

EVIDENTIARY HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Application for)
Certification for) Docket No.
The Palen Solar) 09-AFC-7
Power Project)
_____)

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA
WEDNESDAY, OCTOBER 27, 2010
10:08 A.M.

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APPEARANCES

COMMITTEE MEMBERS PRESENT

Robert Weisenmiller, Presiding Member

Karen Douglas, Associate Member

HEARING OFFICER AND ADVISERS

Raoul Renaud, Hearing Officer

Eileen Allen, Adviser

STAFF AND CONSULTANTS PRESENT

Alan H. Solomon, Project Manager

Lisa De Carlo, Staff Counsel

Witnesses

Carolyn Chainy-Davis

Andrew Collison

Michael Daly

Michael Donovan

Zara Kieler

Susan Lee

Mark Masser

Maudalina Rodriguez

Susan Sanders

John Thorn

David Vidaver

Will Walters

APPLICANT

Solar Millennium, LLC

Scott Galati

Alice Harron

Michael Cressner

APPEARANCES CONTINUED

Witnesses

Alice Carl
Jennifer Guigliano-Gilmore
Angie Harbin-Ireland

INTERVENORS

Kevin Emmerich (telephonic)
Basin and Range Watch

Lisa Belenky
Ileene Anderson
Center for Biological Diversity

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1 PROCEEDINGS

2 HEARING OFFICER RENAUD: I think we'll go ahead
3 and start now. This is the evidentiary hearing for the
4 Palen Solar Power Project at the California Energy
5 Commission, docket number 09-AFC-7.

6 The evidentiary hearing was scheduled for
7 10:00 -- or noticed to begin at 10:00 this morning. My
8 name is Raoul Renaud. I'm the Hearing Officer assigned by
9 the Energy Commission Committee to oversee the hearing
10 process in this matter.

11 The Commissioners presiding are Robert
12 Weisenmiller and Associate Member Chairman Karen Douglas.

13 Before we go further, let's take introductions
14 from the parties. Parties in this case include the
15 applicant, the Energy Commission staff, Center for
16 Biological Diversity, California Unions for Reliable
17 Energy, Californians for Renewable Energy, and Basin and
18 Range Watch.

19 Let me ask those of you on the telephone, please
20 keep the noise level down. We can hear you.

21 Let's begin with introductions by the applicant,
22 please. Go ahead.

23 MR. GALATI: This is Scott Galati representing
24 Palen Solar I, a subsidiary of Solar Millennium for the
25 Palen project.

1 MS. HARRON: Alice Harron, Palen Solar I.

2 MR. CRESSNER: Michael Cressner, Solar I.

3 HEARING OFFICER RENAUD: Thank you.

4 Introductions of staff. Or you have other
5 people? Go ahead.

6 MR. GALATI: We'll introduce them when it comes
7 time to give testimony.

8 MS. DE CARLO: Lisa De Carlo, Energy Commission
9 Staff Counsel.

10 MR. SOLOMON: Alan Solomon, Project Manager,
11 Energy Commission.

12 HEARING OFFICER RENAUD: Thank you.

13 Any representatives from CBD, Center for
14 Biological Diversity?

15 MS. BELENKY: Lisa Belenky for the Center for
16 Biological Diversity.

17 HEARING OFFICER RENAUD: Thank you.

18 And anyone representing California Unions for
19 Reliable Energy Today? Anyone representing Californians
20 for Renewable Energy, CARE.

21 Basin and Range Watch, are you there? Laura
22 Cunningham? Laura Cunningham, are you there?

23 MR. EMMERICH: This is Kevin Emmerich from Basin
24 and Range Watch. Laura is not here. I am not sure if we
25 area going to be able to stick around on the phone. Our

1 connection is very, very bad today.

2 HEARING OFFICER RENAUD: All right. Thank you.
3 While you are with us though, please try to keep the noise
4 level at your end down because it's very loud for us in
5 here or mute your phone.

6 What's in the background? Is that at your end,
7 Kevin? I hear other voices.

8 Hello? Who just said, "I'll turn around?" All
9 right.

10 Any representative from CARE today?

11 Those of you on the telephone, when you're not
12 speaking, would you please mute your phone? Do not put it
13 on hold, because we'll hear music. But please mute your
14 phone.

15 Go ahead, Mr. Galati.

16 MR. GALATI: Alice Carl, are you on the phone?
17 Dr. Carl?

18 HEARING OFFICER RENAUD: Alice Carl, are you on
19 the phone? No. All right.

20 Before we begin the proceedings today, let me
21 just ask if Mr. Galati has any introductory remarks or
22 requests before we go further.

23 MR. GALATI: Yes, I do. I would ask for the
24 Committee to give us a little bit of time to discuss
25 a couple of issues in a workshop setting with staff.

1 As you know from our opening testimony and our
2 rebuttal testimony and staff's rebuttal testimony, our
3 disputes with staff in the area of biology deal with Bio
4 23 and 24 and also Bio 20. And in the rebuttal testimony
5 that staff filed, they proposed some changes to Bio 23 and
6 24 that we find largely acceptable, but want to talk about
7 one issue.

8 And we also wanted to talk about a couple other
9 changes that showed up in staff's rebuttal testimony on
10 Bio 29. We think these issues are resolvable. We would
11 like an opportunity to talk them through. We hope we can
12 come to an agreement so that our dispute with staff will
13 only on be Bio 20. So we'd like that opportunity to
14 discuss.

15 Everything else I think we're in agreement with
16 staff on all the other Conditions of Certification.

17 HEARING OFFICER RENAUD: All right. Thank you.

18 I imagine most of you who can hear are familiar
19 with what a workshop is. But if anyone isn't, I'll
20 explain it.

21 The Committee can authorize the parties to meet
22 and discuss issues in the case in an open public setting,
23 such as this one. We find these are very productive ways
24 for parties to work out issues concerning impacts and
25 attempt to come to resolution of how those impacts will be

1 addressed.

2 Does staff do you wish to add to Galati's
3 request?

4 MS. DE CARLO: No. We think having a workshop
5 would be a fruitful use of time to go over some last
6 minute things.

7 HEARING OFFICER RENAUD: Intervenors? Ms.
8 Belenky.

9 MS. BELENKY: We have no objection to doing a
10 workshop, but we would like to at least talk a little bit
11 about what time different matters would be on today,
12 because I have one expert who's going to appear by phone
13 and I would like to have that.

14 HEARING OFFICER RENAUD: Fine. Thank you.

15 Any other parties wish to comment on the idea of
16 a workshop?

17 Well, the Committee will order the parties then
18 into a workshop to discuss these biological resources
19 issues. And before we -- and by the way, that workshop is
20 public. Those on the telephone can listen. All the
21 parties can be here. Everybody can participate. It's
22 entirely public and open meeting.

23 Now, Ms. Belenky, what can we do for you in terms
24 of scheduling?

25 MS. BELENKY: Well, I'm particularly concerned

1 with alternatives, because my expert is going to appear by
2 phone. If I can give him at least a window of a time we
3 would start alternatives.

4 HEARING OFFICER RENAUD: All right.

5 MS. BELENKY: That would be very helpful.

6 HEARING OFFICER RENAUD: I'm thinking we'll start
7 with biological resources today, that being the most
8 complicated of the topics. So I would certainly -- I
9 could begin by saying that the alternatives issues would
10 not be done until afternoon and probably mid to late
11 afternoon. Is that helpful?

12 MS. BELENKY: That's very helpful. I will
13 contact him and see what -- so not until after lunch at
14 least?

15 HEARING OFFICER RENAUD: No question about that.
16 Because the workshop is probably going to an hour or so, I
17 should think.

18 All right. Well, I think what we'll do then is
19 we will adjourn for purposes of the workshop. The
20 Committee members, and that includes me, must depart,
21 because these can be considered discussions among the
22 parties concerning the issues, and we have to remain
23 impartial.

24 So it now being 10:15 or so, we'll give you an
25 hour and we'll come back at 11:15. Hopefully, you'll be

1 done. If you're not, we'll talk further. Thank you.

2 And those of you on the phone, please, you may
3 continue to listen or you may call in an hour from now.
4 Those of you present, obviously anybody is welcome to
5 participate, listen, and so on. Thank you.

6 (Thereupon the parties recessed into a workshop
7 from 10:17 a.m. to 11:20 a.m.)

8 HEARING OFFICER RENAUD: This is the Palen
9 Evidentiary Hearing at the California Energy Commission.

10 The parties have been in a Committee-sponsored
11 workshop for the last hour. And have you made progress
12 and are you completed with your discussion or do you need
13 to continue the workshop?

14 MR. GALATI: From the applicant's perspective, I
15 don't believe that we need to continue the workshop. We
16 made progress on one language change, which was Bio 23,
17 which we'd like to work and read into the record.

18 On the Bio 29, we didn't make any progress.

19 And on -- there is two parts to Bio 29. We're
20 prepared to go the evidentiary hearing now.

21 HEARING OFFICER RENAUD: Very good.

22 Staff, do you agree with that assessment?

23 MS. DE CARLO: Yes.

24 HEARING OFFICER RENAUD: Other parties wish to
25 comment here.

1 MS. SANDERS: We did have one change that we
2 agreed to on Bio 29 which was a rounding, difference in
3 how security numbers were rounded. And I thought we did
4 agree. We had the numbers using the applicant's slightly
5 different assumption. Is that not true, Mr. Galati?

6 MR. GALATI: Sorry. I didn't hear that
7 resolution, so yeah, we're fine with that. I didn't think
8 we had a resolution on that.

9 MS. SANDERS: I'm sorry I didn't make that clear
10 we would work with your numbers -- you were out of the
11 room. So you is that acceptable to everybody?

12 MR. GALATI: That's acceptable to us. If I had
13 known we get agreement when I leave the room, I'll leave
14 the room now.

15 MS. GUIGLIANO: You guys have our table.

16 MS. SANDERS: We haven't figures those different
17 assumptions and verifying your numbers. Correct? Is that
18 all right with all parties?

19 MS. DE CARLO: Do you need more time to work that
20 out, Susan, or can we proceed to hearing right now?

21 MS. SANDERS: Perhaps they can do this at their
22 leisure and prepare the numbers and come back and then
23 enter those for the record then. Would that work?

24 MR. GALATI: I would ask for the Committee
25 preference on this particular point. Would you like us to

1 break again and try to red line numbers in a table since.

2 We have agreement in the concept, maybe another
3 option would be to go to evidentiary hearing with
4 agreement on the concept and then produce after the
5 hearing a table that is adjusted to reflect what we agreed
6 on the record.

7 HEARING OFFICER RENAUD: I think the latter is
8 preferable. We do need to get going. There is a fair
9 amount of testimony today. So it sounds like you have an
10 agreement. You just need to reduce it to writing. So I
11 think we'll proceed and have you submit that later.

12 MR. GALATI: Then I propose we do the same thing
13 for Bio 23. There's one language change we were going to
14 try to handle orally. I am certainly submit something
15 tomorrow that captures that change. I know staff is
16 working on that as we speak.

17 MS. DE CARLO: We're prepared to read something
18 into the record today, if that's amenable to the
19 applicant.

20 HEARING OFFICER RENAUD: Okay. All right. Well,
21 is there a lot of time involved in the reading, or is it
22 simply changes to an existing --

23 MS. DE CARLO: It's changes to two sentences I
24 believe to the existing condition.

25 HEARING OFFICER RENAUD: We'll plan to do that at

1 an appropriate point. Okay.

2 In that case, we are on the record, and we will
3 proceed with the evidentiary hearing testimony and
4 exhibits. We did introductions before.

5 Let me just make a few opening remarks. Again,
6 I'm Raoul Renaud, the Hearing Officer assigned by the
7 Commission and the Energy Commission Committee to oversee
8 the hearing process.

9 The Committee in this case consists of
10 Commissioner Robert Weisenmiller, who is the presiding
11 member, and Chairman Karen Douglas, who is the associate
12 member. Chairman Douglas is seated to my right. And far
13 to my left is Commissioner Weisenmiller's advisor, Eileen
14 Allen. Commissioner Weisenmiller is not able to attend
15 currently but will make every effort to be here later in
16 the day.

17 What we are doing today is taking testimony and
18 evidence on four topics: Air quality, alternatives,
19 biological resources, and soil and water resources. The
20 parties completed evidentiary hearings on all other topics
21 on October 13th.

22 The testimony and evidence comes into the record
23 during this proceeding for the purpose of being used in
24 creating the Presiding Member's Proposed Decision, the
25 PMPD, which would then be presented to the full Commission

1 for either adoption or rejection.

2 The proceeding today is fairly formal. Witnesses
3 who testify in person will testify under oath. The
4 parties will have the opportunity to cross-examine them.

5 And all of this is being stenographically are
6 recorded and will be eventually reproduced in a typed
7 booklet, which will be available on the Commission website
8 site.

9 Typically, we begin with the applicant, because
10 the applicant has the burden. This in the application for
11 certification proceeding. And we also decided earlier
12 that we would begin with biological resources. And having
13 said that, I think we should proceed.

14 Applicant?

15 MR. GALATI: I have some housekeeping that I
16 think might be in order.

17 HEARING OFFICER RENAUD: Go ahead.

18 MR. GALATI: At the last evidentiary hearing, we
19 admitted Exhibits 1 through 58 from the applicant.
20 Exhibit 58 was created that day, which dealt with a
21 particular change to condition Trans 6.

22 And so we have some additional exhibits starting
23 with Exhibit 59 and actually moving into Exhibit 64. So
24 unfortunately for the exhibit list that we presented, I
25 don't know if you have our most up to date, Mr. Hearing

1 Officer, but there's corrections that need to be made,
2 because 58 was left off of our list, which we accomplished
3 at the hearing.

4 So if you have an exhibit list in front of you,
5 our next exhibit in line should be 59, not 58. And that
6 is something that was docketed and attached to our
7 rebuttal testimony.

8 HEARING OFFICER RENAUD: All right. 58 as I
9 recall was the Trans 6.

10 MR. GALATI: Correct.

11 HEARING OFFICER RENAUD: On my list, 58 is shown
12 as the Hyundai Motor America, et cetera. So that will be
13 59.

14 MR. GALATI: Correct. So they'll all change.
15 Hyundai America, Mohave Grounds, desert tortoise
16 translocation study is Exhibit 59.

17 HEARING OFFICER RENAUD: All right.

18 MR. GALATI: So I'd also like to mark -- I
19 previously we docketed it yesterday. I handed a hard copy
20 to the Committee and to the parties a new exhibit that I'd
21 like to mark as Exhibit 64.

22 HEARING OFFICER RENAUD: Would you describe that
23 for record.

24 MR. GALATI: This is a document that was docketed
25 October 26th. It is a report Memorandum from AECOM to Mr.

1 Michael Cressner for Solar Millennium, and it is the
2 result of fall botanical surveys completed at the Palen
3 project. And it is double sided and numbered
4 sequentially, but I believe it is about 20 to 25 pages.

5 HEARING OFFICER RENAUD: Okay. Very good. We'll
6 mark that as 64 then.

7 (Thereupon Applicant's Exhibit 64 was marked for
8 identification.)

9 MR. GALATI: So at this time, before we get into
10 live testimony, I would move into the evidentiary record,
11 if the parties do not object, Exhibit 59 through Exhibit
12 64.

13 HEARING OFFICER RENAUD: All right. Let me ask
14 staff is there any objection to the admission of those
15 exhibits?

16 MS. DE CARLO: No objection.

17 HEARING OFFICER RENAUD: CBD?

18 MS. BELENKY: No objection.

19 HEARING OFFICER RENAUD: Basin and Range Watch,
20 are you on the phone?

21 CARE? Are you on the phone?

22 CURE? No. Okay.

23 No objection to the admissions of those exhibits.
24 They are admitted. Thank you.

25 (Thereupon Applicant's Exhibits 59 through 64

1 were admitted into evidence.)

2 MR. GALATI: As an offer of proof rather than
3 through sworn testimony, if the parties did not object, I
4 would like to state for the record that the applicant
5 agrees with the changes that staff has made to the
6 biological resources Conditions of Certification in its
7 rebuttal testimony, which is exhibit --

8 MS. DE CARLO: I think it's 303.

9 MR. GALATI: 303. This is Biological Resources
10 Condition 8. There was a change made to Biological
11 Resources Condition 23 and Condition 24. When staff puts
12 on their direct testimony, they will modify Bio 23
13 slightly orally. We agree to that change, and I can state
14 that for the record at that time as well.

15 HEARING OFFICER RENAUD: All right.

16 MR. GALATI: And Condition of Certification Bio
17 29, we agree to the changes we discussed at our workshop,
18 which have to do with changes in the -- changes in the
19 security calculations for Table 3.

20 Now I'd like to put on some quick testimony. And
21 I'm actually going to swear in Jennifer Guigliano and
22 Angie Harbin-Ireland to testify, if that's okay, about one
23 change that we want to Bio 29, which deals with an
24 indirect impacts on Mojave fringe-toed lizard phasing and
25 that will be conclude our direct testimony.

