? And how those issues interact  
25 with the project description here.

1                   MR. WOOLARD: Sure. So the powerline  
2 upgrade goes through -- Southern California Edison  
3 would be constructing, and we've gone through the  
4 Cal-ISO for the sizing of the line.

5                   The interconnection request is close to  
6 being finalized. It should be finalized by the  
7 first quarter of next year.

8                   It'll be an upgrade to a 230 kV line.  
9 And that line -- the power would flow to Eldorado,  
10 and then into the Cal-ISO from there.

11                  MS. BELENKY: Thank you. I'm a little  
12 confused when you say it would flow to Eldorado  
13 and then to the Cal-ISO. So the energy would  
14 actually go back towards Nevada, and then into the  
15 grid, the larger grid, is that correct?

16                  MR. WOOLARD: Right. Eldorado is, I  
17 believe, a Cal-ISO interconnection point, and so  
18 it goes --

19                  MS. BELENKY: In Nevada?

20                  MR. WOOLARD: In Nevada.

21                  MS. BELENKY: Yes.

22                  MR. WOOLARD: But it's the Cal-ISO.

23                  MS. BELENKY: Okay. I just wanted to  
24 make sure everyone understood that. And is this  
25 transmission line upgrade necessary for this

1 project?

2 MR. WOOLARD: This transmission line  
3 upgrade is necessary for this, as well as others,  
4 other projects as well. So there are several  
5 projects that are focused on this transmission  
6 upgrade.

7 MS. BELENKY: So the transmission  
8 upgrade is necessary for the Ivanpah project?

9 MR. WOOLARD: Yes.

10 MS. BELENKY: Yes. Thank you. I don't  
11 have anything further.

12 MS. SMITH: Gloria Smith, Sierra Club.  
13 I'd join Center for Biological Diversity's  
14 objection to the witness testifying on  
15 quantitative and qualitative information on the  
16 desert tortoise.

17 CROSS-EXAMINATION

18 BY MS. SMITH:

19 Q Speaking of the closure, you implied  
20 that the turning it back over in quality is  
21 restored to its original is actually something  
22 quite remarkable. And going along with the three-  
23 to-one mitigation then would be there in  
24 perpetuity.

25 How is closure of this project any

1 different than closure of any other power plant  
2 project? I mean they're all considered impacts in  
3 perpetuity, given it's a 50-year life span. How  
4 is this different than any other project?

5 MR. WOOLARD: I'm sorry, my only comment  
6 was that in concert with the three-to-one  
7 mitigation it was more than you've seen in several  
8 precedents before.

9 MS. SMITH: So it has nothing to do with  
10 the closure?

11 MR. WOOLARD: Right.

12 MS. SMITH: I have nothing else. Thank  
13 you.

14 MR. BASOFIN: Good morning, Josh Basofin  
15 with Defenders of Wildlife.

16 CROSS-EXAMINATION

17 BY MR. BASOFIN:

18 Q Thank you for your testimony, Mr.  
19 Woolard. I just have a couple questions for you.

20 MR. BASOFIN: Well, actually, first of  
21 all I'd like to reiterate the objection of the  
22 Center for Biological Diversity that this  
23 testimony has gone beyond project description into  
24 other substantive topic areas.

25 Mr. Woolard, you mentioned that there

1 was an attempt made not to disturb the natural  
2 contours of the land and to minimize grading, is  
3 that correct?

4 MR. WOOLARD: Yes.

5 MR. BASOFIN: Okay, can you tell us how  
6 many acres of the site is proposed to be graded?

7 MR. WOOLARD: I don't have the exact  
8 number with me. We can provide that to you  
9 supplementally.

10 MR. BASOFIN: Okay. And can you  
11 describe the number of acres that are proposed to  
12 have vegetation cut?

13 MR. WOOLARD: We can get that as well,  
14 the exact number.

15 MR. BASOFIN: Okay. In part of your  
16 testimony you discussed the desert tortoise. And  
17 you described the desert tortoise as a category  
18 three desert tortoise. Is it your understanding  
19 that that community is a category three?

20 MR. WOOLARD: No, no, that was the  
21 habitat. The habitat was level three, not a  
22 category three.

23 MR. BASOFIN: Okay, I just wanted to  
24 clarify that because you had described it as a  
25 category three desert tortoise.

1                   MR. WOOLARD: I don't think I did, but  
2                   it is the habitat is level three.

3                   MR. BASOFIN: Okay.

4                   MR. WOOLARD: Or it was level three or  
5                   category three habitat was what I was saying, not  
6                   the tortoise, itself.

7                   MR. BASOFIN: Okay, thank you for the  
8                   clarification. That's all I have.

9                   MS. BELENKY: I just wanted to follow up  
10                  if I can (inaudible).

11                  HEARING OFFICER KRAMER: (inaudible).

12                  MS. BELENKY: Okay, that's fine.

13                  HEARING OFFICER KRAMER: Staff.

14                                   CROSS-EXAMINATION

15                  BY MR. RATLIFF:

16                   Q     Mr. Wollard, the BLM has informed us  
17                   that it is the custom of BLM to require a site  
18                   restoration fee for such right-of-way grants and  
19                   the Commission Staff supports that requirement.  
20                   Is BrightSource willing to accept such a  
21                   responsibility?

22                   MR. WOOLARD: Such responsibility for?

23                   MR. RATLIFF: To restore the site at the  
24                   end of the project's life.

25                   MR. WOOLARD: We're in discussions on

1           that now, yes.

2                       MR. RATLIFF:  So you haven't decided  
3           whether or not you're going to accept a --  
4           typically BLM would require a bond for that.  Is  
5           BrightSource in agreement that it would provide a  
6           bond for restoration of the site?

7                       MR. WOOLARD:  I believe the discussions  
8           are around the sizing of any of that facility.  So  
9           we're working with them on how to size that  
10          facility, not whether -- I don't believe it's a  
11          yes or no.  The discussion with BLM is around the  
12          sizing of that bond facility.

13                      MR. RATLIFF:  So you've agreed to have a  
14          bond --

15                      MR. WOOLARD:  To do something, yes.

16                      MR. RATLIFF:  -- that is -- you haven't  
17          determined yet what --

18                      MR. WOOLARD:  We haven't yet determined  
19          the size of the bond.

20                      MR. RATLIFF:  Thank you.

21                      THE REPORTER:  Your microphone.

22                      HEARING OFFICER KRAMER:  I'm doing it.  
23          On the telephone, Mr. Brizzee.

24                      MR. BRIZZEE:  No questions, thank you.

25                      HEARING OFFICER KRAMER:  Basin and Range

1 Watch.

2 MS. CUNNINGHAM: No questions, thank  
3 you.

4 HEARING OFFICER KRAMER: CURE.

5 MR. JOSEPH: CURE has no questions of  
6 this witness.

7 HEARING OFFICER KRAMER: Western  
8 Watersheds.

9 MR. CONNOR: Yes.

10 CROSS-EXAMINATION

11 BY MR. CONNOR:

12 Q Mr. Woolard, I have a question. And  
13 that is are you familiar with what category three  
14 desert tortoise habitat actually means?

15 MR. WOOLARD: I can't say that I'm an  
16 expert on that, no. But I am familiar with the  
17 various levels of category. I've read the  
18 descriptions. I do not present myself as an  
19 expert by any means, though.

20 MR. CONNOR: Do you know what the  
21 management goal is for category three habitat?

22 MR. WOOLARD: Not without going back to  
23 refer to my -- no, I can't say that I know it off  
24 the top of my head.

25 MR. CONNOR: Okay, thank you.

1 HEARING OFFICER KRAMER: Okay. Ms.  
2 Belenky, you had another question?

3 MS. BELENKY: (inaudible).

4 HEARING OFFICER KRAMER: Okay, as far as  
5 the objections go, we'll overrule those. This  
6 witness is speaking generally. All the parties  
7 will have an opportunity to rebut or present their  
8 own version of the details of some of the topics  
9 that he covered, I would say, with a broad brush.  
10 We don't find any need to exclude that testimony.

11 And let me ask, Mr. Harris, will Mr.  
12 Woolard be available at the January meetings if  
13 additional questions should come up?

14 MR. WOOLARD: I probably can be when  
15 we --

16 MR. HARRIS: We'll make every effort to  
17 have him be available --

18 HEARING OFFICER KRAMER: Okay, for  
19 instance, if we had a panel or something, it might  
20 be appropriate to include him.

21 MR. HARRIS: Yeah, my understanding, in  
22 terms of the objections, too, is that all the  
23 parties will have another chance to cross-examine  
24 our panel for project description. And Mr.  
25 Wollard has every incentive to be here. And so

1 we're going to try to make that happen.

2 But we appreciate the accommodation of  
3 allowing him to sort of tee up the proceeding  
4 today, and also scheduling worked out well this  
5 time. But, again, there is a full panel that  
6 we'll present in January for all these questions  
7 that were asked.

8 PRESIDING MEMBER BYRON: Mr. Wollard,  
9 thank you for being here. It's impressive the  
10 president of the company's here to explain the  
11 project that you've been working on for a number  
12 of years. I found the discussion very helpful.

13 And we will get into the details that I  
14 think most of our intervenors are in with regard  
15 to the biological issues. But the general  
16 description was very helpful.

17 You also got into some areas that we  
18 typically don't get into in our evaluation of  
19 these projects. The one that I found most  
20 interesting was about technologies that are being  
21 tested and not faring very well in their field  
22 testing. Sounds like yours, at least according to  
23 you, is doing well. And you've gotten the  
24 investor-owned utilities to sign up for additional  
25 megawatts.

1                   Commissioner, I wonder if maybe we could  
2                   get results from some of our investor-owned  
3                   utilities; find out which technologies are doing  
4                   better than others. And we'll concentrate our  
5                   efforts on those projects and not the others.

6                   ASSOCIATE MEMBER BOYD: Nice try,  
7                   Commissioner, --

8                   PRESIDING MEMBER BYRON: Yeah. But  
9                   unfortunately we don't get the benefit of doing  
10                  that.

11                  So, again, I thank you for being here.  
12                  A very helpful discussion.

13                  ASSOCIATE MEMBER BOYD: I have a  
14                  question --

15                  PRESIDING MEMBER BYRON: Please go right  
16                  ahead.

17                  ASSOCIATE MEMBER BOYD: -- to close out  
18                  the witness, if you don't mind. And it may be  
19                  objected to by all the attorneys in the room as  
20                  irrelevant to the case before us. But it is about  
21                  a statement that Mr. Wollard made before that  
22                  stepped on a hot button with me.

23                  In your early remarks about the land  
24                  impacts of various types of energies, I believe  
25                  you said wind is four times more consumptive of

1 land than the approach you're taking.

2 And then you had a quote about, I don't  
3 know if you used the term biopower or bioenergy,  
4 and you had a comment about, I believe, maybe  
5 there was three or four times more, as well.

6 MR. WOOLARD: Forty times.

7 ASSOCIATE MEMBER BOYD: Forty times.

8 Well, that's why I reacted to it. Because you  
9 said that in front of an audience and on the  
10 record, I want to ask you a question.

11 And the reason I said it's a hot button  
12 with me is I'm deeply committed to bioenergy,  
13 biomass, biopower, biofuel, et cetera. And a lot  
14 of people, and the press in particular, hear  
15 statements like that about biofuel, and then  
16 that's the end of the argument.

17 Am I correct in assuming a statement  
18 like that is predicated on growing energy crops  
19 versus picking up pieces of the waste stream,  
20 perhaps?

21 MR. WOOLARD: Yes, yes. And a lot of  
22 that came out of the Nature Conservancy and Jimmy  
23 Powell has done a lot of that work and thinking  
24 about biofuels. If you want to go back to the  
25 source on some of that, I think they're fairly --

1 they have their arms around this pretty well.

2 But it is growing crops --

3 ASSOCIATE MEMBER BOYD: Right.

4 MR. WOOLARD: -- versus harvesting waste  
5 out of the waste stream, which is obviously a much  
6 better way to focus the attention.

7 ASSOCIATE MEMBER BOYD: And that latter  
8 is my crusade in that I constantly run into this,  
9 oh, biofuel, biopower, et cetera, et cetera, it's  
10 energy crops. And that's the end of the  
11 discussion sometimes.

12 So I just wanted to keep the waste  
13 stream issue alive, because we're struggling in  
14 this state to address that.

15 MR. WOOLARD: I agree completely. And  
16 then one last thing, photosynthesis, just think of  
17 it as 1 percent efficient. And photovoltaics is  
18 20 to 22 percent efficient, if you get the high  
19 efficiency cells. So that's the first piece.

20 Then you have to burn what you've  
21 produced, the photosynthesis, and you lose more.  
22 So that's the very quick way to think about the  
23 efficiency.

24 ASSOCIATE MEMBER BOYD: Right. Trouble  
25 is, it's there anyway. You know, in the forest we

1 burn them down instead of harvesting the waste  
2 material. In the ag, field burning is almost not  
3 allowed anymore for air quality reasons, et  
4 cetera, et cetera, et cetera. And we're filling  
5 our landfills up about forty times faster than  
6 we'd like to. And a lot of it is wood debris from  
7 urban use and green waste. So on and so forth.

8 So, it's a problem that might be solved,  
9 as inefficient as it is. There are other net  
10 benefits, so that's why I keep pursuing it.

11 Thank you, though, for --

12 MR. WOOLARD: Yes.

13 ASSOCIATE MEMBER BOYD: -- adding to  
14 that.

15 HEARING OFFICER KRAMER: Okay, as I said  
16 earlier, project description will be revisited  
17 during our January hearings.

18 Now we'll move on to the next topic,  
19 which is compliance and closure. And let me ask  
20 about the next three, compliance and closure,  
21 facility design and power plant efficiency. And I  
22 do that because the applicant did not make any  
23 proposals for changes to the conditions. So maybe  
24 then we can take all three of those together.  
25 Does any party object to doing so?

1                   And for the intervenors who aren't quite  
2                   as familiar with our process, what we normally do  
3                   in a case like this is the applicant will  
4                   identify, either briefly or sometimes in some  
5                   detail, the exhibits that relate to those topics.  
6                   And offer to move that evidence in on the basis of  
7                   the written declaration of the witnesses that is  
8                   attached to that testimony. And if there are no  
9                   objections we simply accept that, and that is all  
10                  the testimony we take on the particular topic.

11                  So, Mr. Harris, do you care to make a  
12                  motion?

13                  MR. HARRIS: Yeah, I would move that we  
14                  move into evidence the testimony on the three  
15                  subjects you just listed, compliance and closure,  
16                  facility design and power plant efficiency.

17                  Our exhibits are identified in section  
18                  1C of our prefiled testimony. And I can either  
19                  read those, or we can just acknowledge that  
20                  they're in 1C, Mr. Kramer.

21                  HEARING OFFICER KRAMER: Might be easier  
22                  to read them.

23                  MR. HARRIS: Okay.

24                  HEARING OFFICER KRAMER: Is it an  
25                  extensive list?

1 MR. HARRIS: Yes, actually it is, I  
2 think.

3 HEARING OFFICER KRAMER: Well, then your  
4 prefiled testimony is exhibit 65, is that correct?  
5 It was filed November 16, 2009?

6 MS. SMITH: Excuse me, Mr. Kramer.

7 HEARING OFFICER KRAMER: Yes.

8 MS. SMITH: I just got a text message  
9 from Marc Joseph. You've lost contact with the  
10 people on the phone.

11 HEARING OFFICER KRAMER: Is anyone else  
12 still on the phone line? Okay, why don't we take  
13 a break for hopefully just a couple minutes and we  
14 will attempt to reestablish the connection.

15 (Off the record.)

16 MR. HARRIS: I've got the exhibit  
17 numbers for all the documents. If you want to  
18 move through each one of these I think we're ready  
19 to do so, or however you want to proceed, Mr.  
20 Kramer.

21 HEARING OFFICER KRAMER: Actually it  
22 might be easier to just, we'll mark them off and  
23 then they will be part of the record.

24 Now, when we do this, just so the  
25 parties know, at the end of the hearings we'll

1           have a sort of clean-up discussion to make sure  
2           that we've dealt with all the documents that make  
3           their way to the exhibit list, so that one is not  
4           inadvertently left unadmitted, or un-objected-to,  
5           for that matter.

6                         MR. BASOFIN: Mr. Kramer, could I ask a  
7           question at this point regarding exhibits, since  
8           we're going through the exhibit list?

9                         HEARING OFFICER KRAMER: Certainly.

10                        MR. BASOFIN: When the applicant's  
11           exhibits are moved into evidence will we be  
12           receiving copies of them?

13                        HEARING OFFICER KRAMER: You should have  
14           received a compact disk with copies of all of them  
15           a couple weeks ago, I think.

16                        MR. BASOFIN: We did. I'm just  
17           wondering about hard copies, if those will be  
18           available.

19                        HEARING OFFICER KRAMER: Do you need  
20           hard copies?

21                        MR. HARRIS: We weren't intending to  
22           supply hard copies. It's thousands of pages. So,  
23           is there something that's -- you can't print or --

24                        MR. BASOFIN: Well, I'm just wondering  
25           if the exhibits that are intended to be moved into

1 evidence during the hearing, itself, if those -- I  
2 mean I think generally those would be provided at  
3 the hearing.

4 MR. HARRIS: We do have copies of  
5 everything in the back, John. Can you identify  
6 where that giant box is?

7 MR. CARRIER: File folder boxes -- boxes  
8 back here on this chair, if you need to go back  
9 and refer to hard copies. They're in this big  
10 box.

11 HEARING OFFICER KRAMER: Sounds like Mr.  
12 Basofin is thinking more generally that he wants  
13 one to, probably to read for light bedtime  
14 reading. And --

15 MR. BASOFIN: Well, I guess more  
16 specifically, the question is if a witness will be  
17 relying on an evidentiary exhibit during  
18 testimony, it would be good to have those  
19 available.

20 HEARING OFFICER KRAMER: Well, then I  
21 think the applicant has said that they are  
22 available back there.

23 MR. BASOFIN: Okay.

24 MR. RATLIFF: Mr. Kramer, with regard to  
25 these topics, which no party has identified as

1           being contested, I think the way the applicant has  
2           done their testimony is they've given a long list  
3           of all the data responses that they have provided,  
4           as well as perhaps other documents that they have  
5           made their testimony.

6                         That may be a fairly long list in some  
7           of these topic areas. I'm wondering if, for those  
8           uncontested areas, we just allow those to go in  
9           without the reading of all of those various data  
10          requests, sets of data requests and responses.

11                        HEARING OFFICER KRAMER: I think Mr.  
12          Harris was going to read them by number.

13                        MR. HARRIS: Yeah.

14                        HEARING OFFICER KRAMER: And that's  
15          probably more efficient than trying to go back to  
16          his -- the testimony he's referring to, exhibit  
17          65, is on the order of 790 pages, if I recall  
18          correctly. So we don't necessarily want to have  
19          that printed for everyone to look at.

20                        But let me just say generally on this  
21          topic, you know, the Committee's sort of wrestling  
22          with the burden of producing all this paper for  
23          much of which won't be read by parties.  
24          Especially on these apparently uncontested topics.

25                        With, you know, the burden on the

1 parties if they have to go make a sort of  
2 scavenger hunt, for instance.

3 So the compromise we drew was that Mr.  
4 Harris and the applicant would put everything on a  
5 CD so that you had -- and you could look at it  
6 that way.

7 I suppose if there is some sort of  
8 individual burden in printing it, we can address  
9 that.

10 We will be talking about a slightly  
11 different topic at the end of the day, which is  
12 what about some of the documents that are just  
13 referred to in the testimony of the staff or the  
14 applicant, and how we're going to get copies of  
15 that for everyone. So this discussion will come  
16 up again.

17 But, I think for the moment, Mr.  
18 Basofin, you can get it out of the back, the box  
19 in the back, if you need to see one of these  
20 documents. But I'm really wondering why you would  
21 need to, since they're on topics that you're not  
22 contesting.

23 PRESIDING MEMBER BYRON: Remember,  
24 everyone please speak up closely to the mic so  
25 that those on the phone can hear us.

1 HEARING OFFICER KRAMER: Let me ask, on  
2 the phone, were you able to hear Mr. Ratliff? He  
3 is, I think, the most soft-spoken person in the  
4 room at this moment.

5 (Laughter.)

6 MR. SPEAKER (Phone): Loud and clear.

7 HEARING OFFICER KRAMER: Okay, it must  
8 be our speakers here aren't giving them to us.

9 MR. BASOFIN: I mean I was just saying  
10 in response to your last question, I mean although  
11 these are uncontested items, my understanding is  
12 that intervenors have reserved the right to cross-  
13 examine on any of these topics at the hearing.

14 But, I mean I will say that having the  
15 hard copies of the exhibits in the back, I think,  
16 should suffice.

17 HEARING OFFICER KRAMER: Okay, --

18 MR. BASOFIN: So that's satisfactory,  
19 thank you.

20 HEARING OFFICER KRAMER: Good. And I'll  
21 also note that you should have received a hard  
22 copy of the final staff assessment in the mail at  
23 some point.

24 Okay, Mr. Harris, go ahead.

25 MR. HARRIS: Thank you. I was able to

1 organize during the short break, so I appreciate  
2 that.

3 Just for the purposes of letting  
4 everybody know where the documents are, in our  
5 prefiled testimony it was done by subject. And so  
6 we have project description and the testimony that  
7 follows. In each one of our prefiled testimonies,  
8 which are part of exhibit 65, section 1C, as in  
9 charley, lays out our prior filings. And they  
10 also have an exhibit number. And those are the  
11 exhibit numbers I'm going to be reading as we move  
12 forward through the first topic.

13 So the three topics were compliance and  
14 closure, facility design and power plant  
15 efficiency. Those are all consolidated in our  
16 exhibit 65 under the project description. And I'm  
17 going to read the exhibit numbers from section 1C.  
18 And those are as follows:

19 Exhibit 1 -- go slowly so I don't screw  
20 this up -- exhibit 4, exhibit 5, exhibit 7,  
21 exhibit 20, exhibit 21, exhibit 28, exhibit 29,  
22 exhibit 30 and exhibit 31. Those are the exhibits  
23 for those three subjects, compliance and closure,  
24 facility design and power plant efficiency.

25 I'd move those exhibits into evidence.

1                   HEARING OFFICER KRAMER: Any objection  
2                   from any party? Hearing none, those are received  
3                   into evidence.

4                   Mr. Joseph asked if we could move the  
5                   traffic and transportation topic forward so that  
6                   he would -- that's the only topic he is remaining  
7                   on the phone to discuss.

8                   During the break both the applicant and  
9                   staff indicated they had no difficulty with doing  
10                  so. Do any of the other parties have any concerns  
11                  about moving that forward?

12                  Okay, seeing none, we'll go to traffic  
13                  and transportation. And this is one of our mildly  
14                  contested items, so it will require the  
15                  presentation of testimony. Based on the  
16                  discussion earlier today, we will have the  
17                  applicant -- actually, Mr. Ratliff proposed that,  
18                  was it on this topic, Mr. Ratliff, you thought it  
19                  would be more efficient for staff to go first?

20                  MR. RATLIFF: Yes.

21                  HEARING OFFICER KRAMER: And, Mr.  
22                  Harris, did you have any objection to that?

23                  MR. HARRIS: None. I'd offer the  
24                  contrary, I thought it was an accommodation to  
25                  staff, but we're perfectly happy with this, so.

1                   MR. RATLIFF: Let me just note that it's  
2                   typical for staff to go first. We don't want to  
3                   stand on that formality necessarily, but here we  
4                   think it's also useful for staff to go first.

5                   MR. HARRIS: No objection.

6                   MR. JOSEPH: Mr. Kramer, can I inquire  
7                   of Mr. Ratliff whether staff will be proposed a  
8                   revised trans-1 condition of certification?

9                   THE REPORTER: May I ask who is  
10                  speaking?

11                  HEARING OFFICER KRAMER: You need to  
12                  identify yourself, Marc.

13                  MR. JOSEPH: I'm sorry, this is Marc  
14                  Joseph for CURE.

15                  MR. RATLIFF: Yes.

16                  HEARING OFFICER KRAMER: And what does  
17                  that cause you to want to do, Mr. Joseph?

18                  MR. JOSEPH: Based on the earlier  
19                  conversations I had with Mr. Ratliff, I think it's  
20                  going to cause me to smile and say, thank you, we  
21                  agree with that change.

22                  (Laughter.)

23                  HEARING OFFICER KRAMER: Okay.

24                  MR. RATLIFF: And we were hopeful that  
25                  that is the case.

1                   PRESIDING MEMBER BYRON: That's okay.  
2                   This is Commissioner Byron. We like that kind of  
3                   response, thank you, Mr. Joseph.

4                   HEARING OFFICER KRAMER: I gather  
5                   there's more to it than that simple element,  
6                   though. And so we still do need to have a hearing  
7                   with witnesses, is that correct?

8                   MR. RATLIFF: Right. And I think we  
9                   should probably go ahead and swear the witnesses  
10                  and have the hearing.

11                  There are two components to this topic.  
12                  One is traffic and one is glare. So you want to  
13                  do traffic first, and --

14                  HEARING OFFICER KRAMER: They both were  
15                  part of your traffic testimony, right, both  
16                  issues?

17                  MR. RATLIFF: That's correct.

18                  HEARING OFFICER KRAMER: Okay, so there  
19                  is a cross-over to visual, as well.

20                  MR. RATLIFF: Yes.

21                  HEARING OFFICER KRAMER: Okay. We did  
22                  swear a bunch of witnesses en mass earlier. Did  
23                  we not capture the witnesses you're thinking  
24                  about?

25                  MR. RATLIFF: Shall we bring both of the

1 witnesses forward and have them -- they have been  
2 sworn.

3 HEARING OFFICER KRAMER: Okay. Are you  
4 proposing a panel presentation or --

5 MR. RATLIFF: Well, if you want to have  
6 these two topics separate, that's fine with me.  
7 We could do it either way. They are, I think --  
8 well, actually, I think maybe it would be best to  
9 have it as a panel, yes.

10 HEARING OFFICER KRAMER: Mr. Harris, do  
11 you have any objection to the panel format for  
12 this item?

13 MR. HARRIS: No objection, no.

14 HEARING OFFICER KRAMER: Mr. Ratliff, go  
15 ahead.

16 MR. RATLIFF: The staff witnesses on  
17 this topic are James Jewell and Jason Ricks. And  
18 they have been sworn. I would like to have them  
19 very briefly describe their work experience and  
20 expertise before we go forward, particularly  
21 because some of these issues are rather technical  
22 in nature.

23 HEARING OFFICER KRAMER: And when you  
24 first speak, please state and spell your name for  
25 the court reporter. And then go ahead.

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DIRECT EXAMINATION

BY MR. RATLIFF:

Q Mr. Ricks, could you summarize your qualifications to present this testimony?

MR. RICKS: Sure. My name is Jason Ricks, J-a-s-o-n R-i-c-k-s. I have a masters of science environmental public health. And I've been doing traffic analysis under the California Environmental Quality Act and National Environmental Policy Act for about five years now.

MR. RATLIFF: And, Mr. Jewell, could you also summarize your qualifications?

DR. JEWELL: I'm James Jewell, that's J-e-w-e-l-l. I practice in San Francisco as an independent lighting consultant in the whole field in lighting I have degrees from the University of Pacific and from Yale University. And I've practiced nearly all my life in the whole field of light and vision.

MR. RATLIFF: Thank you, Mr. Jewell. And does that include membership in the Illuminating Engineering Society?

DR. JEWELL: I've been a member of the Illuminating Engineering Society since 1958, and have served as the president of that society.

1                   MR. RATLIFF: Thank you. I would begin  
2                   by having Mr. Ricks summarize his testimony. And  
3                   then we'll have Mr. Jewell follow with a summary  
4                   of his testimony, and with the issues that staff  
5                   would like to have addressed today.

6                   MR. RICKS: Thank you. We identified in  
7                   the staff assessment that construction-related  
8                   traffic would not reduce levels of service on the  
9                   affected roadways to unacceptable levels, with the  
10                  exception on Friday afternoons on northbound I-15;  
11                  we identified a significant impact to the existing  
12                  level of service.

13                  Identified that the vehicles generated  
14                  by construction that would travel on I-15  
15                  northbound on Friday afternoons would result in a  
16                  significant impact.

17                  However, we identified a mitigation  
18                  measure requiring the applicant to provide bus  
19                  service for a minimum of 60 percent of their  
20                  construction workers. And this mitigation measure  
21                  would reduce the effect to less than significant.

22                  Also we identified potential impact of  
23                  damage to roadways as a result of construction.  
24                  And recommended a mitigation measure, a condition  
25                  of certification to repair any roadway damage at

1 the end of construction.

2 And also we identified potential -- or,  
3 no, there were less than significant impacts  
4 related to constructing structures over 200 feet  
5 in height. We identified that there would be less  
6 than significant impact to air traffic as a result  
7 of these structures.

8 And additionally, we identified a  
9 potentially significant impact related to air  
10 traffic as a result of thermal plumes created by  
11 the air cooled condensers from the project. And  
12 recommended a mitigation measure of requiring any  
13 air traffic in the vicinity that would fly over  
14 the site to maintain a minimum height of 1350  
15 meters -- feet, I'm sorry, feet, 1350 feet.

16 And additionally, since publication of  
17 the final staff assessment the applicant has  
18 submitted revised construction assumptions  
19 indicating that most of the construction workforce  
20 would originate in California.

21 This is different than the original  
22 assumptions contained in the application for  
23 certification in which it was assumed that most of  
24 the construction workforce would originate from  
25 Nevada.

1                   Therefore, with these new assumptions,  
2                   -- and we agree, we think this, based on the  
3                   construction market and the data that we've seen,  
4                   we think the applicant's assumptions are  
5                   reasonable.

6                   And what this does is it changes the  
7                   distribution of traffic on Friday afternoons.  
8                   Since most of the construction traffic will  
9                   originate in California, it will not be returning  
10                  to the Las Vegas area, i.e., on northbound I-15 on  
11                  Friday afternoons.

12                  Therefore, -- and in addition, the  
13                  applicant has asked that we remove, we revise the  
14                  condition of certification such that busing is no  
15                  longer required.

16                  So what we've done is we've removed the  
17                  percentage requirement; originally required that  
18                  60 percent of workers must travel to the site by  
19                  bus. We've removed that 60 percent and are still  
20                  requiring the applicant to provide bus and van  
21                  services for workers who can make use of it.  
22                  However, we are not requiring 60 percent, or any  
23                  percentage, for that matter.

24                  And I believe that's it. Oh, I'm sorry,  
25                  one more impact. We identified the construction

1 traffic would -- project construction traffic,  
2 when combined with construction traffic from other  
3 proposed projects, would contribute to a  
4 cumulative impact on Friday afternoons on  
5 northbound I-15.

6 I think that's it.

7 MR. RATLIFF: And, Mr. Ricks, --

8 ASSOCIATE MEMBER BOYD: Question.

9 MR. RATLIFF: -- was this change in  
10 condition of certification trans-1, was this at  
11 the request of the applicant, or do you know if it  
12 was in response to a request of the California  
13 Unions for Reliable Energy?

14 MR. RICKS: I believe it was both. I  
15 think the original request was from CURE. But in  
16 the applicant's testimony, it was also requested  
17 that the measure be changed.

18 MR. RATLIFF: Commissioners, the precise  
19 language of amended trans-1 is in a handout that  
20 Mr. Kessler has that we would probably mark as our  
21 next exhibit. This is an exhibit which was  
22 prepared to describe the extent to which the staff  
23 agrees or disagrees with the applicant's  
24 recommended changes in conditions of  
25 certification.

1                   And it has all of the changes that we  
2                   would either agree to or recommend on page 11 of  
3                   that handout, if you have it -- we should make it  
4                   available -- is the new language under the traffic  
5                   control plan condition trans-1.

6                   HEARING OFFICER KRAMER: Okay, on the  
7                   assumption that your visual presentation is going  
8                   to be exhibit 301, we'll call this exhibit 302.

9                   MR. RATLIFF: And with that I think the  
10                  best -- what I would suggest we do now is that we  
11                  have Mr. Jewell summarize his testimony, as well.  
12                  And then let the questions come to them as a  
13                  panel, since there was some overlap in the work  
14                  that they did on the glare issue.

15                  I believe actually, am I correct, John,  
16                  you worked on this as well? Should you be sworn?  
17                  You have been sworn.

18                  MR. KESSLER: I have been sworn.

19                  MR. RATLIFF: So, Mr. Kessler also,  
20                  initially when this issue came to the attention of  
21                  staff, I believe Mr. James Jewell was out of the  
22                  country, and the original work was addressed by  
23                  Mr. Kessler and Mr. Ricks. And then subsequently  
24                  they were able to get the help of Mr. Jewell, in  
25                  addition.

1                   So, Mr. Kessler, is one of the people I  
2                   would like to be considered, as well, to be a  
3                   witness for this topic.

4                   HEARING OFFICER KRAMER: As far as his  
5                   qualifications go, I believe he delineated those  
6                   in his written declaration, or his r, sum  
7                   attachment to the FSA, is that correct?

8                   MR. KESSLER: Yes.

9                   HEARING OFFICER KRAMER: Does any party  
10                  wish to examine Mr. Kessler about his  
11                  qualifications as a witness? Hearing none, go  
12                  ahead.

13                  MR. RATLIFF: Go ahead, Mr. Jewell.

14                  DR. JEWELL: Well, I've examined all the  
15                  documents submitted by the applicant and listened  
16                  this morning to the presentation and impressed no  
17                  end by the care and extent to which they've  
18                  described the processes for controlling the  
19                  heliostats.

20                  It seems that that is a very  
21                  sophisticated process and one to which I will  
22                  stipulate agreement.

23                  However, I find that, together with  
24                  staff, there are two circumstances which seem to  
25                  be of some concern. Applicant states in many

1 cases that the energy of solar radiation will not  
2 be a difficulty offsite. I take that to mean at  
3 ground level, for ground-level observers. And the  
4 elaborate discussion of the controls convinces me  
5 that that is probably correct.

6           However, we've learned, although it's in  
7 previous Commission document, staff document, that  
8 the so-called rest position for the heliostats is  
9 horizontal. That is at maximum solar zenith  
10 reflection.

11           So we would like, under the original  
12 trans-3 two specific issues addressed. Is it  
13 possible that a number of heliostats immediately  
14 adjacent to each other might produce a continuous  
15 line in the sky of reflected sunlight, such that  
16 an observer from an airplane would see not  
17 intermittent heliostats, but in effect a  
18 continuous line of heliostat. And run the risk of  
19 a saturated situation of the retina.

20           The second question that's not clear  
21 from the documents, although it seems to be  
22 precluded by the control, is is there anytime in  
23 which the heliostats in the so-called rest  
24 position will produce a new focal point in the  
25 sky.

1                   That is they come away from focus on  
2                   power tower and move to some other rest position.  
3                   And will that rest position be another focal point  
4                   with the brightness of some several or many  
5                   heliostats? Those two conditions in trans-3, I  
6                   believe, should be sustained, should be justified.

7                   In addition to that, reference was made  
8                   to the conditions in so-called trans-4. I did  
9                   provide to staff a segment of the American  
10                  National Standards Practice on Roadway Lighting on  
11                  sign lighting. I've been a member of the Roadway  
12                  Lighting Committee since 1969, and have been the  
13                  chairman of that committee, and now an honorary  
14                  member of that committee.

15                  The standard which I suggested, I'm  
16                  sorry, the recommended practice which I suggested  
17                  to staff dealt with the necessary luminance on  
18                  externally lighted sign to assure that that sign  
19                  would be visible against a high brightness  
20                  background. It seemed to me that that would be a  
21                  reasonable measure of determining what kinds of  
22                  illuminance would be visible.

23                  It is not a standard and is not  
24                  applicable to being measured. I was out of the  
25                  country at the Professional Lighting Designers

1 Convention in Berlin at the time the document was  
2 drawn up, and I regret misconstruance of the staff  
3 from my data.

4 So the measurement conditions that are  
5 contained in trans-4 I would be willing to  
6 stipulate that they could be omitted.

7 MR. RATLIFF: Thank you. Mr. Kessler,  
8 trans-4, as it's been reproduced on page 14 and 15  
9 of the staff handout, does it capture the staff's  
10 proposed changes in trans-4?

11 MR. KESSLER: Actually, it does not  
12 because we are trying to better understand this  
13 subject. As Mr. Jewell said, we misconstrued the  
14 89 candela per square meter reference point as  
15 being a threshold, which it is not. And in fact,  
16 there's -- based on Mr. Jewell's report of our  
17 understanding and testimony, there is no clear  
18 threshold for illumination, as we understand it  
19 today.

20 There is with respect to energy, which  
21 we referred to in condition trans-3, with respect  
22 to the heliostats. But not with respect to the  
23 solar power towers, as we attempt to address in  
24 trans-4.

25 And so what we're hoping to gain from

1           this proceeding today and the gentleman who's  
2           visiting from Israel, is a better understanding of  
3           how illuminance can, how it plays into the solar  
4           power tower. And what effect it may have in terms  
5           of distraction to other activities in the vicinity  
6           of the project. And whether there's a need for  
7           any type of monitoring over time, considering that  
8           there may not be, or there is not, a real  
9           threshold of terms of a health and safety issue.

10                    But maybe in terms of distraction to  
11           activities such as air travel, vehicle travel and  
12           so on, in the vicinity of the project.

13                    We have heard personal accounts from  
14           people who have traveled in the state, as well as  
15           in Spain, within our staff, and have provide  
16           varying levels of personal experience in looking  
17           at the solar power towers.

18                    And because this is a new technology in  
19           our state, and this broad of an application, and  
20           there's some unknowns, staff is really just trying  
21           to err on the safe side to be sure that down the  
22           road we're not faced with a problem that is a  
23           significant impact, but we just don't realize it  
24           today.

25                    So I think what we're trying to

1 entertain is maybe some option to monitor the say,  
2 traffic safety, using Caltrans, CHP data over  
3 time. Any observations or complaints from  
4 aviators and so on. And to greatly change the  
5 language as trans-4 reads today. We hoping to get  
6 a better understanding, and what we learn from the  
7 applicant, today, as well.

8 So we apologize that we can't provide  
9 more clear guidance as to what we'd like to see,  
10 but we're looking forward to gaining that from our  
11 experience today.

12 MR. RATLIFF: Commissioners, if I may.  
13 We may have cold-cocked the panel here with an  
14 issue that we haven't, perhaps, broken down into,  
15 I think, its subparts. And this is one of the  
16 things that I think would have benefitted,  
17 perhaps, from a workshop or an informal format.

18 And if you will allow me, I'll try to,  
19 in my certainly, probably, imperfect way, try to  
20 tell you what the issues are here.

21 I think they're three. One issue is --  
22 which I think Mr. Jewell has addressed -- is  
23 whether there would be any impact to traffic on I-  
24 15 or to viewers elsewhere near the ground surface  
25 level from the mirrors, themselves. And to the

1 vision of people who might be within the range of  
2 the reflection of the mirrors. And with specific  
3 regard to that, whether there could be retinal  
4 damage to such viewers.

5 The second issue, I believe -- and again  
6 I'll have Mr. Jewell tell me if I've gotten this  
7 wrong when I'm finished -- is whether the mirrors  
8 in any of the configurations which could occur may  
9 have the capacity to inflict retinal damage on  
10 viewers who would be above the project, for  
11 instance from an airplane.

12 And I think Mr. Jewell was addressing  
13 that, as well. But I wasn't quite sure that the  
14 issue was quite clear in your mind as to why we  
15 care about that. And I'd like Mr. Jewell to go  
16 back and address the potential for retinal damage  
17 from this kind of light.

18 And the third issue, which I'm not sure  
19 has been addressed at all, but is one with which  
20 the staff has some concern, particularly as a  
21 cross-over for the visual issue, is the appearance  
22 of the -- or the prominence and appearance of the  
23 glare from the power tower, which is these towers,  
24 these 300- to 400-, actually almost 500-foot  
25 towers which will be the focus of the mirror

1 panels.

2 And which, themselves, have a certain  
3 radiant glow from the focusing of the mirrors.  
4 What the appearance of that would be, and whether  
5 it presents any health and safety issue. And how  
6 prominent it would be.

7 Those are the issues we're trying to  
8 address here. And I would like, perhaps Mr.  
9 Jewell, having said that have Mr. Jewell either  
10 correct what I've just said. And further,  
11 perhaps, address the issue of why we care at all  
12 about the possibility of retinal damage from this.

13 DR. JEWELL: Forgive me, I would never  
14 contradict counsel. I might say, for the benefit  
15 of the Commissioners, this applicant, like the  
16 applications that I read from other projects, are  
17 extremely concerned, I would gather, extremely  
18 concerned about the danger of retinal damage.  
19 That is damage to the eye, itself, physical damage  
20 to it, resulting from the redirection of the sun's  
21 rays.

22 Now, the liability that would be  
23 incurred from retinal damage is significant. And  
24 I can understand why all the applicants present  
25 that in terms of energy.

1                   However, my consultation and the input  
2                   from the staff is that the Commission is  
3                   concerned, as well, with the appearance of these  
4                   facilities across the state.

5                   So, let's go back again to the thermal  
6                   energy issue. Each mirror, according to  
7                   applicant's description, reflects one sun. So, as  
8                   I've said, we want to be assured that when the  
9                   heliostats are in so-called rest position, that is  
10                  turned upwards, and therefore reflecting, is that  
11                  they can never get to a position where they're  
12                  aligned.

13                  If they're, you know, sort of here or  
14                  there, and an observer in an airplane would see  
15                  one brightness and then another brightness, and  
16                  then a period of darkness, and that, at least in  
17                  my judgment, would be perfectly safe.

18                  It's the condition where a row of  
19                  heliostats were pointed up, and a passing plane is  
20                  passing through, the pilot might go through that  
21                  continuous line of light. We'd like to be sure  
22                  that that can't occur.

23                  In addition to that, there seems to be  
24                  the possibility that when the heliostats go to the  
25                  so-called rest position, that they could achieve

1 another focal point in the air. That is the focal  
2 point which was addressed as the power tower to  
3 generate steam, could somehow be drifted off over  
4 here. And we want to be assured that that solar  
5 intensity does not happen.

6 Those are the two perfectly  
7 straightforward issues which I would think  
8 applicant would want to address clearly.

9 In addition to that, I've been asked  
10 about my judgment concerned with the towers,  
11 themselves, as a structural object on the site.  
12 They're very big. And applicant has consistently  
13 said, well, they're no brighter than a 100-watt  
14 lamp.

15 Applicant has never bothered to say what  
16 100-watt lamp it is, whether it's one that gives  
17 750 lumens or one that will introduce as 1300  
18 lumens. But I'll stipulate to the same.

19 The thing that's misleading in  
20 applicant's documents is when he says it's  
21 equivalent to seeing a lamp. However, the  
22 enclosure for a 100-watt lamp is an A-19, which  
23 means it's 2-3/8 inches in diameter.

24 Now, what happens is it's the equivalent  
25 of a lot of those. The generator surface is 20

1 meters high. The width varies by the different  
2 side. So what someone sees is not a single 100-  
3 watt lamp somehow mysteriously hung up in the air,  
4 but a great field of 100-watt lamps.

5 Now I want to assure the Commissioners  
6 the effect is not cumulative. In other words,  
7 it's not as if you were seeing several hundred, or  
8 indeed perhaps several thousand, 100-watt lamps  
9 all together. What you're seeing is a field of  
10 light.

11 If this room had standard fluorescent  
12 fixtures that had lenses on it, the lenses are all  
13 equally bright over the whole surface. And so my  
14 concern is, and it's shared by staff, is that  
15 there could be the very bright, large, 20-meter  
16 high surfaces, even though they're only equivalent  
17 to a 100-watt lamp.

18 So I guess my final conclusion here is  
19 that these things will be bright, intrusive, and  
20 in effect, a nuisance. But they're probably the  
21 social good derived from this renewable energy  
22 will out-weigh that appearance. But I think that  
23 appearance should be borne in mind in this  
24 consideration.

25 MR. KESSLER: Just to clarify the stow

1 position that Mr. Jewell was referring to, as we  
2 understand the project, there will be more  
3 heliostats, mirrors, built than what can be used  
4 at midday.

5 And this is so that the project can  
6 generate more heat, more energy in the early and  
7 the latter part of the day, and rely less on  
8 natural gas. And also be more efficient.

9 But at midday we understand that a  
10 number of -- hundreds, if not thousands, I don't  
11 know the numbers; that wasn't provided to us --  
12 but will be parked in the stow position. Meaning  
13 they're, as Mr. Jewell said, pointing straight up.

14 So, if you can imagine the sun in the  
15 southern horizon pointing at that, and then giving  
16 at the same angle that reflection leaves that  
17 mirror surface and can come into contact with an  
18 object in the air.

19 So the concern we're talking about, as  
20 staff, is really that midday stow position, for  
21 the most part, that we see as having the greatest  
22 potential for affecting people in the air via the  
23 aircraft.

24 HEARING OFFICER KRAMER: So what is the  
25 traffic -- so the traffic is air traffic that

1           you're concerned about, not vehicular traffic on  
2           the highway?

3                       MR. RATLIFF: Well, again, we've mixed  
4           two different concerns. I mean we have a concern,  
5           I'd like to confirm actually with Mr. Jewell if I  
6           may.

7                       I mean, Mr. Jewell, you're saying that  
8           the appearance of the power towers, you're not  
9           suggesting that those are a health and safety  
10          hazard in and of themselves, is that correct?

11                      DR. JEWELL: No, I'm not.

12                      MR. RATLIFF: And to traffic or to the  
13          casual pedestrian or passerby, that would not be a  
14          safety hazard? You're saying merely that it's --

15                      DR. JEWELL: It's a nuisance.

16                      MR. RATLIFF: It's a nuisance, okay.

17          Thank you.

18                      HEARING OFFICER KRAMER: Does that  
19          conclude your testimony?

20                      MR. RATLIFF: Yes. I just wanted to say  
21          that there were two -- I think what you've heard  
22          is testimony on two different things.

23                      One is the appearance of the power  
24          tower. The other is the reflective glare that  
25          could be perceived from someone who was overhead

1 in an airplane and/or -- presumably in an  
2 airplane.

3 And that was the concern that I think  
4 Mr. Jewell was addressing first, before he  
5 addressed the power tower.

6 HEARING OFFICER KRAMER: Mr. Harris, did  
7 you wish to cross-examine or present your  
8 witnesses first?

9 MR. HARRIS: I think we'd like to go  
10 last with cross. I think, if the other folks have  
11 questions --

12 HEARING OFFICER KRAMER: Okay, so let me  
13 start then again with Mr. Suba.

14 MR. SUBA: I have no questions, thank  
15 you.

16 HEARING OFFICER KRAMER: Maybe it would  
17 be more efficient to ask if anybody, intervenors  
18 in the room, if you do have any questions?

19 Seeing none, any on the telephone wish  
20 to ask a question? Mr. Joseph, you might be in on  
21 this?

22 MR. JOSEPH: This is Marc Joseph.  
23 The description I heard from Mr. Ricks on the  
24 revised trans-1 sounds, as I was hoping it sounds  
25 fine. Obviously I don't have a copy of exhibit

1 302 in front of me. If someone at some point  
2 could email it to me.

3 But subject to actually reading the  
4 words, I think I have no questions. And we're  
5 perfectly agreeable to the revised condition.

6 HEARING OFFICER KRAMER: Okay, thank  
7 you. Any other intervenors on the phone have a  
8 question -- wish to cross-examine?

9 MS. CUNNINGHAM: No.

10 HEARING OFFICER KRAMER: Okay. Mr.  
11 Harris, then.

12 MR. HARRIS: Thank you, and I'll try to  
13 take traffic, traditional traffic, first. And  
14 then we'll do the light and the reflectivity and  
15 glare second.

16 Just a couple questions for the staff's  
17 witness.

18 CROSS-EXAMINATION

19 BY MR. HARRIS:

20 Q Essentially you found that there aren't  
21 any significant impacts associated with the  
22 operation of the facility with traffic, is that  
23 correct?

24 MR. RICKS: Correct.

25 MR. HARRIS: So really we're down to

1 just the construction impact, is that correct?

2 MR. RICKS: Yes.

3 MR. HARRIS: And that's just the Friday  
4 night impact, is that correct?

5 MR. RICKS: For the cumulative impact?  
6 Yes.

7 MR. HARRIS: Cumulative. And it's only,  
8 for the Friday night impact it's only a cumulative  
9 impact that you're finding, correct?

10 MR. RICKS: Correct.

11 MR. HARRIS: Okay. You've made changes,  
12 proposed changes to trans-1 and we'll look at  
13 those. With all the traffic now going south, is  
14 it possible that that significantly has mitigated  
15 the cumulative impact? Or are you still finding a  
16 significant cumulative impact?

17 MR. RICKS: We're still finding it  
18 significant. The revisions are -- well, there's  
19 another component to the revisions, because  
20 originally in the original assumptions in the AFC  
21 there are approximately 959 workers, I believe,  
22 proposed to work at the site. And the applicant  
23 proposed busing workers to the site in buses that  
24 would carry about 15 people per bus.

25 So the 959 workers were going to travel

1 in 243 vehicles. So there were a total of 243  
2 daily trips going to the site.

3 And now the revised assumptions, there  
4 was no busing component. There were some  
5 assumptions about workers carpooling together, but  
6 in effect, on Fridays it appears the applicant's  
7 proposing that approximately 1100 vehicles will be  
8 traveling on the roadway.

9 And not all the traffic is southbound on  
10 Friday afternoons. There's still -- there's 174,  
11 the assumption of 174 trips will be traveling  
12 northbound.

13 So the revised assumptions show that  
14 really only reduce the number of vehicles on  
15 northbound I-15 by 70. So 174 vehicles will still  
16 be traveling northbound on I-15, which is already  
17 at a very low level of service.

18 And like I said earlier, when combined  
19 with traffic from other proposed projects that we  
20 identified in the cumulative analysis of the staff  
21 assessment, we believe that the impact would still  
22 be significant. The cumulative impact.

23 MR. HARRIS: Okay, thank you. One your  
24 trans-1 you provided a new bullet that says,  
25 provide van or bus service to transport

1 construction workers residing north of the site  
2 from Las Vegas to the site and back.

3 Is that provision necessary for the  
4 traffic control plan, in your estimation?

5 MR. RICKS: I'm sorry?

6 MR. HARRIS: Is it necessary, that  
7 particular provision?

8 MR. RICKS: To reduce congestion on the  
9 roadway, yes.

10 MR. HARRIS: Okay. In terms of the  
11 traffic control plan, do you object to the idea of  
12 moving most of this language about vans and buses  
13 and incentives into the verification language?

14 MR. RICKS: I don't think so, no.

15 MR. HARRIS: Okay, and then really what  
16 I'm trying to avoid there is the need to file  
17 another amendment with the Commission by having  
18 some of that language in the actual condition  
19 language. As staff knows, the verification  
20 language can be amended.

21 I think what we're looking for is  
22 maximum flexibility to be able to make changes to  
23 that traffic control plan based upon the real  
24 world experience on the ground.

25 So, are you agreeable to moving some of

1           that language to the verification?

2                       MR. RICKS:  I think so.  Is there any --

3                       MR. RATLIFF:  Commissioners, we're, as  
4           you, I think, understand, by moving the  
5           requirements of the traffic control plan, the  
6           pieces that would be in the traffic control plan,  
7           from the condition of certification to the  
8           verification would not change the substantive  
9           condition, itself.  But would allow staff the  
10          flexibility to change it substantively without  
11          going back for an amendment, having the applicant  
12          go back for an amendment, to the full Commission.

13                      And the applicant, obviously, is very  
14          anxious about this because if they had to come  
15          back to the Commission for such an amendment, it  
16          would delay their project still more.

17                      And we are agreeable, quite amenable to  
18          having the requirement be within the verification  
19          rather than the condition, but we wanted to make  
20          sure you understand that we don't intend to not  
21          have that requirement.

22                      I mean we accept -- in this case I think  
23          the flexibility of the staff to vary anything due  
24          to some change in circumstances that we couldn't  
25          foresee now makes sense.

1                   But we do intend that to be part of the  
2 verification that would be enforceable by the  
3 Commission, just as if it were a condition of  
4 certification.

5                   MR. HARRIS: Thank you for that  
6 clarification, Mr. Ratliff.

7                   I want to go back to the Friday  
8 afternoon timeframe, because we're really down to  
9 just that, right? Friday afternoons on  
10 construction.

11                  MR. RICKS: Yes.

12                  MR. HARRIS: Does that take into account  
13 that there's a peak construction period for the  
14 project?

15                  MR. RICKS: Could you -- does it take  
16 into account how so?

17                  MR. HARRIS: Let me set up the question  
18 better for you, okay. Construction will start  
19 slow and eventually peak, and then drop off at the  
20 end, obviously, as they're doing the final  
21 activities.

22                  So there's a peak construction period,  
23 correct?

24                  MR. RICKS: Yeah, and that's what we  
25 analyze. I mean we base everything on the peak,

1 the peak value, so obviously there will be days  
2 where there are probably only a few vehicles  
3 traveling from the site on Friday afternoon.

4 MR. HARRIS: So how long is that peak  
5 construction period, in your understanding?

6 MR. RICKS: Don't recall. I believe it  
7 was six months? I can't remember.

8 MR. HARRIS: Would you accept, subject  
9 to check, three months?

10 MR. RICKS: Sure, subject to check,  
11 sure.

12 MR. HARRIS: All right. And so,  
13 obviously, during other than the peak time those  
14 numbers are going to fall off. Did you make any  
15 analysis outside the peak timeframe in terms of  
16 the impacts on the, the temporary impacts on I-15  
17 on Friday nights?

18 MR. RICKS: No. We only looked at the  
19 worst case scenario.

20 MR. HARRIS: Only the peak.

21 I think that's all my questions for Mr.  
22 Ricks. Thank you.

23 PRESIDING MEMBER BYRON: Commissioner,  
24 perhaps we could make it a lot easier. We're  
25 trying to create all these green jobs in

1 California. And since we've established most of  
2 these folks do come from the California side,  
3 maybe we can just put up a right turn only on  
4 Friday afternoons. Keep that money in California  
5 instead of seeing it going to Las Vegas.

6 (Laughter.)

7 PRESIDING MEMBER BYRON: Of course, I'm  
8 just being facetious for all of you in the  
9 audience here. Are we moving on?

10 MR. HARRIS: I had one more question for  
11 Mr. Jewell. It's Dr. Jewell, I'm sorry? Doctor.  
12 You used some words that made my lawyer's ears  
13 perk up, and thank you for sometimes listening to  
14 your lawyers, sometimes my clients listen to me,  
15 too, but not always.

16 You used the term, I think, bright,  
17 intrusive and a nuisance to describe the  
18 reflection from the towers. What distance did you  
19 have in mind when you made that statement?

20 DR. JEWELL: Well, it's difficult to  
21 quantify, as I said. There's certainly no  
22 standard for this. You know, we live with all  
23 sorts of things. Driving past an automobile sales  
24 lot exposes one to windshield after windshield,  
25 which is reflecting solar brightness to an

1 oncoming driver. That's a nuisance, a  
2 distraction, but you drive right on past it and  
3 you live safely ever after.

4 The same thing. Photographs I've seen  
5 of these towers, they're rather elegant  
6 structures. They're nice looking structures. But  
7 what they will be is a 20-meter high, large, flat  
8 surface. The whole surface of which will be  
9 cumulatively, based on your own provision, as  
10 bright as a 100-watt lamp.

11 Now, that's not excessive, but it's  
12 still a big bright object in the sky, you know.  
13 It won't provide thermal damage. It won't do  
14 anything but just be there and be, as I say,  
15 intrusive.

16 How does one -- you know, my profession  
17 can't quantify that really.

18 MR. HARRIS: Thank you very much, that's  
19 very helpful.

20 I have no more questions for the  
21 witnesses.

22 HEARING OFFICER KRAMER: Okay, I have a  
23 few.

24 MR. RATLIFF: Mr. Kramer, would I have  
25 an opportunity for redirect before --

1 HEARING OFFICER KRAMER: Yes, but I  
2 might give you more --

3 MR. RATLIFF: Okay.

4 HEARING OFFICER KRAMER: I might create  
5 more opportunities for more questions.

6 (Laughter.)

7 HEARING OFFICER KRAMER: Mr. Ricks, does  
8 your traffic analysis assume that there would be  
9 no Sunday construction?

10 MR. RICKS: We didn't look at Sundays.

11 HEARING OFFICER KRAMER: Okay, and  
12 that's because you were --

13 MR. RICKS: You know, I'd have to go  
14 back and look at my notes. I believe -- I can't  
15 remember if construction was proposed to be seven  
16 days a week. I thought it was six days a week.

17 HEARING OFFICER KRAMER: Okay. And what  
18 triggered that question was looking at some of the  
19 other changes the applicant proposed. It may have  
20 been inadvertent and we'll get to it later, but a  
21 restriction on Sunday construction was removed by  
22 the effect of a proposed amendment.

23 What's the basis for the revised  
24 construction traffic assumptions? Is this  
25 something you're going to get to, Mr. Harris, with

1 your witness? If so, I can wait for that.

2 But just intuitively it's not obvious to  
3 me how the workers are all going to come from much  
4 further away, rather than the Las Vegas area.

5 So I wanted to get into that at some  
6 point. Is that something your witnesses will be  
7 discussing?

8 MR. HARRIS: Our witnesses can answer  
9 those questions.

10 HEARING OFFICER KRAMER: Okay, but let  
11 me give Mr. Ricks a chance to comment on that  
12 issue, as well.

13 MR. RICKS: On why the construction  
14 assumptions have changed?

15 HEARING OFFICER KRAMER: Yeah, and why  
16 you believe that they are reasonable.

17 MR. RICKS: We received information from  
18 CURE, I forget what the acronym stands for  
19 exactly. Mr. Joseph --

20 HEARING OFFICER KRAMER: We all know  
21 that.

22 MR. RICKS: -- is on the phone. That  
23 their contracts require that since this is a  
24 project that occurs in California, most of the  
25 workforce must be hired from California, or must

1 be hired from California first.

2 And in San Bernardino County, alone,  
3 there are over 70,000 unemployed construction  
4 workers. So, it seems reasonable that they would  
5 pull from this pool of construction workers first.

6 HEARING OFFICER KRAMER: And where would  
7 the nearest residential area be in California that  
8 these people might be --

9 MR. RICKS: And, also, in their  
10 assumptions they indicated that workers would  
11 likely stay -- reside in Primm or Las Vegas, or  
12 points in between, during the week. And commute  
13 to the site locally from that area.

14 HEARING OFFICER KRAMER: Okay, so if  
15 they're not staying over for Saturday construction  
16 then it's reasonable to assume that they would be  
17 headed back towards California.

18 MR. RICKS: Correct.

19 HEARING OFFICER KRAMER: Okay. Let's  
20 see, Mr. Jewell indicated that about 20 meters of  
21 the power tower is what gets heated by the  
22 heliostats, was one of my questions.

23 A question perhaps the applicant can  
24 answer best is to what extent can the mirrors be  
25 pointed downward so they're not reflecting any

1 sun.

2 And, Mr. Jewell or Dr. Jewell, I don't  
3 think I've wrapped my head around this 100-watt  
4 analogy quite yet. Are you saying that the power  
5 tower, the heated part, is going to appear to be  
6 basically a bunch of 100-watt -- as many 100-watt  
7 bulbs as could fill that surface area? Or is it  
8 the light of 100-watt bulb? Do you understand my  
9 question?

10 DR. JEWELL: I do, indeed. As I said,  
11 applicant's phrasing of his comparison is, I  
12 think, somewhat misleading. His comparison is the  
13 tower is not brighter than a 100-watt lamp. And  
14 will stipulate to that.

15 The point I think the Commissioners  
16 should be clear about is that the 100-watt lamp,  
17 let me just get the exact data -- the 100-watt  
18 lamp is nearly six centimeters in diameter, and  
19 the A-19 lamp is 11.25 centimeters tall.

20 So you have, in effect, you have all  
21 these little gadgets lined up side by side of 20  
22 meters high. I'm just saying that there's a  
23 panel, the whole surface of which is no brighter  
24 than, but is as bright as a 100-watt lamp. It's  
25 not the equivalent of one little bitty 100-watt

1 lamp hung up miraculously in the sky.

2 And so it's a panel. The whole panel of  
3 which is that brightness.

4 HEARING OFFICER KRAMER: So, are they  
5 then comparing the surface area and saying it puts  
6 out about the same amount of light as the  
7 equivalent surface of a 100-watt bulb would?

8 DR. JEWELL: Yes, that's what they're  
9 saying. And I would agree to that. Their  
10 comparison seems reasonable. But I want to make  
11 the point that the Commissioners should not draw  
12 the conclusion that it's equivalent to one 100-  
13 watt lamp. It's equivalent, it's a flat surface  
14 equivalent to lots of 100-watt lamps, the whole  
15 surface of which, at any given point, is equal to  
16 one 100-watt lamp.

17 Again, I would offer the comparison to  
18 fluorescent fixtures in your offices where the  
19 brightness of the surface is the same over the  
20 whole of it.

21 HEARING OFFICER KRAMER: Okay, thank  
22 you. And then I'll just note that before we  
23 finish we should decide who is going -- and if  
24 somebody is going to submit a revised trans-1 to  
25 deal with this moving of some of the requirements

1 to the verification.

2 Mr. Harris, I gather no other parties  
3 had expressed any -- except for Mr. Joseph. Did  
4 you want to go last with your witness, in case Mr.  
5 Joseph has one, or just put yours on now?

6 MR. RATLIFF: Again, Mr. Kramer, --

7 HEARING OFFICER KRAMER: Oh, I'm sorry,  
8 Mr. Ratliff, I forgot --

9 MR. RATLIFF: Yes.

10 HEARING OFFICER KRAMER: -- that you  
11 wanted to ask some redirect.

12 MR. RATLIFF: First I would offer that  
13 staff will provide a revised condition,  
14 transportation-1 condition reflecting the  
15 discussion that we had here today. I think we  
16 have the language for that already.

17 HEARING OFFICER KRAMER: Okay, so you  
18 can do that before our January hearing, so we can  
19 discuss any issues then?

20 MR. RATLIFF: Yes.

21 HEARING OFFICER KRAMER: Okay.

22 MR. RATLIFF: I think that leaves  
23 unclear still the trans-4 condition, which has to  
24 be rewritten. I think Mr. Jewell explained that  
25 it was originally written with a misunderstanding

1 by staff what -- by Mr. Kessler and Mr. Ricks, of  
2 what Mr. Jewell had told them when the condition  
3 was written. And will need to be rewritten to  
4 better reflect his concern.

5 And that is one of the things that the  
6 applicant has requested in their comments on the  
7 staff's conditions of certification. So, we'll  
8 have to rewrite that condition. And we will. And  
9 trans-3, as well, I'm told.

10 HEARING OFFICER KRAMER: I think we'll  
11 have some more time, after all the testimony, to  
12 discuss the conditions.

13 MR. RATLIFF: And I wanted to ask my --

14 HEARING OFFICER KRAMER: -- in micro-  
15 detail.

16 MR. RATLIFF: -- I wanted to do a very  
17 brief redirect.

18 HEARING OFFICER KRAMER: Go ahead.

19 MR. RATLIFF: To each of my witnesses.  
20 Well, a question to each of my witnesses.

21 REDIRECT EXAMINATION

22 BY MR. RATLIFF:

23 Q First, to Mr. Kessler, how many power  
24 towers are there on the project site? I put you  
25 on the spot with this question, I'm sorry.

1                   MR. KESSLER: I was thinking heliostats.  
2                   There's five to Ivanpah 3, and one each to Ivanpah  
3                   1 and 2, for a total of seven.

4                   MR. RATLIFF: Okay.

5                   MR. KESSLER: I'm glad you didn't ask me  
6                   heliostats.

7                   (Laughter.)

8                   MR. RATLIFF: And to Mr. Jewell, when  
9                   you say -- I just want to make sure that everyone  
10                  understood -- when you say that the surface of the  
11                  heating element on the power tower is 20 -- I  
12                  think you said 20 meters high --

13                  DR. JEWELL: Twenty meters tall,  
14                  according to the applicant's data.

15                  MR. RATLIFF: But you didn't mean off  
16                  the ground, you meant in its overall dimensions?

17                  DR. JEWELL: Right. In other words it's  
18                  a rectangle, the width of it varies on the sides.  
19                  But all of them are 20 meters high.

20                  MR. RATLIFF: Right. And these are far  
21                  above the ground?

22                  DR. JEWELL: Yeah, they're way up there.  
23                  They're at --

24                  MR. RATLIFF: Right. Okay.

25                  DR. JEWELL: -- at the top, in effect.

1                   MR. RATLIFF: And I'm just asking for  
2 clarification, I don't know what your answer's  
3 going to be, but you said it was like you would  
4 cover the whole thing with a whole array of 100-  
5 watt bulbs, it would be the same if it was just  
6 one giant 100-watt light bulb?

7                   DR. JEWELL: Well, I --

8                   MR. RATLIFF: In terms of luminance.

9                   DR. JEWELL: -- I'm not quite sure,  
10 counselor, how you make that comparison so  
11 readily. But according to applicant's data, as  
12 far as I can determine, no point on that surface  
13 that's been heated in order to generate the steam  
14 will be brighter than, but it will all be as  
15 bright as a 100-watt lamp. Which I presume  
16 they've chosen the brightest one, which is 1750  
17 lumens.

18                   MR. RATLIFF: Okay, thank you.

19                   And to Mr. Ricks, when you talked about  
20 the diminished level of service on I-15 on  
21 Fridays, what is the level of service typically,  
22 or what can the level of service be on Friday  
23 afternoons as one is eastbound from Nipton Road  
24 towards Las Vegas?

25                   MR. RICKS: It's one, or worse, which is

1 -- there's a letter grade, there's a letter  
2 ranking system for level of service, A being the  
3 best, meaning free flow traffic; vehicles can move  
4 at will at whatever speed they like.

5 And F is the worst, meaning very very  
6 limited flow or gridlock conditions.

7 And to explain it simply it's just a  
8 measure of the capacity of vehicles that the  
9 roadway can handle to the volume of vehicles on  
10 the road.

11 And it varies, there's a range. But the  
12 capacity of the road, of I-15, is 36,000 vehicles.  
13 And there are times on Friday when there are over  
14 40,000 vehicles on the roadway.

15 MR. RATLIFF: Did you say 36,000?

16 MR. RICKS: Yes.

17 MR. RATLIFF: And what is the -- if you  
18 can tell me, what is the speed associated with  
19 levels of service of D, E or F?

20 MR. RICKS: I don't have that in my  
21 head. Zero to -- I don't know. I don't believe  
22 we have the speeds.

23 MR. RATLIFF: But is that typical of  
24 stop-and-go traffic?

25 MR. RICKS: Yes.

1 MR. RATLIFF: That finishes my redirect.

2 PRESIDING MEMBER BYRON: I'd like to  
3 understand the significance of trans-4, the  
4 staff's concerns. A couple of quick questions for  
5 the applicant. Please make your answers brief.  
6 We have many other issues to go through.

7 Help me with the heliostats. Are these  
8 flat panels or are they curved?

9 MR. HARRIS: These questions are  
10 probably better for my witness, but they're  
11 essentially flat with a slight curvature because  
12 of the way they're adhered.

13 PRESIDING MEMBER BYRON: So they do have  
14 a focal point associated with reflection of the  
15 sunlight?

16 MR. HARRIS: Yes.

17 PRESIDING MEMBER BYRON: And is each  
18 focal point different?

19 MR. HARRIS: Can I have my expert  
20 respond?

21 MR. GILON: Not each, but there are  
22 about -- oh, I'm Yoel Gilon, Y-o-e-l G-i-l-o-n.

23 PRESIDING MEMBER BYRON: Mr. Gilon, are  
24 you here from Israel?

25 MR. GILON: Yes.

1                   PRESIDING MEMBER BYRON: I'm glad we  
2                   made your trip worthwhile.

3                   So they have a number of different focal  
4                   points?

5                   MR. GILON: Right. There are about four  
6                   focal point, the shortest one is 400 meter. And  
7                   the larger one is 1 centimeter. So it's a focal  
8                   point but it's very far away, such that the  
9                   difference -- it's almost flat. It's just not  
10                  totally flat, but it's almost flat, with the focal  
11                  point between 400 in one -- another one at 700.  
12                  It's about three or four.

13                  PRESIDING MEMBER BYRON: So when the  
14                  heliostats are pointed -- I should say when  
15                  they're horizontal and the light is reflected  
16                  upward, the focal points will essentially be  
17                  between those different lengths that you just  
18                  mentioned?

19                  MR. GILON: Yes, yes, it is.

20                  PRESIDING MEMBER BYRON: So, what's the  
21                  likelihood of any coalescent of focal points?

22                  MR. GILON: Can you repeat the question?

23                  PRESIDING MEMBER BYRON: What is the  
24                  likelihood that the focal points from various  
25                  heliostats would coalesce to the same location?

1                   MR. GILON: So this is part of what we  
2 will make sure won't happen. We are proposing  
3 even to present a heliostat position plan where we  
4 take care that such condition won't happen.

5                   There might be two -- the only real  
6 concern we have is when some of them will be  
7 damaged and not in function. And then the  
8 calculation is that if two of them will point to  
9 the same point at 1000 meter away, which is more  
10 or less the average of the 1300 feet airplane  
11 passing on the top, it would be once in a million  
12 year. So I think this criteria of this  
13 probability is very low.

14                   All other possibilities when we direct  
15 them, and we will make sure that the -- it's a  
16 very sophisticated programming to direct those  
17 heliostats to the tower such that if it will be in  
18 another point it cannot be by coincidence.

19                   So we will make sure that it won't  
20 happen intentionally and not unintentionally it  
21 will never happen.

22                   PRESIDING MEMBER BYRON: Okay. One last  
23 question. As I understand it, you have similar  
24 designs installed elsewhere in the world, correct?

25                   MR. GILON: Well, as of now we have our

1 pilot plant in Israel, which is there it's 1600  
2 heliostats. There the focal point is between 250  
3 meter up to 400 meter. It is a pilot, so it's a  
4 smaller size. But, you know, maybe --

5 PRESIDING MEMBER BYRON: And my question  
6 is --

7 MR. GILON: Okay.

8 PRESIDING MEMBER BYRON: -- do you have  
9 -- have you had any reported incidences of  
10 aviation from pilots or any aviation issues  
11 associated with this plant?

12 MR. GILON: Not at all, not at all.  
13 And, in fact, there was some picture taken before  
14 just to know the impact of it, but not at all.

15 PRESIDING MEMBER BYRON: Okay.

16 MR. GILON: And it's working one and a  
17 half year.

18 PRESIDING MEMBER BYRON: Thank you.

19 ASSOCIATE MEMBER BOYD: Quick question.  
20 How close is the closest power tower to the  
21 interstate? Anybody.

22 MR. GILON: The tower, it's about a mile  
23 away.

24 ASSOCIATE MEMBER BOYD: The closest one?

25 MR. GILON: The closest one, in the

1 closest place is one mile away. But if I may say,  
2 you start observing it five miles away. So it  
3 won't be a surprise suddenly one mile away.

4 ASSOCIATE MEMBER BOYD: Just sort of by  
5 notice, I've been to Spain and seen the power  
6 towers. You see them a long ways away, and you  
7 can be right on top of them and still looking at  
8 them. They don't bother your eyes, but it is  
9 brilliant white light, there's no question about  
10 that. I just worry about the gawkers on the road.  
11 But they take their chances driving to Las Vegas  
12 anyway.

13 (Laughter.)

14 ASSOCIATE MEMBER BOYD: No other  
15 questions.

16 HEARING OFFICER KRAMER: Mr. Harris, I  
17 think -- Mr. Joseph, did you have any witnesses?

18 MR. JOSEPH: No.

19 HEARING OFFICER KRAMER: Mr. Harris, I  
20 don't know if that completed your testimony. If  
21 not, please go ahead.

22 MR. HARRIS: We're done with the staff's  
23 panel, then, I assume. So let's go ahead and go  
24 through, and we'll go through in the same order as  
25 Mr. Ratliff, and start with traffic and

1 transportation. I want the witnesses to introduce  
2 themselves, again, if they would. And then I'll  
3 start with Loren.