1 A Yes.

2 Q I want to direct your attention to the Mojave
3 fringe-toed lizard habitat. There is a line item in the
4 table called "indirect impacts." Are you familiar with
5 that?

6 A Yes.

7 Q Are you familiar with the discussions we had in our
8 workshop that dealt with applicant's desire to move the
9 timing of the indirect impacts for Phase I?

10 A Yes.

11 Q Could you correct the following understanding, if I've
12 got it wrong. There are some indirect impacts that will
13 be direct impacts if Phase 2 is constructed; is that
14 correct?

15 A Correct.

16 Q And there's some indirect impacts that occur whether
17 or not Phase 2 is constructed; correct?

18 A Correct.

19 Q The number that staff put in this assumes -- for the
20 indirect impacts for Phase I, assumes that Phase 2 would
21 not be constructed; is that correct?

22 A Correct.

23 Q Do you have -- can you summarize the applicant's
24 desire or recommendation of how we believe we should have
25 to mitigate the indirect impacts for Phase I that will be

1 direct impacts for Phase 2? Can you do that for us?

2 A Sure. The position that the indirect impacts for
3 Phase I should be -- that would become direct impacts for
4 Phase 2 should be mitigated timing wise in association
5 with the start of construction of Phase 2.

6 I mean, the reason for that being that the direct
7 impacts would be associated with construction of Phase 2
8 would be mitigated as direct impacts under Phase 2. And,
9 therefore, the security associated with those direct
10 impacts would be associated with the timing of
11 construction.

12 Q So your recommendation would be to somehow distinguish
13 in this table either through a footnote or another column
14 those indirect impacts that are -- that occur if Phase 2
15 is not constructed and time the security and mitigation to
16 some timing after Phase I is completed; is that correct?

17 A Yeah. So if there is the possibility -- we think
18 project change that would occur in Phase 2 wouldn't -- is
19 not constructed, that would need to be addressed. So
20 there would be opportunity to reassess whether or not
21 mitigation associated with potential unproven but assumed
22 indirect impacts associated with the construction of the
23 Phase I, if Phase 2 didn't happen, should be associated
24 somehow with the timing or some timing that reflects the
25 fact that Phase 2 has failed to occur.

1 Q My understanding is the applicant's position is
2 two years after the construction for Phase I is complete,
3 if Phase 2 is not constructed, then they would mitigate
4 for the indirect impacts. Otherwise, they would be
5 mitigating them as direct impacts; is that correct?

6 A That's correct. That's the applicant's position.

7 Q Okay. Also I'd like to move now off of Condition of
8 Certification Bio 29 and -- actually, that concludes my
9 direct testimony.

10 HEARING OFFICER RENAUD: All right. Thank you.

11 Staff, do you wish to cross-examine?

12 MS. DE CARLO: Just a few questions.

13

14 CROSS-EXAMINATION

15 BY MS. DE CARLO:

16 Q How long is construction anticipated to take for Phase
17 I?

18 A I'm don't know if I'm the best person. Two years.

19 Q And so you're proposing that mitigation for -- or
20 actually the security be paid for indirect impacts
21 two years after that; is that correct?

22 A Well, under the assumption that Phase 2 is being
23 constructed, because we don't have any evidence right now
24 that --

25 Q Well, no. You're requesting that if Phase 2 is not

1 constructed that you be given two years after the
2 completion of construction of Phase I to pay security for
3 the incorrect impacts; is that correct?

4 A I essentially that's what it would end up being.

5 Q That would be four years -- a total of four years from
6 beginning of start of construction Phase I before security
7 is provided for the lizard, the MFTL; is that correct?

8 A Suppose two years after start of construction -- if
9 it's two years after completion of construction.

10 Q And does that trigger the four years, the payment of
11 security, does that immediately provide mitigation or is
12 there some time after that when the mitigation is actually
13 required to be provided?

14 A I would say probably it depends on how the mitigation
15 is accomplished, whether you pay into the fee program or
16 whether you're acquiring lands for mitigation.

17 Q Isn't it true that pursuant to the Condition of
18 Certification that we have in place now that the applicant
19 is given about at least 18 months after posting of
20 security to actually provide the mitigation?

21 A If they're providing the mitigation themselves and not
22 paying --

23 Q So at the end of the day, if all the time lines
24 occurred according to applicant's wish, it could be almost
25 six years to provide mitigation for the dunes from start

1 of construction of Phase I; is that correct?

2 A To clarify, it's not just dunes; it's indirect
3 impacts. Most of it isn't dunes. But to clarify, yeah,
4 there would be a delay, because you wouldn't know at the
5 start of construction at Phase I whether or not Phase 2
6 would be built. So there is a risk associated with the
7 timeline.

8 MS. DE CARLO: Okay. Thanks. That's all the
9 questions I have?

10 HEARING OFFICER RENAUD: Thank you.

11 Cross-examination by CBD?

12 MS. BELENKY: Thank you.

13 BY MS. BELENKY:

14 Q My only question is: Did we come up with the numbers
15 that would fit within the -- that would distinguish
16 between the indirect impacts that would be direct impacts
17 of the under Phase 2 because I didn't hear the number when
18 you were --

19 A There is the 170.

20 Q Did we agree to that number? That never was clear to
21 me. So this is kind of an intellectual exercise at this
22 point, because we don't have a number that we are
23 discussing. It wouldn't be all of the indirect impacts,
24 only those that would wind up being directed impacts.

25 A We did a calculation on Monday just to look at that,

1 and I believe 112 and the 117 acres become direct impacts.

2 Q Having looked at the figures that the staff has, I
3 would be surprised that 112 of the 117 fit in that because
4 that doesn't seem to jive with staff.

5 A That came directly out -- we have the GIS files from
6 Andrew that we have been working on all these calculations
7 off of.

8 Q Does staff degree that 112 of the 116 indirect
9 impacts -- acres are in this category, because I don't --
10 that's not what we were saying.

11 MR. COLLISON: I believe it would be the
12 difference between the 144 acres and the 117 acres. I
13 think that's the point that we arrived at before the
14 conversation ended.

15 MS. BELENKY: So the 20 --

16 MR. COLLISON: Sorry -- 112 could be -- you're
17 right 112 could be --

18 MR. GALATI: Could we have just a second here. I
19 apologize, just because I read transcripts all my life.
20 We have one witness under oath, and we don't have another
21 witness under oath. And we're engaging in a dialogue. So
22 hate to be so formal, but let's let Ms. Guigliano try to
23 answer Ms. Belenky's question, which is does she know --
24 believe or no what the number is, which I think she's
25 answered.

1 HEARING OFFICER RENAUD: Hold on one second. I
2 agree with you, Mr. Galati, that it's a witness under oath
3 and there is cross-examination by one party. And, to me,
4 the main concern is simply that only one person talk at a
5 time so we can have a clear record.

6 However, I'm going to allow a reasonable amount
7 of interplay among people who are participating here in
8 the interest of an open and full discussion. All right.

9 MS. GUIGLIANO: We calculated acreage. We took
10 the sand shadow from the applicant's consultant and
11 overlaid it with our project service area to figure out
12 how much of the sand shadow from Phase 1A would fall
13 inside Phase 2. And that's the 112 acres. That would be
14 directed impacts from the sand shadow that was created
15 from Phase IA.

16 BY MS. BELENKY:

17 Q Let me ask -- so on the chart Table 1 in the column
18 that says Phase I under reconfigured Alternative 2, in the
19 row that says indirect impacts, the number 117 is in
20 there, and the staff's -- I believe this is the staff's
21 testimony. What number would you put in that cell?

22 A Sorry. Say that again.

23 Q I'm trying to understand what number you believe
24 should be in the cell under Phase I at indirect impacts on
25 Table 1 that now says 117 acres.

1 A It should be 117 acres.

2 Q It says 117 acres.

3 A For indirect impacts under Phase I based on the Sand
4 shadow we provided, we checked his numbers. It's 117 for
5 indirect impacts.

6 Q And you agree it's 117, but then there is some
7 sub-portion of that that you're saying you should not have
8 to provide security for at the beginning of construction?

9 A We're saying -- we're asking that all of the indirect
10 impacts be just lumped under Phase 2, assuming we build
11 the whole project. And that if Phase 2 is never
12 constructed, then there's some timeline where we have to
13 mitigate per staff. We weren't disagreeing with these
14 numbers. We mitigate for the indirect impacts staff
15 identified associated with the Phase 1A which is the 117.
16 We're not arguing -- we weren't debating the acreages. We
17 were just debating the timing and how we handle that.
18 Because if we put the security up right now for that 117
19 acres of indirect impacts just associated with the Phase
20 IA and they build the whole project, the applicant has
21 paid a security of 500,000, whatever it ends up being for
22 that 117 acres before Phase I, for impacts that turn into
23 direct impacts that aren't occurring until Phase 2 is
24 constructed.

25 Q Let me try to ask this another way. What do you think

1 is the number of acres out of the 117 that will later
2 become direct impacts?

3 A From our map, of that is within the Phase 2 area that
4 we calculated. From the maps they gave us, it falls under
5 Phase 2.

6 Q Thank you.

7 A There are 117 acres in his thing that fell in Phase 2
8 when we looked at what from Phase I falls within Phase 2.

9 I think I said 112. It was corrected.

10 Q Your testimony is that the entire 117 acres of
11 indirect impacts from Phase I become direct impacts under
12 Phase 2; is that your testimony?

13 A My testimony is there are 117 acres in the sand shadow
14 for Phase IA that fall into the Phase 2 boundary when we
15 open the GIS files and my GIS person calculates them.

16 HEARING OFFICER RENAUD: Does that conclude your
17 questions?

18 MS. BELENKY: It does. And it doesn't quite
19 track with my understanding, so I will spend some time and
20 look at it.

21 HEARING OFFICER RENAUD: All right. Thank you.

22 Cross-examination by Basin and Range Watch? Are
23 you there? Is anyone on the phone from Basin and Range
24 Watch.

25 MS. JENNINGS: I discussed it with them. They're

1 not able to participate because of the phone system.

2 HEARING OFFICER RENAUD: All right. Thank you.

3 Is there any way we can work around that to get
4 them to a land line or something?

5 MS. JENNINGS: No. They didn't think so. Their
6 cell phone works about half mile from their home, but they
7 can't afford to have the cell phone and they don't want to
8 sit out there and listen.

9 HEARING OFFICER RENAUD: All right. Okay.

10 Mr. Galati, any redirect?

11 MR. GALATI: Yes.

12

13 REDIRECT EXAMINATION

14 BY MR. GALATI:

15 Q I'm going to go ahead and start with a number first.

16 So Ms. Guigliano, if it was proven to you that
17 some of the 117 acres is outside the footprint of Phase 2,
18 would you agree that the 117 that's not going to be
19 impacted by Phase 2 that the applicant could provide
20 security for Phase I and then just defer the security for
21 that portion of the 117 that's within Phase 2 to a later
22 date?

23 A Correct.

24 Q But based on what you looked at in the GIS files,
25 you're not seeing that any of the 117 is outside of the

1 Phase 2 area?

2 A Our GIS person did a calculation for me on what is in
3 the Phase 2 area, and it was 117 acres. That's --

4 Q Next I wanted to address some questions from staff
5 about the timing of the impact and timing of mitigation.
6 Is it your opinion that the indirect impacts from sand
7 transport immediately create a significant impact to the
8 Mohave fringe-toed lizard the minute a fence is put up
9 around Phase I?

10 A No. There are many factors.

11 Q And is it also your testimony that the full 117
12 indirect impacts don't become permanent impacts unless
13 Phase 2 is not built; is that correct?

14 A Correct.

15 Q Because some portion of it, at this date, you believe
16 it's 117 is fully within Phase 2 direct impacts?

17 A Correct.

18 MR. GALATI: I have no further redirect
19 questions.

20 HEARING OFFICER RENAUD: All right. Well, I'll
21 ask if anybody has re-cross just in case.

22 MS. DE CARLO: Not from staff.

23 HEARING OFFICER RENAUD: CBD? All right.

24 Next witness.

25 MR. GALATI: The rest of ours is rebuttal

1 testimony and cross-examination of staff and CBD. So we
2 have no more direct testimony.

3 I believe we've entered all of our exhibits into
4 the record. And I think we'll wait and respond to staff's
5 testimony on Bio 23, the change that we've discussed.

6 HEARING OFFICER RENAUD: All right. Thank you.

7 Staff, are you ready to proceed with biological
8 resources?

9 MS. DE CARLO: Yes. I would like to identify the
10 exhibits from our updated exhibit list pertaining to
11 biological resources.

12 HEARING OFFICER RENAUD: All right. Go ahead.

13 MS. DE CARLO: We have Exhibit 303 Energy
14 Commission staff's rebuttal testimony filed on October
15 22nd.

16 We have Exhibits 304 through 313, which are
17 various exhibits that relate to biological resources. Do
18 you want me to read the titles of each one?

19 HEARING OFFICER RENAUD: No. I think everyone
20 has a copy of your exhibit list. So you can dispense with
21 that.

22 MS. DE CARLO: And then Exhibits 315 and 316 as
23 well, those are all for biological resources.

24 HEARING OFFICER RENAUD: All right. And what I
25 don't think you mentioned 314.

1 MS. DE CARLO: 314 is actually for our
2 alternatives.

3 HEARING OFFICER RENAUD: All right. Fine.

4 And do you wish to move those exhibits into
5 evidence then.

6 MS. DE CARLO: I do, if there are no objections.

7 HEARING OFFICER RENAUD: Is there any objection
8 from applicant?

9 MR. GALATI: No.

10 HEARING OFFICER RENAUD: All right. CBD?

11 MS. BELENKY: No.

12 HEARING OFFICER RENAUD: All right. Thank you.
13 Those will be admitted then.

14 (Thereupon Staff Exhibits 303-313 and 315-316
15 were admitted into evidence.)

16 MS. DE CARLO: Are the parties okay with
17 stipulating to staff sponsoring their testimony and
18 exhibits identified? I don't need to go through the
19 preliminary questions?

20 MS. BELENKY: Yes.

21 MS. DE CARLO: Okay. Then my witness needs to be
22 sworn. We have Andrew Collison, Susan Sanders, Carolyn
23 Chainey-Davis, Zara Keiller, and Michael Donovan.

24 HEARING OFFICER RENAUD: Will they be testifying
25 as a panel?

1 MS. DE CARLO: They will be.

2 HEARING OFFICER RENAUD: Let's wear them all,
3 please.

4 (Whereupon prospective witnesses were sworn.)

5

6 DIRECT EXAMINATION

7 BY MS. DE CARLO:

8 Q Mr. Donovan, did you help in the preparation of
9 biological resources Conditions of Certification 23 and
10 24?

11 A Yes, I did.

12 Q Do you have any proposed changes you would like to
13 propose?

14 A Yes. Under the verification, under the second to the
15 last paragraph where it goes, "water bearing zone is
16 unrelated and not influenced," we would change that to
17 "water bearing zone is not hydraulically connected to the
18 regional."

19 There is one other additional change. This is
20 under 15. And it says the "shallow water bearing zone
21 unrelated." We would change that to "shallow water
22 bearing zone and is not hydraulically connected."

23 MS. DE CARLO: Okay.

24 HEARING OFFICER RENAUD: Cross-examination?

25 MR. GALATI: No cross-examination on that point.

1 on them and the regional sand dune corridor.

2 As you notice in the publication of the staff
3 assessment, the draft environmental impact statement, the
4 applicant developed two new reconfigured alternatives,
5 Alternative 2 and 3 that shifted the project out of the
6 sand dune corridor. And Dr. Collison in a while will
7 provide some more information about that. And that
8 avoided the substantial interference with the sand dune
9 corridor and reduced impacts to sand dunes and sand dune
10 species. And staff wants to commend the applicant for
11 that. That was a major reconfiguration. And I want to
12 emphasize what an important act that was.

13 And let me read to you from one of our exhibits.
14 This is Exhibit 306. This is a paper by Dr. Barrows,
15 ecological model for protection of the dune ecosystem.
16 This is regarding the Coachella Valley fringe-toed lizard,
17 which is the one related to the one that occurs on the
18 project site, the Mojave fringe-toed lizard.

19 HEARING OFFICER RENAUD: Would you tell us where
20 you're reading in the document.

21 MS. SANDERS: Exhibit 306. If you're looking at
22 a computer version, it will be on PDF page 200. Does that
23 help?

24 HEARING OFFICER RENAUD: My version has 14 pages.
25 What's the page number of the document itself?

1 MS. SANDERS: That would be page one of the
2 document 306.

3 HEARING OFFICER RENAUD: Okay.

4 MS. SANDERS: It's called, "An Ecological Model
5 for the Production of the Dune Ecosystem." In the first
6 paragraph let me read you what it says. "Human
7 development that began in the 1950s and accelerated
8 through the next three decades created barriers to sand
9 movement that have altered the habitat. As a result, the
10 lizard was listed as threatened by the federal government
11 in 1980."