4 DIRECT EXAMINATION

5 BY MR. HARRIS:

6 Q So please state your name for the  
7 record, if you would, again.

8 MR. BLOOMBERG: Loren Bloomberg,  
9 L-o-r-e-n B-l-o-o-m-b-e-r-g.

10 MR. HARRIS: And what subject matter  
11 testimony are you here to sponsor today, Loren?

12 MR. BLOOMBERG: Traffic and  
13 transportation.

14 MR. HARRIS: And were the documents that  
15 you're sponsoring as part of your testimony  
16 identified in your prefiled testimony?

17 MR. BLOOMBERG: Yes.

18 MR. HARRIS: And those are in section 1C  
19 of the applicant's prefiled testimony, exhibit 1,  
20 exhibit 2, exhibit 3, exhibit 57, exhibit 4,  
21 exhibit 5, exhibit 32, exhibit 34 and exhibit 37.

22 Do you have any changes or corrections  
23 or clarifications to your testimony at this point?

24 MR. BLOOMBERG: No.

25 MR. HARRIS: And were the documents

1 prepared either by you or at your direction?

2 MR. BLOOMBERG: Yes.

3 MR. HARRIS: Are the facts stated  
4 therein true to the best of your knowledge?

5 MR. BLOOMBERG: Yes.

6 MR. HARRIS: And the opinions stated  
7 therein your own?

8 MR. BLOOMBERG: Yes.

9 MR. HARRIS: And do you adopt this as  
10 your testimony for the proceeding?

11 MR. BLOOMBERG: Yes.

12 MR. HARRIS: Can you quickly summarize  
13 your qualifications for the Commissioners, please.

14 MR. BLOOMBERG: Yes. Bachelors in  
15 system engineering, University of Virginia. Two  
16 masters from UC Berkeley in civil engineering and  
17 transportation.

18 Nineteen years of experience. I have a  
19 professional engineer in traffic from the State of  
20 California. My official title is Principal  
21 Technologist with CH2MHILL -- resource for traffic  
22 engineering.

23 I've performed hundreds of traffic  
24 analyses in California and elsewhere. I've  
25 written guidelines for traffic impact analysis in

1 Oregon.

2 I'm working on similar guidelines in  
3 Hawaii right now. And I'm also a member of the  
4 Highway Capacity and Quality Service Committee,  
5 which is the group of 30 professionals that write  
6 the highway capacity manual, which is the key  
7 resource for traffic engineering in the U.S.

8 MR. HARRIS: Can you describe your  
9 general approach, your analysis. Give us a  
10 summary of the analytical methodologies and your  
11 assumptions that were asked about earlier, if you  
12 would.

13 MR. BLOOMBERG: Well, basically we  
14 started with estimated number of workers and  
15 trucks. And both the worker and truck patterns  
16 vary by time of day.

17 And then we looked at the impacts on all  
18 the roads, the local roads, the intersections, the  
19 interchanges and the freeway. And we looked at  
20 the current and the new traffic volumes with the  
21 proposed project. And then capacity and level of  
22 service.

23 The biggest operation issues, as was  
24 mentioned before, is on mainline I-15 for the  
25 recreational traffic to and from Las Vegas. And

1 in this case, particularly the northbound traffic  
2 in the Friday pm peak.

3 MR. HARRIS: So the AFC was filed in  
4 2007; things have obviously changed. Can you  
5 summarize, you know, what's changed and how it's  
6 affected your analysis as you've set forth in your  
7 prefiled testimony.

8 MR. BLOOMBERG: Yes. We revised the  
9 analysis basically reviewing the assumptions that  
10 were put forth in 2007 and the new information we  
11 have today.

12 The key part was the expected truck  
13 patterns, and more importantly the worker patterns  
14 that were provided for us.

15 The original analysis assumed that most  
16 of the workers would come from Las Vegas. As was  
17 mentioned earlier, we looked at the labor markets  
18 and those have changed substantially with the high  
19 unemployment.

20 And particularly that BrightSource and  
21 Bechtel have indicated to us that a labor  
22 agreement is going to be signed, and likely this  
23 week is my understanding. With that labor  
24 agreement, which is 50 southern California labor  
25 unions, we assumed that most of the labor force

1 would then come from southern California instead  
2 of Las Vegas as was assumed previously.

3 MR. HARRIS: So with the new information  
4 about the economic climate and the pending labor  
5 agreement, how was your analysis affected?

6 MR. BLOOMBERG: Well, basically we  
7 changed the worker mix. And the worker mix was  
8 the big driver for the transportation patterns.

9 And in particular we expected most of  
10 the workers would come from the Inland Empire  
11 areas of San Bernardino and Riverside.

12 As far as the workers, themselves, we  
13 assumed variable commutes with probably the  
14 strongest pattern was that most of the workers  
15 would come to the site, come to the area on either  
16 Sunday night or Monday morning; stay during the  
17 week; and then return back to southern California  
18 on Friday evenings.

19 Now, we didn't assume everyone would use  
20 those patterns. Some workers would stay in Las  
21 Vegas. And we also assumed a certain percentage  
22 of workers from Las Vegas.

23 But basically during the week between  
24 Monday and Friday evenings, most workers would be  
25 coming from the north. But on Monday mornings, on

1 Friday nights, most workers would be coming to and  
2 from the south towards southern California.

3 The result was that we have total  
4 traffic on I-15 because we would have -- we have  
5 somewhat less carpooling than we would because of  
6 those worker patterns. But we would have less  
7 traffic in that critical peak direction, that area  
8 of northbound I-15 from the site toward Las Vegas  
9 on Friday evenings.

10 MR. HARRIS: Thank you. So, can you  
11 just briefly summarize your major findings from  
12 your analysis.

13 MR. BLOOMBERG: Yeah, a couple things.  
14 First of all, we found that buses would no longer  
15 be necessary because the main focus of the  
16 original analysis that we had, the original  
17 mitigation was that Friday evening direction.  
18 Because most of the traffic is to and from -- is  
19 to southern California on Friday evening. We  
20 didn't see the need for that mitigation.

21 So, basically we supported the revision  
22 to trans-1, striking the bullet about the bus  
23 requirement. Just one detail on that. We had  
24 less traffic now, traffic as far as number of  
25 vehicles, without the buses than we did before

1 with the buses. So we had about 62 less -- we had  
2 62 less trips now because of on northbound I-15,  
3 that critical direction, even without the buses  
4 because most of the traffic is going south.

5 So, based on those 2009 current  
6 assumptions on workers, more returned to southern  
7 California, we recommended striking that provision  
8 for the bus requirement.

9 We still included the provisions in the  
10 traffic control plan for the worker departure plan  
11 on Fridays. But with those provisions, we found  
12 it would be less than significant impact on  
13 traffic on Friday afternoons and throughout the  
14 project.

15 MR. HARRIS: So you found with the  
16 implementation of those mitigation measures, that  
17 even the potential cumulative impact has been  
18 mitigated to less than significant?

19 MR. BLOOMBERG: That's correct.

20 MR. HARRIS: Okay, thank you. I'd like  
21 to move now to the glare and reflectivity issue.  
22 And move to Mr. Gilon, if we could. So, you've  
23 already been sworn and you've already spelled your  
24 name. So I'm going to skip most of the  
25 preliminary, other than to ask you, do you adopt

1 the documents as your testimony today?

2 MR. GILON: Yes, I do.

3 MR. HARRIS: Can you summarize your  
4 qualifications for the Commission, please.

5 MR. GILON: I graduate from -- in  
6 mathematics and physics from the University of  
7 Jerusalem 30 years ago. And in mathematics and  
8 physics, I say, first degree physics.

9 But even before -- and also I have a  
10 degree in fine arts, in the Betsadl (phonetic)  
11 Academy of Jerusalem after I finish my scientific,  
12 if it matters for visual.

13 Before I even finished I was already  
14 working for LUZ, the first company who made the  
15 trough in the beginning of the '80s. As a student  
16 I was doing rate tracing program at the time there  
17 was, you work with main computer. I'm mentioning  
18 it because all related to -- I'm not an expert in  
19 the side of safety and injury of the eyes, but on  
20 the size of optics and solar energy, I have this  
21 experience of 30 years.

22 Then in '85 I started working at the  
23 first LUZ. I was responsible to develop and  
24 optimize the trough, the LS-2, the second  
25 generation trough collector, which is still today

1 considered the best. Many are all copying them  
2 and finally they get back to the same that we did  
3 at that time.

4 Also responsible for the performance  
5 model, which was very important for evaluating the  
6 size, the total project. One of the key issue,  
7 which is my expertise, is to know everything from  
8 sun up to electricity, and even the financial  
9 value of it.

10 So it's include weather, and, of course,  
11 the optics related to the solar and the devices,  
12 reflector and receivers.

13 I was responsible for the development of  
14 the fourth generation in '91 of the trough system.  
15 But at the time, I'm mentioning it because it's  
16 relevant to the BrightSource, because we started  
17 with 15 megawatt project and 30 megawatt; and the  
18 last two project was 80 megawatt. The next one  
19 was supposed to be 200 megawatt.

20 And then, at least on my side, I was  
21 considering the tower because it was, at the time,  
22 considered to be the most efficient means of  
23 making electricity from solar.

24 But probably needed to go gradually at  
25 that time. And just to mention, in '85 when I was

1 starting -- I was coming a lot to those SEGS in  
2 California, I also recall, I can speak as a  
3 witness of seeing Solar One in operation,  
4 including the brightness of the tower out there.

5 In '91 we went bankrupt. And then I was  
6 still a consultant in solar, but doing other  
7 things. In 2006 I joined the Arnold Goldman is  
8 the initiate of the first LUZ and the current  
9 BrightSource. And I joined him as a solar expert.  
10 But more specifically on the solar field, the  
11 heliostat, the tower. And I'm mentioning it  
12 because that's what I'm familiar with.

13 MR. HARRIS: So in terms of the  
14 demonstration project that was mentioned earlier,  
15 are you familiar with that demonstration project,  
16 and been involved with that for BrightSource?

17 MR. GILON: Right. That's another point  
18 that we started 2006, but right away we building,  
19 in one year we built a demonstration project of, I  
20 mentioned before, 1600 heliostat and a tower of  
21 about 70 meter, 80 meter total.

22 And one important point is that the  
23 flux, the brightness of this receiver, which is  
24 working from last June, so it's one year and a  
25 half, the brightness of this receiver is the same

1 as will be for the future receiver we will have in  
2 Ivanpah.

3 But let me explain. Ivanpah will have a  
4 receiver of, you know, you all mentioned -- I'm  
5 happy you mentioned you're using meters. I  
6 learned for this to speak feet, just because of  
7 you, now if I can stay saying meters, so it's 20  
8 meter high on 16.5 meter widths, if you like; 70  
9 feet on 55 feet.

10 As for the pilot, the pilot, of course,  
11 is just for demonstration purposes, so it consists  
12 of two pieces. One of 17 feet by 17 feet, that's  
13 the steam generation part. And one super heater  
14 of 13 feet by 13 feet.

15 But the flux, and maybe the simplest way  
16 is flux I measure how many sun we can put. On the  
17 steam generator we can put as much as 600 sun,  
18 which is also the limit that we will have in  
19 Ivanpah.

20 I prefer not to say the exact number on  
21 the super heater, because that depend on what the  
22 boiler supply are dictating us.

23 But this is the top-est level, which  
24 normally we don't achieve in both in Ivanpah. It  
25 could be about 400, maybe 500 sun. So this same

1 level of flux forming on that will be the same.

2 Now, it's true that it's not the same.

3 The size will be much bigger, but it depends on  
4 what distance.

5 MR. HARRIS: Let's kind of break it down  
6 a little bit. And you've been talking about glare  
7 and reflectivity. And in terms of reflectivity,  
8 the potential source of reflectivity is obviously  
9 the mirror. And the concern is interstate 15.

10 There's been a lot of discussion about  
11 the heliostat positioning plan. But before we  
12 talk about that plan, can you talk about how the  
13 heliostats operate and talk about things like stow  
14 position and safe position and the algorithm and  
15 all those other good things, to kind of give  
16 people an idea of how the heliostats actually  
17 operate before we talk about the plan?

18 MR. GILON: Okay, I'll do so, but if you  
19 allow me just to say, because we're talking about  
20 two different things. We're speaking on the  
21 reflectance from the mirror.

22 I suggest that I will try to explain  
23 some time on this part, because first of all, I  
24 think that's very simple. And so we're speaking,  
25 and therefore I think all of us can understand it.

1                   So we have two sources in question here.  
2           One is the reflection of the suns from the  
3           reflector surface, from the mirror, from the  
4           heliostat. The heliostat is just a mirror that is  
5           built in such a way that we can direct the mirror  
6           in all directions. That's why it's a two-  
7           dimension concentrating device.

8                   The concentration is coming from all the  
9           heliostat all together. We are speaking about the  
10          tower, In Ivanpah it will be at 459 feet high  
11          tower with -- and 55,000 heliostat all around  
12          them. All directed to that tower.

13                   But I just want to repeat again, the two  
14          sources are the mirror, which reflecting the light  
15          just from the sun. So the source of energy in  
16          this case is the sun and that's what we're looking  
17          for.

18                   And the second is the glare from the  
19          tower, itself, up there. And there I'd like to  
20          mention to all of us that it's -- even before I  
21          heard we were speaking about efficiency in such  
22          term like, for example, high temperature and so  
23          on. This is most sophisticated to understand.

24                   In light, we are all familiar with  
25          light. We live with it on a day-by-day. In the

1 first place the sun. And that's why one of the  
2 things that make it so simple for us is that we  
3 know how to live with the sun around us. And the  
4 sun is much much brighter than anything that we  
5 are speaking about in those plates.

6 And the second is the mirror. And it's  
7 true also about the mirror. We know, and we have  
8 experience, in traffic and other places, of  
9 reflecting surface. It can be a lake. I want to  
10 refer to a lake. Our field will not be more than  
11 the reflectance of a lake, for example.

12 But also we have piece of glass or  
13 mirror somewhere and somehow it will reflect it to  
14 us, that's where it will be.

15 Okay, now I will tell about how a  
16 project is made. There is the tower in the center  
17 and the heliostat all around. And our goal is to  
18 collect all those surface area. I'll take this,  
19 if this is the tower, all the heliostat are  
20 pointing up to the receiver on top of the tower.

21 And our goal, unlike many other things,  
22 our goal is to bring all this surface to reflect  
23 the light on the tower.

24 If you like, in a perfect world we would  
25 put on top of the tower a kind of black hole that

1 will absorb everything; then we won't see  
2 anything. The reason why we see something is  
3 because it's when we are wrong -- no, I'm not  
4 using the right word, but unfortunately, there is  
5 not such a single 100 percent absorbtivity.

6 And for example, in all our time we are  
7 using 95 percent absorbtivity. And as I am  
8 telling you, I'm, for example, responsible for  
9 development. We are now developing a coating that  
10 will have 97 percent absorbtivity so that it will  
11 go down 3 -- so 3 percent will go 60 percent --  
12 I'm sorry, 60 percent down.

13 But I will refer to the Ivanpah. The  
14 Ivanpah is assuming it's 95 percent. So 5 percent  
15 is going back.

16 Now for the mirror. The mirror or the  
17 heliostat will be directed as much as possible  
18 there. If there is a mirror that is directed to  
19 the I-15, something is wrong. And, of course,  
20 there are wrong mirror, and we will refer to it.

21 But in normal operation we need to  
22 direct them to this receiver or other places. And  
23 I will tell what are the other places. But even  
24 before I would say, so we have committed that we  
25 will present a heliostat positioning plan which

1 will be submitted 90 days before we start  
2 operation.

3 And the reason it's important to say,  
4 because some of the things I'm telling you today  
5 we keep learning. And we probably -- we might  
6 make different kind of algorithm of how we operate  
7 and so on.

8 But let us all remember, our goal is to  
9 bring all the energy up there. And all the  
10 heliostats, just as an example, are pointing up --  
11 they are all individually controlled. They can  
12 calculate where the sun is. And they get in all  
13 the what point to direct itself. And each  
14 heliostat get an individual point of reference  
15 because we want -- this is for purpose of making  
16 the most optimal way to get all the energy there.

17 As I mentioned before, we have even  
18 restriction, or we have limits of how much sun we  
19 can put on these receiver. So all of them need to  
20 be very well directed there.

21 And it cannot be by coincidence any  
22 other places. Now, what are the other places that  
23 those heliostats can be? So, since I mention it,  
24 in the end we want everything to be in there.

25 We have also standby position, which is

1 before you bring the -- not the heliostat, but you  
2 bring the reflection of the heliostat, of the sun,  
3 to a certain point out of the receivers such that  
4 we know for sure the way it will go through.

5 All of that, by the way, a lot of it we  
6 learned from Solar One. That's where they were  
7 experiencing between 1980 and '85. One of the --

8 MR. HARRIS: Let me suggest, why don't  
9 you walk us through a cycle, if you will, from  
10 morning, from the stow position all the way --

11 MR. GILON: Right.

12 MR. HARRIS: -- through the day. And  
13 just kind of let them know how the heliostat  
14 tracks. And then we can talk about where it --

15 MR. GILON: Right.

16 MR. HARRIS: -- up, so.

17 MR. GILON: I'll do so. So, during  
18 night, first of all, it's not -- I just want to  
19 correct the rest position is not when it's flat,  
20 it's the safe position. Safe position is when  
21 it's very high wind. Those heliostats can stand  
22 up to 86 miles per hour wind, and at that wind you  
23 need the heliostat to be horizontal such that it  
24 have the smallest impact for wind.

25 But normally we don't like this

1 position, by the way, because the meaning is that  
2 the mirror are facing up, in our case it's facing  
3 up, and they will get more dirty.

4 Usually you want at rest position they  
5 are not just horizontal, but even with a negative,  
6 a slight angle toward the ground, such that they  
7 reflect a little bit to the ground. But the main  
8 purpose is such that it will not collect dust,  
9 because we are -- cleaning the mirror is very very  
10 important. It was mentioned before, that most of  
11 the water we're using is for -- this small amount  
12 of water we're using is for cleaning the mirror.

13 So, at night and before sunrise, they  
14 will be in this position, horizontal position.  
15 I'm sorry, vertical position. Vertical position,  
16 a little bit toward the ground.

17 And we want to squeeze every possible  
18 energy, so before sunrise we bring them to -- each  
19 one of them is bring to the point that where the  
20 sun will come, it can get already to the desired  
21 points on top of the receiver, such that the day  
22 will start. As well in the end of the day, if  
23 it's in a perfect day, all you start up there,  
24 it's going down.

25 But let me, by doing so I'm not giving

1       you all the possibility. Other possibility, if  
2       it's not before sunrise, anytime during the day  
3       the heliostat is not moving to the final point.  
4       It will go through what is called a red, a safety  
5       zone. It will be underground as long as the  
6       heliostat is facing down the ground, there is no  
7       damage.

8                   Also not to the people working in the  
9       field. Let us remember, we are speaking here  
10      today about I-15, about -- but the first concerns  
11      we have, no, we have concern on everybody. But to  
12      be honest, the first concern is people that are  
13      inside the field.

14                   And if you read the Sandia report that  
15      was done in the '80s, their first concern was for  
16      those. And, in fact, in our demonstration plan we  
17      already checked and used doctors, who are expert  
18      in the eyes, such that they can protect the people  
19      working there.

20                   But mentioning that, the heliostats will  
21      move, will direct such that it will go to a zone  
22      below the tower. And then there would be a kind  
23      of wire line which the focal point will go up  
24      along this wire. And all this wire is within the  
25      body of the field, of course.

1                   It is close to the tower and much below,  
2                   of course, the 1350 feet of plane coming. But it  
3                   will bring it to what we call the stand point.  
4                   The standby point. The standby point close to the  
5                   receiver, I would say less than 50 feet around the  
6                   receiver.

7                   One more point, as we learn from Solar  
8                   One, in Solar One safety report, they recommended  
9                   to have a ring of standby. If you see those nice  
10                  picture of Solar One, see two standing points. By  
11                  the way, PS-10, you'll see PS-10 are still using  
12                  one or two points. That's very nice to see that  
13                  they, when all the used are focusing at a point in  
14                  the air. And even so it's air, it's so bright  
15                  that you can see.

16                  In our case we are going to have a ring  
17                  of standby around it, just because it's safer,  
18                  mainly for birds and insects. That's what I can  
19                  quote from this report they are referring to  
20                  insects and birds that might be attracted. And  
21                  even so, no damage has happened, not in our  
22                  demonstration and not in Solar One, as well.

23                  So it will go to the standby point. And  
24                  from standby, it will go directly to the field.

25                  And now I'd like to repeat, each

1 heliostat have this own controller. And no -- we  
2 are going to check, and also validated in the  
3 process of even just before starting those field,  
4 that every heliostat cannot get a focal point to  
5 be directed to, which is not in the body of the  
6 field. The mean all the external heliostat and up  
7 in there, up to the level of the 150 meter in this  
8 case. And for sure, not the 400 meter, which is  
9 the 1750 feet.

10 And so I will just repeat again, because  
11 it was mentioned before, the position of safe  
12 where it's horizontal and we all face up, one,  
13 it's only when it's a high wind. Now, it can  
14 happen. Of course, during night the wind is more  
15 at night. Nobody is concerned.

16 But it can happen that there will be  
17 high wind and good solar. But then all of them  
18 will face up and the coincidence of two of them,  
19 because they will not be perfectly horizontal, so  
20 some of them might. But the coincidence of them  
21 to reach a certain point in 1300 feet and so on,  
22 is totally improbable.

23 MR. HARRIS: Let's talk about distance  
24 now, and reflectivity, because I think that's an  
25 important thing. If there was an event where

1 something was pointed towards the viewer, you  
2 talked about 400 meters or a quarter-mile being a  
3 significant distance. Can you elaborate upon the  
4 400 meters or quarter-mile distance?

5 MR. GILON: Okay. Now we are moving to  
6 the heliostat, itself, the mirror, the heliostat,  
7 itself. And I'll repeat a little bit what we said  
8 before. Every heliostat is almost flat. There is  
9 heliostat between 400 meter way and 1 centimeter  
10 focal point.

11 Focal point mean that this whole surface  
12 is aiming a certain point. But you have to  
13 remember at that distance the size of this focal  
14 point is already very very large.

15 Let me explain. The size of the sun is  
16 half a degree. Half a degree is about 10 -- one  
17 to 100, such that in 1 centimeter the sun, itself,  
18 has 10 meter diameter already.

19 So even if we take these heliostats with  
20 a focal point of 1 centimeter, it's not a point in  
21 1 centimeter, it's a 10 meter, but it's all --  
22 it's just 10 meter. It's not 10 meter plus the  
23 size of it. That's why we are doing it. But we  
24 are speaking on a small impacts, all together.

25 Now, what we have calculated, and now we

1           have very sophisticated method of calculation of  
2           how the surface is count, not only the sun is  
3           simple, but there is also the inaccuracies of the  
4           mirrors and mechanics, the gravitation and so on.

5                        So we have calculated that all of our  
6           heliostat will fall below 1 kilowatt a square  
7           meter after 400 meter, which is a quarter of a  
8           mile. So up to a quarter of a mile will not reach  
9           this level of 1 kilowatt per square meter.

10                      MR. HARRIS: So that 400 meters you're  
11           going to be below the staff's continuous exposure  
12           limit of 1 kilowatt per meter square, that's  
13           correct?

14                      MR. GILON: That's correct. If you  
15           like, on -- it's two criteria. The first one,  
16           which is fully accepted by us, it's the momentary  
17           exposure which is 10 kilowatt per square meter,  
18           which we should not reach even not for a quarter  
19           of a second. We accept it.

20                      MR. HARRIS: So you accept that second  
21           -- I want to make sure that the staff heard that.  
22           As to the exposure limit of 10 kilowatt per meter  
23           square, you accept that limit in trans-3, is that  
24           correct?

25                      MR. GILON: Yes. I total accept that.

1 As I mentioned before, we will not reach it any  
2 distance. I don't need to mention the 400 meter.  
3 One heliostat will never meet such a flux, such a  
4 level.

5 Of course, many heliostat can meet such,  
6 but that we will protect by just making sure that  
7 in no case more heliostat will be directed. Not  
8 even two will be directed to the same point. But  
9 we accept these first criteria.

10 MR. HARRIS: So, in addition to the 400  
11 meters criteria, you've also mentioned that  
12 there'll be things like intervening heliostats  
13 that would prevent offsite direction to viewers  
14 more than 400 feet?

15 MR. GILON: Right. So after saying this  
16 first criteria, which we accept, about the second  
17 one, which is -- the second criteria. This can  
18 come from one kilowatt per square meter can, of  
19 course, come from one heliostat and even more than  
20 that.

21 But the only heliostat that can obtain  
22 this, as I mentioned before, will be when it will  
23 be -- it will be in a distance lower than a  
24 quarter of a mile. And this will happen in the  
25 following condition, because normally the solar

1 field, as I mentioned before, all the heliostat  
2 are concentrated toward the tower.

3 Such that if you -- before we go even to  
4 I-15, if you are outside those field and you see  
5 the heliostat in your direction, they are on the  
6 other side normally -- in a normal operation, to  
7 the other side of the field. So it will be a long  
8 distance, above 1000 meter for sure.

9 MR. HARRIS: So even if you're standing  
10 at the edge of the heliostat field the closest  
11 heliostat that can reflect to you is probably more  
12 than 400 meters away, is that correct?

13 MR. GILON: Yes, in a normal operation.  
14 Now, what we should be aware that one -- and all  
15 our calculation we were based on the fact that if  
16 we are speaking on 55,000, we are speaking of  
17 55,000 heliostat on each field, some of them will  
18 not function. And if they are not function we  
19 assume that in a week or so we'll fix them or  
20 we'll bring them to a normal position. But such a  
21 heliostat that is stuck facing up, and those  
22 heliostat in the side, by the way, will have the  
23 1000 meter focal point.

24 So those heliostat might exceed the one  
25 kilowatt per square meter, but not from continuous

1 operation. So, let me say about the second  
2 criteria, the second criteria on continuous of 1  
3 kilowatt per square meter, we don't like to accept  
4 it. Even so we are meeting that above a quarter  
5 of a mile. But I think that when we say  
6 continuous, it's not a quarter of a second. What  
7 is mentioned there is 1 kilowatt per square meter  
8 for about one-quarter of a second.

9 Let's say if it is for minutes, then  
10 there is no problem at all. Because even the sun,  
11 as all knows it's not the sun, I want to say the  
12 sun is moving. It's the earth moving. But for  
13 our regular normal --

14 (Laughter.)

15 MR. GILON: -- the sun would be moving,  
16 in a minute or two it will pass through. So, if  
17 the question is what we mean continuous. If we  
18 speak continuous for minutes or more, so then we  
19 have no problem at all with this criteria.

20 Otherwise, after a quarter of a mile it  
21 can be about this 1 kilowatt per square meter.  
22 Again, in no cases the first level that we accept.

23 MR. HARRIS: Let's kind of move things  
24 along. Let's talk about glare now. We talked  
25 about the receiver and I think people got a pretty

1 good idea what that's all about.

2 You said this won't be a hazard to  
3 drivers on I-15. Why do you think this will not  
4 be a hazard to drivers on I-15?

5 MR. GILON: Okay. So we move to the  
6 other things. And I want to make sure, on the  
7 mirror, what we see in the mirror reflectance is  
8 the sun. And we know the sun we don't look at the  
9 sun. That's why the old criteria is that we will  
10 blink and therefore we have no problem with that.

11 This is for mirror because it reflects the  
12 sun.

13 On the glare what we are speaking here  
14 is on a reflectance of what we absorbing. We are  
15 absorbing, since it's 100 megawatt project it's  
16 ten times bigger than what used to be Solar One.  
17 It's ten times bigger of PS-10 also. So we will  
18 have a glare. It will be bright, for sure.

19 But the level from safety point of view,  
20 what we mention before, we are far away of that  
21 level. It's, let's say, less than a hundred  
22 times. In 1000 meter we will go down to below  
23 one-tenth, close to one-tenth of the sun.

24 So from safety point of view, everything  
25 we are speaking now about this, the glare from the

1 tower has no safety. I believe it was also  
2 recognized.

3 But saying that doesn't mean we won't  
4 see it. We will see very definitively, and if I  
5 understand, I don't need now to refer to the 89  
6 candle per square meter, which -- so just to say,  
7 maybe for us to say, we are concerned about the  
8 receptor, or I-15 receptor. And not so much -- we  
9 don't, that's why we didn't like any criteria  
10 about the source of energy to make a definition  
11 about it.

12 But what I can say, and I hope this is  
13 related to the mentioning the 100 watt per square  
14 meter, the 100 watt light bulb, and in a way I  
15 agree that maybe it can be misleading.

16 Just for us to know, you know, I thought  
17 that it's a good example. When we are walking  
18 here, please, everybody then later try to look at  
19 it. It's not -- we are so used to it that we are  
20 not looking at it. But three feet away it's not,  
21 I would not, I don't want to call it discomfort  
22 and so on. But we just avoid it; we're not  
23 looking at it. It's not so pleasant to look at  
24 those spot when we are working there.

25 So we know how to live with it. And

1 this, from this aspect that's might be closer the  
2 case when we get to it. But I checked it. We  
3 will start seeing the tower five miles away. And  
4 five miles away, even so as I mentioned before,  
5 that we have 20 meters, 70 feet, five miles away.  
6 Or even one mile away the size of the receiver  
7 would be like the sun. A little bit bigger than  
8 the sun.

9 Five miles away, I think here, I'm not  
10 saying here as an expert, but I was told that a  
11 certain distance you don't -- you would like to  
12 call.

13 And from this perspective, five miles  
14 away will be like a point of a brighter, it's 100  
15 watt bulb. We will see it. No doubt. I think  
16 everybody would enjoy it and it will be beautiful  
17 to look. But we are not speaking on that part.

18 But two point I think very important.  
19 One, it won't be a surprise. I think that, and we  
20 know as our experience, if we are going above the  
21 hill and suddenly we get the sun in front of us,  
22 we know it's a problem. We learn to live with.

23 But in this case, both coming on I-15  
24 from the north or from the south, if we are coming  
25 from the north, from Las Vegas, after Primms it

1 will be five miles away, and it will not be in the  
2 sky. So it will be -- the mountain will be in the  
3 background, so you'll start seeing it in the same  
4 way coming from the south to the north versus Las  
5 Vegas, it will be five miles away.

6 You'll notice it for sure. I think it  
7 will be very exciting because it's very  
8 interesting, as we are to see.

9 I mention before, I believe that in  
10 Solar One in Daggett I was driving there at the  
11 time and I was so excited. I recall coming from  
12 Los Angeles and all the way seeing it. Of course,  
13 it's nonsense. I see it probably two, three  
14 minutes.

15 But it was much closer to the I-15, I  
16 believe. And I don't recall complain of during  
17 those five years of operation. And it was much  
18 closer.

19 It is true that it's 10 megawatt instead  
20 of 100 megawatt. But here again, there the  
21 distance was such that you can see the size of  
22 this receiver. And there from the brightness it  
23 was not more than that. On the other hand, it  
24 will be a larger source.

25 MR. HARRIS: Let's talk a little bit

1       about the brightness, too, because there have been  
2       a lot of references to 100-watt bulbs back and  
3       forth. And I think you've got some thoughts,  
4       maybe there's some calculations on the plane out  
5       here about the distance at which it will appear,  
6       the 115 feet reported before. You wanted to talk  
7       a little bit about that.

8               MR. GILON: Oh, yes. At the time I --  
9       there is a quotation there. I prefer not to use  
10      this quotation because it is related also to the  
11      fact that it was the fifth tower and also, as  
12      mentioned before, it's a question of what kind of  
13      hundred watt bulb is.

14             But, at least I made this calculation  
15      that's five miles away. This is the distance when  
16      you start seeing it, it will be. And five miles  
17      away you can consider it as a source, as a small  
18      point because it's five miles away. So it's  
19      really a point.

20             There it will be similar to a 100 watt  
21      bulb. By the way, a 17 percent efficiency bulbs.  
22      From light point of view, it's 17 percent at the  
23      distance of 30 feet. Now, 30 feet away, a 100  
24      bulb, you see and it's even bright. But you can  
25      live with it, it's part of what you'll see around

1           you.

2                       MR. HARRIS: Okay, I think we've covered  
3 everything that we need to cover, so I'll go ahead  
4 and make the witness available for cross-  
5 examination. The witnesses, sorry.

6                       HEARING OFFICER KRAMER: Any --

7                                       CROSS-EXAMINATION

8 BY MS. SMITH:

9                       Q     I have a short question, just a quick  
10 question. You mentioned a study from the Sandia  
11 report. Is that the study that was done on the  
12 Daggett site?

13                      MR. GILON: Yes.

14                      MS. SMITH: That's the one you mean.

15                      MR. GILON: Yes, it's --

16                      MS. SMITH: That's from '80 or  
17 something?

18                      MR. GILON: '81, '82. But it's called  
19 Sun Sand 83- -- 5.

20                      MS. SMITH: Okay, I don't think I have a  
21 copy of that.

22                      MR. HARRIS: He's got a copy he can show  
23 you during the break, Lisa.

24                      MS. SMITH: Thank you.

25                      MR. HARRIS: That way you can find it.

1 MS. SMITH: Thank you.

2 HEARING OFFICER KRAMER: Any cross-  
3 examination from the parties on the telephone?  
4 And can one of you speak up so we know you're  
5 still there.

6 MR. JOSEPH: This is Marc Joseph. I'm  
7 still here, and the answer is no.

8 MS. CUNNINGHAM: None from Basin and  
9 Range Watch.

10 MR. BRIZZEE: And none from the county,  
11 thank you.

12 HEARING OFFICER KRAMER: Okay, thanks.  
13 One more question in the room here.

14 MR. SUBA: Thank you.

15 CROSS-EXAMINATION

16 BY MR. SUBA:

17 Q Just to clarify, there are approximately  
18 55,000 heliostats per field. But your  
19 calculations show that during the safe position,  
20 during high wind and good insolation, the chances  
21 of only two of those producing a constructive  
22 interference is very very low?

23 MR. GILON: Right, but it's not related  
24 to the field. I'm saying for the 55,000 in normal  
25 operation we make sure that none of them will.

1 But it seems we have a very -- we have a more than  
2 99 percent will be always in operation. So that  
3 the chance of two of them reaching 1000 meter at  
4 the same point is insignificant.

5 MR. SUBA: Oh, I thought -- my  
6 understanding what you said was during a high wind  
7 and during the day, above 85 miles an hour, they  
8 will all go to the safe position.

9 MR. GILON: Right, but it's two things.  
10 The fact that they will not reach a certain point  
11 is not related to the safe mode. It is -- because  
12 if two of them are broken, it's not related to  
13 safe mode, it's just when they are broken the  
14 chance that they will reach one point could be --  
15 that's where two or more of them can be a safety  
16 issue, are not.

17 In the case of safe mode, then when they  
18 all face up, then all of them are facing up  
19 vertically, so they are almost all -- some of them  
20 might have a -- they are not so accurate, so at  
21 certain point they might be, but it will be far  
22 away. And, again, with insignificant probability.

23 HEARING OFFICER KRAMER: Staff, any  
24 questions?

25 MR. RATLIFF: Yes.

1 //

2 CROSS-EXAMINATION

3 BY MR. RATLIFF:

4 Q Your testimony is that the typical  
5 resting, when they're not in sure and when there  
6 isn't a wind storm, would be near to vertical, but  
7 beyond vertical, is that correct? So they would  
8 be more pointing, so the focal point would be on  
9 the ground?

10 MR. GILON: Yes.

11 MR. RATLIFF: Apparently in our  
12 discussions with you earlier, our understanding is  
13 their repose would be flat. But now you're saying  
14 that that would not be the case?

15 MR. GILON: No, I'm not sure. I think  
16 at point we even -- I didn't read it again because  
17 I saw that we don't want to stack to it, because,  
18 you know, we might change things, all around the  
19 same direction.

20 But I can check again, but it was always  
21 the case that the rest position is not when --  
22 it's just a safe position when they are flat.

23 MR. RATLIFF: And in your smaller  
24 Israeli plant, smaller scale, is that the typical  
25 resting mode at that plant, that the level of

1       repose would be angled slightly towards the  
2       ground?

3               MR. GILON: Well, to make it -- first of  
4       all, it's not flat as rest. The only thing is  
5       that because it's the first generation of these  
6       collector. And the first generation of those  
7       collector was one mirror, as opposed to the two  
8       mirrors that we'll have now.

9               So this one mirror was not, it was not  
10       possible to bring it to the negative position.  
11       But it was as close as possible to vertical. So  
12       it was almost vertical. So it was not pointing --  
13       by the way, here is where, it is not pointing out  
14       to the ground, but it's pointing out a little bit  
15       above the ground. And it didn't cause any problem  
16       on the roads around it.

17               There is -- it's not a highway, but  
18       there is a principal road passing very close to  
19       it.

20               MR. RATLIFF: Okay. One of the -- I  
21       think the chief concern that Mr. James Jewell  
22       raised was that -- that the staff is concerned  
23       about, is that it is conceivable that a number of  
24       the mirrors might develop a focal point if they  
25       were not controlled to prevent that.

1                   Not that you would just have one mirror  
2                   that would be angled toward the sky, but that you  
3                   would have any number of mirrors which might have  
4                   a focal point that was aimed skyward,  
5                   unintentionally, that would have a significant  
6                   glare effect.

7                   I wasn't sure, listening to your  
8                   discussion, that you said that this would be  
9                   unlikely to happen, if you were talking about the  
10                  likelihood of one mirror or of a number of mirrors  
11                  which would collectively be taking a focal point  
12                  that would be skyward.

13                  MR. GILON: Right. So unintentionally  
14                  we rely on probability that it won't happen at a  
15                  certain distance. But intentionally we will make  
16                  sure that's why we will show, and in fact, we have  
17                  a heliostat positioning plan such that every use  
18                  that is directed to very very specified  
19                  positioning. And those position will make sure  
20                  that never two or more can aim to a point out of  
21                  the border of this plant.

22                  And the border, I mean the surface of  
23                  those heliostat and up to 1350 feet above.

24                  MR. RATLIFF: One of the questions I  
25                  would have is when you will provide the plan which

1 would indicate how you were going to control the  
2 mirrors, so that that focal point could not occur  
3 by more than one mirror. Is that something that  
4 you will provide to us prior to the project's  
5 breaking ground? Or is that something you're  
6 going to provide at an earlier point?

7 MR. GILON: Well, we propose it, and I  
8 think it was also a question -- it was a proposal  
9 from the staff. We adopted this HPP, the  
10 heliostat positioning plan, 90 days before  
11 operation.

12 And the reason why I believe that it's  
13 good is that we can -- I have described today that  
14 I think, to the best of my knowledge, we know  
15 exactly how we'll do all those position.

16 But finally the position of the  
17 heliostat is very sophisticated, I'll go ahead and  
18 use that. So I think that it will be more clever  
19 to make it 90 days before operation. Then we can  
20 certainly say exactly what's going on, and not  
21 just now I'm giving you, I can give you idea how  
22 we will prevent all those possibility. But we  
23 will make sure that it won't happen, because this  
24 is also a concern that we have.

25 MR. RATLIFF: Okay. Finally, as we

1 discussed before, staff believes the trans-4, the  
2 condition needs to be rewritten. But in its  
3 current form it would require certain kinds of  
4 verifications and measurements to be taken post-  
5 construction to determine what the glare levels  
6 were coming off from the mirrors.

7 Is the applicant amenable to that kind  
8 of a verification procedure afterwards? I realize  
9 that you may -- maybe this isn't a question  
10 directed, that is perfectly directed to you, but  
11 that's one of the questions I think we would like  
12 to discuss with the applicant, perhaps in the  
13 hybrid portion of this discussion that we're  
14 having today.

15 MR. GILON: I say what I think, myself,  
16 and we might, if you speak about this by  
17 understanding what's the problem.

18 To make it clear, trans-4, and with some  
19 modification, I mentioned the first criteria is  
20 totally acceptable by us. The second criteria,  
21 with a small change I believe that it's also fully  
22 acceptable. This is for sure, and need to be  
23 verified later, that's all clear.

24 On trans-4, because there is no certain  
25 criteria, I'm not sure -- and for sure, it will be

1 bright. Now, if we will try to see -- I hope that  
2 everybody will love it and like it happen in other  
3 place, but if we will start to get people feel  
4 they don't like it for some reason or another, and  
5 there is no standard, I'm not sure what, you know,  
6 I don't know what we commit ourself here when we  
7 say we will verify what's the public opinion on  
8 traveling there and so on.

9 MR. RATLIFF: I don't think these  
10 measurements were intended to be a measure of  
11 whether people are irritated. It was a question  
12 of whether the glare would pose any kind of health  
13 and safety concern.

14 MR. HARRIS: Let me provide -- respond.  
15 And the main thing that we heard is the 89 candela  
16 per meter squared, that number's coming out. That  
17 went a long way to satisfy our concerns. And I  
18 think we'd be interested in talking with you about  
19 some kind of monitoring program. Sounds like --  
20 got a monitoring program. Without a clear  
21 standard that's a little difficult, but I think we  
22 would be willing to talk with you guys about some  
23 kind of revise of trans-f that again puts most of  
24 the details into the verification because we're  
25 all learning here, but some kind of monitoring.

1 MR. RATLIFF: Okay.

2 MR. GILON: But, I want to repeat, it's  
3 not just -- at the time I was not happy with this  
4 89 candle per square meter, but at the time I was  
5 even asked what kind of other number we would  
6 propose.

7 And I don't like to propose, because as  
8 I say, we live day by day, not just with the sun.  
9 The sun is one hundred, one -- but even with our  
10 surrounding, in rooms and so on, we learn how to  
11 live with something that if we will measure it and  
12 decided to look at it, we will find something  
13 wrong.

14 But if it is for discussion, for sure we  
15 can discuss. I just -- I'm afraid that here we  
16 are putting something that we, as human beings,  
17 live with it all the time. And we know how to  
18 handle it.

19 MR. RATLIFF: Thank you.

20 HEARING OFFICER KRAMER: I have one  
21 question from the Committee then. The controls  
22 for the heliostats, I gather that's computerized,  
23 is that right?

24 MR. GILON: Yes.

25 HEARING OFFICER KRAMER: And so will

1           your software be able to track their focal points  
2           continuously?

3                       MR. GILON:  Yes, it does.

4                       HEARING OFFICER KRAMER:  And is it going  
5           to be set up to check for a situation where  
6           several focal points are not on the power tower,  
7           but in the same place?

8                       MR. GILON:  Yes, but I -- and I suggest  
9           even, I believe it's the opposite in advance it  
10          won't allow individual heliostat to have a focal  
11          point out of the border.  So that it will prevent.

12                      HEARING OFFICER KRAMER:  And is some  
13          kind of tolerance for inaccuracy, you know, minute  
14          inaccuracy in the positioning of the heliostats  
15          going to be built into that algorithm?

16                      MR. GILON:  Yes, but two of them.  One,  
17          we will account for this tolerance such that it  
18          will be inside the border.  And for larger  
19          intolerances, that will be impossible  
20          probabilities.

21                      HEARING OFFICER KRAMER:  And if you were  
22          to discover that it was hard to control these, you  
23          remain with the option of putting them in the, I  
24          guess you'd call it the rest position, where they  
25          are somewhat more than vertical, past the

1 vertical?

2 MR. GILON: I am afraid we're speaking  
3 on different things. If they are in operation the  
4 only way they are directed to a certain point is  
5 in operation. They are not in the rest position.  
6 In the rest position for sure they will be  
7 vertical, or even toward the ground.

8 HEARING OFFICER KRAMER: Would they be  
9 put in the rest position anytime the plant's not  
10 operating and there isn't a wind issue?

11 MR. GILON: Anytime it's not operating  
12 it will be to the rest position. And the wind  
13 issue, they will bring to the safe position, which  
14 is the horizontal.

15 HEARING OFFICER KRAMER: Okay, thank  
16 you. I don't know how everyone -- we're into the  
17 lunch hour at this point. I think we still  
18 probably have a few minutes of discussing some of  
19 the proposed changes to the conditions in this  
20 area.

21 Let me ask the parties, would your  
22 preference be to break now, or take another 20 or  
23 30 minutes to go through the changes?

24 MR. JOSEPH: This is Marc Joseph. Mr.  
25 Kramer, are you talking about changes to trans-1

1 or 3 and 4? I sort of thought we were finished  
2 with 1.

3 HEARING OFFICER KRAMER: Yes, staff was  
4 going to bring back a revision to that one and 4.

5 MR. JOSEPH: Is staff going to circulate  
6 the revision to 1 between now and the next set of  
7 hearings? Was that the idea?

8 HEARING OFFICER KRAMER: That was their  
9 promise.

10 Okay, so look for exhibit 302 in your  
11 email, Mr. Joseph.

12 MR. JOSEPH: Okay.

13 HEARING OFFICER KRAMER: And now there  
14 is one, even in trans-1 there's a kind of common  
15 issue that we're going to have to discuss at some  
16 point. I gather, Mr. Joseph, you're thinking  
17 about signing off?

18 MR. JOSEPH: Yes.

19 HEARING OFFICER KRAMER: Okay. The  
20 common issue that's going to come up that is  
21 raised by the applicant's proposal even, to trans-  
22 1, is eliminating the BLM authorized officer as a  
23 second approver in addition to the compliance  
24 project manager for some of the compliance filing.

25 So, I don't know if you're interested in

1 weighing in on that topic.

2 MR. JOSEPH: I don't have a view on  
3 that.

4 HEARING OFFICER KRAMER: Okay, then  
5 sounds like you may be able to go on to something  
6 else then.

7 MR. JOSEPH: Thank you.

8 HEARING OFFICER KRAMER: So, preference?  
9 Do you want to continue on or take a lunch break?

10 MR. HARRIS: You know, we don't think  
11 there are any factual issues outstanding on these  
12 conditions. I don't know if there's a need to  
13 keep the witnesses around for that discussion.

14 HEARING OFFICER KRAMER: Well, let me  
15 suggest that quite often something comes up and  
16 you want to consult with them.

17 MR. HARRIS: Yeah, I guess let's have  
18 the discussion then because we would like to close  
19 out the record on transportation if we could.

20 HEARING OFFICER KRAMER: Okay.

21 MR. RATLIFF: We may want to propose  
22 some kind of monitoring condition for glare  
23 reflected skyward. But we -- I don't know if  
24 we're prepared to do so at the moment.

25 So I was wondering if it would be better

1 -- it would be better for us, I believe, if we had  
2 a lunch break and could then discuss that. I  
3 don't know whether this involves an issue of fact  
4 or not, frankly. And maybe it would be best to  
5 recess and then come back and address that issue.

6 HEARING OFFICER KRAMER: Does that  
7 change your mind, Mr. Harris?

8 MR. HARRIS: That sounds fine. I think  
9 we're at the point now where we can finish the  
10 discussion of the issues, and we're just going to  
11 have to have discussions with staff on a  
12 monitoring plan that makes sense. I'm not sure we  
13 need to use hearing time to do that. I don't know  
14 that there are any factual questions at this  
15 point, but probably best if we just lock Mr.  
16 Jewell and Mr. Gilon in the room and have them  
17 solve it for us. But --

18 MR. RATLIFF: What I'd like to think is  
19 that we could agree on it at tomorrow's workshop,  
20 and, you know, preferably in five minutes, of  
21 course, not an hour. But if we could do that, we  
22 wouldn't have to use the hearing for that.

23 MR. HARRIS: But do you think this is  
24 something we could resolve tomorrow?

25 MR. RATLIFF: Then maybe we can just

1 close this out, and hopefully not have to revisit  
2 the issue.

3 MR. HARRIS: Okay, so you're suggesting  
4 we close this issue out for the day, and talk  
5 about it tomorrow at the workshop?

6 MR. RATLIFF: Yeah.

7 MR. HARRIS: I'm fine with that if the  
8 Committee's fine with that.

9 HEARING OFFICER KRAMER: And then you  
10 would come back -- leave open the possibility of  
11 reopening it for further, at least discussion of  
12 the conditions, in January?

13 MR. HARRIS: Yeah. I'm not sure we need  
14 to reopen the record on the issue, but we could  
15 certainly have the discussions on the record about  
16 the agreement if we reach one.

17 HEARING OFFICER KRAMER: Right. And the  
18 Committee may have some issues, as well. I don't  
19 see us as exactly a rubber stamp necessarily as to  
20 whatever the parties agree to.

21 For instance, the word legitimate has  
22 been introduced here in a couple cases by the  
23 applicant to describe complaints. And that, to  
24 me, at least, seems problematic in that there's no  
25 standard as to what a legitimate complaint would

1 be.

2 MR. HARRIS: We actually took that  
3 language from your standard noise conditions,  
4 which used the term legitimate.

5 (Laughter.)

6 MR. HARRIS: And the reason they use  
7 that term in the noise, the standard noise  
8 condition is that somebody will say, well, gee,  
9 the power plant operation is making a lot of noise  
10 and, you know, it's driving us out of our  
11 neighborhood. And you'll check, and that power  
12 plant hadn't run that day. And that's deemed to  
13 not be a legitimate noise complaint.

14 So, we're just following your lead.

15 HEARING OFFICER KRAMER: Okay. Well,  
16 thanks for highlighting that aspect of the noise  
17 condition.

18 (Laughter.)

19 HEARING OFFICER KRAMER: Well, if the  
20 parties don't see the need to argue to us about  
21 the legitimacy of -- pardon me, their proposed  
22 changes, staff has responded to you. And they  
23 have not completely agreed to all of your  
24 proposals.

25 So maybe it would be best then to let

1           you, at a more leisurely pace, review what staff  
2           gave you this morning. And then we'll leave it  
3           open for further discussion, if necessary, of the  
4           argument, if you will, in January.

5                       MR. HARRIS: Okay. Yeah, I think the  
6           way we'd love to see it play out is if we sit  
7           down, we work out an agreement. And if we bring a  
8           common proposal back to the Committee for your  
9           consideration. Obviously, the Committee acts  
10          independently on that.

11                      Or if we can't reach agreement, then we  
12          would brief those issues. But, again, I don't see  
13          any more factual disputes between the parties.  
14          And I think we're really close, and it's just a  
15          matter of getting the experts to talk to each  
16          other.

17                      HEARING OFFICER KRAMER: I agree about  
18          the factual issue, but I do find that rather than  
19          trying to discuss some of these nuances and  
20          exchange of briefs, it's a lot quicker and more  
21          effective to do it while we are all in the same  
22          room.

23                      MR. HARRIS: I'd rather be skiing than  
24          briefing, yes.

25                      HEARING OFFICER KRAMER: Amen. Okay,

1           then that will close out, subject to perhaps  
2           further argument, the topic of traffic and  
3           transportation.

4                        Mr. Harris, though we didn't -- you read  
5           off a list of exhibits at the beginning of your  
6           witness' testimony. But I did not get all those  
7           down, because my pen was not primed. And I'm not  
8           sure that was meant to be your complete list of  
9           exhibits.

10                      So, would you introduce those you'd like  
11           to, again?

12                      MR. HARRIS: Yeah, again, section 1C of  
13           our traffic and transportation testimony. And  
14           those are exhibit 1, exhibit 2, exhibit 3, exhibit  
15           57, exhibit 4, exhibit 5, exhibit 32, exhibit 34  
16           and exhibit 37. And I would move those into the  
17           record.

18                      HEARING OFFICER KRAMER: And what about  
19           exhibit 65, should that be in there, as well, the  
20           general testimony?

21                      MR. HARRIS: If you want to move that at  
22           this point I'd move exhibit 65, as well.

23                      HEARING OFFICER KRAMER: Or you can wait  
24           till later, if you'd like.

25                      MR. HARRIS: I'd probably forget later,

1 so if you don't mind, --

2 HEARING OFFICER KRAMER: Okay.

3 MR. HARRIS: -- we can move it.

4 HEARING OFFICER KRAMER: Would you like  
5 to go back and retroactively add that to earlier  
6 topics, the three topics?

7 MR. HARRIS: Yes, I would, please.

8 HEARING OFFICER KRAMER: Okay.

9 MR. HARRIS: Thank you for saving me  
10 from myself.

11 HEARING OFFICER KRAMER: Any objection  
12 to the admission of those exhibits?

13 Hearing none, they are admitted.

14 Let us take a break until 1:30, by the  
15 clock back there on the wall, for lunch.

16 (Whereupon, at 12:23 p.m., the hearing  
17 was adjourned, to reconvene at 1:30  
18 p.m., this same day.)

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AFTERNOON SESSION

1:34 p.m.

HEARING OFFICER KRAMER: We're back on the record for the afternoon. It's about 1:35. We have at least two people back with us on the telephone. And --

MR. BRIZZEE: Bart Brizzee from the county is also present.

HEARING OFFICER KRAMER: Okay, that's three. Then that's probably all we were expecting.

MR. MECKFESSEL: So is Meckfessel, Bureau of Land Management.

HEARING OFFICER KRAMER: I'm sorry, who was that?

MR. MECKFESSEL: George Meckfessel, Bureau of Land Management.

HEARING OFFICER KRAMER: Could you spell your last name for the court reporter?

MR. MECKFESSEL: M-e-c-k-f, like frank, -e-s-s, like sam, -e-l.

HEARING OFFICER KRAMER: Okay, M-e-c-k-f and the rest?

MR. MECKFESSEL: -e-s-s-e-l.

HEARING OFFICER KRAMER: -s-s-e-l.

1           Okay, thank you. And that was George. Okay. Are  
2           you just here to listen, or did you have something  
3           you wanted to comment upon?

4                       MR. MECKFESSEL: No, I'm just here  
5           listening.

6                       HEARING OFFICER KRAMER: Okay, thank  
7           you. We, I guess, are moving to the visual  
8           resources topic, by virtue of having a witness set  
9           up. And, staff, would you go ahead with your  
10          testimony?

11                      MR. RATLIFF: Yes, the staff witness is  
12          William Kanemoto. And have you been sworn?

13                      MR. KANEMOTO: Yes.

14                      MR. RATLIFF: He has, he's been sworn.

15                               DIRECT EXAMINATION

16          BY MR. RATLIFF:

17                      Q       And so, Mr. Kanemoto, can you please  
18          summarize your testimony and your conclusions for  
19          the Committee.

20                      MR. RATLIFF: And then Mr. Kanemoto has  
21          a PowerPoint show for you, which I think, since a  
22          picture is worth more than 1000 words, he wants to  
23          show you slides which, I think, are almost all  
24          previously provided by the applicant, with the  
25          exception of a couple of maps. And one or two of

1           which, I think, were added in our additional  
2           testimony that we filed last week.

3                       MS. SMITH: Point of clarification.  
4           What topic area are we on?

5                       MR. RATLIFF: Visual resources.

6                       MS. SMITH: Okay, I'm sorry. I didn't  
7           hear you say that.

8                       MR. KANEMOTO: Yes, we thought we would  
9           summarize the conclusions as briefly as we can.  
10          It's a little long, so I hope everyone will have  
11          some patience. But I think the images help make  
12          all the discussion a lot more real.

13                      HEARING OFFICER KRAMER: First, could  
14          you spell your name for the court reporter.

15                      MR. KANEMOTO: K-a-n-e-m-o-t-o.

16                      So staff concluded that the proposed  
17          project would result in a substantial adverse  
18          impact to existing scenic resource values as seen  
19          from several key observation points in the Ivanpah  
20          Valley and Clark Mountains.

21                      This is a map of the viewshed that  
22          appeared in the staff assessment. Those points  
23          are the Primm Valley Golf Course, KOPs 1 and 2.  
24          Middle ground distance viewpoints on highway I-15,  
25          those are KOPs 3 and 4.

1 Viewpoints in the Mojave National  
2 Preserve on the east face of Clark Mountain,  
3 represented by KOP 10. And viewpoints in the  
4 Stateline Wilderness Area including the Umberci  
5 Mine and vicinity, that's KOP 9 to the north.

6 These points are indicated in the figure  
7 in the red. Staff concluded that these visual  
8 impacts would be significant in terms of the four  
9 visual impact criteria, CEQA appendix G. And in  
10 terms of the context and intensity of effects in  
11 general, including the location of the project  
12 directly adjoining a national park, two designated  
13 wilderness areas and a land sailing site of  
14 regional or greater importance.

15 Other considerations included concerns  
16 expressed by public commentators to date; a degree  
17 of uncertainty as to the level of discomfort and  
18 glare to be expected from the solar tower  
19 receivers; and concern over cumulative visual  
20 effects of renewable projects on the southern  
21 California and Mojave Deserts, as a whole.

22 Staff found that with the recommended  
23 conditions of certification potentially  
24 significant visual impacts at the Primm Valley  
25 Golf Course, KOPs 1 and 2, could be mitigated to

1 less than significant levels in the long term.

2 However, staff concluded that  
3 potentially significant visual impacts at the  
4 other locations cited above could not be  
5 mitigated, and would thus result in significant  
6 and unavoidable impacts.

7 Staff also concluded that the solar  
8 receiver units atop the solar power towers would  
9 generate conspicuously bright levels of glare for  
10 middle-ground viewers, which, while not  
11 representing a hazard, could represent a visually  
12 dominant feature that would alter the character of  
13 views of Clark Mountain from the valley floor, and  
14 affect the public's ability to enjoy those views,  
15 though not preventing them.

16 In addition, staff concluded that the  
17 project would not conform with applicable goals  
18 and policies of the San Bernardino County general  
19 plan conservation open space elements as follows:

20 MR. RATLIFF: Bill, as one low-talker to  
21 another, please speak directly into the  
22 microphone.

23 (Laughter.)

24 MR. KANEMOTO: I'll try. Conservation  
25 element goal D-CO-1 calling for preservation of

1 scenic vistas in the county. Open space element  
2 goal OS-5, policy OS-5.2, which require projects  
3 to be visually compatible with the scenic  
4 qualities of designated county scenic routes.

5 Highway I-15 in the project vicinity is a  
6 county-designated scenic route.

7 Finally, staff concluded that the  
8 project, in combination with foreseeable future  
9 projects, would have significant, unavoidable,  
10 cumulative visual impacts of two kinds.  
11 Cumulative impacts within the immediate project  
12 viewshed essentially foreseeable future projects  
13 in the Ivanpah Valley. And cumulative impacts of  
14 foreseeable future solar and other renewable  
15 energy projects within the southern California  
16 desert and Mojave Deserts.

17 I thought it would be good to start by  
18 providing a visual sense of the setting we're  
19 talking about. First, here's a map of the site in  
20 relation to the Mojave National Preserve. And a  
21 smaller scale map of the site taken from the AFC.

22 The hatched area immediately to the left  
23 of the one-mile buffer zone around the project is  
24 the boundary of the former Mojave National Scenic  
25 Area, which was subsequently made a part of Mojave

1 National Preserve.

2 This is a very wide angle panorama taken  
3 from within the site looking east toward the golf  
4 course. I apologize for the fact that it does not  
5 seem to be in perfect focus right now, and it's a  
6 little hard to read.

7 As most people I spoke with onsite,  
8 which included a team of BLM resource management  
9 or VRM specialists from the local desert district  
10 and Washington levels, agreed the project site is  
11 not just another mediocre, nondescript,  
12 forgettable landscape.

13 It is not comparable to say, large,  
14 attractive farmland in the central valley or a  
15 nice, but unremarkable suburban landscape. It is  
16 predominately natural with a distinctly vivid  
17 scenic quality, including striking nearby  
18 mountains, the dry lake and panoramic long-  
19 distance vistas.

20 It's natural intact-ness strongly  
21 predominates over manmade intrusions. And it has  
22 a unity or wholeness created by its visual  
23 enclosure by nearby mountains on all sides.

24 This is a view from east of the dry  
25 lake, looking west at the site. Ivanpah 1 would

1 be to the left of the rock outcrop. And Ivanpah 2  
2 and 3 would be behind and to the right of the  
3 rock.

4 This is the same view panned slightly to  
5 the left, centered on the Ivanpah 1 site and Clark  
6 Mountain. This is a view of the Ivanpah 1 site  
7 from within the dry lake. And a similar shot  
8 earlier in the day showing the vegetation color a  
9 little more clearly.

10 This is a view of the site from the town  
11 of Nipton, which is about five miles away, looking  
12 northwest. You can see the outcrop to the right  
13 on the photograph.

14 This is a view from Nipton -- from  
15 between Nipton and I-15 on the Joshua Tree  
16 Highway, otherwise known as Nipton Road. This is  
17 a view from the Nipton Road/I-15 interchange  
18 looking directly north about four miles south of  
19 the site.

20 And this is the same view panned  
21 slightly to the left to show more of the project  
22 site. Ivanpah 1 would occupy much of the front,  
23 and to the right of the rock outcrop. Ivanpah 2  
24 and 3 would appear to the left and behind it.

25 This is a similar view taken at a

1 midpoint between Nipton Road and the golf course.  
2 And the same view panned to the left to focus on  
3 the project site.

4 In the AFC the applicant characterized  
5 the site as VRM class 4, or the lowest possible  
6 visual rating in the BLM system. Which implies  
7 either low scenic quality or low viewer  
8 sensitivity.

9 However, as we stated in the staff  
10 assessment, we see no basis for that  
11 characterization. First, the site has neither low  
12 scenic quality nor low viewer sensitivity.  
13 Second, BLM, itself, is responsible for preparing  
14 the visual resource inventory mapping of lands in  
15 its jurisdiction. BLM did so, and identified the  
16 Ivanpah Valley, including the project site, as VR  
17 class 3.

18 This mapping was conducted by a team of  
19 four BLM VRM specialists, including a national VRM  
20 trainer. Staff generally agreed with their  
21 conclusions and used this inventory mapping as the  
22 basis for our analysis.

23 In terms of the standard CEC visual  
24 assessment, VR class -- or visual resource class 3  
25 is equivalent to a moderate level of overall

1 visual sensitivity or susceptibility to impact.

2 I believe this is a conservative evaluation,  
3 the scenic quality and sensitivity of the valley.

4 Yes, that's right. The white area is  
5 the Mojave National Preserve, the northernmost  
6 portion. It's adjacent to -- in the brown area,  
7 to the right of that is the project site. And  
8 that's I-15.

9 MR. RATLIFF: Is that apparent to you,  
10 does that make any sense to you, what he just  
11 said? Okay.

12 MR. KANEMOTO: As I was saying, my  
13 belief is that this is -- rating this area as a VR  
14 class 3 was a conservative evaluation of the  
15 scenic quality and sensitivity of the valley.

16 In fact, --

17 HEARING OFFICER KRAMER: By conservative  
18 to you mean it understated the value or overstated  
19 it?

20 MR. KANEMOTO: I believe it was a  
21 deliberate understatement of the value of the area  
22 and I'll explain why.

23 PRESIDING MEMBER BYRON: Mr. Kanemoto,  
24 do you know when that assessment was done?

25 MR. KANEMOTO: Yes, it was done in 2008.

1                   PRESIDING MEMBER BYRON: Thank you.

2                   MR. KANEMOTO: In fact, the basis for  
3 the BLM's rating of the valley as ER class 3 was a  
4 scenic quality rating score of 11. A score of 12  
5 would have resulted in a VR class 2. In other  
6 words, if any of the seven components of visual  
7 quality in the VRM inventory method had received  
8 one more point, on a scale of one to five, the  
9 valley would have been classified as VR class 2.

10                   This corresponded with our own response  
11 to the site, which it lies somewhere in the  
12 boundary between class 3 and class 2. This is  
13 between moderate and moderately high scenic  
14 quality.

15                   The following are simulations of the  
16 project's -- that were identified with significant  
17 impacts. This is KOP-1, it's hole one of the  
18 Primm Golf Course, looking southwest toward  
19 Ivanpah 1.

20                   This is KOP-2, hole eight of the golf  
21 course, looking west toward Ivanpah 2 and 3. This  
22 is KOP-3, near Yates Well Road, the nearest point  
23 to the project, focused on Ivanpah 2 and 3.

24                   This is KOP-4, same general vicinity as  
25 the previous view, only panned to the left to

1 focus on Ivanpah 1. This is KOP-9; it's a view  
2 from the road to Umberci Mine, within the State  
3 Line Wilderness Area, looking south.

4 PRESIDING MEMBER BYRON: Mr. Kanemoto,  
5 I'm trying to understand that view. It looks like  
6 it's at some altitude above the ground.

7 MR. KANEMOTO: That's right. The entire  
8 wilderness area is defined sort of by the --

9 PRESIDING MEMBER BYRON: No, no, the  
10 view, itself. You're up at the level of the  
11 conductors on the transmission tower. How did you  
12 get that view?

13 MR. KANEMOTO: The road up into the  
14 wilderness area, you know, it's climbing up into  
15 the mountains. In other words, --

16 PRESIDING MEMBER BYRON: Okay, so this  
17 is with a telephoto lens, then?

18 MR. KANEMOTO: That I don't know. I  
19 don't believe so. I believe that all these  
20 photographs were taken with a so-called normal  
21 lens, --

22 PRESIDING MEMBER BYRON: All right.

23 MR. KANEMOTO: -- a 50 mm lens.

24 MR. RATLIFF: And this photo was one of  
25 the applicant's photos in one of their exhibits

1           that was produced pursuant to a data request from  
2           staff.

3                         MR. KANEMOTO:  Yes, maybe I should  
4           provide some background on that.  The --

5                         PRESIDING MEMBER BYRON:  Mr. Kanemoto,  
6           it's not necessary.  Go right ahead with your  
7           testimony, please.

8                         MR. KANEMOTO:  Okay.  The next view is  
9           KOP-10, which is a view from the main road to  
10          Benson Mine, which is within the Mojave National  
11          Preserve.

12                        MR. RATLIFF:  Can you tell us what we're  
13          looking at, Bill, when we look down there.  Can  
14          you identify the features in that photograph?

15                        MR. KANEMOTO:  Oh, sure.  Well, just  
16          beyond Ivanpah 2 you can see the Primm Golf  
17          Course.

18                        MR. RATLIFF:  On the right.

19                        MR. KANEMOTO:  Yes, on the right there,  
20          right next to the lake bed.  And then that  
21          development to the left is Primm.  And the  
22          building just to the right of Primm is the  
23          existing power plant.

24                        Staff believes that most viewers, if  
25          they saw this project, would agree that the

1 project, as proposed, which involves altering over  
2 five miles, five square miles of the valley floor,  
3 would represent a strong level of adverse change  
4 in the visual character and quality of the valley  
5 landscape. At least from the viewpoints we showed  
6 previously.

7 For example, if one simply paved the  
8 footprint of the project, say replace the existing  
9 and undeveloped plot as five square miles of  
10 parking lots, I think that few would regard you  
11 that the change is not a strong contrast for  
12 visually dominant change to the character and  
13 quality of the existing valley landscape.

14 Add to that, seven 40-story, highrise  
15 towers, with brightly lit roofs to that scenario,  
16 and we would clearly conclude that a strong level  
17 of contrast to visual change had occurred.

18 Now, under both BLM and CEC methods of  
19 visual assessment, this strong level of visual  
20 contrast, or visual change in the context of a  
21 moderate or VR class 3 level of visual sensitivity  
22 represents, by definition, a substantial  
23 significant impact.

24 So within the standard frameworks of  
25 analysis that the two agencies apply to all

1 projects, our conclusions are relatively clear-  
2 cut. In BLM VRM parlance, this project would  
3 demand attention, will not be overlooked, and is  
4 dominant in the landscape.

5 That phrase is the VRM definition for  
6 conformance with VRM class 4. By definition, it  
7 is not compatible with VR class 3. The existing  
8 site is VR inventory class 3.

9 I also think a key point here is that  
10 the existing setting does not have to be pristine,  
11 that is completely free of manmade intrusions, for  
12 significant impacts to occur. I think, as the  
13 previous photos demonstrated, the setting is not  
14 pristine, but it is predominately intact and  
15 natural in character, and has many striking  
16 features.

17 If the valley was pristine, it would  
18 certainly have been rated VR class 2 by BLM, or  
19 high to moderate in visual sensitivity, in CEC  
20 terms. And have required a still lower impact  
21 threshold.

22 In making our conclusions about the  
23 anticipated level of visual change, we were  
24 strongly influenced by available information about  
25 the actual appearance of similar facilities, and

1 especially the role of glare in the overall visual  
2 effect, which has been discussed a lot already  
3 today.

4 Some photos of other power projects were  
5 presented in the staff assessment, which we will  
6 show in a moment.

7 As we discussed in the FSA, we had  
8 concerns that the actual appearance of the  
9 projects could be understated in the simulations  
10 provided by the applicant.

11 This is not necessarily criticism of the  
12 simulations. It is possible the problems may  
13 result from technical limitations of the  
14 simulation process.

15 For example, the brightness of glare  
16 cannot be represented in the printed image.  
17 However we believe the certain decisive aspects of  
18 the project appearance are not clearly conveyed in  
19 the simulations.

20 James Jewell discussed the glare-related  
21 issues much better earlier, but I would like to  
22 show some of the images that originally raised  
23 these issues. The following photos are mostly by  
24 Sandia National Laboratories, depict photos of the  
25 Solar One and Solar Two projects in Daggett. Some

1 images are also of the PS-10 Solarcar project in  
2 Seville.

3 Aspects of the project appearance that  
4 are not clear in the simulations include the  
5 mechanical/industrial character of the mirror  
6 units, themselves.

7 Another is the effect of very bright  
8 diffuse or spread reflection as seen from elevated  
9 viewpoints. The diffuse reflection effect you see  
10 in these photos appears in such a large proportion  
11 of aerial views of power tower projects that we  
12 are strongly inclined to assume that similar  
13 effects would be experienced at least occasion by  
14 viewers in the mountains.

15 Lastly, we're concerned with the  
16 brightness of the receivers, as has been discussed  
17 quite a bit already. This is the Solarcar  
18 project.

19 To paraphrase my understanding of what  
20 James Jewell has told me, based on the data he had  
21 available, the receivers are not a hazard.  
22 However, they are very bright; they will be  
23 distracting, and a visual nuisance to motorists.

24 They may interfere with the ability to focus  
25 on the darker mountains behind them.

1           As Mr. Jewell said, we're not concerned  
2 with glare from the heliostats to observers in the  
3 valley. He has, however, experience concern about  
4 off-axis focusing of heliostats, as he discussed  
5 earlier, and as depicted in these last images of  
6 the Solarcar Project.

7           In their prehearing testimony the  
8 applicant raised questions about the number of  
9 visitors in the Clark Mountain area due to issues  
10 of sampling methods used by the park service.  
11 Plus there's a range of estimates right now of  
12 visitor numbers ranging from 12,300 per year,  
13 according to the applicant's calculations, to up  
14 to 41,000 or more, according to the park service's  
15 studies.

16           Staff simply notes that according to  
17 BLM's guidelines for classifying levels of  
18 recreational use as a determinant of visual  
19 sensitivity from VRM handbook 8410-1, a high use  
20 level, and therefore high sensitivity, is defined  
21 as 10,000 visitors per year or more.

22           As we stated previously, staff believes  
23 the project is inconsistent with various scenic  
24 policies of the County of San Bernardino. I will  
25 not repeat those at this time.

1                   Staff concluded that there would be  
2                   significant adverse cumulative impacts within the  
3                   Ivanpah Valley. This is a map highlighting some  
4                   of the anticipated cumulative projects foreseen in  
5                   the valley. Clearly there is considerable  
6                   development planned in the area.

7                   However, I would like to focus right now  
8                   on the issue of regional cumulative impacts. The  
9                   applicant, in their prehearing testimony, has  
10                  questioned the relevance or appropriateness of  
11                  addressing regional or desert-wide cumulative  
12                  visual impacts. Staff not only disagrees with  
13                  this view, but feels that this is an important  
14                  public issue that needs to be considered by the  
15                  Commissioners, not only in relation to this  
16                  project specifically, but to all renewable  
17                  projects going forward.

18                  This map shows many or most of the known  
19                  current applications for renewable projects in the  
20                  souther California desert. The green lines  
21                  indicate eligible state scenic highway segments.  
22                  I've highlight the projects that appear likely to  
23                  be visible from major highways based solely on  
24                  proximity of the project, footprints on the map.

25                  These appear as the red dots.

1                   If nothing else, I think this map makes  
2                   it clear that substantial portions of major  
3                   highways crossing the southern California desert  
4                   could potentially be affected visually by proposed  
5                   renewable projects.

6                   Further, these highways are the  
7                   principal way that the vast majority of visitors  
8                   to the desert experience it. That experience may  
9                   be substantially changed on a cumulative basis.

10                  Staff believes the criteria for  
11                  mitigating and reducing these cumulative desert-  
12                  wide effects on highway viewers, to the extent  
13                  feasible, should be developed to reduce these  
14                  potential impacts to an acceptable level.