12 So this is the Coachella Valley sand dune lizard,
13 which is to the west of the project site. We have the
14 Mojave fringe-toed, a related species. It is not listed.
15 It's a special concern -- species of concern to the Fish
16 and Game and the Bureau of Land Management. But steps
17 like what the applicant has done has taken us off the path
18 from perhaps listing it, because this species is at the
19 southern most limit of its range. And it's the kinds of
20 things that we're talking about now, putting barriers to
21 sand which creates the habitat needed for this lizard.
22 Reconfiguring this project helped avoid going down the
23 road towards listing.

24 To sum up some of the other impacts of the
25 project for desert tortoise, most of the project site is

1 moderate to low quality habitat for desert tortoise. The
2 applicant is going to be mitigating one-to-one for impacts
3 to most of it. Five to one for that small portion, about
4 200 acres that's designated critical habitat. Staff feels
5 that plus Bio 1 -- Bio 9 through Bio 11, those are
6 avoidance and minimization measures. We believe that
7 fully mitigates for impacts to desert tortoise.

8 The project would impact up to 312 acres of
9 desert washes that are jurisdictional state waters. Would
10 indirectly impact up to 32 acres downstream. It would
11 interfere with the flow.

12 Staff's Condition of Certification Bio 21
13 mitigates for those impacts and also satisfies Fish and
14 Game Codes related to protection of streams.

15 Even though the project is using dry cooling,
16 there are potential impacts to groundwater
17 dependent-ecosystems. So those plants that go deep and
18 rely on groundwater.

19 Staff and applicants have worked out a monitoring
20 program whereby we -- because there's so much uncertainty
21 on this issue, to monitor the status of those -- they're
22 called phreatophyte, the plants dependent on groundwater
23 to monitor them and see what the effect of project pumping
24 is and to have remedial action if it proves there is an
25 effect. And that's in Bio 23 and 24. And staff believes

1 those measures would avoid significant impacts to
2 groundwater dependent vegetation.

3 Special status plants, I don't think the
4 applicant discussed this, but I think your rare plant
5 surveys indicated there are no fall rare plants to be
6 found, sensitive special status species fall plants
7 surveys data has just come in. And if they want to
8 address that later, perhaps they can speak to it.

9 We had a Bio 19, a very elaborate detailed
10 mitigation measure to avoid impacts to special status
11 plants. There are some known to occur near the project
12 area. There will be some impacts. But Bio 19 reduces all
13 those impacts to less than significant levels. We don't
14 have any more lingering uncertainty about what the project
15 might do to fall blooming rare plants. That's correct.

16 The botanist agrees with me.

17 Other special status wildlife inhabit the site,
18 like borrowing owl, the LeConte's Thrasher, Loggerhead
19 Shrike, badgers, Desert Kit Fox. Staff has avoidance
20 minimization measures in their Conditions of
21 Certification.

22 Staff also believes acquisition protection
23 enhancement of the some -- the acreage required depending
24 on which alternative is chosen, that will also have
25 benefits to those other special status species that

1 co-occur with the desert tortoise. And staff believes
2 those impacts to those special status wildlife will be
3 mitigated to less than significant levels with those
4 Conditions of Certification.

5 I think Dr. Collison now is going to explain to
6 you our analysis of the impacts to sand dune habitat and
7 to Mojave fringe-toed lizard which are dependent on sand
8 dune habitat. I will turn it over to him.

9 MR. COLLISON: If I could, I'd like to set up the
10 projector.

11 HEARING OFFICER RENAUD: Please, go ahead.

12 MS. DE CARLO: While we're waiting for that, I
13 apologize. I forget to indicate that we do have some
14 people on the line as well. Maudalana Rodriguez I believe
15 is on the line. She's with California Department of Fish
16 and Game. She helped co-author staff's analysis. And I
17 am not sure if Mark Masser with BLM is there as well. And
18 possibly Taniqua Engleheart from U.S. Fish and Wildlife
19 Service.

20 HEARING OFFICER RENAUD: Will you be calling
21 them, too?

22 MS. DE CARLO: No. They won't be giving direct
23 testimony. Taniqua is here solely to provide agency
24 comment, if necessary. But Mark and Maudalana are
25 available for cross-examination as well.

1 MR. COLLISON: Could we go to the first slide,
2 please?

3 So I'm just going to talk briefly about the
4 relationship between sand dunes and Mojave fringe-toed and
5 how that relates to the project site and the various
6 different issues that are being proposed. First --

7 HEARING OFFICER RENAUD: For the record, let me
8 just say that the slide that we're looking at now is from
9 the RSA, Appendix C, page 5.

10 MR. COLLISON: In fact, the entire
11 presentation -- we put this entire presentation as a
12 separate exhibit just to make it more convenient because
13 I'm going to be jumping around to different sources. And
14 this is -- what's the exhibit number?

15 MS. DE CARLO: 313.

16 HEARING OFFICER RENAUD: Thank you very much.

17 MR. COLLISON: So we're looking at page 2 of
18 Exhibit 313. Really, this is just to make a point that
19 Mojave fringe-toed lizards rely on a fresh supply of wind
20 blown sand, and they exhibit dunes that are actively being
21 supplied with sand.

22 The second photograph on that slide shows what
23 typical fringe-toed lizard habitat looks like. The bottom
24 photo shows what the habitat looks like if it loses its
25 supply of sand. It withers away. We use the term

1 deflates, and the sand is blown away and it becomes
2 unsuitable for fringe-toed lizards.

3 We go to the next slide. The sand that supplies
4 fringe-toed lizards doesn't occur everywhere within the
5 Mojave desert. It follows very well designed pathways.
6 And those pathways are shown in yellow on the left-hand
7 figure that we're looking at up here based on the study
8 done to identify sand pathways.

9 And you can think of these as the rivers of the
10 desert. These are the sand transport paths within the
11 desert. They follow these very well prescribed corridors.

12 The photograph on the right-hand side showed
13 specifically the sand transport corridor where the Palen
14 project site is located. You can see it's a very well
15 defined thing. It's the sandy yellow colored S curve that
16 works its way through the middle of the photograph on the
17 right-hand side. So you can see in there the
18 fingerprint for the original proposed project that we've
19 now moved on from. But you can see why we originally had
20 concerns that the first project was going to cause a
21 significant regional impact to sand dune transport
22 processes. So it was really a very large intrusion into
23 that sand transport corridor. If we move on to the next
24 slide.

25 So there's also a very strong association between

1 these sand transport corridors and the fringe-toed
2 lizards. This is a graphic from the applicant's
3 submission, and it shows the blue dots that you can see up
4 in the right-hand corner of the project. These are the
5 occurrences of individual fringe-toed lizard that were
6 identified by the applicant in the bio surveys. And you
7 can see that they're very strongly associated with some of
8 the zones of the sand transport corridors. There's very
9 strong correlation between the sand transport corridors
10 and the abundance of fringe-toed lizards.

11 If you look at the green zone, the zone three,
12 which is on the periphery of the sand transport corridor,
13 you can see the abundance of these fringe-toed lizards is
14 much sparser. And so in a sense, this gives you a idea of
15 what happens when you start turning off the sand supply.
16 You get a reduction in the density and abundance of these
17 species.

18 If we can move on to page 5. This next graphic
19 shows the effects of putting an obstruction in the sand
20 transport corridor. What we have on the left -- and this
21 I think may be become very relevant to the conversation
22 we're going to have about tortoise fencings and the wind
23 fence for the project.

24 Studies have been done in the Mojave desert.
25 This is a study done by Grantz, et al, at U.C. Davis.

1 They did a study where they put fences in the Mojave
2 desert and measured sand transport rates and dust
3 transport rates through those corridors. What they found
4 was for dust there was another 80 percent reduction in the
5 amount of dust downwind of one of these fences relative to
6 what they measured up wind.

7 Sand would be more effective, because sand tends
8 to move very close to the sand. Most sand transport
9 occurs within a zone that's six inches high above the
10 ground. Dust can travel more easily over obstructions like
11 this. So we have quantitative evidence that even
12 relatively smaller -- you can see this is a relatively
13 small fence. It is a porous fence. This is not a
14 complete barrier to wind movement. And yet it's very
15 effective in reducing the amount of sand moving through
16 the system.

17 Next slide.

18 I'm going to show you now two peer reviewed
19 journal articles that specifically address the
20 relationship between sand disruption and fringe-toed
21 lizard abundance. Both of these are for the Coachella
22 Valley just upwind within the same valley system we are
23 working with here.

24 This a study by Griffith, et al, and what they
25 did -- this is a USGS publication. What they did is

1 looked at the rates at which sand was supplied for -- the
2 type of sand that's very suitable for fringe-toed lizard
3 habitat, the rates at which it's supplied by river systems
4 and then removed by wind systems. This is sort of the
5 conveyer belt that occurs for sand dunes. Delivered by
6 desert washes and then removed downwind by the wind.

7 And this table on the right-hand side shows the
8 period of time in months for the removal of, first of all,
9 on the left-hand side it says months to remove all sand.
10 And then on the right-hand side, it's months to remove all
11 what they called uma sand. Uma is the Latin name for the
12 species. And what they mean by uma sand is that finer
13 sand traction that is particularly good habitat for this
14 species.

15 And you'll notice that in -- this is very
16 relevant to the first testimony that the applicant
17 provided where we were talking about how long should we
18 wait to trigger mitigation. And the proposal was put
19 forward that perhaps up to six years might be used before
20 we trigger mitigation.

21 This study shows that the sand required to
22 support fringe-toed lizard habitat was removed in periods
23 between -- if you look at those numbers, 1.7 months up to
24 about 4.9 months. Now, there is a caveat with that. They
25 recognize these numbers are on the low side, and they

1 suggest perhaps doubling or tripling these numbers for
2 more vegetative conditions.

3 But what they're saying is basically within about
4 a year of putting in an obstruction to sand supply, there
5 is complete removal and loss of the sand that supplies the
6 fringe-toed lizard. So when we have argued about whether
7 six years or not, six years is too long or too short of a
8 period to look for mitigation, this is the kind of
9 evidence we're relying on to support enforcing the
10 mitigation very quickly after construction and the
11 introduction of obstructions like wind fences and even the
12 tortoise fence that I believe we'll talk about later.

13 The next slide is another study. This also
14 addresses the same issue. These authors were looking at
15 the effect of lines of tamarisk trees and whether there
16 were fringe-toed lizards upwind and downwind of those
17 trees. What they found was abundant fringe-toed lizards
18 upwind of the trees. They found almost zero fringe-toed
19 lizards downwind of these trees.

20 These trees have been in place for seven, 12, and
21 17 years. These wind breaks have been in existence for
22 between seven was the youngest and 12 -- and 17 was the
23 eldest. And it's not that they were studying for all of
24 the years up to that point. They just went out and found
25 breaks that had been in existence. It could be the impact

1 occurred earlier, but they know that after they did tests
2 on these trees, test spots, there was no presence of
3 fringe-toed lizards. There were abundant fringe-toed
4 lizards immediately upwind on the other side of the wind
5 fence.

6 So there was a lot of evidence to suggest that
7 fairly quickly after barriers are put into a sand
8 transport corridor, we see an a lot of sand and an
9 associated loss of fringe-toed. Next slide.

10 So the applicant did what I have to say is a
11 really nice qualitative geomorphic assessment of the
12 effects of sand transport, and they provided a series of
13 studies looking at sand dunes and mapping sand dunes. And
14 I have a lot of respect for the work that was submitted
15 and the way that they've gone about doing their work. But
16 we do have some significant differences in the conclusions
17 we reached with that work. I think a large reason we've
18 come to different conclusions is we're trying to put out
19 quantitative numbers. We're trying to say how many acres
20 of impacts occurs and how severe is that impact.

21 So what we have done is taken a look at the data
22 presented by the applicant and also data from the
23 literature and turned that into a numerical model that we
24 use to predict what happens with you drop the barriers
25 into a sand transport corridor. So the next few slides

1 show the effect of this model that we've developed.

2 The first point to make is that a lot of data
3 comes from the applicant. The data really looks at two
4 things. It looks at the prevailing direction sand is
5 moving through a corridor, and then it also looks at
6 distributions. It looks at variability around that one
7 prevailing direction. Our data for prevailing direction
8 primarily comes from the applicant, and this is actually
9 the applicant's consultant in the field taking those
10 measurements. So he looked at sand dunes. He looks at
11 the orientation of those sand dunes and uses that to
12 figure out what the long-term prevailing wind direction
13 is.

14 The next slide shows what we do with that
15 database. We also use data from weather stations. In
16 this case, the weather station at Blythe to look at
17 distributions around that. So in other words, rather than
18 just saying the wind is blowing in the same direction all
19 the time, we look at distributions in wind direction
20 around that. That becomes very important when we're
21 starting to figure out what the area of impact is down
22 wind of one of these projects. So we basically developed
23 a model that take all of these factors and allows you to
24 drop an object into a matrix. We sort of divide the
25 desert into a series of cells, which I'm showing

1 simplified on the right-hand side. We drop our
2 obstruction into that and look to see what we call the
3 shadow downwind of that is. And the shadow is the area
4 where wind supply is disrupted.

5 So next slide.

6 This is one of our shadow outputs for the
7 original proposed project. So you can see that the
8 project attributed quite a long way into the sand
9 transport corridor, 50 percent for more into the sand
10 transport corridor. Based on that, we predicted an
11 indirect impact. When we're discussing indirect impacts,
12 we're talking about that dark area, that shadow behind
13 downwind of the project.

14 So the original proposed project had a really
15 large effect, over a thousand acres of indirect effect.
16 And I would just echo Ms. Sander's comments that we very
17 much appreciated the subsequent reductions of that
18 footprint and the shrinking back of the project.

19 The next slide I think shows the second and then
20 later on I'm going to talk about the third alternative.
21 You can see that the applicant has pulled back a long way
22 from that sand transport corridor, although they have not
23 put back 100 percent.

24 What you can see is these areas on the left-hand
25 side, you can see the dark areas where we are predicting

1 there would be a reduction in sand supply. In fact, quite
2 a large reduction. That darkest area shows about a 75
3 percent reduction in sand supply. So this is the basis
4 for our predictions.

5 The green dots on the map are fringe-toed
6 lizards. You can see there are fringe-toed lizards in the
7 areas which would be effected.

8 The next slide shows the other alternative. It
9 shows Alternative 3. And to this is the way that we've
10 gone about predicting what the impacts would be. As I
11 say, we've largely taken either the applicant's data or
12 other data sources that were available and turned that
13 into a means of making a quantitative prediction. We can
14 move on.

15 So I don't know if you want to now discuss the
16 fence or if you want to hold that. Perhaps if you -- can
17 you just flip on the next slide?

18 So one of the -- in recent workshops, we've had
19 discussions with the applicant about -- once it became
20 clear the fence was causing a problem, we had discussions
21 about other ways of modifying the fence, putting in
22 smaller fence, only using a tortoise fence, for example.
23 And would that be a means of reducing the indirect shadow.
24 So again what I've done is gone to the literature. This
25 is a publication by Grantz, et al. These are again the

1 professor at U.C. Davis that I referred to earlier that
2 have the wind fence experiment. And in addition to
3 putting out a wind fence, they also studied saying let's
4 just put out some other barriers and see how much they
5 effect the transport of dust through this process.

6 You can see on the right-hand side, these are 24
7 inch plastic cones they have scattered over -- this is a
8 study again done in the Mohave desert. They've scattered
9 these over the wind surface. What they found is even
10 those cones stopped 40 to 64 percent of dust transport
11 within three feet of the ground, which is where most sand
12 transport occurs.

13 Again, this would be more effective for sand
14 transport, because it has a higher mass and tends to be
15 more effective. This seems like a very extreme result.
16 But sand transport is extremely sensitive to boundary
17 layer that it's flowing over, because it's so in concert
18 with the ground.

19 Relatively small disruptions along the ground,
20 such as the tortoise fence or something similar to that,
21 for example the solar ray itself, cause a drag and
22 friction which is enough to drop these particles out and
23 stop the moving.

24 So even taking out the original 30-foot high wind
25 fence that was proposed and replacing it with just the

1 desert tortoise fence, we feel would have a significant
2 impact on the sand transfer. I think that's the final
3 slide.

4 These are the data. The number on the right-hand
5 side is the percentage of dust reduced by these different
6 things that they've put on the ground ranging from the
7 fence to burrows and the roughness element of those
8 24-inch plastic cones that I just showed you.

9 So we believe there is a significant impact to
10 even from a relatively small fence being put on the site.
11 And that, again, is our basis for saying that we believe
12 mitigation should start right after the fence goes up.
13 And we do believe the indirect impact area is what we have
14 predicted it to be.

15 MS. DE CARLO: Mr. Collison, in previous
16 discussions with the applicant, they floated the idea or
17 requested that we consider giving them the opportunity to
18 monitor before requiring the mitigation. What is your
19 opinion on the feasibility of allowing a preliminary
20 monitoring situation?