15                  Criteria such as set-backs from highways  
16                  or siting of more visually prominent technologies  
17                  on less visually exposed sites are examples of  
18                  measures that might be considered.

19                  To conclude, in the applicant's  
20                  prehearing testimony a statement of mine in the  
21                  FSA was cited to the effect the project would  
22                  appear more acceptable than many other forms of  
23                  industrial development.

24                  In response to some comments received in  
25                  the preliminary staff assessment, I had wanted, in

1       that discussion, to clarify a distinction between  
2       strong visual change, the primary measure in the  
3       methodology we use, and visual quality, as such.

4               I think it is very clear that the  
5       proposed project would result -- represent not  
6       only a very strong change in visual character from  
7       a predominately natural condition to a highly  
8       artificial, manmade industrial character. But  
9       also a decline in visual quality in a level of  
10      scenic attractiveness and value to viewers.

11              However, I thought it was also  
12      worthwhile to make a distinction between very low  
13      visual quality, the kind of degraded condition we  
14      associate with a large mine or an oil refinery,  
15      for example, and the project which would exhibit  
16      some characteristics that are less negative in the  
17      eyes of most viewers.

18              These qualities include the formal unity  
19      of the layout, in circles; and the simplicity of  
20      the tower forms.

21              Having said that, it would be mistaken  
22      to conclude that staff considers the project  
23      attractive or on a scenic par with the natural  
24      landscape it would be replacing.

25              Just as if the site were being replaced

1 by big box stores and parking lots, or by large-  
2 scale residential development, visual quality,  
3 though not extremely low, would decline. A  
4 predominately natural landscape would be lost.

5 Describing I-15 in the segment as  
6 scenic, as it currently is by the County of San  
7 Bernardino, would no longer make sense.

8 The original rationale for BLM's  
9 classification of this valley is multiple use  
10 Class L, or limited, under the California Desert  
11 Conservation Area Plan, would be put in question.

12 That is essentially the standard of  
13 impact we applied in this analysis. By that  
14 standard, impacts to viewers on I-15 and the  
15 Mojave National Preserve, would, in our view, be  
16 significant.

17 MR. RATLIFF: Does that conclude your  
18 testimony?

19 MR. KANEMOTO: Yes, it does.

20 MR. RATLIFF: The witness is available.

21 HEARING OFFICER KRAMER: Any cross-  
22 examination from any of the other intervenors?  
23 Anyone on the telephone?

24 Is Mr. Harris or Mr. Wheatland  
25 conducting this part?

1                   MR. WHEATLAND: I will have questions  
2 for the witness.

3                   HEARING OFFICER KRAMER: Go ahead.

4                   MR. WHEATLAND: Could we bring up the  
5 lights in the room and ask Mr. Kanemoto to come  
6 take a seat?

7                   PRESIDING MEMBER BYRON: Mr. Wheatland,  
8 is your microphone on? I need to ask you to be  
9 close so folks on the --

10                  MR. WHEATLAND: Yes.

11                  PRESIDING MEMBER BYRON: -- phone can  
12 hear you.

13                  MR. WHEATLAND: All right, I am closer  
14 to the mic.

15                                   CROSS-EXAMINATION

16 BY MR. WHEATLAND:

17                   Q     Good afternoon, Mr. Kanemoto. My name  
18 is Gregg Wheatland and I'll be asking questions on  
19 behalf of the applicant.

20                                   Let's begin at page 6-12.1 of the final  
21 staff assessment where you state that, quote, "the  
22 context of the project is, one, directly adjoining  
23 a national park and, two, designated wilderness  
24 areas." End quote.

25                                   Are you aware that the project does not

1 directly adjoin a national park?

2 MR. KANEMOTO: Perhaps I misused the  
3 word adjoined. They are within a mile.

4 MR. WHEATLAND: It's actually the  
5 closest point of the project to the national  
6 preserve is a little bit over a mile away, isn't  
7 that correct?

8 MR. KANEMOTO: I wouldn't dispute that.

9 MR. WHEATLAND: And are you aware that  
10 the project does not directly adjoin a wilderness  
11 area?

12 MR. KANEMOTO: Yes.

13 MR. WHEATLAND: And approximately how  
14 far away is the project from the wilderness area  
15 at its closest point?

16 MR. KANEMOTO: Somewhat over a mile.

17 MR. WHEATLAND: Are you aware that the  
18 Mojave National Preserve is a national preserve  
19 and not a national park?

20 MR. KANEMOTO: Yes.

21 MR. WHEATLAND: What is your  
22 understanding of the differences between a  
23 national park and a national preserve?

24 MR. KANEMOTO: Well, for these visual  
25 purposes I don't see a major distinction.

1                   MR. WHEATLAND: Isn't it true that  
2                   extraction uses are permitted in a national  
3                   preserve, where they are not generally permitted  
4                   in a national park?

5                   MR. KANEMOTO: That's true.

6                   MR. WHEATLAND: And isn't it true that  
7                   hunting is permitting in a preserve, but generally  
8                   not in a national park?

9                   MR. KANEMOTO: That's true.

10                  MR. WHEATLAND: And the grazing is  
11                  permitted in a preserve, but not a national park?

12                  MR. KANEMOTO: Certainly.

13                  MR. WHEATLAND: Now you mentioned the  
14                  national scenic area. Is the annexed unit of the  
15                  preserve, the Mojave National Preserve, was that  
16                  included in the boundaries of the original  
17                  national scenic area?

18                  MR. KANEMOTO: I'm sorry, could you  
19                  repeat that?

20                  MR. WHEATLAND: Sure. There's an  
21                  annexed portion of the Mojave National Preserve  
22                  that includes the Clark Peak.

23                  MR. KANEMOTO: Right.

24                  MR. WHEATLAND: Was that unit included  
25                  within the original National Scenic Area?

1                   MR. KANEMOTO: Yes. That's my  
2 understanding.

3                   MR. WHEATLAND: You're not sure?

4                   MR. KANEMOTO: I'm fairly sure.

5                   MR. WHEATLAND: Okay. Now, I'd like you  
6 to turn to what is visual resources figure 2 of  
7 the final staff assessment. Could you turn to  
8 that figure, please. That was a graphic that was  
9 earlier in your PowerPoint presentation, as well.

10                  MR. KANEMOTO: Yes, that's right.

11                  (Pause.)

12                  MR. WHEATLAND: Do you have it before  
13 you?

14                  MR. KANEMOTO: I'll need to pull it up  
15 on the projector.

16                  (Pause.)

17                  MR. WHEATLAND: Thank you for putting it  
18 up. This figure shows that KOP-9 is taken from  
19 the Umberci Mine within the statewide wilderness,  
20 is that correct?

21                  MR. KANEMOTO: Yes.

22                  MR. WHEATLAND: Are you aware that KOP-9  
23 was actually taken near the road and transmission  
24 lines outside the wilderness area and just one  
25 mile from the project site?

1                   MR. KANEMOTO: Well, I had that strong  
2                   suspicion. Our request to the applicant was that  
3                   they take a picture in the vicinity of the Umberci  
4                   Mine or en route to it. And this is the picture  
5                   that they took. I wasn't present, and you know,  
6                   so we don't know the exact location. It's  
7                   obviously it's en route to the mine.

8                   MR. WHEATLAND: Okay, I don't want to  
9                   interrupt you. Were you part of the staff team  
10                  that requested the additional KOPs, including KOP-  
11                  9?

12                  MR. KANEMOTO: I was. These particular  
13                  recreational viewpoints were selected by the BLM  
14                  Staff on the basis of their local recreational  
15                  experience.

16                  MR. WHEATLAND: All right. Well, from a  
17                  local recreational experience, the request for  
18                  KOP-9 was to be taken from a ridge above the  
19                  Umberci Mine where there was no trail or road,  
20                  isn't that correct?

21                  MR. KANEMOTO: I really don't recall  
22                  those particular details in the request, no.

23                  MR. WHEATLAND: Do you recall reading  
24                  the applicant's data response in which these KOPs  
25                  were provided?

1 MR. KANEMOTO: Yes.

2 MR. WHEATLAND: And do you recall the  
3 applicant informing the staff of the difficulties  
4 of obtaining a KOP at KOP-9, and that an  
5 alternative KOP was selected?

6 MR. KANEMOTO: I believe so.

7 MR. WHEATLAND: All right. Now, on your  
8 map here, what does the dark lines represent?  
9 These aren't the boundaries of the preserve, are  
10 they?

11 MR. KANEMOTO: No. Exactly. Those are  
12 the lines of the VR inventory classes that were  
13 mapped by the BLM team.

14 MR. WHEATLAND: Well, are they? Because  
15 your map shows the Umberci Mine being within that  
16 VRM assessment, isn't that correct?

17 MR. RATLIFF: I object; the question's  
18 been asked and answered.

19 MR. WHEATLAND: Well, let me ask it this  
20 way then. Does your map represent that the  
21 Umberci Mine is within the VRM assessment of the  
22 Statewide Wilderness?

23 MR. KANEMOTO: Yes.

24 MR. WHEATLAND: Does not, in fact, the  
25 BLM assessment exclude the Umberci Mine?

1 MR. KANEMOTO: I'm sorry?

2 MR. WHEATLAND: Doesn't, in fact, the  
3 BLM assessment, VRM assessment, exclude the  
4 Umberci Mine?

5 MR. KANEMOTO: I don't believe so.

6 MR. WHEATLAND: Well, could you please  
7 turn to that figure on the PowerPoint presentation  
8 where you provided the BLM assessment. There's a  
9 map that showed their assessment. Could you turn  
10 to that, please.

11 MR. KANEMOTO: I'm not sure I understand  
12 your question.

13 MR. WHEATLAND: You had a slide in your  
14 PowerPoint presentation that showed the BLM  
15 assessment, isn't that correct? The BLM --

16 MR. KANEMOTO: -- I see, sure,  
17 certainly.

18 (Pause.)

19 MR. KANEMOTO: This is the figure you're  
20 referring to?

21 MR. WHEATLAND: Right. Now, there's a  
22 large white block there that's labeled as  
23 California, but you've indicated that that's not  
24 in California, that's the northern unit of the  
25 Mojave National Preserve, is that correct?

1 MR. KANEMOTO: Correct.

2 MR. WHEATLAND: And just above the upper  
3 right-hand corner of that unit of the Mojave  
4 National Preserve, there's a white area that  
5 excluded from the BLM assessment. Do you see  
6 that?

7 MR. KANEMOTO: Yes.

8 MR. WHEATLAND: Isn't that Umberci Mine?

9 MR. KANEMOTO: Not that I'm aware of.

10 MR. WHEATLAND: What is that white area,  
11 then?

12 MR. KANEMOTO: My understanding was that  
13 that entire area is the Stateline Wilderness Area.

14 MR. WHEATLAND: All right, well, we'll  
15 go on then. At page 6.12-10, if you could turn to  
16 that page of the FSA, please.

17 You state that the fact that the Mojave  
18 National Preserve, the Stateline and Mesquite  
19 Wilderness Areas were designated for special  
20 status under the Desert Protection Act reflects  
21 their unusually high scenic and recreational  
22 value, is that correct?

23 MR. KANEMOTO: Yes.

24 MR. WHEATLAND: Now, are you referring  
25 to the California Desert Protection Act of 1994?

1 MR. KANEMOTO: Yes.

2 MR. WHEATLAND: Have you read that Act?

3 MR. KANEMOTO: I've read parts of it.

4 MR. WHEATLAND: Have you read the part  
5 that applies to the Mojave National Preserve?

6 MR. KANEMOTO: I've read parts of it.

7 MR. RATLIFF: Can you be more specific,  
8 Mr. Wheatland?

9 MR. WHEATLAND: Have you read Title V,  
10 section 501?

11 MR. KANEMOTO: I don't recall.

12 MR. WHEATLAND: Do you recall if in  
13 Title V, section 501, it makes any reference to  
14 scenic values of the National Preserve?

15 MR. KANEMOTO: Not specifically.

16 MR. WHEATLAND: But it does refer to  
17 natural, cultural, historical and recreational  
18 values, isn't that right?

19 MR. RATLIFF: Objection. We don't have,  
20 I think, copies of that before us. Can I get the  
21 relevance of your question to the witness?

22 MR. WHEATLAND: Yeah. In fact, Mr.  
23 Kanemoto, it doesn't refer anywhere to the scenic  
24 values of the preserve when Congress created this  
25 preserve, isn't that right?

1                   MR. RATLIFF: Which specific provisions  
2 are you referring to?

3                   MR. WHEATLAND: The Mojave National  
4 Preserve. But let's do this, --

5                   MR. RATLIFF: Which provisions of the  
6 statute --

7                   MR. WHEATLAND: Title V, section 501.

8                   MR. RATLIFF: Does not refer to the  
9 scenic values --

10                  MR. WHEATLAND: Of the Mojave National  
11 Preserve.

12                  MR. RATLIFF: -- of the Mojave -- okay.

13                  MR. WHEATLAND: But let's do this, this  
14 is a matter that the Commission, itself, can take  
15 official notice of, so I'd prefer to move on.

16                  MR. RATLIFF: Yeah, and I would point  
17 out, I mean you can say that about a particular  
18 provision, but there are other provisions that we  
19 might also make reference to, as well.

20                  MR. WHEATLAND: Right, but the only  
21 reason I am asking the witness this question was  
22 he cited the Act in his testimony. And since he  
23 cited the Act, I presume that he read it. But I  
24 can move on.

25                  We talked a minute ago about the

1           presumption that if an area is included in the  
2           boundaries of a preserve due to its special  
3           values, would it be also reasonable to assume that  
4           if an area is not included within the boundaries  
5           of the preserve it does not contain those same  
6           special values?

7                         MR. KANEMOTO:  Would you please repeat  
8           that question?

9                         MR. WHEATLAND:  Right.  Your presumption  
10          is that by the mere designation of the Mojave  
11          National Preserve it contained some special scenic  
12          values.  Would it be equally reasonable to presume  
13          that areas not included within boundaries of the  
14          preserve did not contain those values?

15                        MR. KANEMOTO:  No, I wouldn't say so.

16                        MR. WHEATLAND:  Are you aware that the  
17          National Park Service has prepared a management  
18          plan for the Mojave National Preserve?

19                        MR. KANEMOTO:  Yes.

20                        MR. WHEATLAND:  Have you read that plan?

21                        MR. KANEMOTO:  I have not read that  
22          plan.

23                        MR. WHEATLAND:  Have you visited the  
24          project site?

25                        MR. KANEMOTO:  Oh, yes.

1                   MR. WHEATLAND: How many times have you  
2 visited the site?

3                   MR. KANEMOTO: Three times.

4                   MR. WHEATLAND: And for how long?

5                   MR. KANEMOTO: Usually for a day each.

6                   MR. WHEATLAND: Have you visited each of  
7 the KOPs?

8                   MR. KANEMOTO: Oh, no.

9                   MR. WHEATLAND: You have not?

10                  MR. KANEMOTO: I have not.

11                  MR. WHEATLAND: So KOP-9, have you  
12 visited that KOP?

13                  MR. KANEMOTO: No, I did not.

14                  MR. WHEATLAND: KOP-10, did you visit  
15 that KOP?

16                  MR. KANEMOTO: No, I didn't visit any of  
17 the recreational KOPs. We were using, and that's  
18 one of the reasons why we typically request  
19 simulations as evidence for the AFC is so we can  
20 use them as a support for the analysis of visual  
21 resources without having to necessarily have been  
22 in that location.

23                  MR. WHEATLAND: So just so I understand,  
24 you didn't view the project site from any location  
25 to the west of the project site on the eastern

1 flanks of the Mojave National Preserve, is that  
2 correct?

3 MR. KANEMOTO: That's right.

4 MR. WHEATLAND: And you didn't view the  
5 project site from any location to the north of the  
6 site from the approximate vicinity of KOP-9 or  
7 elsewhere?

8 MR. KANEMOTO: I viewed it from the foot  
9 of those hills on the road that you use to go to  
10 the Umberci Mine. But I didn't go up that road  
11 because I didn't have a four-wheel-drive vehicle.

12 MR. WHEATLAND: And on these three  
13 occasions, each of which was for approximately one  
14 day, approximately how many other visitors did you  
15 encounter in the vicinity of the project site,  
16 excluding the golf course?

17 MR. KANEMOTO: A few. A small number.

18 MR. WHEATLAND: Less than a dozen?

19 MR. KANEMOTO: Yes.

20 MR. WHEATLAND: Did you visit the KOPs  
21 that are reflected on I-15?

22 MR. KANEMOTO: Oh, yes.

23 MR. WHEATLAND: And in observing those  
24 sites, were you driving or did you pull over to  
25 view the project site?

1                   MR. KANEMOTO: Oh, no, I walked around  
2 for quite a long time on several occasions, yeah.

3                   MR. WHEATLAND: Walked around where?

4                   MR. KANEMOTO: Well, I pulled off at the  
5 Yates Well Road interchange, and on several  
6 locations and walked all around that area just to  
7 take various photographs and so on.

8                   MR. WHEATLAND: And in the most recent  
9 photos that you provided to us last week, did you  
10 actually pull over on I-15, as well?

11                   MR. KANEMOTO: I did.

12                   MR. WHEATLAND: Do you expect that many  
13 other drivers will do as you did to pull over on  
14 the shoulder of the freeway to observe the project  
15 site?

16                   MR. KANEMOTO: Not if they can help it.  
17 But I thought it was very important to take those  
18 photographs, because without getting photographs  
19 of that segment of the highway, it's really  
20 possible to not understand how incredibly visually  
21 exposed the entire site is to most of that  
22 highway. It's because of the slope of the Bahadas  
23 (phonetic), the exposure is quite dramatic.

24                   MR. WHEATLAND: If you're pulled over on  
25 the shoulder of the --

1 MR. KANEMOTO: No, no, no, just --

2 MR. WHEATLAND: -- interstate --

3 MR. KANEMOTO: -- just if you're  
4 traveling on the highway. Because it's at a  
5 higher elevation, you know, you're looking up  
6 towards it in a way that makes the entire Bahada  
7 very visible. I think as the photographs  
8 illustrated it.

9 MR. WHEATLAND: Between Nipton Road and  
10 Primm, are there any designated scenic viewpoints  
11 on I-15?

12 MR. KANEMOTO: I'm sorry, could you  
13 repeat --

14 MR. WHEATLAND: Yes. Between Nipton  
15 Road and Primm are there any designated scenic  
16 viewpoints on I-15?

17 MR. KANEMOTO: No designated scenic  
18 viewpoints that I'm aware of.

19 MR. WHEATLAND: Are there any visitor  
20 facilities along this stretch of I-15?

21 MR. KANEMOTO: The Primm Golf Course.

22 MR. WHEATLAND: Are there any designated  
23 pull-outs along I-15?

24 MR. KANEMOTO: No.

25 MR. WHEATLAND: And what would you

1 estimate to be the average rate of speed on this  
2 stretch of I-15?

3 MR. KANEMOTO: Well, I've heard a lot of  
4 different reports. I've heard everything from  
5 zero to 80 miles an hour. And I experienced a lot  
6 of that range, myself.

7 PRESIDING MEMBER BYRON: Particularly on  
8 a Friday night.

9 (Laughter.)

10 MR. WHEATLAND: Well, turning to a  
11 different subject, the FSA discusses glare. How  
12 do you define the term glare as it's used in your  
13 testimony?

14 MR. KANEMOTO: Well, you know, I  
15 definitely don't put myself forth as any sort of  
16 expert on glare. I received all of my advice  
17 about glare from James Jewell. But my  
18 understanding from how, for example, the IES  
19 defines glare with respect to motorists and so on,  
20 has to do with visual contrast between the source  
21 of glare and the visual background against what's  
22 being watched.

23 And that's particularly relevant in this  
24 case because, you know, I think the object of  
25 concern are the Clark Mountains, which are very

1 dark in color. And the lights, which are very  
2 bright, have as much contrast as one can almost  
3 imagine in daylight conditions, you know.

4 But that's my understanding of glare, is  
5 it's defined by contrast.

6 MR. WHEATLAND: Well, what's the  
7 difference in your mind between reflection and  
8 glare?

9 MR. KANEMOTO: Well, I don't think there  
10 is a difference. I think reflection is a source  
11 of glare. Is one source of glare.

12 MR. WHEATLAND: You used the term glare  
13 in different ways in your section of the FSA. You  
14 talk about discomfort glare, disability glare --

15 MR. KANEMOTO: Yes.

16 MR. WHEATLAND: -- nuisance glare, --

17 MR. KANEMOTO: Yes.

18 MR. WHEATLAND: -- specular glare --

19 MR. KANEMOTO: Yes.

20 MR. WHEATLAND: -- diffuse glare.

21 MR. KANEMOTO: Yes.

22 MR. WHEATLAND: Are these different  
23 types of glare?

24 MR. KANEMOTO: Yes, to my understanding  
25 they are. And the source of those are, you know,

1 a small number of technical articles that I read  
2 that I was directed to by others. And all those  
3 terms are used to distinguish between different  
4 forms of glare.

5 MR. WHEATLAND: All right. What do you  
6 mean by discomfort glare, as that term is used in  
7 your testimony?

8 MR. KANEMOTO: Well, I think discomfort  
9 glare is a term that seems to be used to refer to  
10 levels that are below any obvious threshold of  
11 physical danger. But is trying to evoke the sense  
12 that there's an experience of discomfort.

13 MR. WHEATLAND: And what do you mean by  
14 disability glare?

15 MR. KANEMOTO: Disability glare in the  
16 articles that I read referred specifically to  
17 glare that could interfere with a person's ability  
18 to navigate.

19 MR. WHEATLAND: And what did you mean by  
20 nuisance glare?

21 MR. KANEMOTO: The same as discomfort  
22 glare. They seem to be used synonymously, and if  
23 there's a technical difference between the two  
24 words, I'm not aware of it.

25 MR. WHEATLAND: You also used the term

1 specular glare and diffuse glare. What did you  
2 mean by these terms?

3 MR. KANEMOTO: Yes. Specular glare, you  
4 know, refers to the specific reflection of an  
5 image of an object. And in this case we're  
6 talking about the sun, the actual reflected image  
7 of the sun, what they sometimes call columnar, a  
8 columnar light rays.

9 Diffuse glare refers to everything else.  
10 Rays that do not follow, you know, a direct  
11 geometric reflective path, but actually diverge  
12 from that. And, yeah, that's what that refers to.

13 MR. WHEATLAND: And diffuse glare?  
14 Sorry, that's diffuse glare.

15 MR. KANEMOTO: Diffuse glare, yes.  
16 Diffuse glare is everything from what gives this  
17 cup color, you know, to the bright lights that I'm  
18 seeing on the ceiling there, because it's being  
19 reflected at various angles.

20 MR. WHEATLAND: And how is specular  
21 glare different?

22 MR. KANEMOTO: Specular glare is the  
23 direct image of a bright object.

24 MR. WHEATLAND: Now you state that at  
25 KOP-10, bright receiver glare is expected during

1 all sunny periods. That's at page 26 of the  
2 visual resources testimony. By bright glare what  
3 exactly do you mean?

4 MR. RATLIFF: Could we take a moment  
5 just to look --

6 MR. WHEATLAND: Oh, certainly.

7 MR. RATLIFF: Which portion of the page  
8 are you --

9 MR. KANEMOTO: Could you repeat the  
10 sentence, please.

11 MR. RATLIFF: Could you tell us --

12 MR. WHEATLAND: I don't have the  
13 sentence before me, but I will read from your  
14 testimony.

15 MR. KANEMOTO: Okay.

16 MR. WHEATLAND: It's on page 6.12-26.

17 MR. KANEMOTO: Yes.

18 MR. WHEATLAND: As depicted in visual  
19 resources figure 16B, even at this distance the  
20 project would display a strong level of form  
21 introducing an element of highly manmade character  
22 into a wide portion of the field of view. This  
23 mirror fields would vary in their appearance from  
24 dark blue to bright solar diffuse glare.

25 And then you go on to say, at certain

1 times the mirror rays would potentially create  
2 strong diffuse or spray glare, particularly in the  
3 morning.

4 And you go on to say, bright receiver  
5 glare is anticipated during all sunny periods.

6 And I'm asking you what did you mean by  
7 bright receiver glare?

8 MR. RATLIFF: May I interject just a  
9 moment here. A critical part of one of the  
10 sentences was left out. The sentence actually  
11 reads: The mirror fields would vary in their  
12 appearance from dark blue to bright diffuse glare,  
13 as illustrated in visual resources 7B."

14 I think that's the answer to the  
15 question.

16 MR. KANEMOTO: Yes, that is the answer  
17 to the question. That was my intent. That was  
18 why I showed the figures that I showed earlier,  
19 which were essentially the same photographs.

20 I was referring to this phenomenon where  
21 the majority of photographs of power tower  
22 projects from the air have very bright emissions  
23 of diffuse glare. And we were trying to find out  
24 just how bright and how frequent that phenomenon  
25 is. But, you know, we don't know.

1                   MR. WHEATLAND: Well, thank you. That  
2 answers my question. I needed a reference to  
3 understand what you meant by that term.

4                   MR. KANEMOTO: Okay.

5                   MR. WHEATLAND: You also referred to  
6 such views, you're saying such views may be  
7 obstructed, is that right?

8                   MR. KANEMOTO: I can't find the notes.  
9 Could you read the sentence?

10                  MR. WHEATLAND: Sure, I'm going to read  
11 it for you. It's also on 6.12-26. The sentence  
12 I'm reading is: The solar receivers could  
13 potentially interfere with the ability to see such  
14 views due to strong nuisance glare."

15                  MR. KANEMOTO: I really have to find the  
16 sentence --

17                  MR. WHEATLAND: Sure.

18                  MR. RATLIFF: Can you tell us where on  
19 the page that is?

20                  MR. WHEATLAND: I'm looking, too. Yeah,  
21 it's in the paragraph that's the third from the  
22 bottom on page 26.

23                  MR. KANEMOTO: Yes. The solar receivers  
24 could potentially interfere with the ability to  
25 see such views due to strong nuisance glare. Is

1           that what you said?

2                       MR. WHEATLAND:  Yeah, yeah, the project  
3           would tend to dominate but not physically obstruct  
4           scenic views of the valley as seen from the high  
5           elevations in the mountains.

6                       MR. KANEMOTO:  Yes.

7                       MR. WHEATLAND:  The solar receivers  
8           could potentially interfere with the ability to  
9           see such views due to strong nuisance glare.

10                      MR. KANEMOTO:  Right.

11                      MR. WHEATLAND:  And so when you're  
12           talking about such views, you're talking about  
13           views of the valley?

14                      MR. KANEMOTO:  Views of the mountains.

15                      MR. WHEATLAND:  Oh, views of the  
16           mountains.  Okay.  And just to be clear, you base  
17           this assessment on your review of the KOP photos,  
18           having not personally been to that KOP, is that  
19           correct?

20                      MR. KANEMOTO:  No.  All the KOPs where  
21           you would be viewing the mountains from I-15 I  
22           visited many times.  But, you know, the  
23           conclusions were drawn from looking at those  
24           photographs of existing projects.  And from  
25           discussions with James Jewell about the nature of

1 contrast and glare.

2 MR. WHEATLAND: All right. Now, when  
3 you talk about bright glare and very bright glare  
4 in your testimony, are you talking about the same  
5 degree of glare, or differing degrees of glare?

6 MR. KANEMOTO: I'm sorry, what were the  
7 two words?

8 MR. WHEATLAND: Well, take a look, for  
9 example, on KOP-9, which is one mile from the  
10 project site. You're talking there about bright  
11 solar diffuse glare, isn't that correct?

12 MR. KANEMOTO: I'm sorry, could you read  
13 the sentence?

14 MR. WHEATLAND: Well, one sentence says:  
15 Bright receiver glare is anticipated during all  
16 sunny periods.

17 MR. KANEMOTO: Bright receiver glare.  
18 Yes.

19 MR. WHEATLAND: All right, --

20 MR. KANEMOTO: I'm sorry, what was the  
21 question again?

22 MR. WHEATLAND: Well, we're talking  
23 about KOP-9, which is one mile from the project  
24 site where you speak of bright solar glare. Now,  
25 on KOP-3, which is 3.5 miles from the project

1 site, you speak of very bright solar receiver  
2 units. And I'm trying to get a sense of when  
3 something is bright or very bright, are you  
4 intending a distinction --

5 MR. RATLIFF: Could we have a reference  
6 of the testimony that --

7 MR. WHEATLAND: Sure.

8 MR. KANEMOTO: The short answer to that  
9 question is, as James said earlier, the answer is  
10 basically no, no one knows because there is no  
11 codified measure of very bright or bright. But  
12 it's clear to experts like James that they are  
13 very bright. In fact, he has described them  
14 specifically as very bright.

15 MR. WHEATLAND: Well, does the  
16 brightness decrease with the distance from the  
17 receivers?

18 MR. KANEMOTO: Yes.

19 MR. WHEATLAND: So, wouldn't it stand to  
20 reason that if you're 2.5 miles away from the  
21 receivers they're going to be less bright than if  
22 you are one mile away?

23 MR. KANEMOTO: Yes, but I don't know how  
24 much less bright they are experientially. And I  
25 don't think anybody knows, that's the problem.

1                   That is our concern.  Actually we have  
2                   learned a little bit about the phenomenon just  
3                   talking intensively about it since the time this  
4                   was written.  But we still have no answer to those  
5                   questions.

6                   MR. WHEATLAND:  We talked earlier about  
7                   the difference between diffuse and specular glare.  
8                   Sometimes you use the term diffuse, and sometimes  
9                   you use the term specular.

10                  MR. KANEMOTO:  It's a very important  
11                  distinction.

12                  MR. WHEATLAND:  And does it vary by KOP?

13                  MR. KANEMOTO:  No.

14                  MR. WHEATLAND:  Well, then why do you  
15                  refer to diffuse in some KOPs and specular in  
16                  others?

17                  MR. KANEMOTO:  I'm not sure what the  
18                  context of the statement that you're referring to  
19                  is.  But specular glare, as I said, refers  
20                  specifically to an image of the sun, a direct  
21                  image of the sun.  Or, you know, other light  
22                  source.

23                  MR. WHEATLAND:  Now, you have  
24                  participated in the preparation of many EIRs or  
25                  EISs over the course of your career, is that

1 correct?

2 MR. KANEMOTO: Yes.

3 MR. WHEATLAND: For visual resources, is  
4 your role typically to prepare the visual  
5 simulations, or is it to prepare the actual visual  
6 analysis, as you did in this case?

7 MR. KANEMOTO: Both.

8 MR. WHEATLAND: Both. Approximately how  
9 many EIRs or EISs have you prepared the visual  
10 analysis?

11 MR. KANEMOTO: I don't know the exact  
12 number, but probably close to 200. It could be  
13 more or less, I'm not sure. Over 25 years.

14 MR. WHEATLAND: And of those, did any of  
15 those involve a power plant?

16 MR. KANEMOTO: Yes, many did.

17 MR. WHEATLAND: And what were those, for  
18 example?

19 MR. KANEMOTO: Some recent projects were  
20 Carlsbad, the Magnolia Project, Contra Costa  
21 Project. I'm not thinking of the names right now,  
22 there's many. I've worked on dozens.

23 MR. WHEATLAND: And each of these  
24 involved cumulative impacts analysis, isn't that  
25 correct?

1 MR. KANEMOTO: Yes.

2 MR. WHEATLAND: In this FSA you analyzed  
3 the cumulative visual impacts within the viewshed.  
4 You also analyzed the cumulative visual impacts  
5 within the region outside the viewshed, is that  
6 correct?

7 MR. KANEMOTO: Yes.

8 MR. WHEATLAND: For these other EIRs or  
9 EISs that you have authored, in how many cases  
10 have you analyzed the cumulative impacts of the  
11 project outside the viewshed?

12 MR. KANEMOTO: Few or none.

13 MR. WHEATLAND: And of these other EIRs  
14 or EISs in which you prepared the visual  
15 simulations, in how many cases did the EIR analyze  
16 cumulative impacts of the project outside the  
17 viewshed?

18 MR. KANEMOTO: I'm sorry, could you --

19 MR. WHEATLAND: Well, you also -- not  
20 only did you prepare analyses, but sometimes you  
21 just prepared the visual simulation, is that  
22 right?

23 MR. KANEMOTO: Of power plants are you  
24 saying?

25 MR. WHEATLAND: Yeah, well, of power

1 plants, for example.

2 MR. KANEMOTO: Not power plants.

3 MR. WHEATLAND: Okay.

4 MR. KANEMOTO: As a rule, for power  
5 plants, the applicant has produced the  
6 simulations.

7 MR. WHEATLAND: Did you review the BLM  
8 handbook in preparing this FSA?

9 MR. KANEMOTO: Yes.

10 MR. WHEATLAND: And did you read in that  
11 handbook where it says the geographic scope in  
12 preparing cumulative analyses is generally based  
13 on the natural boundaries of the resource  
14 affected, rather than the jurisdictional  
15 boundaries?

16 MR. KANEMOTO: Exactly.

17 MR. WHEATLAND: And did you see where it  
18 says, for example, if a proposal affects water  
19 quality and air quality the appropriate cumulative  
20 effects analysis would be the watershed and the  
21 airshed?

22 MR. KANEMOTO: Sure.

23 MR. WHEATLAND: Then would it then not  
24 follow that in analyzing the visual impacts, the  
25 appropriate cumulative analysis would be the

1 viewshed?

2 MR. KANEMOTO: Well, I think the  
3 viewshed is one appropriate base in an analysis,  
4 but I don't think it's the only one. And I tried  
5 to explain the reasons why I feel that way in the  
6 presentation earlier.

7 MR. WHEATLAND: Oh, and I understand the  
8 reasons.

9 MR. RATLIFF: Lest the point be lost on  
10 the Committee, could I just interject --

11 MR. WHEATLAND: Sure, --

12 MR. RATLIFF: Mr. Kanemoto did a  
13 cumulative impact analysis of the viewshed.

14 MR. WHEATLAND: Right.

15 MR. RATLIFF: He also did a broader  
16 cumulative impact analysis of the effect on the  
17 greater desert area.

18 MR. WHEATLAND: Right, the visual  
19 impacts on the greater desert area, exactly.

20 MR. RATLIFF: Okay.

21 MR. WHEATLAND: That's what I started  
22 with. I think I started with -- yeah.

23 MR. KANEMOTO: We're very concerned with  
24 the cumulative impacts of this on this landscape  
25 type by this type of project at this time.

1                   MR. WHEATLAND: But can you recall any  
2 other EIR or EIS that you may have prepared, read  
3 or reviewed in the course of your 25-year career  
4 where the EIR or EIS has reviewed the cumulative  
5 impacts on visual resources on a regional basis?

6                   MR. KANEMOTO: Yes, I seem to remember  
7 some instances, not recently.

8                   MR. WHEATLAND: And what were those  
9 instances?

10                  MR. KANEMOTO: I remember doing an  
11 analysis of small hydro projects in the Yuba  
12 Basin, which is a pretty large area, and very  
13 small projects, you know, --

14                  MR. WHEATLAND: And what was that?

15                  MR. KANEMOTO: I'm sorry?

16                  MR. WHEATLAND: What project was that?

17                  MR. KANEMOTO: It was specifically an  
18 EIR to look at cumulative impacts of small hydro  
19 projects in the Yuba River Basin.

20                  MR. WHEATLAND: Oh, but it was a  
21 programmatic EIR?

22                  MR. KANEMOTO: So to speak.

23                  MR. WHEATLAND: Yeah. But for a project  
24 EIR have you looked at one that would analyze the  
25 cumulative impacts of visual resources on a

1 regional basis?

2 MR. KANEMOTO: I can't recall.

3 MR. WHEATLAND: In preparing the  
4 cumulative impacts analysis, did you review the  
5 environmental impact statements for other projects  
6 that were reasonably foreseeable within the  
7 project viewshed?

8 MR. KANEMOTO: Please repeat the  
9 question.

10 MR. WHEATLAND: In preparing the final  
11 staff assessment, the cumulative impacts analysis,  
12 did you review the environmental impact statements  
13 that have been prepared for other reasonably  
14 foreseeable projects within the project viewshed?

15 MR. KANEMOTO: Within the project  
16 viewshed?

17 MR. WHEATLAND: Yes.

18 MR. KANEMOTO: I didn't review EISs, no.

19 MR. RATLIFF: Could you identify which  
20 projects have EISs that you're referring to?

21 MR. WHEATLAND: Sure, sure. That's my  
22 next question.

23 MR. RATLIFF: Okay.

24 MR. WHEATLAND: And you're helping move  
25 me along, I appreciate it.

1                   For example, did you review the draft  
2                   EIS for the Desert Express?

3                   MR. KANEMOTO: I did not.

4                   MR. WHEATLAND: Now, your conclusion is  
5                   that this project, together with the airport  
6                   project and the Desert Express, and some other  
7                   projects within the valley, would have a  
8                   substantial cumulative impact, is that correct?

9                   MR. KANEMOTO: Yes.

10                  MR. WHEATLAND: Are you aware that the  
11                  draft EIS for the Desert Express concluded that  
12                  the cumulative impact of the transportation,  
13                  development and energy projects, including this  
14                  project, in combination with the Desert Express  
15                  would not be substantial?

16                  MR. KANEMOTO: I don't agree with that.

17                  MR. WHEATLAND: I didn't ask you whether  
18                  you agreed with it, I was just asking if you were  
19                  aware of it.

20                  MR. KANEMOTO: No.

21                  MR. WHEATLAND: My cross-examination  
22                  here is almost complete, but I would like to have  
23                  a document marked for identification. And we're  
24                  distributing copies at this point. So if we could  
25                  just have a moment off the record to distribute

1 the copies.

2 HEARING OFFICER KRAMER: Let's go off.

3 (Off the record.)

4 HEARING OFFICER KRAMER: Mr. Wheatland,  
5 I think the next number in your exhibit list would  
6 be number 68, does that sound right?

7 MR. WHEATLAND: All right. Then I'd ask  
8 that applicant's cross-examination exhibit, the  
9 draft environmental impact statement and 4F  
10 evaluation for the proposed Desert Express High  
11 Speed Passenger Train, this is chapter 3.16  
12 cumulative impacts, be identified as exhibit  
13 number 68.

14 HEARING OFFICER KRAMER: We will do  
15 that.

16 MR. RATLIFF: Mr. Kramer, I want to  
17 point out the date on this exhibit is March 2009.  
18 That the witness has testified that he has not  
19 read this. And that it is over 52 pages in  
20 length. So I would object to any cross-  
21 examination over an exhibit such as this.

22 Moreover, it has not been filed as  
23 applicant's testimony, either.

24 MR. WHEATLAND: I'm not intending to ask  
25 the witness to read this. And I don't need to ask

1 the witnesses any questions about the document,  
2 because it will speak for itself.

3           Though I must take exception to the fact  
4 that we're only introducing this here today.  
5 There are a number of -- a lot of information that  
6 was presented in the PowerPoint presentation this  
7 morning that's being presented to the Committee  
8 for the first time. And I'm not objecting to  
9 that, but the fact is that additional information  
10 is coming in, in terms of direct.

11           And I don't need to ask the witness a  
12 question about this document now.

13           MR. RATLIFF: I disagree that there was  
14 a lot of information in the applicant's (sic)  
15 testimony which was new. I think virtually none  
16 of it was new. And that which you might claim was  
17 new, was filed on December 9th in accordance with  
18 the order from the Committee, with the exception  
19 of two maps, which I think merely illustrate the  
20 nature of the surrounding area.

21           HEARING OFFICER KRAMER: I don't think  
22 we need to argue an objection that was not made.

23           MR. RATLIFF: No, but I think that the  
24 justification being made for entering this now at  
25 this time in an untimely manner is that we

1 introduced new testimony in our direct testimony,  
2 and we didn't. And I would object to having this  
3 entered into evidence at this late date.

4 HEARING OFFICER KRAMER: Well, you're  
5 correct that we did have opening testimony,  
6 rebuttal testimony sequence set up in our exchange  
7 of evidence. And all of that was intended to  
8 avoid surprise at the hearings.

9 In the interest of -- and that will be  
10 in effect for the January hearings on the more  
11 than mildly contested items, I guess we can call  
12 them.

13 So, here, I see this as rebuttal  
14 evidence.

15 MR. WHEATLAND: And, Mr. Kramer, I agree  
16 with you, but we've marked it for identification.  
17 We'll reserve it for our rebuttal and I won't ask  
18 any questions of the witness here today.

19 MR. RATLIFF: My objection is it to be  
20 entered into the record for evidence at all. I  
21 mean there is no scheduled rebuttal testimony for  
22 this hearing. All testimony was to be filed last  
23 week. This was not filed last week. This is  
24 testimony, if this is evidence, it's filed late  
25 today. And we haven't read it. That's exactly

1           what your order was specifically designed to  
2           prevent. So, I object.

3                       HEARING OFFICER KRAMER: Well, would  
4           your concerns be addressed by allowing you to --  
5           or keeping this topic open to allow you to present  
6           any additional response that you feel you need to  
7           in January?

8                       I think, in effect, the applicant has  
9           maybe presented itself with a dilemma here. It  
10          requested that we try to get some of these, the  
11          word may be mine, but mildly contested items taken  
12          care of today rather than in January, along with  
13          the more hotly contested items.

14                      And now it's put the staff in a position  
15          where it at least wants to review this.

16                      MR. RATLIFF: You know, if I knew this  
17          was going to happen, I would have gone and looked  
18          for other EISs that may have come to a contrary  
19          conclusion. Or I may have tried to find out who,  
20          in fact, the author was. And I may have had  
21          questions about it. I'm not prepared to go  
22          forward like that today.

23                      HEARING OFFICER KRAMER: I understand.  
24          So, I think the question for the applicant will be  
25          if they want to introduce this document into the

1 record, are they willing to postpone the  
2 completion of this topic until January in order  
3 for staff to have time to review this document and  
4 perhaps prepare additional testimony.

5 MR. WHEATLAND: I'm certainly prepared  
6 to postpone completion of any questions that would  
7 relate to this document. Absolutely. I'm not  
8 trying to surprise anyone. And I think it's  
9 reasonable to ask to allow the staff a chance to  
10 review this document.

11 I'm hoping when they review it, it will  
12 change their testimony, frankly. So, I'm happy to  
13 have them review it. If you'd like to continue  
14 the hearing with respect to this document until  
15 January, we would have no problem with that.

16 But I'd like to complete the record with  
17 respect to the other areas of cross today.

18 HEARING OFFICER KRAMER: Okay. That's  
19 what we'll do then, is we will allow staff and the  
20 other parties additional time to respond --

21 MR. RATLIFF: I'm objecting --

22 HEARING OFFICER KRAMER: -- to this.

23 MR. RATLIFF: -- to this being entered  
24 into evidence. I'm not asking for an opportunity  
25 to review it. And I would like a ruling on my

1 objection.

2 MR. WHEATLAND: I haven't moved it.

3 HEARING OFFICER KRAMER: The objection  
4 will be overruled, but we will keep the testimony  
5 open until January to allow you to respond.

6 MS. BELENKY: Excuse me, I just want to  
7 make sure I understand what is being left open on  
8 the issue of the regional cumulative, or just on  
9 this document? Because those seem to be somewhat  
10 different.

11 HEARING OFFICER KRAMER: I think  
12 realistically it probably would be the regional  
13 cumulative impacts, because staff may want to, as  
14 Mr. Ratliff said, find other EIRs --

15 MR. RATLIFF: Well, is this opportunity  
16 open for the other parties, as well, then? Or is  
17 it only for the staff?

18 HEARING OFFICER KRAMER: Well, the other  
19 parties didn't indicate that they wanted to  
20 contest this issue at all, so they would be  
21 limited to cross-examining any additional  
22 witnesses or documents that you might produce.

23 MR. RATLIFF: Well, the other parties  
24 hadn't seen this either when it was filed -- or  
25 before it was filed, just as we hadn't.

1 HEARING OFFICER KRAMER: I understand  
2 that. Are we clear on the ruling?

3 MR. RATLIFF: Yes.

4 HEARING OFFICER KRAMER: Okay, Mr.  
5 Wheatland, go ahead with the rest of your --

6 MR. WHEATLAND: Fine. As I indicated  
7 off the record, I have a few more questions on  
8 cumulative impacts. And then I have a few  
9 questions with respect to the witness' direct  
10 testimony this afternoon.

11 The FSA, at page 6.12-33 references  
12 cumulative impacts table 1, which identifies 66  
13 solar projects and 63 wind project applications,  
14 with a total overall area of over 1 million acres  
15 within the CDCA, is that correct?

16 MR. KANEMOTO: Yes.

17 MR. WHEATLAND: The FSA also states at  
18 page 6.12-42 that the project, in combination with  
19 foreseeable future projects, could have  
20 significant and unavoidable cumulative visual  
21 impacts within the southern California Mojave  
22 Desert, is that correct?

23 MR. KANEMOTO: Yes.

24 MR. WHEATLAND: Which reasonably  
25 foreseeable future projects are you referring to?

1 And let me just say, is it all of the projects  
2 listed in table 1, or a subset of them?

3 MR. RATLIFF: Which table are you --  
4 where is table 1?

5 MR. WHEATLAND: Table 1 is the  
6 cumulative impacts table 1 that's set forth in the  
7 cumulative impact section of the FSA. And it's  
8 referenced by the witness in his section on visual  
9 resources. That's why I'm asking him about it.

10 And so, Mr. Kanemoto, did you have the  
11 question in mind? Would you like me to restate  
12 it?

13 MR. KANEMOTO: Yes.

14 MR. RATLIFF: Do you have the table  
15 before you?

16 MR. KANEMOTO: No, the table is similar  
17 to the one that we showed in the presentation.  
18 It's not the same, but it's similar.

19 MR. WHEATLAND: So my question --

20 MR. RATLIFF: Could we have an  
21 opportunity for the witness to see the table --

22 MR. WHEATLAND: Certainly.

23 (Pause.)

24 MR. RATLIFF: Mr. Wheatland, are you  
25 referring to a reference to that table in Mr.

1 Kanemoto's testimony? And if so --

2 MR. WHEATLAND: Yes.

3 MR. RATLIFF: -- where is it?

4 MR. WHEATLAND: All right, let me find  
5 it for you, please. My notes indicate 6.12-33,  
6 but I'll try to find the specific reference.

7 HEARING OFFICER KRAMER: 43 or 42? Must  
8 be --

9 MR. WHEATLAND: Oh, okay. Depends on  
10 how you print the document out, I guess. Mr.  
11 Harris finds it at 6.12-31 under the section  
12 cumulative impacts and mitigation.

13 And the bullet is cumulative impacts  
14 table 1, regional renewable energy projects.

15 (Pause.)

16 MR. RATLIFF: Okay, so your question is  
17 about the paragraph that precedes -- is in the  
18 middle of the page, starts off with "There is  
19 potential for substantial future development"?

20 MR. WHEATLAND: Right. And it says  
21 cumulative impacts table 1 identifies 66 solar  
22 projects and 63 wind projects applications for a  
23 total overall area of over 1 million acres.

24 MR. RATLIFF: Where are you reading now?

25 MR. WHEATLAND: On page 33, the bottom

1 of the second-to-the-last paragraph.

2 MR. RATLIFF: Oh, page 33.

3 MR. WHEATLAND: Um-hum.

4 You mentioned the table, we established  
5 that. And we also established on page 6.12-42  
6 that he says they're cumulative impacts of the  
7 foreseeable future solar and wind projects within  
8 the region.

9 And so I'm asking him, when he talks  
10 about foreseeable future solar and wind projects,  
11 which projects is he referring to? Is he  
12 referring to all of the projects that are in the  
13 cumulative table 1, or is he referring to a subset  
14 of them.

15 MR. KANEMOTO: That would be an  
16 unspecified subset.

17 MR. WHEATLAND: Could you explain what  
18 you mean by an unspecified subset?

19 MR. KANEMOTO: Well, for example, the  
20 reason I presented that figure just now in the  
21 PowerPoint presentation was to say that let's say  
22 that you looked at it from the perspective of  
23 effects on highway viewers in the southern  
24 California desert.

25 And a very large subset of those

1 projects that were on that list are in proximity  
2 to those highways, and would have a very  
3 substantial effect on the view of those roadways  
4 cumulatively. Not individually, but cumulatively.  
5 That's one perspective that one could look at it  
6 from.

7 There are many other perspectives that  
8 cumulative visual impacts could be looked at for  
9 that set of projects. And we did not go into that  
10 in detail.

11 MR. WHEATLAND: And you presented a map  
12 today with some red dots on it to indicate where  
13 those projects might be, is that correct?

14 MR. KANEMOTO: Yes.

15 MR. WHEATLAND: And was that included in  
16 the information that you distributed last week?

17 MR. KANEMOTO: I believe so.

18 MR. WHEATLAND: Just to be clear. Now,  
19 you mentioned earlier the BLM handbook for  
20 preparing environmental impact statements. Did  
21 you see in that handbook where it suggests that in  
22 assessing whether a future project is reasonably  
23 foreseeable, that it may be helpful to ask some  
24 questions about that resource?

25 MR. KANEMOTO: I'll have to ask you to

1 repeat yourself, your question.

2 MR. WHEATLAND: Would it be helpful if I  
3 showed you the handbook?

4 MR. KANEMOTO: I have the handbook.

5 MR. WHEATLAND: Well, for example,  
6 doesn't the handbook say that you should ask is  
7 there an existing proposal, such as the submittal  
8 of a permit application, before designating a  
9 project as reasonably foreseeable?

10 MR. KANEMOTO: Well, first of all, are  
11 you --

12 MR. RATLIFF: I object on the grounds  
13 that I don't know -- the witness has not said that  
14 he did this analysis for the BLM, nor did he say  
15 that he followed the BLM approach.

16 MR. WHEATLAND: Well, yes, that's true.  
17 But this is a document that is both the final  
18 staff assessment and an EIS prepared in  
19 cooperation with BLM. The witness has testified  
20 that he has consulted with BLM officials in the  
21 preparation of this document. And I am trying to  
22 determine whether, in fact, he followed the BLM  
23 methodology for preparing an environmental impact  
24 statement that will bear their name.

25 MR. KANEMOTO: We began down that path,

1 but then we were asked by BLM not to do that.

2 MR. WHEATLAND: Not to do what?

3 MR. KANEMOTO: Well, I think we could go  
4 back to the first statement that you made. You  
5 referred to the -- I'm assuming you're referring  
6 to handbook H8400 and so on?

7 MR. WHEATLAND: Let me tell you the one  
8 I have. These have different numbers, so I want  
9 to be clear. I'm talking about handbook H-1790-1.

10 MR. KANEMOTO: Well, I don't have that  
11 committed to memory.

12 MR. WHEATLAND: Okay, that's the BLM  
13 National Environmental Policy Act Handbook.

14 So, I'm sorry, I interrupted you. You  
15 were going to tell me what they asked you not to  
16 do.

17 MR. KANEMOTO: I thought you were  
18 referring to the VRM handbook.

19 MR. WHEATLAND: No, I'm not talking  
20 about VRM now, we're talking about the assessment  
21 of cumulative impacts. And the handbook says that  
22 there are three questions you have to ask about a  
23 future resource in order to determine whether it's  
24 reasonably foreseeable.

25 And I was going to ask you if you asked

1           any of those three questions with respect to this  
2           unspecified subset of resources that you've  
3           identified.

4                     MR. KANEMOTO:  We discussed these things  
5           briefly, but --

6                     MR. WHEATLAND:  Okay.  One of the  
7           questions they asked in order to identify whether  
8           a resource is reasonably foreseeable is if it's a  
9           federal action, has the NEPA process began.  For  
10          example, publication of a notice of intent.  For  
11          the map you showed with the little red dots, are  
12          any of those projects now engaged in the NEPA  
13          process where a notice of intent has been issued?

14                    MR. KANEMOTO:  Yes.

15                    MR. WHEATLAND:  And which ones are  
16          those?

17                    MR. KANEMOTO:  I don't know, for sure.  
18          I mean, I'm not sure which projects are which.

19                    MR. WHEATLAND:  And would those projects  
20          that have the red dots, have any of those filed an  
21          application with this Commission?

22                    MR. KANEMOTO:  I'm certain they have.

23                    MR. WHEATLAND:  And which ones are  
24          those?

25                    MR. KANEMOTO:  Some of them that I'm

1           aware of are the Stirling Projects, several trough  
2           projects including the Genesis Project, Mojave  
3           Project, Ridgecrest Project. I don't know,  
4           there's many many many others.

5                       MR. WHEATLAND: And all of those are  
6           represented by red dots on your map?

7                       MR. KANEMOTO: Yes.

8                       MR. WHEATLAND: Your testimony makes a  
9           point of the 1 million acres that would be  
10          potentially impacted by these projects. Do you  
11          expect that all these projects will be built?

12                      MR. KANEMOTO: No.

13                      MR. WHEATLAND: So that the actual  
14          impact should be some number less than 1 million  
15          acres?

16                      MR. KANEMOTO: Oh, yes, definitely.

17                      MR. WHEATLAND: And how big is the  
18          Mojave Desert, what's the context of this 1  
19          million acres?

20                      MR. KANEMOTO: I don't remember.

21                      MR. WHEATLAND: Well, would you agree,  
22          subject to check, that it would be about -- the  
23          Mojave Desert is about 140 million acres?

24                      MR. KANEMOTO: It's possible.

25                      MR. WHEATLAND: So that would be less

1           than 1 percent of the total Mojave Desert would be  
2           impacted cumulatively if all of these projects  
3           were built, is that correct?

4                       MR. KANEMOTO: I can't say.

5                       MR. WHEATLAND: My last area of  
6           questioning today has to do with the appendix G  
7           criteria B, which asks whether a project  
8           substantially damages a scenic resource within a  
9           state scenic highway.

10                      Do you conclude the project would or  
11           would not substantially damage a scenic resource  
12           under section B of the appendix G criteria?

13                      MR. KANEMOTO: Well, that criterion is  
14           obviously very ambiguous as to its interpretation  
15           in various documents, as you probably know. In  
16           the literal sense, it does not affect a scenic  
17           highway.

18                      Many many many many documents have  
19           interpreted that criterion to refer not just to  
20           scenic highways, but to scenic resources in  
21           general.

22                      MR. WHEATLAND: All right. Then would  
23           you conclude that the project would or would not  
24           substantially damage a scenic resource within the  
25           meaning of subsection B of appendix G?

1 MR. KANEMOTO: No.

2 MR. WHEATLAND: Well, thank you very  
3 much, Mr. Kanemoto, for answering my questions  
4 today. That's all the questions I have of this  
5 witness.

6 HEARING OFFICER KRAMER: Thank you. Mr.  
7 Ratliff, do you have any other witnesses?

8 MR. RATLIFF: Only one.

9 HEARING OFFICER KRAMER: Okay. Then I  
10 think we will not have any witnesses --

11 MR. RATLIFF: Could I ask one redirect  
12 question, please.

13 HEARING OFFICER KRAMER: Certainly.

14 REDIRECT EXAMINATION

15 BY MR. RATLIFF:

16 Q Mr. Kanemoto, one of Mr. Wheatland's  
17 questions to you was in your analysis of various  
18 gas-fired power plants in the past, did you do a  
19 regional cumulative analysis as opposed to just a  
20 viewscape analysis.

21 And I wanted to ask you what was it  
22 about this project that made you think that it was  
23 necessary to do a more regional analysis?

24 MR. KANEMOTO: Because there's many many  
25 projects of a similar nature that are all being

1 applied for right now at the same time, and  
2 directly affect the same basin of impact. Namely  
3 the undeveloped portions of the California desert.

4 MR. RATLIFF: Thank you.

5 MR. WHEATLAND: Recross?

6 HEARING OFFICER KRAMER: Mr. Wheatland.

7 RE-CROSS-EXAMINATION

8 BY MR. WHEATLAND:

9 Q So. Mr. Kanemoto, if I understand your  
10 response to Mr. Ratliff, this project is unique  
11 and that's why you felt compelled to do a regional  
12 analysis, is that right?

13 MR. KANEMOTO: Well, I wouldn't say it  
14 was unique, but it was unique -- it was unusual.

15 MR. WHEATLAND: Did you prepare the  
16 analysis for the Goat Ranch Quarry draft EIR?

17 MR. KANEMOTO: In Crescent City? Or  
18 are --

19 MR. WHEATLAND: I don't believe it's  
20 Crescent City.

21 MR. KANEMOTO: No, not Crescent -- in  
22 northern California.

23 MR. WHEATLAND: Shasta County.

24 MR. KANEMOTO: Yes, I did.

25 MR. WHEATLAND: Did you do just the

1 visual simulation, or the --

2 MR. KANEMOTO: Yes, --

3 MR. WHEATLAND: -- or the entire  
4 analysis?

5 MR. KANEMOTO: The simulation.

6 MR. WHEATLAND: But not the analysis?

7 MR. KANEMOTO: I may have done the  
8 analysis, I frankly don't remember.

9 MR. WHEATLAND: Don't recall, yeah. The  
10 reason I ask is because that was a 500-acre quarry  
11 surrounded on three sides by BLM land with many  
12 other quarries proposed in the region. Yet it  
13 didn't perform a regional analysis of cumulative  
14 impacts.

15 And I'm just wondering when it's  
16 appropriate to do a cumulative impact analysis on  
17 a regional basis and when it's not.

18 MR. KANEMOTO: Like I say, I don't even  
19 remember if I prepared the analysis for that  
20 project, so I can't say for certain.

21 MR. WHEATLAND: Can you say for certain  
22 what criteria is used to determine when a regional  
23 analysis is performed and when it is not?

24 MR. KANEMOTO: When it's relevant.

25 MR. WHEATLAND: Thank you.

1 (Laughter.)

2 MR. WHEATLAND: That's all the questions  
3 I have.

4 HEARING OFFICER KRAMER: Okay, thank  
5 you. Mr. Wheatland, -- now, I gather none of the  
6 other parties will be presenting witnesses, I  
7 understand, since they didn't contest this issue.

8 So, it's the applicant's turn to present  
9 its witnesses.

10 MR. WHEATLAND: Very good, if we can  
11 have just a moment off the record, please.

12 HEARING OFFICER KRAMER: Certainly.

13 (Brief recess.)

14 HEARING OFFICER KRAMER: So, are we on  
15 the record, Peter? Okay, Mr. Wheatland, go ahead.

16 MR. WHEATLAND: Thank you. As a  
17 preliminary matter, just as the staff had some  
18 visual aids for their direct examination, we've  
19 put up two boards on the side of the hearing room  
20 here that have two photographs. These are  
21 photographs that are either in the FSA or in our  
22 data responses to the Commission Staff.

23 And we have also prepared a map of the  
24 project area in relation to the actual boundaries  
25 of the national preserve and wilderness areas, and

1 other features, KOP features. And we have  
2 distributed copies in the room to the Committee  
3 and the parties of this map.

4 HEARING OFFICER KRAMER: The map would  
5 be numbered exhibit 69. And it would be helpful  
6 at some point for the record if you could describe  
7 the original source of each of these posters so  
8 that --

9 MR. WHEATLAND: Yes.

10 HEARING OFFICER KRAMER: -- we could  
11 look them up later.

12 MR. WHEATLAND: Mr. Priestley -- Dr.  
13 Priestley will be able to do that. Otherwise we  
14 will provide that for you.

15 So we have three witnesses on our visual  
16 resources panel.

17 DIRECT EXAMINATION

18 BY MR. WHEATLAND:

19 Q First, Dr. Priestley, would you please  
20 state your name and spell your last name.

21 DR. PRIESTLEY: Yeah, my name is Thomas  
22 Priestley, that's P-r-i-e-s-t-l-e-y.

23 MR. WHEATLAND: And would you please  
24 describe your background and qualifications.

25 DR. PRIESTLEY: Yes. I have an

1           undergraduate degree in city planning from the  
2           University of Illinois; a masters degree in city  
3           and retail planning from the University of  
4           California at Berkeley; a masters in landscape  
5           architecture with an emphasis on environmental  
6           planning from University of California at  
7           Berkeley.

8                         When I finished my masters work I worked  
9           for five years for PG&E in San Francisco where I  
10          got very interested in siting, aesthetic and other  
11          qualitative issues related to electric power  
12          facilities.

13                        And that inspired me to go back to  
14          school, back to Berkeley to the landscape  
15          architectural department where I earned a Ph.D. in  
16          environmental planning that emphasized things like  
17          design, environmental planning, and in particular,  
18          social science research methods.

19                        And so I have been active in this area  
20          for over 30 years, with a particular emphasis on  
21          the evaluation of the aesthetic land use and  
22          property value impacts of electric facilities of  
23          various kinds, as well as other kinds of large  
24          infrastructure projects.

25                        MR. WHEATLAND: Ms. Haydon, would you

1 please state your name and spell your last name  
2 for the record.

3 MS. HAYDON: Yes. Hi, my name is Wendy  
4 Haydon, last name is spelled H-a-y-d-o-n.

5 MR. WHEATLAND: And would you please  
6 state your professional qualifications?

7 MS. HAYDON: I have a bachelors degree  
8 in environmental studies from Sac State in 1987.  
9 I have a masters degree in recreation  
10 administration from Sac State in 1994.

11 I've been a consultant working on  
12 environmental document preparation, EIRs, EISs,  
13 EAs, initial studies since 1987.

14 I've been working on AFCs for both  
15 visual resources and land use discussions. I've  
16 done 13 of them, seven in visual resources and six  
17 in land use.

18 MR. WHEATLAND: And, Mr. Gilon has  
19 previously taken the stand and stated his  
20 qualifications, so I will not ask him to repeat  
21 that now.

22 The witnesses are sponsoring exhibit 65,  
23 resources section. And those additional documents  
24 that are identified in section 1C of our visual  
25 resources testimony.

1                   In addition, let me ask the witnesses,  
2           do you have any changes or corrections to this  
3           testimony?

4                   MS. HAYDON: Yes. We submitted some  
5           errata.

6                   MR. WHEATLAND: And that errata was  
7           distributed last week. And should we give an  
8           exhibit number to that errata? 67, thank you.  
9           All right.

10                   And I want to ask each of the witnesses  
11           do you adopt this written testimony and errata as  
12           your testimony in this proceeding?

13                   MS. HAYDON: Yes, we do.

14                   MR. WHEATLAND: And, Dr. Priestley?

15                   DR. PRIESTLEY: Yes.

16                   MR. WHEATLAND: And, Mr. Gilon?

17                   MR. GILON: Yes, I do.

18                   MR. WHEATLAND: All right. Now, the  
19           final staff assessment states that the visual  
20           impacts of the proposed project would be  
21           significant in terms of the four criteria of CEQA  
22           appendix G of the guidelines.

23                   And I believe today on the stand the  
24           witness indicated that with respect to section B,  
25           that that impact would not be significant. So

1 we're talking this afternoon only about three of  
2 the four criteria.

3 But let me ask our witnesses, do you  
4 agree with the statement that three of the four  
5 CEQA criteria are significant?

6 MS. HAYDON: We do not agree.

7 MR. WHEATLAND: The four significant  
8 criteria is would the project create a new source  
9 of substantial light or glare which would  
10 adversely affect the nighttime views of the area.

11 MR. RATLIFF: Mr. Wheatland, I'm sorry,  
12 did you say that we agreed with you regarding  
13 criteria B --

14 MR. WHEATLAND: Yes. I asked --

15 (Parties speaking simultaneously.)

16 MR. RATLIFF: -- the checklist.

17 MR. WHEATLAND: No, this is appendix --  
18 yes, section B was the one where there was an  
19 impact on a resource. And I asked the witness  
20 whether the project would or would not  
21 significantly impact that resource. His answer  
22 was no.

23 So I think we have agreement with the  
24 staff now with respect to section B of the  
25 appendix G criterias. So I'll be asking our

1 witnesses only with -- questions with respect to  
2 the other three criteria.

3 And the first criteria is the impact on  
4 glare affecting day or nighttime views of the  
5 area. The FSA seems to conclude that glare would  
6 be a significant impact. Do you agree?

7 DR. PRIESTLEY: I do not agree. The FSA  
8 visual resources section really overstates the  
9 potential for light and glare from the project.  
10 In a moment, Yoel Gilon of BrightSource will  
11 testify to this.

12 Suffice to say that where the FSA states  
13 that even with condition trans-4, the anticipated  
14 level of nuisance from glare of the solar  
15 receiving units, however, and I emphasize, could  
16 remain conspicuous, could be dominant, and could  
17 detract from the public's ability to enjoy views  
18 of Clark Mountain from the valley floor.

19 However, the FSA provided no data and no  
20 analysis to substantiate these conclusions.

21 MR. WHEATLAND: Mr. Gilon, the FSA  
22 states that from the golf course, at a distance of  
23 1.5 miles, the Ivanpah Solar Project would provide  
24 strong levels of discomfort glare. And I'd like  
25 to ask you if there will be strong levels of

1           discomfort glare at this distance.

2                       MR. GILON:  And I repeat what I said  
3           this morning, that it won't create such.  I think  
4           it would have been acceptable that it's, in no  
5           case it won't be a safety or health issue, just  
6           because it won't -- we're speaking now from the  
7           golf course is half a mile away.

8                       Which then it will be -- if it's coming  
9           from the site of the heliostats, even one  
10          heliostat malfunctioning and turn to the other  
11          side, it will go down at that distance to a fifth  
12          of the sun, which is very low.

13                      And if we are speaking on the glare  
14          coming from the tower, again, the level of this  
15          will be about four watt per square meter, in  
16          comparison to 1000 watt per square meter, which is  
17          a clear day sun.  So it's very low.

18                      MR. WHEATLAND:  The FSA also states on  
19          the very first page of the FSA, visual analysis,  
20          that there's a degree of uncertainty as to the  
21          level of disability or discomfort glare from the  
22          solar receivers.

23                      Mr. Gilon, will the project provide  
24          glare that is disabling or cause discomfort from  
25          any location that will be accessible to the

1 public?

2 MR. GILON: No. And, again, I repeat,  
3 all the places, as I said before, along the I-15  
4 and even in the golf course, below a quarter of a  
5 mile around the border, and mentioned there might  
6 be heliostats that are not functioning and turned  
7 to the other direction. There it will not meet  
8 the 1 kilowatt per square meter. It will be about  
9 that. It will be far below the 10 kilowatt, which  
10 can cause damages if it's even less than a quarter  
11 of a second. But for continuous time, it won't  
12 stay there.

13 And if I may, because I heard before  
14 about the specular and the diffuser portion of  
15 this project. And I think here, this is not  
16 unclear or we don't know yet. I think we know  
17 very well yet. We don't know the impact of those  
18 specific Ivanpah, but it's very very well defined.

19 The diffused light is coming from the  
20 tower, from the receiver of the tower, because  
21 it's a reflection of the light, so it's coming on  
22 all diffuse.

23 As for the heliostat it's a mirror. The  
24 mirror is only specular. And one of the two,  
25 either you have the sun is coming from the sun,

1 and either you have the sun. And therefore you'll  
2 see the reflection of those mirror. And this will  
3 not happen all along the day.

4 The mirror will reflect when they are at  
5 certain position and when the sun is at a certain  
6 position. I like to refer to this similar to a  
7 lake. Imagine if you take the all surface area it  
8 will be less than a lake, because a lake is all  
9 over the surface. Where in the most dense place  
10 of those heliostat, the heliostat surface will  
11 occupy one-third of the surface. And the average  
12 for the total Ivanpah Plant, it occupied one-fifth  
13 of the surface.

14 Such on one hand a lake will not reflect  
15 as well as a mirror. On the other hand, because  
16 it's at least just a third of the surface, it's  
17 more like a lake. And like a lake, when you look  
18 at it at certain time of -- normally you won't get  
19 reflectance. But for certain time of the day in  
20 certain position you might get this reflectance.  
21 So, this is for the part of specular.

22 And the last point I'd like to say is  
23 that in those illustration, even the one on the  
24 side, and in some of the picture you see some  
25 diffused light coming from the reflection of the

1 rays from the mirror up to the tower.

2 Here I'd like to say that all those  
3 picture taken at Solar One was done on purpose.  
4 It was not accidental. They wanted to show this  
5 picture. In fact, there was a movie. I believe  
6 it's called "Baghdad Cafe" or "Cafe Baghdad".  
7 It's a good movie where they used -- the posture  
8 of the movie, they used Solar One to -- but they  
9 did it on purpose. They just focused a point in  
10 the sky.

11 But there is no such thing in a clear  
12 day you won't see those lights coming. By the  
13 way, in PS-10 in Seville, Seville is not such a  
14 good place, so you see the light. So in such day  
15 that when you see this diffuse coming out of the  
16 light, you will not see very well the mountain as  
17 well.

18 So this part at least, no, so I would  
19 repeat, the mirror, it will happen here and there,  
20 in the morning, in the evening more, and for  
21 airplane maybe during the day when you're passing  
22 by.

23 And the tower, it's true, the tower will  
24 have the glare all of the day. And we keep  
25 mentioning, no harm, no safety and health issue

1           there. It will be noticed.

2                       I also think that with the structure, as  
3           we see here, I'm not sure you won't see the  
4           mountain. The mountain will, most of the places  
5           will be on top of it.

6                       MR. WHEATLAND: Right. And just to be  
7           clear for one last question on the issue of glare.  
8           The FSA also states that from the vicinity of the  
9           Benson Mine, approximately four miles from the  
10          project, the mirror arrays -- here they're talking  
11          about the mirror arrays, could potentially cause  
12          strong diffuse or specular glare. And potentially  
13          interfere with views due to nuisance glare.

14                      Do you agree with this statement?

15                      MR. GILON: No, totally not. At four  
16          miles away from the, I repeat, from the mirror it  
17          will be less than a lake, four miles away, when  
18          sometime you'll have some reflection.

19                      And from the glare of the top four  
20          miles, I made a calculation, it will be like a  
21          100-watt bulb, about maybe if not 30, 25 feet  
22          away. Twenty-five feet away of a bulb you see it,  
23          but not more than that.

24                      MR. WHEATLAND: All right. Thank you  
25          very much, Mr. Gilon.

1                   I'm going to move now to the first of  
2                   the four criteria in appendix G. And that  
3                   criteria is whether the project would have a  
4                   substantial adverse impact on a scenic vista.

5                   And I'd like to ask our witnesses are  
6                   there any designated scenic vistas in the project  
7                   study area.

8                   MS. HAYDON: No, there are no designated  
9                   scenic vistas within the project study area. And  
10                  I might add that the FSA did say that on page  
11                  6.12-15.

12                  MR. WHEATLAND: Now the FSA states that  
13                  views from the Clark Mountains within the Mojave  
14                  National Preserve could be considered scenic  
15                  vistas. And could be adversely impacted by the  
16                  project. Do you agree?

17                  DR. PRIESTLEY: No, I do not. And to  
18                  explain, I'd like to refer to this map that we  
19                  have passed out to all of you. This is 11-by-17  
20                  version of a large map that we had prepared and  
21                  that we can leave with the Commissioners that will  
22                  enable you to look at these things and all in much  
23                  much more detail. But this will certainly suffice  
24                  for our current conversation.

25                  The intent of this map was to provide

1           everybody with just a very very clear  
2           understanding with the interrelationships among  
3           the various features in this environment.

4                       And I think it's pretty straightforward  
5           over on the upper right-hand corner you can see  
6           Primm, you can see I-15 extending down to the  
7           intersection with Nipton Road. You can see the  
8           three project sites and the blue circles are the  
9           locations of each of the power towers.

10                      The purple is the Mojave National  
11           Preserver. The green areas are wilderness areas.  
12           The Stateline Wilderness that we have been talking  
13           about, Mesquite Wilderness. And then within the  
14           Mojave National Preserve you can see the Mojave  
15           Wilderness.

16                      MR. WHEATLAND: And Mr. Kanemoto earlier  
17           testified regarding the number of visitors to the  
18           preserve. Would you comment on that, please?

19                      DR. PRIESTLEY: Yes, I can. For those  
20           of you who have been out to the site, you know,  
21           it's pretty evident that, well, in this preserve  
22           it's perhaps intentionally very very undeveloped.  
23           The access to this area is not easy.

24                      The primary access is by Colosseum Road,  
25           which is not paved. It's not marked. And once

1       you start actually getting into the preserve, and  
2       start going up the canyon to the upper slopes, it  
3       is a very very rough road that is certainly not  
4       suitable for ORVs. And actually anybody with a  
5       passenger car would be very unwise to travel that  
6       road.

7                 And in addition, there are no visitor  
8       facilities of any kind out there. You know, no  
9       rest areas, no picnic areas, no interpretive  
10      sites. It's just raw desert out there.

11                So, as a consequence, this is not an  
12      area that has been developed to support  
13      substantial numbers of visitors.