21 MR. COLLISON: So monitoring is tricky to come up
22 with a monitoring program that would capture the
23 conditions that you have out here. Sand transport occurs
24 in the very episodic way. It's temporally episodic and
25 spatially very patchy. So in other words, studies that

1 have been done on this have found that you may go for a
2 period of several years without any sand moving and, then
3 you may have, for example, an El Nino winter where a lot
4 of sand was distributed by desert washes. And then that
5 sand may just sit in the wash for several years and not
6 move anywhere. And then you might have a La Nina winter
7 where you have cold dry winds blowing through the system
8 that pick the sediment up and move it through the dune
9 system.

10 So because these events are very unpredictable
11 and sporadic, it means that any monitoring program would
12 also have to deal with that very sporadic nature. You may
13 see nothing for three or four years and then you may have
14 an event which has a large impact on the lizards. May
15 occur in one day or in a short period of time. So it's
16 very hard to capture that in a monitoring program.

17 It's also hard not to just because this is a
18 temporal aspect, but there is a spatial aspect. You might
19 say, let's go out and measure the depth of sand in a
20 couple of locations. It's going to be highly variable.
21 You have to measure the location in, you know, hundreds of
22 locations potentially and be looking and making sure that
23 there was still a net change in sand. So while I don't
24 think it's completely impossible to come up with a
25 monitoring scheme, I think it's very hard to come up with

1 a monitoring scheme that would capture that variability.
2 And we haven't seen one from the applicant that was
3 heading the direction that we felt was likely to be
4 usable.

5 The other point I'd make is it doesn't take much
6 reduction to sand to actually trigger a big loss of
7 habitat as well. So it's a very sensitive -- habitat is
8 very sensitive to small amounts of change.

9 MS. DE CARLO: And do you, either Ms. Sanders Mr.
10 Collison, do you agree with the applicant's expert
11 testimony that there would be no impact if there were a
12 five-and-a-half year, six-year delay for implementation of
13 mitigation?

14 MR. COLLISON: It entirely depends on what
15 happened during those five years. If you had five years
16 when there was neither an El Nino or La Nina, then maybe
17 there would be no impact. But El Ninos and La Ninas occur
18 on average every three to five years. So it's highly
19 likely that some kind of sediment moving event would occur
20 within that time period that would cause an impact. You
21 might get lucky. But the odds would not be on your side.

22 MS. DE CARLO: And does that conclude your
23 testimony -- panel's testimony? Anything else to add?

24 MS. SANDERS: We might want to ask Mark Masser on
25 the phone -- is also a herpetologist -- had anything to

1 add with respect to the Mojave fringe-toed lizard and
2 habitat requirements.

3 UNIDENTIFIED SPEAKER: Susan, I think he's at
4 lunch.

5 MS. SANDERS: Thank you. That's it.

6 MS. DE CARLO: The witnesses are available for
7 cross.

8 HEARING OFFICER RENAUD: Thank you. Let's
9 proceed with applicant first.

10 Do you have questions?

11 MR. GALATI: Sure.

12

13 CROSS-EXAMINATION

14 BY MR. GALATI:

15 Q Mr. Collison, prior to your work at the Energy
16 Commission, how many aeolian sand transport studies have
17 you done?

18 A I have not done any studies prior to working for
19 Commission.

20 Q That's correct. So this project would be your first
21 one?

22 A Not this particular project. Genesis project would be
23 my first one.

24 Q Okay.

25 A I certainly have done four or five studies for the

1 Commission.

2 Q And I think you testified to it earlier, but you read
3 the applicant's opening testimony where we requested that
4 we would not have to mitigate indirect impacts to sand
5 transport if we could demonstrate to the CPM we could
6 design the fence in such a way it did not become a
7 barrier. Do you remember that?

8 A Sir, can you repeat the question?

9 Q Get used to that. I will ask lots of questions no one
10 will understand or follow. Hang on.

11 The applicant's opening testimony made changes to
12 Bio 20 and looking at page 62 of Exhibit 63. Do you have
13 that in front of you? It's the biological resource
14 testimony opening testimony filed on October 6th,
15 identified as Exhibit 63.

16 A Okay. I have that in front of me.

17 Q I'm on page 62, which is Condition of Certification
18 Bio 20. And in the third bullet, the applicant had
19 suggested that the mitigation would only take place if --
20 shall I say, the mitigation would kick in, the indirect
21 impacts would be required to be mitigated, if the
22 applicant could not design the fence both on the northern
23 boundary and the eastern boundary in a way that does not
24 block the wind and mitigate significant impact. Are you
25 familiar?

1 A I am familiar with that, yeah.

2 Q So is it your testimony that there is no way to design
3 the fence on the northern and eastern boundary such that
4 we could avoid sand transport blockage?

5 A I believe that -- I have not seen a proposal for a
6 fence that would not block sand transport. And in
7 particular, I'm familiar with the requirements of the
8 tortoise fencing, and there is a specific mesh
9 requirement, an aptitude of mesh, and I believe that a
10 fence with that mesh would block -- would substantially
11 block sand transport.

12 Q So now we're talking about a fence that's 18 high with
13 a one by two mesh; correct?

14 A Correct.

15 Q And you believe that that will result in a loss of
16 sand that will cause significant impacts to, for example,
17 117 acres -- 144 acres for reconfigured Alternative 2?

18 A I do, because sand transport occurs -- approximately
19 90 percent of sand transport occurs within one foot of the
20 ground. So sand transport occurs by saltation, which is a
21 bouncing process. It's not like a dust storm where sand
22 is blowing around in the wind. Sand actually bounces, and
23 those bounces occur literally within a few inches of the
24 ground. Even an 18-inch high fence in fact would be a
25 really effective method of stopping sand.

1 Even though the aperture is sufficient, the
2 particle obviously only two millimeters in diameter. The
3 hole is bigger than that. But as I think the slide that I
4 showed earlier that showed those 24-inch high traffic
5 cones three feet apart, that was enough to stop 60 percent
6 of the dust from being transported through. So these
7 boundary friction effects have a really big effect on the
8 sand transport. So, yes, I do believe a tortoise fence
9 could be sufficient to seriously disrupt sand transport.

10 Q I want to understand a little bit how sand transport
11 moves. My understanding is that part of the reason that
12 there is an impact under your analysis is that the fence
13 not only blocks the sand, but it changes the way the wind
14 moves. So there is some distance downwind of the fence
15 that where the wind is changed in such a way that it is no
16 longer incapable of picking up sand; is that correct.

17 A Yeah. When we're talk -- now, that may be a little
18 different with a tortoise fence. But the aerodynamic
19 effect you're referring to is that immediately downwind of
20 a big obstruction like the 30-foot high wind fence that
21 was originally proposed, you get typically an eight-to-one
22 ratio downwind of which the effects would be you're in the
23 way of the wind and nothing would move. And that's kind
24 of different from the sand movement shadow that we had
25 talked about. So yeah.

1 Q In all of the -- in fact, in every one of your
2 examples, isn't the wind fence or obstruction placed
3 perpendicular to the sand movement?

4 A It is.

5 Q And in this case, it's not perpendicular to the sand
6 movement; correct?

7 A The northern boundary -- well, the wind is primarily
8 coming from the north, northwest. So the northern
9 boundary would be somewhat offset. It would be between --
10 I guess it would be in the order of 25 degrees say,
11 between zero and 45 degrees.

12 Q If it would be okay, could we go back to the slide
13 that shows the reconfigured project overlaid with the sand
14 transport system?

15 A It's about three or four pages back, I believe. Is
16 this what you're talking about?

17 Q Yeah. That's correct. That will work.

18 We had a long discussion about the different
19 zones that are labeled there. And there's zone one, zone
20 two, zone three, which is not labeled, and zone four, I
21 think which is. I can't see the zone three labeling.
22 Would you agree that zone three is that small area that's
23 pinching out?

24 A I can point. Zone three is the area -- maybe it's
25 easiest if I come up and start pointing to things. Zone

1 three --

2 Q For the record, I'd like to say this is given to me by
3 a different consultant. That's probably why it's not
4 working.

5 A So zone three is west of this, so it's this area here.

6 Q We had substantial discussion and analysis both by our
7 consultant and yourself about the quantity of sand in the
8 corridor that is traveling in the zone one and zone two
9 portions. Do you remember that discussion?

10 A Yeah.

11 Q And we may have had a disagreement between whether it
12 was 80 or 90 percent. But would you agree that
13 substantial majority of the sand is moving in zone one and
14 zone two?

15 A I do degree, yes.

16 Q And that is one of the reasons why you're happy that
17 the applicant moved any encroachment on those zones;
18 correct?

19 A Correct. It is part of my happiness. I am happy for
20 many reasons, but that is a substantial part of it.

21 Q So we are talking about zone three and zone four,
22 which combined is the minority of the amount of sand
23 moving through this corridor; correct?

24 A Correct. Although it is zone three and zone four,
25 you're right, it is the minority. In fact, zone four, we

1 are not concerned about at all. It's really zone three
2 from that perspective. However, zone three is an area in
3 which fringe-toed lizards live. So we are interested in
4 zone three.

5 Q When the -- if you look at the -- maybe would it be
6 fair to say that the boundary of the site, the new
7 configured project, trying to stay out of zone two, that's
8 the predominant wind direction?

9 A That it's -- or you mean parallel to the predominant
10 wind direction?

11 Q Correct.

12 A It is pretty close to the predominant wind direction.

13 Q So the northern boundary fence and the eastern
14 boundary fence are not perpendicular to the wind
15 direction; correct?

16 A The northern boundary is -- this northern boundary is
17 fairly perpendicular. I mean, the primary wind direction
18 is from down here. It's north, northwest. In fact, it's
19 actually -- I believe it's north 45 west of the
20 particular -- the data point here I believe actually has
21 it as north, 45 west. So this wall it's hitting at about
22 45 degrees. But I agree that this fence it is going much
23 more parallel to.

24 Q Right. So what happens when sand hits a barrier
25 that's 45 degrees?

1 A It really depends on the roughness of the ground. If
2 the ground is extremely smooth, then some of the sand
3 could migrate sideways. If the ground is rough, then the
4 sand is going to tend to stay put when it hits the
5 barrier. It depends on the large number of factors,
6 including wind speed, the size of the particles, the
7 roughness of the ground, the nature of the barrier. As a
8 generalization I would say on a smooth surface there is
9 some chance of it moving side ways. On a rough surface,
10 it's going to tend to just stop there.

11 Q Do you remember the applicant's original proposed was
12 to take the sand that builds up along the north fence and
13 push it or place it on the downwind area and put the stand
14 back in the system. Do you remember that?

15 A I remember that conversation, yeah.

16 Q My understanding is you rejected that proposal because
17 there wasn't any demonstration it would work?

18 A There were a number of concerns about trucking sand
19 around the project site. Yet, there were concerns --
20 yeah, essentially, there were concerns it would not work.

21 I think the concerns were primarily relating to
22 biological issue, if you like, not the physics and the
23 mechanics of the sand movement. In other words, there was
24 concern amongst -- I don't want to speak for the
25 biologist. But I think there was concern amongst the

1 biologist would be issues like weed infestation that the
2 sand could be armored and roughened and not being able to
3 transport.

4 Q And wasn't one of the main issues is there was a
5 perception that there would be a large quantity of sand,
6 and so there would be quite a bit of disturbance to move
7 this sand around on a regular basis? Wasn't that part of
8 it?

9 A I think there was a concern that we didn't know how
10 much sand. There was no real data from the site on how
11 much sand is moving through the system. So it was kind of
12 an area, big uncertainty. Could potentially be very large
13 amount, but nobody really knows.

14 Q Didn't the applicant offer to put the mitigation money
15 in escrow or security and if it didn't work mitigate?

16 A I'm actually not familiar with that part of the
17 conversation.

18 Q Would you reject such a proposal?

19 A I would defer to biologists. I don't think there is a
20 physics problem. I think it's a biology problem.

21 Q Okay. The rest of the biology panel is up. I'll come
22 back to that question. Let me get to the rest of the sand
23 transport issue.

24 Would you agree that with a 45-degree angle there
25 on the north boundary that some of the sand over time that

1 gets trapped along the fence will work its way around the
2 fence?

3 A I think that that is fairly unlikely to occur, because
4 the ground surface -- and if we could -- if we could
5 actually go to slide number two.

6 So the middle figure that we are looking at there
7 is typical fringe-toed lizard habitat, and that's also
8 typical of sort of the zone two, zone three boundary,
9 which is right where that fence is located, the northern
10 boundary fence. You can see that the ground surface there
11 is pretty rough. We have sparse bushes. We have the sand
12 dunes themselves. So this is a pretty rough area.

13 I think sand hitting a fence in that area would
14 tend to be stopped dead. I don't think it would just sort
15 of -- it's not like a skating rink. It's not going to
16 shuffle around to the side. I think if you're out further
17 east of here, there it would be more likely that the sand
18 could move around. I think where your fence is located
19 you're in fairly rough terrain.

20 Q That brings up an important point, because I'm looking
21 at that photograph, and I look at the photograph at which
22 you showed the cones and that the cones were stopping 40 to
23 60 percent of the sand transport. Why aren't those bushes
24 and the vegetation stopping the sand transport?

25 A They are, but it's a steady state system. In other

1 words, sand is being added at the upstream end and it's
2 going out at the downstream end and it's kind of reached
3 an equilibrium.

4 Q There is no way to design the fence to reach that
5 equilibrium?

6 A I have never seen one that has been done in that way.

7 I think the other point that's relevant here is
8 it's not just the fence. I mean, the fence is there to
9 protect -- to protect infrastructure and to keep tortoises
10 out of infrastructure.

11 The wind the solar arrays themselves would exert
12 similar -- would have similar effects. They would create
13 drag on the ground. They would lower the velocity of the
14 wind on the ground surface, and that would cause the sand
15 to drop out. So even if sand made it through a fence into
16 a solar array, the solar array itself would inhibit sand
17 movement and stop it moving out to the site.

18 Q So explain to me how that's happening? As the wind is
19 blowing, obviously in order for it to be transporting the
20 heaviest particles in the lower part, how does changing
21 the wind in the upper part of the wind strata change its
22 ability and movement in the lower strata?

23 A Because you're basically providing -- you're providing
24 a sheltering effect. It's analogous to being in a orchard
25 on a day when the wind is blowing. The wind will be

1 blowing across the top of the orchard, but if you're down
2 there amongst the trees, you're in the shelter and the
3 wind will be slower. You won't feel it as much the same.
4 It's particularly sensitive, because the sand stays so
5 close to the ground, the ground effects are extremely
6 sensitive to boundary layer meteorology.

7 Q You testified earlier on how the applicant had
8 proposed sort of an adaptive management program and asked
9 and had discussions about maybe there is a way to measure
10 if essentially the effects you're predicting actually
11 happen. And could we come up with a way to measure that
12 and then obviously have the security posted and mitigation
13 take effect if, in fact, what you're predicting occurs.
14 Do you remember that discussion?

15 A Uh-huh.

16 Q And you said one of the reasons is you didn't know how
17 to measure it. There wasn't really a good proposal from
18 us on how to measure it. But all the papers you site
19 measure effectiveness. So they obviously measure how much
20 sand gets stopped by all these barriers. Can't we use the
21 same measurement techniques?

22 A They are, but they're looking -- I think these papers
23 are looking at very controlled experiments. I mean,
24 they're building a fence in a controlled way. They're
25 putting out a line.

1 I think the problem you have here is the patchy
2 nature and the episodic nature. So these processes if you
3 were to put out -- I can conceive of a system where you
4 put out -- if you put out enough arrays and you had enough
5 measurements, I can conceive of a system where you could
6 monitor this. But it would be on a very large scale. And
7 we just haven't seen anything that looked like it was in
8 that realm. So I think it's a very complicated issue. I
9 don't think it's completely unsolvable. But I think it
10 would be hard to do, and we haven't seen it from you.

11 Q Would you be adverse to modifying the condition to
12 require a plan to monitor to be approved a performance
13 standard that if it is triggered that the security is then
14 used for mitigation?

15 A I think that's a wider issue than I'm willing to get
16 into in terms of my area of expertise. My area of
17 expertise is not developing mitigation plans. It is on
18 the physical transport system.

19 Q Okay. Then I guess would you agree if the -- for some
20 reason sand is not entrained along the northern boundary
21 or within the interior of the site that there wouldn't be
22 deflation and impacts due to loss of sand downwind?

23 A Let me make sure I've understood you. Are you saying
24 if there is -- that if there is trapping of sand at the
25 upwind boundary, we should see deflation of dunes below

1 that? Is that what you're asking me?

2 Q No. I am asking if you did not see trapping of sand
3 at the northern boundary or within the project site -- you
4 mentioned the arrays, for example -- that you would agree
5 that there's not deflation taking place downwind?

6 A The problem is that dune systems are extremely
7 dynamic. So at any given time, one dune may be losing
8 sand and another sand may be gaining it. So sand is
9 continuously in flux or it is not even -- it's
10 episodically in flux across a series of patches. So you
11 need to imagine a series of patches that are gaining and
12 losing sand.

13 If you were to look at any one -- this is why
14 it's a very challenging sampling problem. You would need
15 to be looking at an extremely large number of patches over
16 an extremely long period of time before you could
17 calculate if there was net loss going on or if it was just
18 one dune's gaining and another dune losing and the net
19 effect was still the same. This is why I think it's a
20 very challenging thing to set up a monitoring program for.

21 Q But obviously they were able to figure it out on all
22 of the papers you site on the effectiveness of winds
23 barriers?

24 A They did specific things where we went out during one
25 event and sampled an event. They probably had a crew of

1 grad students out there waiting for this to happen and did
2 very, very intensive sampling. It's hard to envision
3 something like that going on for six years. If you read
4 the duration of these studies, they're based on intensive
5 field campaigns. If you were to offer --

6 Q Would you agree that if you don't see sand building up
7 along a tortoise fence and you don't see sand building up
8 along the solar arrays and you don't see sand building up
9 along the inside of the eastern boundary that you would
10 have good evidence that deflation is not occurring because
11 the sand is transferring through the site?

12 A You wouldn't have evidence that deflation wasn't
13 occurring, but you would have evidence there was not a net
14 loss occurring at that time.

15 Q Okay. And so is it possible in your mind not on
16 biological impacts but just on sand to devise a monitoring
17 program that could demonstrate that the project is not, in
18 fact, entraining sand, therefore not contributing to
19 deflation?

20 A I think it is possible to develop such a monitoring
21 program, yes. I think it would be pretty intensive, but I
22 think it could be done.

23 MR. GALATI: I guess I'll direct the rest of the
24 question now to the non-sand portion of the biology and
25 ask staff's other biological witnesses if they would agree

1 to a condition that allowed the applicant the opportunity
2 to develop such a plan and then put security for indirect
3 impacts, and if they don't make the demonstration or prove
4 it through measurement, that the mitigation kicks into
5 place. Could you agree to such modifications?

6 HEARING OFFICER RENAUD: Mr. Galati, I think
7 there's perhaps a fact missing from your question, which
8 is how -- what would be the duration of the monitoring
9 plan you're thinking of? Would be the life of the
10 project?

11 MR. GALATI: I first was exploring whether they'd
12 be interested in the concepts and then I would get into
13 the details.

14 From my perspective is we would put security up
15 and then we would do some sort of monitoring for a
16 three-year period to determine whether or not you saw at
17 all entrainment of sand.

18 MR. COLLISON: If I could address that. Three
19 years would not be an adequate period of time for the
20 reasons that I discussed earlier.

21 The movement of the sand is extremely episodic.
22 It could be -- as I said, it's related to the cycling to
23 the occurrence of El Nino and La Nina years. It depends
24 on what wind speeds occurring. It depends whether you
25 have a dry or wet winter. It's extremely sensitive.

1 Three years would not be a sufficient period of time to
2 tease out those details. I think you would be talking
3 plucking numbers out of thin air, which is a little risky.
4 I think you could be talking about twelve years or the
5 order of time that, for example, the paper that I sited
6 earlier by Weaver noticed a long term trend. You have to
7 tease out what's happening year by year from what's
8 happening on the long term basis.

9 Q But again, you just testified earlier that you could
10 lose all the sand in as little as six months.

11 A You could.

12 Q And the impacts begin the minute we put up a fence.
13 So wouldn't you see entrainment of sand and the lack of
14 entrainment of sand would mean there is no downstream
15 impacts.

16 A You have the potential for impacts as soon as you put
17 up the fence. It then depends on what nature gives you in
18 term of wetness and dryness and wind speed. So if you put
19 up the fence and then you have winds below 14 miles an
20 hour for the next two years and you have a small amount of
21 rainfall that helps develop a weed cover, you wouldn't get
22 sand movement.

23 On the other hand, you could get an event the day
24 after you put up the fence and you get the impact
25 instantaneously. It's more a question of risk and

1 probability.

2 But certainly three years in terms of processes
3 occurring within the desert would not be regarded as an
4 adequate period of time to establish an average and a
5 trend over that kind of area.

6 Q I understand an average and a trend. But we're trying
7 to see whether or not there would be sand entrainment. I
8 would put as the trigger that if sand is being entrained
9 then we would mitigate. But if sand is not being
10 entrained -- not trying to get a picture of how much sand
11 is being entrained. We would look to see if sand is being
12 entrained. Because if it's possible to design the fence
13 in such a way that it does not entrain sand, then I would
14 urge that you would find there is no impact downstream,
15 because your impact to Mojave fringe-toed lizard is
16 completely dependant on the concept that sand is entrained
17 and doesn't move. Correct?

18 A That's -- it's predicated on the idea that sand
19 movement is removed faster than it can be replied from
20 upwind.

21 Q So you would be able to see that, wouldn't you? The
22 photographs you showed show it.

23 A Well, the photographs show what it looks like after a
24 period of time that we don't know. So I mean, it would be
25 tricky to do this because of the patchy nature of the

1 system.

2 So as I say, I don't think it's impossible. But
3 I think, for example, your sample number -- I mean, what
4 you would do is you have a large number of observation
5 points scattered around the site where you measured either
6 the movement of sand or you measured the depth of sand
7 remaining in the dune. There are various ways -- or the
8 depth of sand piling up in front of the fence.

9 But the number of samples that would be required
10 would be very high. I don't think it would be -- you're
11 not talking about going out and having a dozen samples.
12 You might be talking about 100 samples or some large
13 number. And they would have to be looked at with a pretty
14 high temporal frequency to see if anything was going on.

15 Q So, you know, I've discussed with our experts about
16 putting up actual physical devices that measure the
17 quantity of sand. And if we were to measure the quantity
18 of sand moving through the site and showing you that it
19 actually moves through the site, and you looked on the
20 outside of the fence and there wasn't a big buildup of
21 sand, wouldn't that be good evidence that the fence has
22 been designed in such a way such that sand moves through
23 the site and it's not entrained?

24 A What I would want to see is measurements made within
25 the site and measurements made immediately upwind of the

1 fence, basically what the researcher who we showed did.

2 So in other words, you need to have an array of
3 sand traps within the project, downwind of your fence, and
4 you need to have a similar array of traps upwind of your
5 project boundary. And if these two numbers came out --
6 let's think about it. If those two numbers came out the
7 same, that would say sand can move through the system and
8 your system is not trapping sand. That would be the kind
9 persuasive to me. But you have to have a pretty large
10 sample number in order to generate statistically
11 meaningful results. But, yeah, that would be the
12 monitoring experiment or the type of thing we would do.

13 Q And if we were able to propose language that captured
14 those types of performance standards in a plan, posted
15 security for the mitigation, had the plan approved by the
16 CPM and others meeting those performance criteria, would
17 that be acceptable to staff just in case the indirect
18 impacts don't happen that we actually mitigate them by
19 redesigning the project?

20 A I think from my perspective from sand movement I can
21 envision an experiment like that being acceptable or a
22 monitoring program like that being acceptable subject to
23 approval of the sample size and sampling methods and also
24 the sampling duration.

25 I just want to reiterate I don't think this is a

1 three year thing. I think this is a much longer or in
2 perpetuity.

3 MR. GALATI: No further questions.

4 HEARING OFFICER RENAUD: Thank you. Let's see if
5 CBD has questions.

6 MS. BELENKY: Yes. Thank you.

7

8 CROSS-EXAMINATION

9 MS. BELENKY: I just want to follow up a little
10 bit on this conversation we've just had, and then I have
11 some other questions as well.

12 On the sand transport, is sand entrainment the
13 only issue here? Couldn't the sand be disbursed
14 elsewhere, but just not where it would have naturally gone
15 in the system?

16 MR. COLLISON: Could you give me a more specific
17 example I guess of what you're concern might happen?

18 Q My concern is that Mr. Galati's questions assume that
19 the only issue is whether the sand is dropped right next
20 to the fence or the barrier. Isn't it possible that
21 having a barrier causes the sand to be pushed into a
22 different direction than it would have naturally gone and
23 not to wind up in the same place?

24 A I think that we have kind of accounted for that in our
25 indirect area. The areas that we have called out as

1 indirect impact areas are those areas where there would be
2 change in the distribution of sand. So I don't think that
3 there would be significant changes in the distribution of
4 the pathway of the sand beyond what we've drawn as our
5 indirect impact area.

6 Q Maybe I could ask this another way. Does your
7 modeling assume that you will find a pile of sand next to
8 the fence?

9 A It does. We assume that once sand hits the fence,
10 effectively, it's taken out of circulation for transport.
11 We don't pass -- we don't pass the sand around.

12 Q Okay. So you don't encounter any other wind movement
13 that may move the sand outside of that prevailing
14 direction?

15 A No. Um, no. We don't -- I mean, the only change in
16 the distribution of sand -- I mean, we assume the sand
17 that hits the fence is stopped dead. Effectively, it
18 comes out of circulation at that point.

19 Q That's the assumption in the model?

20 A Yes.

21 Q But, in fact, there may be winds that are not just in
22 the direction of the prevailing winds that could still
23 move that sand?

24 A We allow -- we don't assume that the wind only comes
25 from the direction of the prevailing winds. The wind is

1 allowed to vary stochastically within the distribution.
2 That is important, because it kind of move -- I mean, it
3 creates a diffusion effect, which is an important process
4 to capture. Otherwise, you would just get -- the shadow
5 would basically go all the way to the moon. It would just
6 wrap around.

7 Q Well, I think I'm trying to make sure because we've
8 just had this discussion from Mr. Galati proposing a plan
9 that we have not seen and has not been really fully vetted
10 that proposes that the only measure would be whether there
11 is sand in a pile next to the barrier. And I'm just not
12 sure whether or not your testimony would support that that
13 is the correct measure for whether it's having an effect.

14 A No, I don't think it's just a question of finding a
15 pile in front of the fence. In particular, if we have the
16 system with the tortoise fence, I think what would happen
17 is you actually would get some limited diffusion through
18 the fence. This is one of the reasons I'm concerned about
19 this monitoring plan that's being discussed is it wouldn't
20 be a nice crisp boundary. In some ways, it would be
21 easier to monitor if you had a wall, it actually would be
22 pretty easy to monitor because you would have a pile or
23 not have a pile.

24 The problem with the tortoise fence and the solar
25 arrays is in a sense what you're doing is making the

1 boundary fuzzier. You're making it less crisp. So that
2 zone over which the sand would fall out of transport would
3 be broader and therefore harder because we're really
4 talking about, you know, some of the fringe-toed lizard
5 habitat, the sand is only a few inches thick. And so it's
6 very hard to measure to make meaningful measurements of
7 that thickness over the course of something that's the
8 width of a football field or whatever. So I think that is
9 a complication. That is a complicated factor.

10 Q Thank you.

11 And then just to finish up on this, the questions
12 that Mr. Galati was asking, because I want to make sure I
13 understood your answers, my understanding was this
14 proposed monitoring plan just relates to the indirect
15 impacts to the Mojave fringe-toed lizard. This would not
16 relate to the direct impacts, which are direct impacts of
17 the project.

18 A That's correct.

19 Q Is that your understanding?

20 A Yes.

21 MS. BELENKY: Okay. I have a few other questions
22 that relate to staff's -- mostly to items in staff's
23 rebuttal. And I don't know if we want to move on to that
24 right now. They're a little bit wide ranging.

25 HEARING OFFICER RENAUD: Well, we haven't --

1 first of all, let me ask if there are any redirect.

2 MS. DE CARLO: I do have some redirect.

3 HEARING OFFICER RENAUD: Go ahead.

4

5 REDIRECT EXAMINATION

6 MS. DE CARLO: Mr. Collison, has the applicant
7 provided you with any fence design that you believe would
8 not result in a potential entrainment of sand?

9 MR. COLLISON: No.

10 MS. DE CARLO: Has the applicant provided any
11 testimony that --

12 MR. COLLISON: Sorry. It's not entrainment.
13 That is not deposition of sand. I have not seen the fence
14 designed that I believe would not cause deposition.

15 MS. DE CARLO: And to your knowledge, has the
16 applicant provided any evidence that sand would not be
17 obstructed as you have anticipated?

18 MR. COLLISON: No.

19 MS. DE CARLO: Either Ms. Sanders or Mr.
20 Collison, either of you can answer this question.

21 What is the potential problem with waiting until
22 there is evidence of entrainment before requiring
23 mitigation or deposition?

24 MS. SANDERS: I think the problem is that we have
25 impacts this we are mitigating for.

1 I think that if I could just go a little further
2 and address some of the -- Mr. Galati asked me a question
3 and I never got a chance to answer what did I think of the
4 proposal to monitor before we implement mitigation.

5 And my problem was two fold. One is that it
6 implies that there is an element of uncertainty in whether
7 or not the impacts will occur. And I think staff isn't
8 adverse to monitoring that situation, as evidenced by Bio
9 23 and 24. There was a lot of uncertainty as to exactly
10 how and when effects of groundwater pumping manifested for
11 vegetation. There isn't that level of uncertainty. We
12 offered quite a bit of substantial compelling evidence
13 that there is sometimes an immediate significant effect of
14 putting up a barrier to sand in downstream -- or down wind
15 fringe-toed lizard habitat.

16 And the other problem I have, and I think other
17 parties have alluded to this, this is all so conceptual.
18 I don't know what we're being asked to agree to, except to
19 review some future language that would spell out the
20 detail or what would be measured. Because the volume of
21 the sand is not the only proxy for what is down wind good
22 habitat. There are many other components to Mojave
23 fringe-toed lizard habitat than just the volume of
24 courses. It's the coarseness of it, the permeability of
25 it, the distribution of sand on the surface. All these

1 things are important.

2 Dr. Collison mentioned the heterogeneity
3 spatially how shrubs receive sand and distribute it down
4 wind of it. All those things are very complex. And I am
5 not sure that we are even coming close to replicating it
6 by measuring a bucket of sand on one side of the fence.

7 So I have -- I mean, again if there is some
8 proposal that we can consider and provide to our
9 fringe-toed lizard experts to consider as well, we don't
10 want to slam the door shut. But right now, we have
11 nothing except a definite impact that we've offered
12 evidence will occur and then nothing on the other side.

13 MS. DE CARLO: Thank you. That completes my
14 redirect.

15 HEARING OFFICER RENAUD: Thank you.

16 Any further cross, Mr. Galati?

17

18 RE-CROSS EXAMINATION

19 MR. GALATI: I just want to address a couple of
20 things raised in the last piece.

21 Ms. Sanders, hasn't the applicant being willing
22 and asking for advice from you and your consultant on what
23 might work since March?

24 MS. SANDERS: I am sorry. What might work for
25 what?

1 MR. GALATI: What might work as an avoidance
2 measure or minimization measure other than land
3 acquisition?

4 MS. SANDERS: I think the response has been to
5 invite you to provide any suggestions that you have.

6 MR. GALATI: Correct. And we did submit some
7 responses on how sand replenishment systems work in a
8 beach environment, didn't we?

9 MS. SANDERS: I did not consider that something
10 to consider. There was no details on how that related to
11 what our desert sand dune system --

12 MR. GALATI: My line of questioning takes issue
13 with what I believed to be a perception that the applicant
14 has been sitting on their hands not trying to solve this
15 problem and that the problem is entirely ours to solve.

16 So hasn't the applicant been as cooperative as
17 possible in trying to figure out something other than land
18 acquisition for mitigation or minimization?

19 HEARING OFFICER RENAUD: Mr. Galati, I think
20 that's getting a bit argumentative. We're not worried
21 about perceptions or who or whom did what. If you have
22 questions about the impacts, that's what we're here for.

23 MR. GALATI: I'll withdraw the question.

24 HEARING OFFICER RENAUD: All right. Okay.

25 MS. DE CARLO: No redirect.

1 HEARING OFFICER RENAUD: All right. Good.

2 I have a couple of questions, and then we'll get
3 to the topic of the rebuttal.

4 I take it you all have rebuttal you want to
5 present; right?

6 MR. GALATI: Yes. I don't need to do it direct
7 unless the Committee would like us to summarize it.

8 MS. DE CARLO: Ours is in writing. We're happy
9 to be available to answer any questions.

10 HEARING OFFICER RENAUD: But CBD wants to ask
11 questions about the rebuttal.

12 MS. BELENKY: Yes. And we also have direct
13 testimony as well.

14 HEARING OFFICER RENAUD: So let me ask my couple
15 questions here first.

16 Looking at the -- first of all, I want to thank
17 you, Mr. Collison, for the PowerPoint presentation. That
18 really made it easy to follow and understand for us lay
19 folks up here.

20 Looking at the two slides, the one that shows the
21 144 acres of impact and the other the 94, I don't know --
22 maybe can you come and put those up?

23 Just toggling back and forth between the two,
24 would it be fair to say that the -- that one, the 144 acre
25 one is actually more in line with the prevailing wind as

1 this generally presents less of an obstruction, even
2 though the indirect impact is greater in acreage?