14                And I am thinking that if staff had  
15      actually visited this portion of the site, they  
16      probably would not have stated on page 6.12-11 of  
17      the FSA that this Clark Mountain area attracts  
18      nearly 52,000 visitors a year.

19                Again, once you see what's going on  
20      there, and the lack of visitor provisions, it  
21      would be hard to imagine 52,000 visitors a year in  
22      this area.

23                In our errata we established -- we  
24      submitted an alternative estimate based on  
25      conversations with the National Park Service

1 Staff, who are responsible for this area, who gave  
2 us their observations of the numbers of vehicles  
3 observed traversing the roads in that area, which  
4 is essentially one or two during most of the year,  
5 and perhaps up to 20 to 30 during the spring and  
6 fall months.

7 And extrapolating from that we came up  
8 with this 12,000 number, which is probably  
9 actually a bit on the high side.

10 And something else to consider is that  
11 visitors, these visitors would not necessarily be  
12 concentrated on the eastern side of Clark Mountain  
13 because if you do follow Colosseum Road up, you'll  
14 get to this upland area which has a very unique  
15 island-like alpine environment, which, in fact, is  
16 very interesting and would be an attraction.

17 MR. WHEATLAND: And that area that you  
18 mentioned, I'd like you to clarify whether that  
19 area is even as visible or has views of the  
20 project site. But, in addition, though, would you  
21 comment please on the Benson Mine as a KOP.

22 DR. PRIESTLEY: Well, yeah, thank you  
23 for the reminder. A very important point about  
24 this map that we need to talk about is we did a  
25 viewshed analysis, that is we have identified the

1 areas from which the project would be potentially  
2 visible and we used the tops of the solar towers  
3 as our basis for doing that. A very conservative  
4 analysis, you know, so you can just see a tiny  
5 portion of the tops of the solar towers. We said  
6 that the project would be visible.

7 Very often for these viewshed maps there  
8 is a tone used to show the areas from which the  
9 project is visible. We have done just the  
10 opposite. What we have done is the stippling  
11 pattern that you see on the map, that stippling  
12 pattern indicates the areas from which the project  
13 would not be visible.

14 So, as you can see from this, it's very  
15 very interesting. First of all, the Mesquite  
16 Wilderness you would only be able to see the  
17 project from a tiny little corner at the  
18 southeastern corner.

19 For most of the Stateline Wilderness  
20 Area the project would not be visible. And if you  
21 look over at where it says Mojave Wilderness, this  
22 area we might generally refer to as the Clark  
23 Mountain unit of the Mojave National Preserve.  
24 You can see that, in fact, for most of this area  
25 the project would not be visible, either.

1                   And now let us turn our attention to  
2                   KOP-10. If you see where it says Mojave  
3                   Wilderness, right over just on the eastern edge of  
4                   that you see Benson Mine and a red dot that  
5                   represents KOP-10.

6                   And there are number of things that can  
7                   be said about this. The view from KOP-10, in the  
8                   final staff assessment, has been represented as  
9                   being representative of views that  
10                  recreationalists on the eastern side of the Clark  
11                  Mountain area would be seeing.

12                  And I think that this assertion needs to  
13                  be challenged on a number of counts. First of  
14                  all, this viewpoint is referred to as the, quote,  
15                  "Benson Mine" unquote, viewpoint. And that is not  
16                  exactly the reality.

17                  Because the Benson Mine is located  
18                  actually in an area, if you look at the stippling,  
19                  where the views toward the project site are  
20                  slightly obscured.

21                  At the instruction of the Energy  
22                  Commission Staff, our staff actually climbed up a  
23                  ridge adjacent to the Benson Mine where there was  
24                  a more clear and unobstructed view, to take this  
25                  photo.

1                   So this photo was taken from an area  
2                   that is not on a four-wheel-drive trail. It is  
3                   not on a hiking trail. This view was achieved by  
4                   hiking up a very very steep rock slope to an area  
5                   where it's unknown how many people a year ever  
6                   visit that particular area.

7                   And we might also say that Benson Mine  
8                   was probably an odd place to choose as a  
9                   representative viewpoint in that if you have been  
10                  out to this area you're aware of the fact that  
11                  there's a maze of roads out there. There are no  
12                  road signs, so even finding Benson Mine would be  
13                  very very difficult.

14                  And then getting there, unless you have  
15                  a really good offroad vehicle, it would be very  
16                  difficult, because the roads are so rough.

17                  So this view is not necessarily  
18                  representative at all. In fact, the FSA suggests  
19                  that this view is also representative of views  
20                  that people on Colosseum Road might be seeing.

21                  And if you study the map here you see  
22                  that this viewpoint is a mile or so south of  
23                  Colosseum Road. And it's true that Colosseum Road  
24                  is the place, to the extent that there are  
25                  visitors in this area, this is probably where they

1 would be, since it's the most highly developed  
2 road in this area. And it takes people up to the  
3 higher elevations, which are particularly  
4 interesting.

5 But, if you look closely where it says  
6 Colosseum Road, one of the things that you will  
7 see is that the area through which much of  
8 Colosseum Road passes has stippling.

9 As Ms. Haydon and I noticed in our field  
10 work in this area, as you're driving up and down  
11 that road, what's very apparent is on the north  
12 side of the road there is a ridge that obscures  
13 your views out toward the valley.

14 So our bottom line is that the so-called  
15 Benson Mine view is not at all representative of  
16 views from the eastern side of the Clark Mountain  
17 area.

18 MR. WHEATLAND: If you would please then  
19 just summarize your testimony with respect to the  
20 views from the Mojave Preserve from the Clark  
21 Mountain unit.

22 DR. PRIESTLEY: So, you know, my summary  
23 would be -- is given the -- and particularly in  
24 light of the small numbers, relatively small  
25 numbers of visitors in the Clark Mountain area,

1 and the fact that the KOP-10 view is not actually  
2 a representative view from this area, staff really  
3 hasn't presented the -- made the case that this  
4 view is a high sensitivity view.

5 It's also true that -- it's very very  
6 clear that there are no developed viewpoints  
7 anywhere in this Clark Mountain portion of the  
8 Mojave National Preserve. And the numbers of  
9 people in this area are very very limited.

10 And a very important piece is a number  
11 of places in the testimony it is alleged that the  
12 views out over the Ivanpah Valley or the views in  
13 this area are views of a pristine landscape. That  
14 is not at all the case, in that in the preserve,  
15 itself, particularly as you get up to the  
16 Colosseum Mine there is much evidence of past  
17 mining activity in terms of pit mines and big  
18 spoil piles and so on.

19 And then when you're looking out toward  
20 the Ivanpah Valley, I would have a hard time  
21 characterizing a valley that is traversed by a  
22 major interstate, is traversed by at least four  
23 major electric transmission lines, includes all  
24 the hotel casino towers in Primm, plus a major  
25 power plant, as well as the very unnatural Primm

1 Golf Course as being, quote, you know, natural and  
2 pristine.

3 MR. WHEATLAND: Now there are two other  
4 places where the staff says that there would be a  
5 significant adverse impact, visual impact from the  
6 project. We just discussed the Mojave National  
7 Preserve.

8 The second one is the wilderness areas.  
9 And the staff has said that the Stateline  
10 Wilderness Area could be considered a scenic vista  
11 and could be adversely impacted by the project.  
12 Do you agree?

13 DR. PRIESTLEY: No, I don't agree. And  
14 to review the reasons why, take a look at the map  
15 some more. So if you look up by the Stateline  
16 Wilderness, you'll see a couple of things.

17 (Telephone interruption.)

18 HEARING OFFICER KRAMER: All right, hold  
19 on. Who did we lose. Let's go off the record.

20 (Off the record.)

21 MR. SPEAKER: I'm still here.

22 DR. PRIESTLEY: Okay. So, anyway, the  
23 final staff assessment alleges that the view from  
24 KOP-9 is the view from Umberci Mine, and that it  
25 is representative of views from the Stateline

1 Wilderness.

2 And as we can see just by looking at  
3 this map, that is not at all true. First of all,  
4 the Umberci Mine is not in the wilderness. It's  
5 in a area that was kept out of the wilderness  
6 areas and actually then separates the Stateline  
7 Wilderness from the Mesquite Wilderness.

8 Secondly, the viewpoint that was used to  
9 represent the so-called wilderness views is, as  
10 you can see, is not within the wilderness, and is  
11 nowhere near Umberci Mine. It's actually one that  
12 was taken on a ridge in an area of state lands.  
13 The blue squares here are state lands.

14 And as you can see, it is very close to  
15 a road that is actually the power line road that  
16 goes down the middle of a power corridor with two  
17 500 kV lattice steel transmission lines, and plus  
18 another one that looks like it's maybe a 220.

19 So, again, this view is not at all  
20 representative of views from the wilderness area.  
21 And, furthermore, as this map indicates, for most  
22 of this wilderness area the project site would not  
23 be at all visible.

24 And then in terms of the sensitivity of  
25 this particular view, the staff presents

1 absolutely no data to indicate the numbers of  
2 users in this area. The site -- this general area  
3 of the Umberci Mine is characterized as having a  
4 popular hiking trail from Primm. But the source  
5 of that is not attributed, and there is no data to  
6 back that up.

7                   And in terms of our own observations on  
8 the site when our staff went there to take  
9 photographs, one of the reasons why we were  
10 unsuccessful in getting a photo from the ridge  
11 above Umberci Mine is the day that our staff went  
12 out there the site was being monopolized by a  
13 family that was target practicing right there at  
14 the mine. So it was too dangerous to go in to do  
15 field work.

16                   So, in sum, the KOP-9 view is far from,  
17 and not the same view as the views from either the  
18 Umberci Mine or the wilderness area. There are no  
19 designated or developed viewpoints in this area.  
20 It hasn't been established that there are  
21 significant numbers of viewers at this mine, or in  
22 the portions of the wilderness area from which the  
23 project would be visible.

24                   And again, akin to our last point, the  
25 view from this viewpoint is hardly pristine,

1 particularly with these giant lattice steel  
2 transmission towers in the foreground of the view.

3 And what we might say is even if this  
4 view were representative of views from the  
5 Stateline and Mesquite Wilderness Areas and the  
6 Umberci Mine, which it is not, and if these views  
7 were to qualify as scenic vistas for CEQA  
8 purposes, which they do not, we would still have  
9 to conclude that the degree of visual impact would  
10 be less than significant.

11 Because if you examine the simulations  
12 of this view, you will see that the project  
13 facilities do not block views of distant landscape  
14 elements, the mountains and so on. Those views  
15 remain unobstructed. And, in fact, integrate well  
16 with the landscape.

17 MR. WHEATLAND: The last of the  
18 viewpoints that the staff says would encounter a  
19 significant adverse visual impact are the  
20 viewpoints from the I-15 corridor.

21 And the staff says that the view  
22 corridors to the Clark Mountains from I-15 could  
23 be considered scenic vistas, and could be  
24 adversely impacted by very bright levels of glare  
25 from the receivers. And, again, Dr. Priestley, do

1           you agree?

2                         DR. PRIESTLEY:  Yeah, no, I don't agree.  
3           And for starters, the final staff assessment's  
4           characterization of the views from I-15 as a  
5           scenic vista is actually inconsistent with the  
6           staff's own finding, which we'll see on page 6.12-  
7           18 of the final staff assessment, that for most  
8           motorists traveling this segment of I-15, the  
9           level of concern about scenic quality is likely to  
10          be low to moderate.

11                        And, again, the FSA wrongly  
12          characterizes the landscape along I-15 as a,  
13          quote, "intact natural landscape."  And if you've  
14          been out there you know that this is very far from  
15          the case.

16                        The area west of I-15 has already been  
17          modified in a number of significant ways.  And  
18          probably the most obvious unnatural element of  
19          this landscape is the Primm Valley Golf Club,  
20          which appears to occupy nearly an entire section.  
21          It's been completely graded.  The native  
22          vegetation has been removed, replaced with exotic  
23          irrigated vegetation.

24                        And it is very highly visible to the I-  
25          15 travelers, since a portion of the golf course

1 is right up against the interstate. And just  
2 because of the way it's all angled, you can kind  
3 of take a look at the map there, you're seeing it  
4 for, you know, about a mile or so as you -- in  
5 very close proximity as you travel down the  
6 interstate.

7 Another reason why this stretch of I-15  
8 does not qualify as a, quote, "scenic vista",  
9 unquote, is as has come up before. As you travel  
10 from the summit at Nipton, you drive north down to  
11 Primm. There are really like no pull-outs, no  
12 designated scenic vistas, no rest stops, no  
13 commercial services that would provide the  
14 traveler an opportunity to get out and enjoy the  
15 scenery.

16 Another and very important factor to  
17 note in terms of our discussions of I-15, is the  
18 notion of a cone of vision. Those who have  
19 studied driver behavior have developed this term  
20 to essentially refer to the area that the driver  
21 would be attending to.

22 And this essentially decreases with  
23 increasing distances. And a study that has been  
24 sponsored by the Federal Highway Administration  
25 has established, for example, that at a speed of

1       60 mile-per-hour that drivers focus on the area on  
2       essentially a 20-degree cone of vision. Which  
3       means, you know, 10 degrees on each side, would be  
4       their primary. And their peripheral vision would  
5       extend out to a total of 45 degrees.

6               And so if you look at this map that  
7       we've prepared, you can see at various points  
8       along I-15 we have drawn these little cones of  
9       visions to provide an idea of what a, at least  
10      drivers would be attending to as they drive down  
11      I-15.

12              And there are a number of things that I  
13      think that you can very quickly see. One is that  
14      up at Nipton Road in this elevated position where  
15      you're a bit further back, in fact a driver may  
16      see a portion of the project within their zone of  
17      peripheral view.

18              But as they proceed northeast on I-15,  
19      these facilities would very quickly fade out of  
20      their primary, and even their peripheral cone of  
21      vision.

22              And something else that is very very  
23      important to note here is that there is no place  
24      where a driver would essentially be driving, have  
25      a solar tower right in the immediate middle of

1           their cone of vision.

2                       And an additional factor is for somebody  
3           driving up and down I-15, at least for drivers,  
4           there would be no place where the solar towers  
5           would line up with Clark Mountain in the backdrop.

6                       And I might point out that if you see  
7           over here on the left side of the photo where it  
8           says Mojave Wilderness, that area essentially  
9           encompasses Clark Mountain.

10                      MR. WHEATLAND: The final point, I  
11           guess, on the I-15 issue that the staff addressed  
12           in the FSA was the question of viewer concern.  
13           Could you please address the questions of viewer  
14           concern for drivers on the I-15.

15                      DR. PRIESTLEY: Well, as I indicated a  
16           little bit earlier, the final staff assessment,  
17           itself, indicates that its assessment is that  
18           since many drivers on this stretch of I-15 are  
19           headed to recreational activities in Las Vegas,  
20           that their degree of visual sensitivity would be  
21           low to moderate.

22                      I might also report from my own  
23           observations, I've been in this area a number of  
24           times, and one of the things I can say is that the  
25           level of truck traffic on this route is pretty

1 heavy, as well. And that traffic may not be so  
2 sensitive to views.

3 Something else that I think is very  
4 important to note is if you look at the KOPs from  
5 I-15, KOPs 3 and 4, what we are seeing actually  
6 are photos that are not taken on I-15. Instead  
7 they are taken to the side of I-15, and not views  
8 down the freeway that one would experience.  
9 Instead they're views looking straight west.

10 And although passengers in a car might  
11 see those views, they are not necessarily  
12 representative of the views of -- certainly not  
13 representative of the views of drivers.

14 MR. WHEATLAND: Well, thank you. In the  
15 interest of time I'm going to conclude the direct  
16 testimony at this point, and offer the panel for  
17 cross-examination.

18 HEARING OFFICER KRAMER: Any cross-  
19 examination from parties in the room? Mr.  
20 Basofin?

21 MR. BASOFIN: I have just one question  
22 for Mr. Priestley.

23 CROSS-EXAMINATION

24 BY MR. BASOFIN:

25 Q Can you explain the methodology that was

1           used to determine where these areas from which the  
2           project is not visible?

3                         DR. PRIESTLEY:  Yeah.  We have, you  
4           know, really a great geographic information system  
5           team at my company.  And they use software  
6           produced ARC Info, GIS software.  And there is a  
7           standard package that in the software that is used  
8           very widely, and it's, you know, universally  
9           accepted that enables you to establish -- what you  
10          first do, you know, you identify the location of  
11          your objects.  You identify, you know, the  
12          elevation of, you know, the top of the objects  
13          that you are interested in.

14                        You're working in an environment where  
15          you have the data on the topography.  And then  
16          this software then allows you to determine, well,  
17          from which surfaces out there is the project going  
18          to be visible or not.

19                        And I should add that this analysis was  
20          based, you know, solely on topography.  It's  
21          possible in areas where there is more vegetation  
22          to feed in the data on assumed tree height and  
23          things of that nature to determine the effect of  
24          vegetation on views.

25                        But in this particular area that

1           probably wasn't very relevant.  So this is based  
2           strictly on the effect of topography in blocking  
3           views.

4                       MR. BASOFIN:  So, to follow up on that,  
5           if there's a rock climber in this area of the  
6           Clark Mountains in the uppermost part of the  
7           preserve, from those stippled points a rock  
8           climber could then see the valley from any of  
9           those stippled --

10                      DR. PRIESTLEY:  From the areas that are  
11           stippled they would not be able to see the valley,  
12           yeah.

13                      MR. BASOFIN:  Thank you.

14                      HEARING OFFICER KRAMER:  Any party on  
15           the telephone wish to cross-examine?

16                      MS. CUNNINGHAM:  Yeah, this is Laura  
17           Cunningham.

18    CROSS-EXAMINATION

19           BY MS. CUNNINGHAM:

20                      Q       I wanted to ask Dr. Priestley which part  
21           of Stateline Wilderness he hiked up.

22                      DR. PRIESTLEY:  I'm sorry, could you  
23           repeat the question for me?

24                      MS. CUNNINGHAM:  Yeah, which part of  
25           Stateline Wilderness have you hiked into or up?

1 DR. PRIESTLEY: Yeah, I, personally,  
2 have not hiked in the Stateline Wilderness. But  
3 my colleague has done field work in that area, Ms.  
4 Haydon.

5 MS. HAYDON: When we originally went out  
6 to -- let me step back a second. Our data request  
7 said to go take photos above the ridge line of  
8 Umberci Mine and Benson Mine. So that's what we  
9 were tasked to do, and what we were hoping to do  
10 that day.

11 We went out in May of 2008. And we  
12 started to drive out to the Umberci Mine and we  
13 saw the mine in the side of the mountain. Got  
14 out; parked the car; saw all the shell casings  
15 there and a bunch of trash.

16 And we looked up at the ridge above the  
17 mine and realized we'd have to climb up 1100 feet.  
18 And there's no -- we didn't see a trail. And it  
19 was 107 degrees out. And we made a decision that  
20 it was a health and safety issue to not climb up  
21 1100 feet.

22 So we started to drive back down the  
23 road and we were standing at the base of the hill  
24 where we ended up taking the photo. And a couple  
25 of SUVs came driving in and they said, hey, what

1 are you doing. And we said, well, we're taking,  
2 you know, pictures of the valley, what are you  
3 doing. They said, well, we're having this family  
4 gathering. There's going to be a couple more SUVs  
5 coming. We're going to do some shooting out here,  
6 so you may not want to come back here again. We  
7 said okay. So, we're done. We'll take the photo  
8 from this hill.

9 So when we got back from that field  
10 visit -- oh, and then for Benson Mine we did go  
11 out to the mine and then climbed the ridge. It  
12 was about 450 feet. And we climbed that one and  
13 took the photo. And that's the one that was  
14 simulated.

15 So when we came back from the field  
16 visit I contacted Bill Kanemoto and Mona Daniels,  
17 I think was her name, with the BLM, and we set up  
18 a conference call. I sent them my photos. I  
19 explained the reason why the photos were taken  
20 where they were.

21 They had asked us to take other photos,  
22 too. Which we did go and take. And a decision  
23 was made by them which photos we would use to  
24 simulate. And that's what we did.

25 MS. CUNNINGHAM: Okay. I'd just like to

1           dispute that when Dr. Priestley says in our  
2           analysis you cannot see the project from most of  
3           Stateline Wilderness, I've hiked in Stateline  
4           Wilderness, not only at the Umberci Mine, but all  
5           along the ridge, and you can see the project from  
6           I'd say most of the southern side of the  
7           wilderness.

8                         DR. PRIESTLEY: You know, it's really  
9           too bad that you're remote and don't have access  
10          to the map that the rest of us are looking at,  
11          because we did have our GIS people do a pretty  
12          rigorous analysis of the areas from which the  
13          project would and would not be visible.

14                        And it is true that there are some areas  
15          on the southern flanks of the Statewide Wilderness  
16          from which the project would be visible. But the  
17          reality is that, I don't know, from what would you  
18          say, maybe 80 percent or more of the wilderness  
19          area the project would not be visible.

20                        MS. CUNNINGHAM: I guess I would dispute  
21          that. I have photographs, and you can see the  
22          project, I would say, from a good 40 percent of  
23          the wilderness from the ridge. That's just my  
24          personal experience.

25                        Thank you. I don't have any more

1 questions.

2 HEARING OFFICER KRAMER: Thank you.

3 Anyone else on the telephone? Staff.

4 MR. RATLIFF: Yes, I do have some  
5 questions.

6 CROSS-EXAMINATION

7 BY MR. RATLIFF:

8 Q Dr. Priestley, with regard to exhibit  
9 69, where does that appear in your prefiled  
10 testimony?

11 DR. PRIESTLEY: It does not.

12 MR. RATLIFF: And with regard to the  
13 term cone of vision, where does that appear in  
14 your prefiled testimony?

15 DR. PRIESTLEY: It does not.

16 MR. RATLIFF: Who actually prepared your  
17 prefiled testimony and your AFC sections? Who did  
18 the writing for that?

19 DR. PRIESTLEY: It was a collaborative  
20 effort.

21 MR. RATLIFF: Did you write it,  
22 yourself?

23 DR. PRIESTLEY: I played a part in  
24 writing it.

25 MR. RATLIFF: Okay.

1 I'm not going to object to these  
2 exhibits. Perhaps it wouldn't be anything other  
3 than futile if I did. Nor do I intend to object  
4 to Dr. Priestley's oral testimony. I'm always  
5 fascinated to hear his analyses.

6 But I do point out that this goes very  
7 near the edge of impermissible embellishment  
8 because the prefiled testimony here is perhaps no  
9 more than an outline in the three to four pages  
10 that we received of the testimony you just heard,  
11 with very little of this discussion of the various  
12 KOPs, no discussion of this map, and no discussion  
13 of the visibility from the various KOPs.

14 And so although I do not object, I do  
15 think you should take into consideration that we  
16 did not have this information before we heard it  
17 just now. And that is one of the things, I think,  
18 that your order was designed to try to prevent.

19 HEARING OFFICER KRAMER: Let me say that  
20 you will have the opportunity to produce a  
21 response at the January hearings if you feel the  
22 need.

23 MR. WHEATLAND: Could I comment briefly?

24 HEARING OFFICER KRAMER: Yes, go ahead,  
25 Mr. Wheatland.

1                   MR. WHEATLAND: I think that you have  
2                   seen, both from the staff's presentation and our  
3                   presentation, some new material. There's no  
4                   question about that.

5                   This map that's being presented is a  
6                   visual aid that's being presented for the first  
7                   time to explain the testimony that we have  
8                   previously filed. And just as the map that was  
9                   prepared by the staff that shows, with the little  
10                  red dots, all of the solar projects along the  
11                  highway is a new map presented today for the first  
12                  time.

13                  So we have new material. I think where  
14                  I disagree with Mr. Ratliff is that I don't  
15                  believe that this is impermissible embellishment  
16                  by either party. But I believe it is a reasonable  
17                  opportunity for you, the Committee, to hear  
18                  directly from the witnesses that prepared the  
19                  information, and to be able to understand where  
20                  they're coming from.

21                  HEARING OFFICER KRAMER: Do you have any  
22                  further questions, Mr. Ratliff?

23                  MR. RATLIFF: I do, yes.

24                  HEARING OFFICER KRAMER: Go ahead.

25                  MR. RATLIFF: Okay. And, again, I'm not

1 absolutely certain who to direct the questions to,  
2 but these questions are directed to the preparer  
3 of the AFC section. Was that you, Ms. Haydon?

4 MR. WHEATLAND: Dr. Priestley, you can  
5 direct the questions to Dr. Priestley and he will  
6 refer it to another witness if he thinks it's  
7 appropriate.

8 MR. RATLIFF: No, I want to direct them  
9 to whomever was the author of the AFC section, as  
10 I said.

11 MR. WHEATLAND: And I believe that Dr.  
12 Priestley testified that it was a collaborative  
13 effort, that there is not a single author.

14 MR. RATLIFF: Well, Dr. Priestley, did  
15 you prepare the AFC section?

16 MR. WHEATLAND: Okay, go ahead and  
17 clarify that.

18 DR. PRIESTLEY: Yeah, just to clarify,  
19 make sure that we're all talking about the same  
20 thing, the preparation of the testimony that we  
21 just submitted, the written testimony, was a  
22 collaborative effort.

23 The preparation of the AFC was Haydon's  
24 work.

25 MR. RATLIFF: Okay. And with regards to

1 the data requests, who prepared the responses on  
2 the data requests?

3 MR. WHEATLAND: All of them, Dick? Or  
4 do you mean -- or generally?

5 MR. RATLIFF: Generally.

6 DR. PRIESTLEY: Yeah, in general, Ms.  
7 Haydon was the preparer of the data requests --  
8 responses to the data requests.

9 MR. RATLIFF: And could I ask, who  
10 prepared the VRI forms, the visual resource  
11 inventory BLM form, 8400 forms for the assessment?  
12 Was that you or Ms. Haydon?

13 DR. PRIESTLEY: That would have been Ms.  
14 Haydon.

15 MR. RATLIFF: Okay, thank you very much.  
16 That's helpful. And I guess I have to ask you  
17 this, as well. Dr. Priestley, did you visit the  
18 site?

19 DR. PRIESTLEY: Yes.

20 MR. RATLIFF: And how many times did you  
21 visit -- how many days --

22 DR. PRIESTLEY: Yeah, yeah, okay. Yeah,  
23 I have been specifically to this site on two  
24 occasions, each time a one-day visit under  
25 different circumstances. You know, under

1 different seasons, rather.

2 And I have also worked in other  
3 projects, have spent time in let's say the greater  
4 Primm area.

5 MR. RATLIFF: Have you been to all of  
6 the KOPs?

7 DR. PRIESTLEY: Let's see, I have been  
8 in the general vicinity of many of the KOPs. But  
9 I have not been to the specific location of every  
10 single one of them.

11 MR. RATLIFF: You heard Mr. Wheatland  
12 earlier today ask Mr. Kanemoto if he had been to  
13 the KOPs west and north of the project site. Have  
14 you been to those KOPs, yourself?

15 DR. PRIESTLEY: Let's say I've been  
16 close to those KOPs, as I was mentioning to you a  
17 little earlier. You know, access into this area  
18 is very very difficult, as is way-finding, because  
19 there is a maze of lightly developed tracks in  
20 that area, very very rough roads.

21 So let's say I got very close to the  
22 Benson Mine viewpoint, but not exactly at the  
23 Benson Mine viewpoint. But I was in an area that  
24 was very close to and similar to it.

25 And let's say I got close to the Umberci

1 Mine viewpoint, but was not able to climb up to  
2 the top of that particular hill to be right on  
3 the --

4 MR. RATLIFF: Okay.

5 DR. PRIESTLEY: -- right on that  
6 particular viewpoint, But I have been out into,  
7 you know, Ivanpah Dry Lake, and I have been to  
8 Primm. And certainly I'm very familiar, have made  
9 numerous visits to KOP-5 on I-5 at the Nipton  
10 summit.

11 MR. RATLIFF: Okay. Ms. Haydon, when  
12 you filled out the VRI forms, the visual resource  
13 inventory forms for BLM, was it because BLM asked  
14 you to do that?

15 MS. HAYDON: No.

16 MR. RATLIFF: Did you do that for  
17 BrightSource's AFC preparation then?

18 MS. HAYDON: I believe it was for a data  
19 request.

20 MR. RATLIFF: This is in the AFC that  
21 you make reference to it --

22 MS. HAYDON: Right.

23 MR. RATLIFF: -- as a reminder. Before  
24 we did data requests.

25 MS. HAYDON: Oh. I don't think the BLM

1 forms were part of the AFC.

2 MR. RATLIFF: Well, do you --

3 MS. HAYDON: I think it was a subsequent  
4 submittal.

5 MR. RATLIFF: In your AFC do you make  
6 reference to an analysis of --

7 (Pause.)

8 MS. HAYDON: I'm sorry.

9 MR. RATLIFF: In your AFC you make  
10 reference to a visual resource inventory analysis.  
11 The use of the passive voice does not describe who  
12 did it, but I assume that it was done by either  
13 you or someone else at BrightSource for the  
14 purposes of the AFC. Is that true, or am I  
15 incorrect?

16 MS. HAYDON: I prepared it.

17 MR. RATLIFF: You prepared it. Okay.

18 MS. HAYDON: In collaboration with  
19 another colleague of mine.

20 MR. RATLIFF: Oh, okay, thank you. And  
21 is it your understanding that the use of these  
22 form 8400 forms that BLM has compiled, that's for  
23 the use of its own employees or for just anyone?

24 MS. HAYDON: Well, I prepared them on  
25 previous BLM projects for an environmental

1 assessment. So it was an attempt -- because the  
2 BLM had not inventoried the lands before we went  
3 out there. They did their inventory about a year  
4 after we did our AFC analysis.

5 So we didn't know what the lands were  
6 classified as to for the VRM.

7 MR. RATLIFF: Okay.

8 MS. HAYDON: So it was our attempt to  
9 have some methodology to use that would comply  
10 with BLM guidelines for the AFC.

11 MR. RATLIFF: Thank you. And I think,  
12 as we heard earlier today, BLM has since done a  
13 visual resource inventory of that site.

14 MS. HAYDON: Yes.

15 MR. RATLIFF: And it disagreed with your  
16 conclusions, is that correct?

17 MS. HAYDON: Yes, it did.

18 MR. RATLIFF: Okay. So then when you  
19 state on page 5.13-26 of the AFC that all factors  
20 result in the area being assigned an interim class  
21 4 designation, that was not BLM who made that  
22 designation. Am I correct?

23 MS. HAYDON: That's correct.

24 MR. RATLIFF: That was your own estimate  
25 of what it should be classified as?

1 MS. HAYDON: That's correct.

2 MR. RATLIFF: And no such interim visual  
3 resource management designation has been assigned  
4 to this area, is that correct?

5 MS. HAYDON: That's correct, as far as I  
6 know no interim.

7 MR. RATLIFF: Okay, thank you. Now,  
8 with regard to what we often call LORS, laws,  
9 ordinances, regulations and standards, this is  
10 addressed in the AFC at pages 5.13, pages 7 and 8,  
11 section 5.13, 7 and 8, I'm sorry.

12 And I would call your attention to page  
13 7 of the analysis. It has a table, table 5.13-3.  
14 And you reference, among the other policies, you  
15 have desert region policy, and here we're talking  
16 the policies of the San Bernardino County general  
17 plan, a policy that would require future land  
18 development policies to be compatible with the  
19 existing topography and scenic vistas and protect  
20 the natural vegetation.

21 And you conclude in your table with the  
22 rather simple and conclusory explanation next to  
23 it, that it does so conform.

24 Was that conclusion based on any  
25 communication from San Bernardino County about the

1 conformity of this project with that policy?

2 MS. HAYDON: No.

3 MR. RATLIFF: No. And I would ask the  
4 same question about desert region goal, DOS-1,  
5 which appears on the next page of your testimony.  
6 Preserve open space lands to insure the rural  
7 desert character of the region is maintained.

8 And your conclusion is that it is in  
9 conformity with that goal. Was that based on any  
10 consultation with the county?

11 MS. HAYDON: No.

12 MR. RATLIFF: Okay. And then that  
13 explanation, the explanation says yes, it would  
14 conform because the project is crossed by existing  
15 overhead high voltage electric transmission lines.

16 How far away from the I-15 freeway are  
17 those transmission lines from the freeway?

18 MS. HAYDON: Well, they go east/west,  
19 so --

20 MR. RATLIFF: They go east/west, but  
21 from near the -- let's pick a point, then. Let's  
22 pick the point of the Primm Golf Course.

23 MS. HAYDON: Well, Primm Golf Course  
24 abuts I-15, so the transmission line -- is that a  
25 transmission line --

1 (Pause.)

2 MS. HAYDON: Okay, can you re-ask the  
3 question, please.

4 MR. RATLIFF: I was asking you how  
5 distant the transmission line corridor that you  
6 refer to here is from I-15, in the locality of the  
7 golf course.

8 MS. HAYDON: Well, there's more than one  
9 transmission line corridor out there. There's --

10 MR. RATLIFF: The one that transects the  
11 project site.

12 MS. HAYDON: Okay, --

13 MR. RATLIFF: That you're making  
14 reference to in your --

15 MS. HAYDON: Okay, --

16 MR. RATLIFF: -- answer here.

17 MS. HAYDON: -- in the area between  
18 Ivanpah 1 and 2, --

19 MR. RATLIFF: Yes.

20 MS. HAYDON: -- it looks like it's about  
21 2.5 miles.

22 MR. RATLIFF: Okay.

23 MS. HAYDON: From I-15.

24 MR. RATLIFF: And is it because of that  
25 transmission corridor and that transection of the

1 corridor that you say that that goal is satisfied  
2 in the San Bernardino County plan? Is that the  
3 basis of your conclusion?

4 MS. HAYDON: It was the transmission  
5 line as well as the other development, like the  
6 golf course, which were KOPs 1 and 2.

7 MR. RATLIFF: Okay. Thank you. Now,  
8 the discussion of the CEQA guideline checklist  
9 criteria, both the AFC and Dr. Priestley, in his  
10 oral testimony today, concluded that you don't  
11 have a significant effect on the scenic vista  
12 because you don't have a designated scenic vista.

13 Is there anything in the guidelines that  
14 says you have to have a designated scenic vista to  
15 have an impact on a scenic vista?

16 MS. HAYDON: My reading of CEQA is no,  
17 there isn't. But I didn't think that there was  
18 even a scenic vista.

19 MR. RATLIFF: Okay, but you don't have  
20 to have something that's been officially  
21 designated to have a scenic vista under CEQA, is  
22 that correct?

23 MS. HAYDON: That's my understanding.

24 MR. RATLIFF: Okay.

25 DR. PRIESTLEY: Yeah, I -- just to

1       elaborate on that question, you know, that's a  
2       point that is not entirely clear, in fact. As  
3       someone who, let's say, does a lot of CEQA visual  
4       analysis, I think given the context the  
5       presumption is that a quote, "scenic vista" is a  
6       view that is somehow, if not designated, is at  
7       least as recognized in some substantial way as  
8       being scenic.

9                 Either through, you know, formal  
10       development of the site, or even, you know,  
11       informal. And if there's a place where it's  
12       obvious that there's a wide space by the road  
13       where substantial numbers of people visit.

14                MR. RATLIFF: Well, doesn't your own  
15       testimony say that it's a county-designated scenic  
16       highway?

17                DR. PRIESTLEY: But is scenic highway  
18       the same as scenic vista?

19                MR. RATLIFF: Well, I think we're  
20       splitting hairs, aren't we?

21                DR. PRIESTLEY: Not necessarily.

22                MR. RATLIFF: Okay. Is it your view  
23       that the fact that it's a county-designated scenic  
24       highway has no bearing on the significance of the  
25       visual impact?

1 DR. PRIESTLEY: No, it is not.

2 MR. RATLIFF: It is not, you're --

3 DR. PRIESTLEY: Meaning --

4 MR. RATLIFF: It does not or is not --

5 (Parties speaking simultaneously.)

6 DR. PRIESTLEY: Okay, yeah, no. What  
7 I'm saying is, of course, we have to take the fact  
8 that it is a county-designating route into  
9 consideration as, you know, as one of the many  
10 factors that we are looking at and making our  
11 assessment.

12 MR. RATLIFF: Okay. So there is that  
13 official designation that you recognize --

14 DR. PRIESTLEY: Right, of this route.  
15 But at the same time the county has not developed  
16 any scenic viewpoints along this area. I mean  
17 there's, like when you drive this route there are  
18 no signs saying that this is welcome to our scenic  
19 route. There are no places that the county has  
20 developed in any way for people to pull over and  
21 enjoy very specific views from the highway.