3 MR. COLLISON: I actually believe that the --
4 this one is more in line. I'm not sure if this is being
5 picked up. I believe that the Alternative 3 is actually
6 more in line with the prevailing wind. In other words,
7 presents less of an obstruction. I think that's why it
8 comes out with the lower value with the 94 acres rather
9 than the 144 acres.

10 HEARING OFFICER RENAUD: All right. And then in
11 terms of impact to MFTL, which of those two would have the
12 least impact?

13 This is to anybody on the panel.

14 MR. COLLISON: It would be this one.

15 HEARING OFFICER RENAUD: Again, number three, the
16 94 acre --

17 MR. COLLISON: Yeah.

18 HEARING OFFICER RENAUD: Although, to me, it
19 looks like there are more green dots inside zone three.

20 MR. COLLISON: I'm glad you asked that point.
21 You raise a really important point.

22 The presence of the fringe-toed lizard, you'll
23 notice there is kind of a hard boundary on the eastern
24 side. That is the limit of the applicant's --

25 MS. CHAINY-DAVIS: Study area.

1 MR. COLLISON: So there is a limit. You'll
2 notice they're all sort of clustered. And the reason they
3 stop here is because that was the limit of the applicant's
4 study area, although there was a second -- I presume this
5 is a road or some kind of Lateral where a second survey
6 was done, which is why they appear very straight lines.
7 So some of the distributions due to where they looked, not
8 just due to where they are.

9 We infer because there is a very high density of
10 fringe-toed lizards up here in zone two, we assume there
11 would be -- and because biological maps and soils maps and
12 aerial photos show this area -- sorry. We are inferring
13 because this area here is the same vegetation, same soils,
14 has the same appearance from aerial photography is this
15 area here, we're assuming we would find a somewhat similar
16 density of fringe-toeds in that area. We're using zones
17 one and two as surrogates for the presence of fringe-toed
18 lizards.

19 HEARING OFFICER RENAUD: Thank you.

20 Hypothetically, if one of these alternatives were
21 built and the sand transport impacts occurred that were --
22 that you're concerned about, would you expect that the
23 lizards would gradually just move northeast?

24 MR. COLLISON: I would defer to question to a
25 biologist.

1 HEARING OFFICER RENAUD: Anybody?

2 MS. SANDERS: Yeah, I think they would move out
3 of areas that didn't provide what they needed, which is
4 fine movement of the sand.

5 HEARING OFFICER RENAUD: Even if they did that,
6 we'd have lost habitat. That's really the point, isn't
7 it?

8 MS. SANDERS: Correct.

9 HEARING OFFICER RENAUD: Yeah. All right.

10 Thank you. That's all my questions.

11 Now, Ms. Belenky, you have some direct rebuttal
12 to present and some questions about the others. Do you
13 have a time estimate? I'm just looking at when we should
14 take a lunch break.

15 MS. BELENKY: Well, I think it would be about 15
16 minutes. But maybe it would be best to take a lunch break
17 now.

18 HEARING OFFICER RENAUD: All right. Let's do
19 that. Let's keep it as short as possible. In any event,
20 no more than 45 minutes.

21 Those of you who are unfamiliar with the area,
22 quickest places to get a sandwich or something, first in
23 our building, across the street on the second floor, there
24 is a little sandwich shop. And then out here on O Street,
25 if you turn right and walk two blocks, you'll come up to a

1 LaBou, which is also a sandwich place. So we'll be back
2 here no later than 1:45. And if you are here sooner, that
3 would be great. Thank you. 01:02 PM

4 MS. DE CARLO: Mr. Renaud, just could we get an
5 idea of what -- the order of the following subjects that
6 will be taken up just so I can give our staff an idea of
7 when they'll be expected after biology?

8 HEARING OFFICER RENAUD: Let me ask the parties.
9 Do any of you have a preference or have witnesses who
10 timing is critical?

11 MR. GALATI: The only witness that I have that is
12 critical is biology witnesses, the only live testimony
13 that we have today. And I am not sure whether CBD is
14 interested in cross-examining my experts, so I'd like to
15 know before we have a break if they are.

16 MS. BELENKY: Yes, we do have a couple of
17 questions for Ms. Carl I believe -- Dr. Carl.

18 MR. GALATI: Yes. So, Alice, did you hear that?

19 DR. CARL: Yes, I unfortunately did hear that.
20 Can it be right after lunch? Is that possible?

21 HEARING OFFICER RENAUD: Sure.

22 MR. GALATI: If that would be okay if our
23 witnesses went first.

24 Dr. Carl is actually in the field doing desert
25 tortoise surveys. So she's on a cell phone in a place

1 that has reception.

2 MS. BELENKY: All right. And then we'll come
3 back to this.

4 HEARING OFFICER RENAUD: Okay. So CBD, we'll go
5 with you first. And you do your presentation and your
6 cross-examination.

7 And then after that, as far as other topics, does
8 anybody have a preference what we do next?

9 MS. DE CARLO: We have some representatives from
10 the South Coast Air Quality Management District who have a
11 flight to catch, so it would be helpful to have air
12 quality be the next subject.

13 HEARING OFFICER RENAUD: Air will be after
14 biology. And then we'll figure out what's after that.

15 MS. DE CARLO: Thank you.

16 HEARING OFFICER RENAUD: Thank you. Off the
17 record.

18 (Thereupon a lunch recess was taken
19 at 1:04 p.m.)

20

21

22

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25

1 MS. BELENKY: I was asking I think sort of an
2 overarching -- I guess it's two sections there. I wasn't
3 trying to go outside the range here. I'm just a little
4 confused procedurally, because they didn't -- neither the
5 staff nor the applicant actually went through all of their
6 testimony in the rebuttal. But I do have questions that
7 go directly to staff's rebuttal. So this is I hope the
8 proper time to ask those questions.

9 HEARING OFFICER RENAUD: Well, yes.

10 MS. DE CARLO: We submitted our rebuttal in the
11 exhibits.

12 HEARING OFFICER RENAUD: The rebuttal was
13 submitted in written form. And, yes, if you wish to ask
14 questions about it, this is a good time to do that.

15 MS. BELENKY: I just wanted to make sure. And
16 then we'll put on our testimony after.

17 The staff responded to our discussion to the
18 Center's discussion regarding the appropriate mitigation
19 ratio and stating that they did consult with other
20 agencies and looked at the BLM's plans. And we appreciate
21 that you were obviously consulting with other agencies,
22 but is that the only basis that you relied on in looking
23 to the ratios?

24 MS. SANDERS: What ratios are you talking about?

25 MS. BELENKY: The one-to-one compensatory

1 mitigation ratio for desert tortoise.

2 MS. SANDERS: Well, the one-to-one mitigation
3 ratio is in the NECO plan. That's a starting point. And
4 then discussed with Fish and Wildlife, Fish and Game, BLM,
5 and staff as to what would be appropriate for the quality
6 of the desert tortoise habitat. And we all agreed that
7 was appropriate based on the best scientific evidence and
8 our experience.

9 MS. BELENKY: So to the extent that the
10 Commission is acting in lieu of DFG, did you make a
11 determination that the one-to-one ratio that you proposed
12 would fully mitigate the impacts to the desert tortoise
13 under the California Endangered Species Act?

14 MS. SANDERS: We did. And we have a finding to
15 that effect. And if you'd like, I can find the page
16 number. It's under the LORS section.

17 MS. BELENKY: But you said specifically analyzed
18 the fully mitigation, the full mitigation?

19 MS. SANDERS: We did.

20 MS. BELENKY: It's not that clear. There's a
21 finding, but I think this analysis piece is not as clear.

22 MS. SANDERS: We did conclude that would provide
23 full mitigation.

24 Maudalana Rodriguez, I know if you're on the
25 phone.

1 MS. RODRIGUEZ: Yeah, I'm on.

2 MS. SANDERS: I don't think any of the other
3 witnesses have been sworn. Maudalana has not been sworn.
4 I don't know if we should do that or not. But maybe you
5 can speak to whether or not that satisfies Fish and Game's
6 mitigation standard.

7 HEARING OFFICER RENAUD: I think that I would be
8 appropriate at this point.

9 Maudalina Rodriguez, are you there on the phone?

10 MS. RODRIGUEZ: Yes.

11 HEARING OFFICER RENAUD: All right. I know in
12 these proceedings we've had some agency people who weren't
13 testifying under oath. And would you be one of those?
14 No.

15 MS. DE CARLO: I think Maudalana was willing to
16 testify under oath.

17 HEARING OFFICER RENAUD: Okay. Good.

18 MS. DE CARLO: If Mark Masser is there, Mark are
19 you there?

20 MR. MASSER: I'm here.

21 MS. DE CARLO: He's with BLM and helped co-author
22 the report. They both could be sworn.

23 HEARING OFFICER RENAUD: Let's have you both
24 sworn, and then you'll be asked some questions by
25 Ms. Belenky.

1 (Thereupon the witnesses were sworn.)

2 MS. BELENKY: Thank you.

3 I'm going to skip around a bit, because we're not
4 going through every issue.

5 In response to the Center's discussion regarding
6 the importance of this area as a linkage for the desert
7 tortoise and the staff rebuttal states that they do not
8 believe that the solar project proposed within one of the
9 linkages depicted renders unusable -- the sentence is a
10 little confusing, but renders unusable the entire broad
11 swath of the linkage. That's on page 5 of the staff's
12 rebuttal.

13 I just wanted to ask staff, I think this
14 statement is quite broad. You're saying it doesn't render
15 completely unusable the linkage. But do you think that
16 the project has any effect on the linkage and this
17 corridor movement corridor?

18 MS. SANDERS: I think that question -- I think
19 that particular sentence you read was in response to the
20 fact that you think the mitigation we proposed did not
21 necessarily offset the impacts to connectivity. We were
22 saying we have identified some areas. In Figure 6 of the
23 RSA, we identified some areas that would be suitable
24 acquisition that would promote connectivity between the
25 recovery units and then, you know, that the desert

1 sunlight proposed, that's a very broad arrow. So one
2 project does not render that proposed linkage unsuitable.
3 That was getting to the sentences that you read.

4 And Mark Masser is one of the people that
5 developed this, so if he would like to speak to that,
6 maybe he can answer your questions a little better.

7 MS. BELENKY: I would like to hear from Mr.
8 Masser. But specifically if we're going to ask Mr. Masser
9 you've just stated this is a proposed linkage. And
10 perhaps Mr. Masser could clear up a little bit. This
11 mapping of these linkages were actually in the NECO plan
12 in the FEIS I believe.

13 Mr. Masser, is it your testimony that those were
14 not adopted by the BLM?

15 MR. MASSER: I'm having a little bit of
16 difficulty hearing you. But if you're asking about the
17 linkage, were you asking specifically about the linkage to
18 the desert tortoise connectivity linkage?

19 MS. BELENKY: Yes.

20 MR. MASSER: That was part of an NECO plan.

21 MS. BELENKY: Yes.

22 MR. MASSER: As I understand it, that was
23 identified as the shortest distance or one of the shortest
24 distances between the Chuckwalla DWMA and the area to the
25 north.

1 But it wasn't necessarily identified as a
2 critical linkage for tortoises. And I think in the staff
3 assessment in the EIS we analyzed further that the more
4 critical linkages were to the east or to the west of that
5 DWMA, between Desert Center and Cactus City.

6 I am not sure if I'm answering your question,
7 because I really having a very difficult time hearing.

8 MS. BELENKY: I think you are answering the
9 question that the linkage that is on the map in the NECO
10 plan shows DWMA connectivity --

11 MR. MASSER: Yes.

12 MS. BELENKY: And then you stated also that there
13 is some other connectivity areas as well; is that correct?

14 MR. MASSER: There is. And based on further
15 analysis, there wasn't a -- there wasn't a lot of analysis
16 that went into that original tortoise connectivity DWMA.
17 It was thrown in there mainly because of the geography of
18 the shortest distance in the DWMA. But it wasn't
19 specifically identified in the critical linkage area.

20 I think when we did further analysis in the staff
21 assessment using the habitat model and other data that the
22 linkage between the Chuckwalla DWMA and the Joshua Tree
23 where they contact each other is much more important for
24 linkage for tortoises.

25 MS. BELENKY: And can you point to where the more

1 important linkage is? I am sorry. I wasn't sure I
2 understood.

3 MR. MASSER: It would basically be the contact
4 zone between the Chuckwalla DWMA and Joshua Tree National
5 Park between Desert Center and Cactus City.

6 MS. BELENKY: To the left of this project. To
7 the west. I see. But the NECO plan did adopt these maps
8 as part of the NECO; is that correct?

9 MR. MASSER: It did. It did adopt that. It was
10 kind of a last-minute recommendation for the Fish and
11 Wildlife Service to include that linkage to the area east
12 of Desert Center. Before that, there was no connection
13 between the areas of the DWMA anywhere east of Desert
14 Center.

15 MS. BELENKY: Thank you.

16 MR. MASSER: I should add, though, that the
17 habitat quality for the tortoise east of Desert Center is
18 very marginal and that the quality of the habitat is much
19 better within the DWMA west of Desert Center.

20 MS. BELENKY: Yes. I think that everything shows
21 that's correct.

22 MR. MASSER: Yeah.

23 MS. BELENKY: But that this area provides a
24 movement corridor for tortoise and possibly other species
25 as well.

1 MR. MASSER: It was specifically set up for the
2 tortoise, but probably provides movement for -- probably
3 more important for other animals.

4 But again, the project doesn't -- I'm not sure
5 what percentage of the DWMA is impacted by this project,
6 but it's not the entire DWMA.

7 MS. BELENKY: No, I don't believe it's the entire
8 thing.

9 But my understanding -- and correct me if I am
10 wrong -- is that on the north side of the highway there is
11 a very fairly small amount of space before you hit the
12 wall of the -- fence of the project site. And that the
13 only movement for any species out of that area would be to
14 go to the west or further to the east, that it creates
15 quite a movement blockage; is that correct?

16 MR. MASSER: I think the movement is better to
17 the east of the project, actually. The distance is
18 shorter between the mountain ranges.

19 And in terms of tortoises, the sand dune habitat
20 to the north of the project would create a barrier. I
21 think we analyzed it fairly by saying that the impacts to
22 especially movement for tortoises would be small.

23 MS. BELENKY: And how would a tortoise that did
24 manage to get across the highway, how would -- where would
25 a tortoise be able to go?

1 MR. MASSER: Well, the animal would have to move
2 either east or west of the project site.

3 Again, we don't anticipate there would be much
4 movement of tortoises across that area anyway given the
5 habitat quality.

6 MS. BELENKY: Thank you.

7 Now I want to turn a little bit to the discussion
8 again on the tortoise issues. And I -- specifically,
9 staff responds on page 5 and 6 about the Colorado Recovery
10 Unit for the desert tortoise. And the staff relies almost
11 exclusively on the draft recovery plan for the tortoise.

12 I'd like to ask the staff: Are you aware there
13 is a current recovery plan with the tortoise?

14 MS. SANDERS: Staff is aware of that.

15 MS. BELENKY: Is there a reason that you did not
16 rely on the current recovery plan for the tortoise?

17 MS. SANDERS: Yes. The Fish and Wildlife Service
18 requested that we use the 2008 Draft Recovery Plan. They
19 thought that better reflected the genetics and the more
20 current thinking about the distribution of the recovery
21 units.

22 And excuse me. Is Taniqua Engleheart on the
23 phone from Fish and Wildlife Service?

24 MS. ENGLEHEART: Yeah, I just joined. This is
25 Taniqua Engleheart and Jody Frasier is here as well.

1 MS. SANDERS: Thank you so much.

2 Could you just clarify the role of the Service in
3 the proceeding.

4 HEARING OFFICER RENAUD: Should we have these
5 witnesses sworn?

6 MS. DE CARLO: No. They will not be providing
7 sworn testimony.

8 Pursuant to its regulation, U.S. Fish and
9 Wildlife Service cannot provide sworn testimony in the
10 proceeding and thus cannot be subject to
11 cross-examination. However, representatives are here from
12 the Service to provide comments on the staff analysis and
13 to answer any questions the Committee might have
14 concerning U.S. Fish and Wildlife Service's policies,
15 procedures, and statutes.

16 HEARING OFFICER RENAUD: Very well. Thank you.

17 So witnesses -- or you can frame your statements
18 as comments. They will not be viewed as testimony, but we
19 would appreciate any information you can provide us.

20 MS. SANDERS: Just to follow up, since we have
21 two representatives from the Service, just clarify the
22 guidance that you gave staff when we were crafting the
23 section on which recovery units to use, which recovery
24 plan to use. Perhaps you could talk about that a little
25 bit.

1 That was a question for Taniqua or Jody. Do you
2 want to talk about why we use the 2008 Draft Recovery Plan
3 in our discussion of impacts to desert tortoise?

4 MS. FRASIER: This is Jody Fraiser.

5 And the reason that we used it is because the
6 draft plan had gone out to the public through the federal
7 register process, and it uses the best available
8 information we have to date relative to genetic character
9 of the desert tortoise throughout its range.

10 And so in conjunction with genetics, we also
11 looked at ecological characteristics and barriers and
12 vegetation and et cetera. So based on that and that the
13 plan had gone out for public review, we determined that it
14 was appropriate to use it.

15 MS. BELENKY: I have a couple of questions about
16 that. When you say the best available genetics
17 information, what are you referring to?

18 MS. FRASIER: I'm sorry. Can you repeat the
19 question?

20 MS. BELENKY: Yes. Sorry.

21 When you say it was relying on the best available
22 current information about genetics, what information are
23 you referring to?

24 MS. FRASIER: Can you tell me who I'm answering?

25 MS. BELENKY: This is Lisa Belenky at the Center

1 for Biological Diversity.

2 MS. FRASIER: I am totally unprepared for this
3 discussion, because I was on another conference call and
4 got pulled in. So I don't have all of the information in
5 front of me.

6 But it's based on various genetics studies that
7 were being conducted and, for instance, I think you guys
8 cited Murphy, et al, 2007. We looked at that. We looked
9 at Hagerty and Tracy, which at that time was in
10 preparation and has since been published in 2010, and
11 other genetic kind of evaluations of wide-ranging species
12 and isolation by distance, et cetera.

13 It is sited in the Draft Recovery Plan. I can
14 dig those out for you, but I would need time to do that.

15 MS. BELENKY: That's fine. I've certainly looked
16 at the Tracy and Hagerty, and when I saw it, it was not
17 published and not peer reviewed. So I would be very
18 interested to see the peer-reviewed version, which is not
19 what the Draft Recovery Plan was based on. It was a draft
20 version of that. So I think we can move on from the
21 genetics at this time.

22 So the Center has raised questions about the
23 impacts to all species in the area from any increases in
24 certain kinds of threats, including predation from canids,
25 which would be coyotes, dogs, et cetera. And in response,

1 the staff said that they didn't -- that they believed that
2 a regional canid management program would be beyond the
3 scope of appropriate mitigation for this project.

4 Given that there are at least three projects in
5 this valley and several more in the I-10 corridor, could
6 you explain why staff believes it is beyond the scope of
7 mitigation to discuss predation and other impacts that may
8 threaten species in this area from either this project on
9 its own or these projects as a whole?

10 MS. SANDERS: Staff did discuss those impacts in
11 several places with respect to desert tortoise and other
12 species.

13 I think the answer in rebuttal testimony you're
14 talking about, we didn't think it was appropriate for this
15 project to come up with a regional plan similar to
16 something that's been done for ravens. The raven
17 programmatic approach we're all now implementing reflects
18 environmental assessment that was published a couple years
19 ago, years of work, years of work on the part of Fish and
20 Wildlife Service to come up with a mechanism for it to
21 happen. It was a major effort. I'm not saying it wasn't
22 warranted for predators like coyotes and feral dogs. Just
23 this project can't come up with a regional approach the
24 way we tied into the regional raven approach.

25 MS. BELENKY: I'm a little bit confused. I mean,

1 certainly the raven approach is an approach taken by Fish
2 and Wildlife Service for the desert, and that was done.

3 Now, the CEC is tasked with reviewing many
4 projects in this area. And these issues are now present
5 for the CEC. To the best of your knowledge, is the Energy
6 Commission looking at any kind of approach for mitigating
7 these kinds of impacts from canids to the resources of
8 this area?

9 MS. SANDERS: Well, we do have avoidance and
10 minimization measures in Bio 8 that address that. I think
11 that is for the DRECP to address. That's the kind of
12 thing that requires a regional programmatic approach.
13 Beyond the avoidance minimization measures, we have in the
14 staff assessment -- I don't know what else you're
15 suggesting that we do.

16 MS. BELENKY: Well, I mean, I think that the
17 Center has clearly expressed our concern that this is an
18 impact of the project and it needs to be mitigated.
19 Avoidance and minimization are, of course, a part of. But
20 we believe there are still remaining impacts and we're
21 concerned.

22 And the reason we are asking these questions is
23 that we're concerned that the staff has not specifically
24 looked at mitigation for these issues. And to the extent
25 these are cumulative between this project and others, that

1 is obviously something that needs to be dealt with.

2 MS. CHAINY-DAVIS: This is -- this is Carolyn
3 Chaney-Davis, California Energy Commission.

4 On page 208, the conclusion section of our
5 cumulative analysis, we talk about the fact that there are
6 times when the disclosure of mitigation for cumulative
7 impacts is not necessarily based on or limited to specific
8 mitigation measures that can be implemented by this lead
9 agency in this proceeding.

10 "When it's not always possible to identify
11 mitigation measure, the discussion may consist of listing
12 the agencies that have regulatory authority over resource
13 and recommending actions that those agencies could take to
14 influence of sustainability of a resource."

15 So by doing so, the needed mitigation would be
16 disclosed to the public and reviewing agencies, even
17 though it could not be implemented by this lead agency in
18 this proceeding at this time. So once disclosed, that
19 information can be used to influence future decisions or
20 to help identify opportunities for avoidance and
21 minimization when other projects are proposed.

22 Bottom line is you know that there is no
23 mechanism in place to require the applicant to set aside
24 fees for a canid predation management plan, because that
25 hasn't been initiated yet. And the DRECP is probably the

1 best place to have that discussion, the best venue for
2 that discussion at this time.

3 MS. BELENKY: Well, thank you for your statement
4 about the best way that this should be handled.

5 Is it your testimony today that the Commission
6 does not have the power to impose any mitigation measures
7 for this impact?

8 MS. SANDERS: No. We are. I pointed to Bio 8,
9 the avoidance and minimization. I don't know that there
10 are currently any other available. What other avoidance
11 measures are available that you think have not been
12 included that should be included?

13 MS. BELENKY: I'm sorry. I took
14 Ms. Chaney-Davis' testimony to be saying that this was
15 outside of the purview of this lead agency.

16 MS. CHAINY-DAVIS: A regional approach to it. A
17 sited-specific approach to it we have addressed through
18 the measures in Bio 8.

19 MS. BELENKY: Do you believe that Bio 8 addresses
20 the cumulative impacts of this issue?

21 MS. CHAINY-DAVIS: It reduces the project's
22 contribution to those cumulative effects.

23 MS. BELENKY: Thank you.

24 MS. CHAINY-DAVIS: Obviously, it doesn't mitigate
25 for the other project's effects.

1 MS. BELENKY: Or the cumulative effects.

2 MS. CHAINY-DAVIS: It addresses the project's
3 contribution to their cumulative effects -- to the
4 cumulative effect to a level that's less than
5 considerable. It doesn't e race it.

6 MS. BELENKY: Okay. I just want a couple of
7 questions one about fire. The Center has raised some
8 concerns that all of the fire all of the discussion of
9 fire tends to focus on fire on the project site and
10 doesn't really address limiting the spread of fire and its
11 impact to adjacent wild lands.

12 MS. CHAINY-DAVIS: The approach to -- this is
13 Carolyn Chainy-Davis again.

14 The approach to fire prevents starts at the site
15 and it starts with worker education. It's not limited to
16 the site. In fact, we acknowledge that increased road
17 traffic resulting from the project, you know,
18 transportation of workers to and from the site could
19 potential ly increase the risk of fire. We also talked
20 about the fact that temporary construction roads could
21 open up areas to OHV that weren't previously. And so we
22 did consider that. And we did include measures in Bio 8
23 and Bio 6 to educate the workers about well actually
24 prohibiting traffic off-road training workers about fire
25 risk and fire prevention measures and Bio 8 also includes

1 a measure that requires these temporary access roads to be
2 decommissioned. They have to install vertical mulching at
3 the head of these roads, so those roads would not be used
4 by OHV. So we do recognize that. We did consider it and
5 we did devise measures the address it.

6 MS. BELENKY: Thank you. I think we are also
7 concerned a bit that the may be it's a language problem,
8 but on page 14 of the rebuttal, it states that staff
9 discussed the risk analysis and it says that no fires have
10 occurred around any of the other solar facilities in
11 California to date. However, I'm not sure what was meant
12 by that. Are you aware that there have been fires at
13 solar facilities in the past?

14 MS. CHAINY-DAVIS: I'm not. I referred to our
15 risk assessment consultant. But I'd go on the say that
16 that conclusion or that statement I probably shouldn't
17 have included the statement because it didn't weigh in
18 much in our an analysis. We went ahead and regardless of
19 that we went ahead and included quite a few measures,
20 specific mitigation measures, to address the fire threat.

21 MS. BELENKY: Okay. Thank you.

22 I think we're concerned because we've seen this
23 pop up before. There was a major fire at one of the
24 facilities in California, and there have been fires in
25 other places as well. So it's important that the factual

1 record is clear. It is not a remote chance of fire.

2 There have been fires.

3 MS. CHAINY-DAVIS: Just to clarify, what he told
4 me is he was referring to fires emanating from the solar
5 facility itself, not from the transmission lines. There
6 is -- I saw when I did some research quite a bit of
7 indication that there is an increased risk of fire
8 associated with transmission lines. So that comment was
9 based solely on the solar facility itself.

10 MS. BELENKY: And I guess I just want to
11 stress -- and we can get back to this in our direct
12 testimony -- there have been fires.

13 HEARING OFFICER RENAUD: Isn't the issue really
14 though about the spread of fire that started on the
15 facility to outside the facility?

16 MS. BELENKY: That is the issue we're most
17 concerned with. We have seen in another one of the
18 records one of the applicant's stating, which is false,
19 that there have never been any fires in California on a
20 solar facility. That is false. And so to the extent
21 there is any indication in this record that that seems to
22 support that, we want to make sure that it's not left
23 unacknowledged.

24 MR. GALATI: Can I just clarify this applicant
25 hasn't said that; correct? You're talking about a

1 different applicant?

2 MS. BELENKY: I do not believe it was this
3 applicant.

4 MR. GALATI: Thank you.

5 MS. BELENKY: I just had a couple --

6 HEARING OFFICER RENAUD: Ms. Belenky, try;
7 angling your mike down more.

8 MS. BELENKY: I think we're pretty much done with
9 our questions for staff on biological resources. And we
10 can do our direct testimony on biological resources if
11 that's --

12 HEARING OFFICER RENAUD: All right. Let me ask
13 staff if -- counsel, do you have any questions you wish to
14 do on redirect basis?

15 MS. DE CARLO: No. Not along those lines.

16 HEARING OFFICER RENAUD: Applicant?

17 MR. GALATI: No.

18 HEARING OFFICER RENAUD: What I think we better
19 do -- I've been advised that we have air quality witnesses
20 here who need to leave promptly shortly. Their testimony
21 will not take long. And I'm going to propose that we
22 interrupt biological resources briefly to take that
23 testimony, which I understand is from staff.

24 MR. GALATI: Mr. Renaud, while making the
25 transition, could we also maybe have CBD cross-examine Dr.

1 Carl before their direct testimony? And then I can either
2 let her go or use her for rebuttal, but I'm not sure what
3 the scope is.

4 HEARING OFFICER RENAUD: Thank for reminding me
5 of that.

6 MS. DE CARLO: Staff's witness for air quality is
7 Will Walters. He needs to be sworn.

8 (Whereupon the witness was sworn.)

9 MS. DE CARLO: We have two exhibits for air
10 quality.

11 One we've labeled Exhibit 317 is Energy
12 Commission staff supplemental air quality testimony filed
13 October 26th.

14 And Exhibit 318 is South Coast Air Quality
15 Management District's revised determination of compliance
16 with the Palen Solar Project Power. If we could move
17 those into the record.

18 HEARING OFFICER RENAUD: All right. Is there any
19 objection to these two exhibits? Applicant?

20 MR. GALATI: No objection.

21 HEARING OFFICER RENAUD: CBD?

22 MS. BELENKY: No objection.

23 HEARING OFFICER RENAUD: Those will be admitted.

24 (Thereupon Exhibits 317 and 318 were
25 admitted into evidence.)

1 DIRECT EXAMINATION

2 BY MS. DE CARLO:

3 Q Mr. Walters, did you prepare the testimony entitled
4 "Air Quality and Revised Staff Assessment Part One,
5 Exhibit 300"?

6 A Yes, I did.

7 Q Did you prepare the testimony entitled, "Palen Solar
8 Power Project Air Quality Supplemental Staff Assessment,
9 Exhibit 317"?

10 A Yes, I did.

11 Q Was the statement of your qualifications attached to
12 this testimony?

13 A Yes, it was.

14 Q Do the opinions contained in the testimony you're
15 sponsoring represent your best professional judgment?

16 A Yes, they do.

17 Q Can you briefly discuss your analysis and conclusions
18 regarding the Palen Solar Power Project's potential to
19 result in impacts to air quality?

20 A Yes. After mitigation that is both proposed by staff
21 in Conditions AQSC 1 through 11 and through the district
22 and what are now the proposed conditions AQ 1 through AQ
23 51, we believe that the air quality impacts through
24 facilities construction and operation have been mitigated
25 to less than significant impact.

1 And to more specifically go over what is provided
2 in the more recent document, the supplemental staff
3 assessment I'll provide brief notes on changes that have
4 occurred since the revised staff assessment.

5 The main changes that staff has included
6 are: The revisions that were included in the revised
7 Determination of Compliance. Those revisions specifically
8 addressed reanalysis of the e-transfer fluid piping system
9 emissions, the quantity of emissions, and the
10 applicability of specific district resource review
11 requirements. The final finding was that the emissions
12 exceed exceeded the VOC emission offset thresholds and VOC
13 offsets would be required for the facility in a total of
14 68 pounds per day.

15 Additionally, as part of the RDOC, the systems
16 have been separated into different permit units. There
17 are now two expansion tanks, overflow tank, and piping
18 system permit units. There is a separate bi-remedial and
19 treatment permit unit. There are now two active carbon
20 control system permit units. And also permit conditions
21 were revised for the two auxiliary boilers, for the two
22 emergency generator and, engines two fire pump engines to
23 address both staff, applicant, and intervenor comments
24 that were received been on the preliminary Determination
25 of Compliance.

1 In total, there are now 51 separate conditions
2 that were 23 and 24. In addition to this, staff has
3 revised condition AQSC 11 to address applicant comments on
4 the specifics of the condition that were amenable to staff
5 to make the compliance a little more clear on how that
6 would work.

7 Also we have added condition AQSC 9, deleting the
8 original AQSC 9 since that condition or the parts of that
9 condition which were related to inspection and maintenance
10 of the heat transfer through piping system are now
11 included in the district conditions no longer needed to
12 have a staff condition. That was deleted and replaced it
13 with a condition to provide information on the ERC credits
14 both in terms of what is initially going to be provided,
15 requests for revisions, and documentation for final
16 surrender of those credits to the district.

17 Q And does that conclude your testimony?

18 A Yes it does.

19 MS. DE CARLO: The witness is available for
20 cross-examination.

21 And I will note that Mosen Muzzini and Brian Yeh
22 are both here from the district in case the Committee or
23 anyone else has any questions.

24 MR. GALATI: Yes, the applicant doesn't have any
25 cross-examination, but would like to take this opportunity

1 to inform the Committee that we have reviewed Exhibit 317
2 and agree with the Condition of Certification as been
3 amended by staff's most recent supplemental filing.

4 HEARING OFFICER RENAUD: CBD, cross-examination.

5 MS. BELENKY: Yes, I have a couple of questions.

6

7

INTERVENOR CROSS-EXAMINATION

8 BY MS. BELENKY:

9 Q I just -- I want to just preface this by saying I
10 understand that for some people the fact that we are even
11 asking about green gas emissions is troubling. However,
12 like any project, anywhere in the state, we need to look
13 at the emissions of the project and make sure that the
14 analysis is accurate. And I would just like to ask a few
15 questions about the greenhouse gas emissions. Did you
16 prepare the greenhouse gas emissions table?

17 A Yes, I did.

18 Q Thank you. And do these tables anywhere or any of
19 this discussion include a life cycle analysis of all the
20 equipment and other parts of this project?

21 A There is an equivalent analysis that's located below
22 greenhouse gas table three, which is essentially an energy
23 payback time analysis, which identifies the amount of time
24 that would be necessary in order for the project
25 essentially to pay back the energy required for all the

1 components of construction, which is found to be well less
2 than a year.

3 Q And I did look at this pay back period. But does it
4 include all of the life cycle emissions for the
5 construction of each of the parts of the project, not just
6 the construction on site, but, for example, the parts of
7 the project that are manufactured off site?

8 A Yeah. The information is derived from a resource
9 article that is based on the entirety of developing the A
10 solar project.

11 Q You are not looking at the actual life cycle of these
12 components? Did you analyze the greenhouse gas emissions
13 from the manufacturer of the components for this project?

14 A No, we did not do that. We only we addressed it based
15 on, as I noted, the energy payback time, which was an
16 available resource for our review.

17 Q But you didn't know what those emissions were. You
18 hadn't analyzed what the emissions were from the
19 manufacturing when you then analyzed the payback period?