22 MR. RATLIFF: Understood.

23 (Pause.)

24 MR. RATLIFF: Perhaps this is addressed  
25 to Ms. Haydon. Regarding the AFC testimony on

1 page 5.13-35. I refer to your last two sentences  
2 in the last paragraph of 5.13.6. And if you'll  
3 indulge me, I'll read them.

4 It says: It is currently unknown of the  
5 impacts on visual resources from these five other  
6 projects would be adverse and significant.

7 And this is the important part:  
8 However, because the Ivanpah SEGS Project will not  
9 create impacts on visual resources that are  
10 considered significant, it will not contribute to  
11 cumulative impacts on visual resources in the  
12 project vicinity.

13 In other words, if I'm interpreting that  
14 correctly you're saying because there's no direct  
15 impact in your opinion, there can be no cumulative  
16 impact or contribution to a cumulative impact from  
17 this project, is that correct?

18 MS. HAYDON: Yes.

19 MR. RATLIFF: And is that your opinion  
20 of how cumulative impact assessment should be  
21 done?

22 MS. HAYDON: Well, yes. If the project  
23 is not having a significant impact, how can it  
24 contribute to a significant impact cumulatively?

25 MR. RATLIFF: Could I ask your colleague

1 if he agrees?

2 DR. PRIESTLEY: Excuse me?

3 MR. WHEATLAND: You can ask him the  
4 question, if you like --

5 MR. RATLIFF: The question is, if a  
6 project does not, as your analysis does conclude,  
7 have a significant direct impact, then it cannot  
8 contribute to a significant cumulative impact.

9 DR. PRIESTLEY: I would say that's not  
10 always true.

11 MR. RATLIFF: Thank you. This is  
12 perhaps better addressed to Dr. Priestley.  
13 Because I think you spoke about it quite a bit in  
14 your oral testimony today.

15 You talked repeatedly about the number  
16 of visitors as one of the criteria for determining  
17 significance of the impact. Is there any set  
18 number which determines the significance of an  
19 impact?

20 DR. PRIESTLEY: Yeah, I'm not sure that  
21 it is, that there is a very specific number. What  
22 you have to look at, take into consideration, are  
23 the numbers of people, exactly what they are  
24 doing, what their sensitivity to the alteration of  
25 the view would be.

1                   So at least when I do my analyses I  
2                   don't have a, you know, a fixed set of like  
3                   numerical thresholds. It will vary depending upon  
4                   the context.

5                   MR. RATLIFF: Well, that's one of the  
6                   interesting questions to me is you say that the  
7                   visual sensitivity of people driving to Vegas is  
8                   going to be low. That's one of the things that  
9                   you said. Is that because of their destination  
10                  that they would have low visual sensitivity?

11                  DR. PRIESTLEY: Well, this is -- this  
12                  piece of information --

13                  (Parties speaking simultaneously.)

14                  MR. RATLIFF: And what if they're --

15                  DR. PRIESTLEY: Yeah, this information  
16                  is what I read in the final staff assessment.

17                  MR. RATLIFF: Oh, really?

18                  DR. PRIESTLEY: Yes.

19                  MR. RATLIFF: I'll have to cross-examine  
20                  my own witness, then, I guess.

21                  (Laughter.)

22                  MR. RATLIFF: But do you agree with  
23                  that? Do you agree with the fact that the people  
24                  are traveling on this highway to Las Vegas means  
25                  that somehow these people's senses are so dull

1           that they don't see anything?

2                           (Laughter.)

3                           DR. PRIESTLEY:  Let's say, I want to be  
4           very very careful in responding to that.  But  
5           let's say that the level of sensitivity on a  
6           highway like this one would be different than  
7           would on the case of something of a highway that  
8           is, for example, a national parkway that has been  
9           designed to provide people with views of the  
10          scenery that actually, you know, maximize their  
11          views of the scenery.  And then it's not the  
12          destination that people go to drive, specifically,  
13          for the scenery.

14                          So this highway definitely does not fall  
15          into that class.  This is, you know, a fairly  
16          utilitarian interstate highway.

17                          MR. RATLIFF:  With regard to the cone of  
18          vision that you speak of or that you --

19                          DR. PRIESTLEY:  Yeah.

20                          MR. RATLIFF:  -- speak of today in your  
21          testimony, I should say.  You're talking about the  
22          driver, is that correct?

23                          DR. PRIESTLEY:  Yes, yes, it is correct.

24                          MR. RATLIFF:  Yes.  And frequently cars,  
25          trucks, buses do have passengers, is that correct?

1 DR. PRIESTLEY: Yes, that's true.

2 MR. RATLIFF: And they do look out the  
3 window --

4 DR. PRIESTLEY: Yes.

5 MR. RATLIFF: And in the cone of vision  
6 that was depicted in the photo that you have given  
7 us from the Nipton exit heading east, would not  
8 the project be quite visible as it was on the  
9 photo just merely by looking down the road?

10 DR. PRIESTLEY: If a passenger --

11 MR. RATLIFF: If you like, pulling it  
12 out so we can look at it --

13 DR. PRIESTLEY: No, -- well, in fact,  
14 that's it right behind you.

15 MR. RATLIFF: Well, no, it's not. It's  
16 not.

17 DR. PRIESTLEY: Oh, you're talking  
18 about --

19 MR. RATLIFF: I'm talking about from  
20 Nipton Road --

21 DR. PRIESTLEY: Oh, you're speaking of  
22 Nipton.

23 MR. RATLIFF: -- north, I guess, it --

24 DR. PRIESTLEY: Oh, okay, you're  
25 speaking of the Nipton view. From there, yes,

1           yes, it is true that the project would be in the  
2           periphery of the cone of vision of the driver, and  
3           certainly for passengers in the car, particularly  
4           those on the west side, or somebody looking out  
5           the front window and you know, tilting their head.  
6           They would certainly be able to see that view.

7                         And I might note that the FSA concludes  
8           that the impact on that view would be less than  
9           significant.

10                        MR. RATLIFF: From the view of --

11                        DR. PRIESTLEY: From the view of anyone.

12                        MR. RATLIFF: At the Tipton Road?

13                        DR. PRIESTLEY: At Tipton Road, yes.

14                        MR. RATLIFF: And do you know why that  
15           is? What is the reason for that?

16                        DR. PRIESTLEY: I'd have to take a look  
17           to refresh my memory. Distance may have had  
18           something to do with it.

19                        MR. RATLIFF: Well, I'm really  
20           interested in your opinion anyway. What is your  
21           opinion as to that view?

22                        DR. PRIESTLEY: Yeah, well, in my  
23           opinion, looking at that view from Nipton Road,  
24           yeah, there are a number of issues.

25                        For one thing, you know, you're pretty

1 far from the project. So it is one element in a  
2 much much larger landscape vista that you are  
3 seeing. So it does not, you know, physically  
4 dominate the view from --

5 MR. RATLIFF: -- looking at your own map  
6 here, though it's going to spread for three miles  
7 to --

8 DR. PRIESTLEY: Pardon?

9 MR. RATLIFF: It's going to spread for  
10 three miles to the north, though. It's --

11 DR. PRIESTLEY: Well, that's all true,  
12 but when you're looking at it from the Nipton Road  
13 viewpoint, again it's, as you look at it it's one  
14 element in a relatively large landscape.

15 So as a consequence it occupies, you  
16 know, relatively speaking, a smaller part of the  
17 whole landscape. In fact, I think we may have a  
18 view of that that we could take a look at.

19 MR. RATLIFF: Yeah, we do. We had a  
20 simulation above it, and I think it speaks for  
21 itself, so.

22 DR. PRIESTLEY: Well, and again, your  
23 staff concluded that the impact on this view would  
24 be less than significant.

25 MR. RATLIFF: You've already said that.

1 I was asking what yours was.

2 DR. PRIESTLEY: Oh, yeah, and I  
3 certainly agree with --

4 MR. RATLIFF: And your reasoning for it.

5 DR. PRIESTLEY: Yeah.

6 MR. RATLIFF: Finally, I would like, I  
7 mean if we'd had a more informal setting it would  
8 have been good to discuss the issue of the KOPs.  
9 How KOPs are chosen and what are their  
10 limitations.

11 I mean how -- you frequently in your  
12 testimony today, we heard that you believe that  
13 many of the KOPs that we were making reference to  
14 were not what you called representative of any  
15 particularly -- well, you said they aren't good  
16 representatives of views from the Umberci Mine  
17 area, or not good representative views of the  
18 Stateline Wilderness area.

19 And that's always going to be a  
20 limitation with KOPs, correct?

21 DR. PRIESTLEY: Well, which is why, you  
22 know, very very careful selection of KOPs is quite  
23 important.

24 MR. RATLIFF: And you realize these KOPs  
25 were chosen in consultation with BLM who thought

1           that these were good KOPs? Or perhaps Ms. Haydon  
2           knows that?

3                       MS. HAYDON: Yes, BLM chose these, BLM  
4           and Bill Kanemoto directed, through a data  
5           request, which KOPs we should go visit.

6                       MR. RATLIFF: And when you couldn't  
7           reach the KOP of Umberci Mine Road, you chose the  
8           spot to take that photo, is that correct?

9                       MS. HAYDON: That's correct.

10                      MR. RATLIFF: That's right. And yet  
11           today, Dr. Priestley, you're saying that that's  
12           not a good representative view, is that correct?

13                      DR. PRIESTLEY: That's correct.

14                      MR. RATLIFF: I have no further  
15           questions.

16                      HEARING OFFICER KRAMER: Thank you. Any  
17           redirect?

18                      MR. WHEATLAND: No redirect.

19                      HEARING OFFICER KRAMER: Okay. There  
20           was an exchange of comments about changes to the  
21           conditions.

22                      Actually, I had one -- I'm sorry, I had  
23           one question for the applicant -- or for the  
24           witnesses.

25                      If you could turn to your prefiled

1 testimony. I can't give you a page, but actually  
2 if you look at the compilation that I passed out  
3 this morning, page 30, if you have that in front  
4 of you, it's the discussion of compliance with  
5 applicable LORS that begins at the top of the  
6 page. And it's right before section 3 discussing  
7 the conditions.

8 And at the end of the first paragraph it  
9 says that the Ivanpah Valley, a BLM-designated VRM  
10 class 3 area is not a scenic area when the visual  
11 resources evaluation of the project was conducted  
12 by the applicant.

13 To me that implies that something  
14 changed its classification as a scenic vista. And  
15 I wondered what was intended by that statement.

16 If you have my copy it's highlighted in  
17 yellow.

18 MR. WHEATLAND: What page is that?

19 HEARING OFFICER KRAMER: 30 or 39.

20 You're looking at the prefiled testimony? So then  
21 it would be about six pages into the prefiled  
22 testimony. Top of the page says compliance with  
23 applicable LORS. And you will not have the  
24 highlight on that copy.

25 MS. HAYDON: I'm sorry, but since now we

1 have the document in front of us, can you please  
2 restate the question?

3 HEARING OFFICER KRAMER: What's meant by  
4 that? It implies to me that there was a change in  
5 the scenic -- perhaps to scenic vista status after  
6 the applicant conducted its evaluation. And if  
7 that's not what it says, what was it meant to say,  
8 if you can tell us.

9 MS. HAYDON: I think this is incorrectly  
10 written, as it's shown here. The Ivanpah Valley  
11 did not have a BLM VRM class when we did our  
12 analysis. Now we're saying the BLM has designated  
13 it VRM class 3.

14 The class 3 area does not have a scenic  
15 vista, it didn't then when we did our analysis two  
16 years ago. It still doesn't have a scenic vista.  
17 It is VRM class 3, but the valley does not have a  
18 scenic vista.

19 I apologize, this was poorly written.

20 HEARING OFFICER KRAMER: And you're not  
21 equating class 3 to scenic vista status, I gather,  
22 then?

23 MS. HAYDON: No.

24 HEARING OFFICER KRAMER: Thank you. So  
25 as far as the proposed changes to the conditions

1 go, staff -- I gather that you've generally --  
2 well, you say here you generally agree with the  
3 applicant's proposed changes, but you made some  
4 minor modifications including retaining the  
5 authority of BLM's authorized officer for review  
6 and approval of the filings.

7 That's the general issue that I  
8 mentioned earlier about whether BLM is another  
9 approving party. I don't know if you want to get  
10 into that today, or in January. It is something  
11 we're going to have to tackle at some point in a  
12 general way.

13 MR. RATLIFF: That is a generic issue  
14 across --

15 HEARING OFFICER KRAMER: Right.

16 MR. RATLIFF: -- all of the conditions  
17 of certification.

18 HEARING OFFICER KRAMER: So I think  
19 we're open to tackling it either today or down the  
20 road, if you prefer.

21 MR. WHEATLAND: This is an issue we'd  
22 like to defer to January. We'd like to have  
23 additional discussion with BLM and the Commission  
24 Staff on this issue.

25 HEARING OFFICER KRAMER: Okay.

1                   MR. RATLIFF: And we're open to that  
2                   discussion. We point out that this project's on  
3                   BLM land and that BLM is very insistent that it  
4                   should be included in a review process for the  
5                   fulfillment of conditions on the land over which  
6                   it has authority. To us that makes sense.

7                   But I understand the applicant's very  
8                   concerned about schedules. So to the extent we  
9                   need to reconcile that, we'll have to do so.

10                  MR. WHEATLAND: We're simply looking for  
11                  ways to simplify the review process and make sure  
12                  that we're not caught in an endless loop of review  
13                  between two agencies that have equal review  
14                  authority. So we need to find some form of  
15                  delegation or coordination that will work to  
16                  provide some certainty to the project schedule.

17                  We would like to work with BLM and staff  
18                  in finding a solution.

19                  HEARING OFFICER KRAMER: Okay, well, it  
20                  sounds like some more workshopping then might do  
21                  some good. Mr. Hurshman, you'll be available in  
22                  January?

23                  MR. HURSHMAN: Well, at least by phone.

24                  MR. RATLIFF: Mr. Hurshman, as you can  
25                  see from his appearance, he's been injured and

1 he's apparently going to be under the knife and  
2 out for the rest of this month.

3 HEARING OFFICER KRAMER: Oh, no,  
4 actually I didn't notice, but I'm sorry to hear  
5 that.

6 MR. RATLIFF: We didn't do it.

7 (Laughter.)

8 ASSOCIATE MEMBER BOYD: Nor did the  
9 applicant?

10 (Laughter.)

11 HEARING OFFICER KRAMER: Okay, so are  
12 there any other changes in the staff's response to  
13 the applicant's proposals for visual conditions  
14 that we should discuss?

15 I guess we could put the whole thing off  
16 until January because we're not going to be  
17 closing this issue, topic area. So maybe that  
18 would be the best approach because the Committee  
19 needs to close up today at 5:30, and we want to  
20 make suer that you have all of tomorrow for your  
21 workshop, which we think would be more productive  
22 than visiting with us again.

23 So, let me suggest that we put any  
24 further discussion, if it's necessary, of the  
25 conditions over until January. And attempt to get

1 the other items, hopefully uncontested items,  
2 dealt with today before 5:30. Does anybody  
3 disagree with that approach?

4 Seeing none. Thank you. So visual  
5 resources -- we will also, Mr. Wheatland, hold  
6 open your motion to admit the documents until  
7 January.

8 MR. WHEATLAND: All the documents?

9 HEARING OFFICER KRAMER: Or actually you  
10 did not make a motion, you simply identified them.

11 MR. WHEATLAND: Right, and I was going  
12 to -- I have not moved any of our visual resource  
13 exhibits --

14 HEARING OFFICER KRAMER: Okay.

15 MR. WHEATLAND: -- into evidence. But  
16 with respect to the direct testimony that we have  
17 in exhibit 95, the documents that are included by  
18 reference in subsection (c) of our testimony,  
19 there's a list that we would ask that would be  
20 moved into evidence.

21 The errata, exhibit 97, and the map --  
22 67, I'm sorry -- 65, the item (c) items, 67 and  
23 69, I'd like to move those into evidence at this  
24 time.

25 HEARING OFFICER KRAMER: Okay, leaving

1 out 68?

2 MR. WHEATLAND: Yes.

3 HEARING OFFICER KRAMER: Okay, any  
4 objection from the other parties?

5 MR. RATLIFF: No.

6 HEARING OFFICER KRAMER: Seeing none,  
7 then we will receive those items into evidence.  
8 Correct, but also there was a whole list of items  
9 in 65 related to visual.

10 MR. WHEATLAND: Those are the items  
11 identified in section 1-C of our testimony, prior  
12 filings.

13 HEARING OFFICER KRAMER: And then, even  
14 if you don't have that with you, it happens to be  
15 in the handout I had this morning because I  
16 reproduced the whole visual section there.

17 Okay, seeing no objection, that is taken  
18 into evidence.

19 Let's return then to the list. Item  
20 3-e), transmission system engineering. To move it  
21 along, the applicant proposed changes to TSE-5 and  
22 6. Staff responded by accepting some but not all  
23 of the changes.

24 Does either party need to comment to us  
25 further, or can we consider the submittals as they

1 are?

2 Mr. Harris?

3 MR. HARRIS: Are you looking for me to  
4 move my documents in, Mr. Kramer, or --

5 HEARING OFFICER KRAMER: First I was  
6 wondering, for instance, if staff's proposed  
7 response was acceptable to you. I don't know if  
8 you've had time to review it. That would be  
9 interesting news to us.

10 MR. HARRIS: We have not had a chance to  
11 look at the staff's proposal on -- John, did you  
12 guys have a proposal on transmission line safety  
13 and nuisance?

14 MR. RATLIFF: We've handed out exhibit  
15 302 today, which has a response to all of the  
16 conditions of certification suggestions.

17 HEARING OFFICER KRAMER: I'll tell you  
18 what, let's take care of it this way. We can  
19 certainly close the record and discussions about  
20 the nature of conditions are really on the order  
21 of argument.

22 It may be necessary in a rare case that  
23 we need to reopen the record to add some  
24 additional evidence, but we can start by closing  
25 it and then reopening only those issues we need to

1           reopen when we hear from you in January about  
2           whether you're satisfied with the response.

3                       MR. HARRIS: I think that's an excellent  
4           way to proceed. We have every incentive to close  
5           out these issues and reach agreement with staff on  
6           proposals for the Committee's consideration.

7                       MR. RATLIFF: It might be -- we haven't  
8           really had an opportunity to talk about why they  
9           want some of the changes that they may want. We  
10          have agreed with some of the ones that we didn't  
11          think are important.

12                      But we can discuss with them further  
13          other things; they are important.

14                      HEARING OFFICER KRAMER: Okay, well,  
15          maybe you can, if you need to, discuss that during  
16          your workshop tomorrow.

17                      MR. RATLIFF: Yeah, okay.

18                      HEARING OFFICER KRAMER: Okay, Mr.  
19          Harris, if you wanted to use a shorthand way of  
20          introducing your documents, you could do so by  
21          reference to the list and the appropriate section  
22          of exhibit 65.

23                      MR. HARRIS: That would be fantastic.  
24          So I guess we left off with transmission system  
25          engineering and transmission line safety and

1 nuisance. And those exhibits are identified in  
2 section 1-C of our prior filing under the section  
3 listed as electric transmission.

4 And I would move the ones listed in 1-C  
5 plus this portion of exhibit 65, electric  
6 transmission.

7 HEARING OFFICER KRAMER: Any objection  
8 from parties?

9 MR. RATLIFF: No.

10 HEARING OFFICER KRAMER: Telephone  
11 folks, you still with us?

12 MR. SPEAKER: Yeah.

13 MR. SPEAKER: Still here.

14 MS. CUNNINGHAM: Yes.

15 HEARING OFFICER KRAMER: Okay. Hearing  
16 no objection, those exhibits are moved into  
17 evidence.

18 The next item is public health.

19 MR. RATLIFF: Mr. Kramer, did you want  
20 us to move the FSA or the other documents that  
21 staff has into evidence today, or did you want --

22 HEARING OFFICER KRAMER: Yeah, I was  
23 thinking you could do that all at once, since  
24 you've got the one exhibit and it could apply to  
25 all of those.

1                   MR. RATLIFF: Did you want to do that  
2 today or another time?

3                   HEARING OFFICER KRAMER: Yeah, let's do  
4 it today, after we finish with these others.

5                   MR. RATLIFF: Okay.

6                   HEARING OFFICER KRAMER: So, Mr. Harris,  
7 I gather we're just going to postpone any  
8 discussion of condition changes. You could  
9 probably move public health through  
10 socioeconomics, that would include hazardous  
11 materials, geological and paleontological, waste  
12 management and noise and socioeconomics, if you  
13 would like.

14                   MR. HARRIS: I would like to move  
15 sections 1-C of the subject matters that you just  
16 indicated for the record into evidence, and that  
17 portion of exhibit 65 for those same subject  
18 matters.

19                   HEARING OFFICER KRAMER: Any objection  
20 from the parties? Seeing none, it's received into  
21 evidence.

22                   Mr. Ratliff, the staff exhibits.

23                   MR. RATLIFF: The staff has three  
24 exhibits, the FSA, which I think is 300; the  
25 photos that we submitted last week, which are 301;

1 and the document which we handed out today at the  
2 hearing, which is dated December 14th, which is  
3 our response to the applicant's suggested changes  
4 in conditions of certification for uncontested  
5 areas.

6 HEARING OFFICER KRAMER: Let me ask with  
7 regard to 301, that's basically a summary of, or  
8 description of the photographs. As I understand  
9 it, it refers to them by pages. And do I have it  
10 correct that the pages are basically the slide  
11 numbers of Mr. Kanemoto's PowerPoint presentation?

12 MR. RATLIFF: I don't know. I think  
13 John Kessler can answer that question, but he --

14 MR. KANEMOTO: I think that's right.

15 MR. RATLIFF: Mr. Kanemoto says yes, so  
16 it must be true.

17 HEARING OFFICER KRAMER: Okay, so to  
18 have this have more meaning would it be  
19 appropriate to attach this to the printed version  
20 of his PowerPoint presentation?

21 MR. RATLIFF: Yeah, we can do that.

22 HEARING OFFICER KRAMER: Okay, so  
23 that --

24 MR. RATLIFF: I think that's what John  
25 intended to do following the hearing, is to get a

1 printed version for you. And I think we have CDs  
2 for all the parties. But the CDs are of the  
3 photos, themselves, just so you know what they  
4 are.

5 HEARING OFFICER KRAMER: Okay. So then  
6 exhibit 301 will include a copy of the PowerPoint  
7 presentation.

8 Any objection to the receipt into  
9 evidence of exhibits 300 through 301?

10 MR. HARRIS: No objection.

11 HEARING OFFICER KRAMER: Seeing none,  
12 those are received.

13 Public comment. Do we have anybody from  
14 the public who would like to make a public comment  
15 to the Committee today? Anyone on the telephone?

16 Okay, I think we postponed any argument.

17 Number 6 is to determine whether  
18 briefing is required on any of the above topics.  
19 One that occurs to me potentially is the proper  
20 geographic scope of a cumulative impact analysis,  
21 which does seem to be a point of disagreement  
22 among the parties.

23 Do applicant and staff, especially, but  
24 anybody else who wants to weigh in, would you find  
25 it useful to brief that issue?

1 MR. WHEATLAND: Yes.

2 MR. BASOFIN: Mr. Kramer, sorry to  
3 interject, are you referring to cumulative  
4 impacts, discussion of cumulative impacts solely  
5 for visual impacts?

6 HEARING OFFICER KRAMER: It would tend  
7 to be specific to the topic area. And I am  
8 thinking specifically about visual.

9 MR. BASOFIN: Okay.

10 HEARING OFFICER KRAMER: The difference  
11 being whether it's regional or within the  
12 viewshed, --

13 MR. BASOFIN: Okay, thank you for the  
14 clarification.

15 HEARING OFFICER KRAMER: -- as I  
16 understand it.

17 MR. RATLIFF: Are you going to be  
18 requesting briefs generally for the entire topic  
19 area anyway, or -- presumably?

20 HEARING OFFICER KRAMER: Well, that's a  
21 specific legal issue I think we want to hear more  
22 about. The --

23 MR. RATLIFF: Do you want that separate  
24 and apart from the brief on the topic or --

25 HEARING OFFICER KRAMER: Well, I was

1 about to ask if the parties would prefer to wait  
2 until after the January hearings and just deal  
3 with this all in one round of briefing, or if they  
4 would prefer to try to brief this before the  
5 January hearings.

6 MR. RATLIFF: I would prefer to do it  
7 later, personally, because we have a lot to do  
8 during the Christmas holidays already. And adding  
9 a brief right now would probably be difficult.

10 MR. HARRIS: I would concur and hope  
11 that instead of briefing we'd be filing joint  
12 recommendations on a lot of these issues. So I  
13 think the extra time is valuable.

14 HEARING OFFICER KRAMER: So it may  
15 eliminate the need for the briefs is what you're  
16 saying?

17 MR. HARRIS: At least that's between the  
18 applicant and staff, yes.

19 HEARING OFFICER KRAMER: Okay. Let's  
20 keep that on the list of potential topics then for  
21 post-hearing briefing.

22 Two more housekeeping items. How to  
23 handle "referenced" documents. I think it was  
24 Ms. Belenky called me last week, and I sent out an  
25 email to the parties, as best I recall, telling

1           you that we'd be discussing this today.

2                       It is often the case that either the  
3           staff assessment or the AFC refers to some big,  
4           giant, quite often big, giant document like the  
5           Desert Plan or some major study.

6                       And we have a case where at least one  
7           party is interested in seeing some of these  
8           documents and getting some assistance in obtaining  
9           a copy.

10                      And also some of those documents one or  
11           more parties may want to have become a part of the  
12           record at some point in time.

13                      Now, some of them we can probably take  
14           official notice of them. But ultimately we still  
15           need a physical copy for the evidence box that,  
16           you know, may or may not have to go to a court  
17           some day.

18                      So I wanted to talk about the logistics  
19           of, first of all, identifying those documents; and  
20           then secondly, coordinating so that we don't have  
21           four or five people producing copies and trying to  
22           provide them to the others. It's just not a good  
23           use of anyone's time.

24                      But a theme here is that this shouldn't  
25           become a scavenger hunt for a party, either.

1                   So, Ms. Belenky, one of the things you  
2                   thought you might do is come to us with a list of  
3                   some of the documents you're interested in. Did  
4                   you have one?

5                   MS. BELENKY: Thank you. I did send  
6                   just a short list from one section to the staff of  
7                   some of their reference documents I was asking  
8                   for. So there's sort of two different categories.

9                   One is reference documents that may not  
10                  be generally available, but that are mentioned in  
11                  either the FSA or elsewhere.

12                  And the other is the very large document  
13                  such as, for example, the NEMO plan, the CDCA  
14                  plan, the desert tortoise recovery plan, that many  
15                  people are going to be referring to.

16                  They are available online. I certainly  
17                  have a copy. But who is going to put those in the  
18                  record. They're mentioned both in the FSA and in  
19                  the applicant's documents, but yet they weren't  
20                  produced by either of them. And we want to know  
21                  who's going to put those in the record.

22                  HEARING OFFICER KRAMER: Thoughts from  
23                  the applicant or staff?

24                  MR. RATLIFF: Do you want these things  
25                  in a hard copy in the record?

1                   HEARING OFFICER KRAMER: I'd like to get  
2 away from paper, but we're not there yet. So, we  
3 need one hard copy --

4                   MR. RATLIFF: Because some of these  
5 documents are big, I mean.

6                   HEARING OFFICER KRAMER: Right. We need  
7 one hard copy for the box. Maybe we could get  
8 away with having them on CD.

9                   MR. RATLIFF: I think that might be  
10 preferable if we all do have access to the  
11 documents, I mean the big documents. I think we  
12 do have access to them. And I don't think that's  
13 a problem. I think the problem may be how you  
14 want to have it represented in the record.

15                   If we could represent it with a CD that  
16 would be very easy, I would think, to do, compared  
17 to --

18                   HEARING OFFICER KRAMER: Maybe you could  
19 create among yourselves one CD of all the common  
20 documents.

21                   MR. RATLIFF: Maybe so. But do we know  
22 what those are?

23                   HEARING OFFICER KRAMER: One lady has a  
24 list of some. I don't know if anyone else has  
25 given that much thought.

1                   MS. BELENKY: I've given it some thought  
2                   because there was some implication that it would  
3                   have to be our burden if we referred to any of  
4                   these documents, that we would then have to bring  
5                   the paper copies and put them in the record, which  
6                   doesn't seem accurate.

7                   Since these large documents, for  
8                   example, the San Bernardino County general plan  
9                   and any sections of that. They are available, but  
10                  they could be massive if you want to put in the  
11                  whole plan.

12                  MR. RATLIFF: Right, --

13                  MS. BELENKY: So it seems that if they  
14                  are mentioned in the FSA or the applicant's  
15                  documents, it's up to them to get them into the  
16                  record somehow.

17                  MR. HARRIS: Couple things. First off,  
18                  anything that's referenced in our testimony that  
19                  you don't have, let us know and we can get you  
20                  copies.

21                  There are other large documents like the  
22                  NEMO EIS that I think, you know, is generally  
23                  available to people, and I think you can take  
24                  official notice of some of those documents. I  
25                  don't see a need to put the paper in the record.

1                   And I'm also concerned about putting in,  
2                   you know, giant documents without referencing  
3                   which portions of the document, you know. I don't  
4                   think anybody wants to look at the, you know,  
5                   facility design for, you know, the Desert Express  
6                   Train.

7                   There may be portions of those records  
8                   that make sense, but people ought to identify  
9                   which portions go in there, as well.

10                  So, I don't mind giving those things a  
11                  reference number, too, if it makes sense for  
12                  something like NEMO, to give an exhibit number,  
13                  but not to put the whole document in. I don't see  
14                  any reason to kill the trees to do that.

15                  HEARING OFFICER KRAMER: Ms. Smith?

16                  MS. SMITH: Thank you, Mr. Kramer. I  
17                  would just argue under CEQA that if a document is  
18                  referenced in the FSA or anyplace else, it does  
19                  need -- the entire document does need to be in the  
20                  record. I'm more than happy to have it be just on  
21                  a disk.

22                  But some of the documents on Lisa's list  
23                  and list that we may have by Friday, by the 18th,  
24                  I would argue that as a matter of law those do  
25                  have to be in full in the record in some format;

1 certainly doesn't have to be a paper copy.

2 HEARING OFFICER KRAMER: Well, and if  
3 nothing else, that's a good idea to get the  
4 version that we were using nailed down on  
5 something that won't disappear on us down the  
6 road.

7 So maybe you can discuss that a little  
8 bit tomorrow at your workshop.

9 MR. RATLIFF: Well, maybe we need to  
10 come up with a list. I mean I don't know how many  
11 documents that we may have referred to in  
12 different sections. I know that in just  
13 biological resources there are a number of  
14 documents. And I don't know if it's a problem in  
15 other sections besides that.

16 We might be able to narrow it to the  
17 areas that people are interested in, that people  
18 are basically in conflict over. And make a list  
19 from those maybe.

20 Would that work? Or do we need to go  
21 through the engineering sections and everything  
22 else and try to find those documents, too?  
23 Because that might be a big huge list in and of  
24 itself.

25 HEARING OFFICER KRAMER: Well, I would

1 think that --

2 MR. RATLIFF: You know, the ANSI  
3 standards, and so forth.

4 HEARING OFFICER KRAMER: I would think  
5 that if no one cares enough to ask to see it, it's  
6 probably not important. And they're going to be  
7 precluded from raising the issue for the first  
8 time following our process.

9 MR. RATLIFF: Well, can we maybe agree  
10 on a list, then, of the things that you want on  
11 that CD. And we'll talk with you guys to see if  
12 you want more stuff or think of more stuff.

13 And then either the applicant or the  
14 staff will end up putting the CD in the record  
15 then, when we figure out what it is we want to do.  
16 Is that okay?

17 MS. SMITH: Sure. Could we have, you  
18 know, maybe till the 18th to the 20th or so to  
19 actually get the list, make sure it's accurate.

20 MR. RATLIFF: Sure.

21 MS. SMITH: Okay. Thank you very much.

22 HEARING OFFICER KRAMER: Okay, thank  
23 you. The next item, I wrote this last week and I  
24 think it was because of something Mr. Harris said  
25 in an email. Other data points to include in

1 prehearing conference statements. Does that ring  
2 a bell for you, Mr. Harris?

3 MR. HARRIS: I'm probably the source of  
4 trouble, but it's not ringing a bell for me, no.

5 (Laughter.)

6 HEARING OFFICER KRAMER: Okay, well, if  
7 nothing else, I think what is meant by this is, is  
8 there any other information that the parties feel  
9 it's not currently on the list of points to cover  
10 in the prehearing conference statements for next  
11 time, and we should perhaps add to the list to  
12 make it easier to efficiently conduct those  
13 hearings over two and a half days.

14 MS. BELENKY: Well, I did have one more  
15 question about documents, just because I want to  
16 make sure we're all totally on the same page and  
17 there's no confusion. Because I think there might  
18 have been a little bit today, even.

19 What I thought was agreed to in the  
20 prehearing conference is that we will, on the days  
21 that things are due, we will submit those  
22 documents in an email to all of the parties and to  
23 the Commission. And that if there's documents  
24 we're going to put them on CD ROMs and send those  
25 around by mail, so those documents might not

1 arrive that exact day. The would arrive a few  
2 days later.

3 And then that we would provide the  
4 Commission, itself, with two copies in paper of  
5 all those things. One copy just in a stack and  
6 then other copies that are in folders by subject  
7 matter, is that correct?

8 HEARING OFFICER KRAMER: Yes. It would  
9 be nice if you over-nighted the CD, --

10 MS. BELENKY: Okay.

11 HEARING OFFICER KRAMER: -- unless  
12 you've emailed them. Mr. Harris obviously had so  
13 many documents that email wasn't possible. But  
14 you may have a set of pdf's that's easy to email.  
15 And in that case, I think the CD could arrive in a  
16 more leisurely pace.

17 But if the documents are only going to  
18 be on a CD, you need to get that to them more  
19 quickly than the standard first class mail would.

20 MR. BASOFIN: And, Mr. Kramer, the two  
21 sets of paper copies to be delivered to the  
22 Commission, should those be over-nighted as well,  
23 or hand-delivered or sent via regular mail?

24 HEARING OFFICER KRAMER: If it gets here  
25 by a couple days before the hearing I think we're

1           okay.

2                         MR. BASOFIN:  So regular mail for  
3           intervenor exhibits that are due on the 18th?

4                         HEARING OFFICER KRAMER:  Yeah, that  
5           would be fine certainly because it's the rebuttal  
6           testimony, you know, which is only a shorter  
7           period before the hearing where I'd be more  
8           concerned.

9                         MR. BASOFIN:  Okay.

10                        HEARING OFFICER KRAMER:  So, back to  
11           data points.  Anything else people want, any other  
12           homework you want to assign yourselves on your  
13           prehearing conference statements?

14                        Maybe I'll remember some day what  
15           prompted this.

16                        MR. HARRIS:  I think the data point was,  
17           I think I used that term in my email to staff  
18           about the photos when I asked for some data points  
19           like where was the picture taken, is it a photo  
20           simulation.  I think that's where I used the word  
21           data points.

22                        So, I apologize for polluting your  
23           rhetoric there, so, yeah.

24                        HEARING OFFICER KRAMER:  No, I might  
25           have just been fishing for something.

1                   Okay. Is there any other issue that any  
2 party wants to raise in preparation for the  
3 January hearings?

4                   Well, seeing nothing there, I wish you a  
5 happy workshop tomorrow. And, Commissioner Byron,  
6 did you want to make any comments?

7                   PRESIDING MEMBER BYRON: Thank you all  
8 very much for being here. I agree, I hope you  
9 have a very successful workshop tomorrow. And I  
10 believe we'll see you again with evidentiary  
11 hearings on January 11th?

12                   HEARING OFFICER KRAMER: 11th, and  
13 there's a prehearing conference on January 4th.

14                   So, we're adjourned. Thank you.

15                   (Whereupon, at 5:05 p.m., the  
16 evidentiary hearing 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 Hearing; 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 hearing, nor in any way interested in outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 28th day of December, 2009.

PETER PETTY

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

December 28, 2009

Margo D. Hewitt,

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