20 A Well, the payback period obviously is somewhat
21 generalized in terms of what it is in terms of different
22 manufacturers. Obviously, there might be slightly
23 different assumptions depending on transportation, et
24 cetera, which is why it is a range of time.

25 But the key factor being that the energy payback

1 is a very short period of time. And so the GHG reduction,
2 even if you were to front load all of the emissions, would
3 essentially be paid back through the emission reduction
4 from the project in its ability to generate electricity
5 rather than having the electricity generated from fossil
6 fuel fire power plants in less than a year.

7 Q Thank you. And for the construction and for the
8 operations, are there any other -- were there any measures
9 considered to mitigate the impacts to the greenhouse gas
10 emissions from the project to minimize them or these are
11 using traditional trucks, et cetera?

12 A There is no additional mitigation beyond the
13 mitigation required in the air quality analysis, which
14 does require the use of newer engines for construction
15 equipment. But the key there being we don't find
16 significant impacts, and therefore we're not requiring
17 mitigation under CEQA to deal with less than significant
18 impacts, in fact, beneficial impacts.

19 Q And the construction greenhouse gas emissions were
20 calculated over how many years? Is this a yearly total or
21 total for the two to four years of construction?

22 A It's a total for the entire construction period. I
23 believe that's noted in the paragraph above the table.

24 Q Yes, but the table is a little unclear about that. It
25 says 39 months. I just want to make sure we understand

1 that. So when you're talking about the payback period,
2 you're talking about the payback period for construction
3 or all of the emissions from the project the three years?

4 A We're talking about payback period for the
5 construction. The operating emissions are negligible and
6 are essentially paid back during the operation each year
7 of a couple days.

8 Q But there is no analysis of that.

9 Okay. Thank you.

10 HEARING OFFICER RENAUD: Any redirect questions?

11 MS. DE CARLO: Are they done? No.

12 HEARING OFFICER RENAUD: All right. Thank you.

13 And staff, do you have another air quality quit
14 witness to call?

15 MS. DE CARLO: No. Just if the Committee has any
16 questions of the air district.

17 HEARING OFFICER RENAUD: Perhaps we should just
18 have the air district representatives identify themselves.
19 If you would, please.

20 MR. YEH: Good afternoon. My name is Brian Yeh.
21 I'm with South Coast Air Quality Management District. I'm
22 the permitting manager for the Palen Solar Power Project.
23 Nice to be here.

24 HEARING OFFICER RENAUD: Thank you. And your
25 agency did provide the RDOC?

1 MR. YEH: That is correct.

2 HEARING OFFICER RENAUD: And DOC is forthcoming?

3 MR. YEH: Right. I mean, as part of the process,
4 the project was -- the public notice was published
5 recently and the 30-day public comment period. So once
6 that period is over, once we receive all the comments, we
7 incorporate whatever necessary changes need to be made and
8 then the final DOC will be issued.

9 HEARING OFFICER RENAUD: Thank you. Okay. Any
10 questions, Mr. Galati?

11 MR. GALATI: No. No questions for the applicant.

12 HEARING OFFICER RENAUD: All right. Ms. Belenky,
13 any questions?

14 MS. BELENKY: No, thank you.

15 HEARING OFFICER RENAUD: All right. Thank you.
16 Thank you for coming.

17 I think we'll go back to biology now. CBD, I
18 think you're still --

19 MS. BELENKY: We're going to have our direct
20 testimony. I think Ms. Anderson needs to be sworn in.

21 MR. GALATI: Remind you again so we please have
22 the cross-examination of Dr. Carl.

23 HEARING OFFICER RENAUD: Thanks again.

24 MR. GALATI: She's getting all ready for
25 construction.

1 HEARING OFFICER RENAUD: All right. Ms. Belenky,
2 I am sorry. Before we do that, we are going to have
3 direct questioning and cross of Dr. Carl, who's been
4 waiting on the phone these many hours. Please go ahead.

5 MR. GALATI: Dr. Carl, are you on the phone?
6 This is Scott.

7 DR. CARL: Yes, I am.

8 MR. GALATI: Were you sworn when we -- well, I
9 guess we can just swear you again so we can make sure we
10 have it.

11 (Whereupon the witness was sworn.)

12 THE WITNESS: Yes.

13 MR. GALATI: We submitted our responses in
14 writing. Unless the Committee would like me to summarize
15 any of Dr. Carl's testimony, I'd make her available for
16 cross-examination and wait for redirect.

17 HEARING OFFICER RENAUD: Very brief summary, if
18 you would.

19 MR. GALATI: Dr. Carl, could you briefly
20 summarize the disagreements or the issues that you
21 addressed in the rebuttal testimony specifically with
22 respect to CBD's opening testimony and the desert
23 tortoise?

24 MS. BELENKY: I thought she was going before us
25 so that we could cross-examine her. I'm a little confused

1 about having rebuttal before we had direct. But if that's
2 what you would prefer.

3 MR. GALATI: Again, I'm offering her for
4 cross-examination. CBD wanted to. I can hold her and do
5 rebuttal later. So if they wanted to cross-examine her
6 on -- I'm not sure what they'd cross-examine her on. She
7 filed rebuttal testimony.

8 HEARING OFFICER RENAUD: I think we're primarily
9 are trying to avoid inconveniencing the witness further.

10 Does CBD have an objection other than formal in
11 terms of just the usual order of things?

12 MS. BELENKY: I guess not.

13 HEARING OFFICER RENAUD: I recognize that this
14 would not be the normal order that we conclude all direct
15 testimony and go to rebuttal. But we do have this witness
16 who's in the field in a location where she has cell phone
17 service, but may have to leave that location.

18 MR. GALATI: And to accommodate, I don't have to
19 summarize what she's already written. So all I was going
20 to ask her to do as orally summarize for what she's
21 written. She already wrote her rebuttal system. You've
22 read it. I can move her for cross-examination now and
23 redirect on the cross.

24 HEARING OFFICER RENAUD: Would you like to hear
25 summary from Dr. Carl, or do you want to just go ahead and

1 cross-examine.

2 MS. BELENKY: I don't think we need to hear any
3 summary. We've read her rebuttal.

4 HEARING OFFICER RENAUD: Would you like to ask
5 any questions?

6 MS. BELENKY: Yes. We just had a few questions
7 for Dr. Carl.

8 HEARING OFFICER RENAUD: Go ahead.

9

10 CROSS-EXAMINATION

11 MS. by BELENKY:

12 Q The applicant submitted your report on the Hyundai
13 translocation, the study from 2006. Is the translocation
14 plan for this project so far as you know going to follow
15 this methodology?

16 A No. The reason that was submitted was because I
17 wanted to show that there were, in fact, very successful
18 translocation projects including the time period of the
19 Gowen and Barry report that you submitted as an exhibit.

20 The translocation plan for all of the solar
21 projects is subject in great part -- it's in totally to
22 the requirements from Fish and Wildlife Service. And so
23 Fish and Wildlife Service is dictating much of what is in
24 the current translocation plan.

25 Q Thank you. And certainly we are aware of this Hyundai

1 study that you did and we have the Center has specifically
2 pointed to it as an excellent example of the very careful
3 translocation which is not necessarily what we have seen
4 in the translocation plans before the Energy Commission.
5 Are you aware of any long-term monitoring results from
6 desert tortoise translocation besides the one that you did
7 for the Hyundai project that go out more than two or three
8 years?

9 A Not more than three years, no.

10 Q Thank you.

11 And then I think there was a statement in your
12 rebuttal I just wanted to clarify. You were discussing
13 the impacts to an area that's not within the desert
14 wildlife management area and you were discussing recovery
15 potential. And I just wanted to clarify on the record do
16 you think that the desert tortoise can recover by only
17 protecting the DWMAs?

18 A I don't think it's just a matter of protecting DWMAs.
19 I think DWMAs are -- a number of scientists have weighed
20 in on the areas which are the highest profile sections. I
21 think that it's probably based on all of the data that the
22 greatest recovery probably recovery is probably most
23 likely in DWMAs. We don't think you ignore areas other
24 than DWMAs at all.

25 Q Thank you.

1 And one other question. We were just discussing
2 a little bit about canid predation. And I guess we could
3 ask do you have any thoughts on what may be causing
4 elevated coyote densities in various areas or thoughts on
5 how to minimize that problem as we move forward with these
6 projects?

7 A Well, it's kind of reared its ugly head a couple years
8 ago on Fort Irwin. And I suspect that it's something that
9 periodically happens and we haven't been able to recognize
10 it -- in the past defined areas where there are -- there
11 seems to be a lot of show. And we don't know why they
12 die. And we really can't tell after the death why an
13 animal died. And it would be useful to -- very useful to
14 look at weather patterns over the last -- since before it
15 started declining over the last 30 years or so and see if
16 any weather pattern that prompted the increase in coyote
17 density prey density decreased. I mean, the prey density
18 initially skyrocketed, which is why the coyote density
19 also increased. And then with the complete prey
20 population, we had problems with coyotes with Desert
21 tortoises.

22 I think that's a situation we could look at and
23 probably get a good handle on how often that occurs. In
24 general, we're -- people have done a lot of telemetry over
25 a lot of years, long-term studies, and at least long term

1 and we don't see the kind of degradation in general. But
2 it certainly has happened and it probably has happened
3 more than we know.

4 So I think Dr. Candor's (phonetic) response
5 relative to the Palen project was appropriate and
6 thorough. And you know, there are measures in place to
7 minimize coyotes coming around. So a faulty -- it's a
8 little hard to imagine coyotes increasing in response to a
9 solar facility without trash and water and no other
10 reason, especially if there is already agricultural in the
11 region makes the region more attractive.

12 So complex problem. And I think that we don't
13 know -- we know coyotes can do damage. But we don't know
14 the extent of damage to population and tortoise recovery.
15 It might be great. It may be much greater than we know.
16 But at this point, I think it's -- we don't know at this
17 point.

18 MS. BELENKY: Thank you. I think that's all of
19 our questions for today.

20 HEARING OFFICER RENAUD: Anyone else have
21 questions for Dr. Carl? All right.

22 Thank you very much, Dr. Carl.

23 CBD, please.

24 MS. BELENKY: Finally. Ms. Anderson, I think you
25 need to be sworn.

1 (Whereupon the witness was sworn.)

2

3 DIRECT EXAMINATION

4 BY MS. BELENKY:

5 Q Thank you. I will just go through a few quick
6 questions.

7 Did you prepare the written testimony that you
8 submitted to the Commission?

9 A I did.

10 Q And do you adopt this testimony today?

11 A I do.

12 Q Do you have any additions or corrections to your
13 testimony at this time?

14 A No, I don't.

15 Q Did you review the rebuttal testimony from staff and
16 the applicant?

17 A I have.

18 Q And in response to that rebuttal and what was said
19 here today, is there any additional information that you
20 would like to provide regarding impacts to biological
21 resources?

22 A No.

23 Q Thank you.

24 Did you examine the fall botanical survey that
25 was provided by the applicant today?

1 A Yes, I have.

2 Q And do you have any comments on that document?

3 A Yes, I was glad to see that surveys were done. And
4 I'm not surprised at some of the results of those surveys
5 with regards to some species that were target species
6 simply didn't come up and germinate during the window when
7 the surveys were implemented, which is often a problem in
8 the desert with regards to timing, germination,
9 particularly of animal species. So some of those species
10 were unable essentially to be surveyed for.

11 Q I just -- if you could just explain a little bit more
12 about the cycle in the desert. So it would not be unusual
13 even if you went out during a certain time frame that it
14 might be what we would call a bad year for a certain
15 plant; is that correct?

16 A Yeah. Well, specifically for these fall-blooming
17 plants, they germinate for the annual plants which
18 complete their life cycle over a series of months going
19 from germination to plant to flower to producing seed, to
20 dying off, and the seeds -- most of the time the plant
21 remains as viable seed and lives out most of its life
22 cycle that way.

23 With these fall-blooming plants, they're really
24 tied to when rain actually effects the area where the seed
25 bank is living and it starts this whole annual plant

1 cycle.

2 So if there is an area where the sides are
3 hanging out in the soil and it doesn't get any rain,
4 they're not going to grow and germinate and produce
5 flowers and fruits. Because of the pattern of
6 precipitation in the desert, especially during the
7 monsoonal season in the late summer, early fall is so
8 unpredictable, and you can have a downpour in one area and
9 a mile away it remains bone dry. It's really hard to
10 capture the actual physical identification of the plant as
11 being present, because most of the time they just hang out
12 in the soil as seeds.

13 Q Thank you.

14 Turning now to the desert tortoise movement
15 across the Chuckwalla Valley and could you -- I just
16 wanted to get your thoughts on the discussion we had this
17 morning and any additional thoughts on the impacts of this
18 project and the cumulative projects in the Chuckwalla
19 valley.

20 A Sure. I would agree with some of the discussion
21 earlier with regards to where the project site is probably
22 not as good habitat for desert tortoise as other areas in
23 the Chuckwalla Valley for that movement to take place.

24 However, I am still concerned because of the
25 number of projects that currently have applications as

1 well as those that are moving forward where those are
2 placed and how they're placed on the landscape with
3 regards to desert tortoise movement. I mean, ideally what
4 we want to do is connect essentially the two core areas
5 that are relatively adjacent to each other, the Chuckwalla
6 DWMA down south and the Chenawavy (phonetic) DWMA up
7 towards the north. And what sits right in the pathway of
8 those two is the Chuckwalla basin.

9 I recognize that there can be movement up through
10 Joshua Tree National Park and further up the Chuckwalla
11 Valley that way. But also I do think that there is an
12 important linkage where the project site sits that would
13 allow for additional movement of tortoises sort of, if you
14 will, on the eastern side of the Chuckwalla Valley up
15 through the wilderness area there, the Palen McCoy.

16 So I see just with the cumulative impact not only
17 of this project, but also of I think that there are four
18 other projects within that valley at this time -- four
19 other applications in the valley at this time that are
20 spread across the valley so they make much a greater
21 barrier if all of them were to be implemented to desert
22 tortoise movement north/south.

23 Q Thank you.

24 And then I just wanted to turn briefly to the
25 issue of impacts to birds from this project. And in

1 particular, do you think that the current mitigation
2 monitoring and reporting requirements are sufficient.

3 A Well, this has been an issue on not only this project
4 but a number of projects I've reviewed with regards to we
5 don't know much about the impacts to bird species when
6 they are migrating through these areas and the impact of
7 them particularly for running into structures that they
8 may not see as solid structures that can harm them but
9 more look like something that they can pass through.

10 And while the literature on this is not certainly
11 not well examined, I think there is only one paper out
12 there, it did show a significant impact on migratory
13 birds. And I just feel that with the data that's out
14 there, there needs to be much more rigorous standards to
15 actually be able to evaluate the number of birds that are
16 impacted by these projects so that we can get a handle on
17 how much of a problem this actually is. It certainly
18 seems significant to me from the literature that's out
19 there.

20 Q And as far as features that might attract birds in
21 this area, in addition to the two cooling ponds on site,
22 there are other features that might attract birds in this
23 area?

24 A Certainly, as birds go through the desert, they are
25 attracted to sort of oasis, agricultural fields, et

1 cetera. And, of course, this project is adjacent to
2 agricultural fields, whether they be napalms or jojoba
3 farms or whatever. It's more of an attractive nuisance.

4 Q Thank you. I think that was all of my questions for
5 today.

6 HEARING OFFICER RENAUD: All right. Thank you.

7 Does anyone wish to ask questions?

8

9 CROSS-EXAMINATION

10 BY MR. GALATI:

11 Q Dr. Anderson, regarding your testimony on the fall
12 botanical survey, you said that the pattern is
13 unpredictable and that it depends on the cycle and you
14 could have a bad year; correct?

15 A Yes.

16 I'd like to correct one thing. I don't have a
17 Ph.D.

18 Q Okay.

19 A I am not doctor.

20 HEARING OFFICER RENAUD: You're in the doctor.

21 That was my fault.

22 BY MR. GALATI:

23 Q Sorry, Ms. Anderson. Actually, it would be worse if
24 you had one and I didn't acknowledge it. So thank you for
25 that.

1 If applicants had done surveys last year, there
2 is no guarantee that they would have been able to detect
3 these species either; correct?

4 A Yes. Unless it was a good rainfall right on the
5 project site.

6 Q And that would apply to next year, too; right?

7 A Yes, that's correct.

8 Q Okay.

9 A That's why typically projects that are -- have a
10 potential impact, you know, go through literally years of
11 studies prior to having their CEQA review, it's been my
12 experience.

13 Q Okay. Let's -- I'll address that one off line with
14 you.

15 Let's move to Desert tortoise movement. I want
16 to understand this a little bit more. It's not that the
17 desert tortoise are moving like in a highway; correct?

18 A That's right.

19 Q It's not like a desert tortoise is trying to get from
20 the south to the north? It's that we're talking about
21 generations to get from the south to the north and
22 interacting; correct?

23 A Yeah. And it's more really about the interaction
24 between them and, you know, breeding, making sure that
25 there is genetic connectivity.

1 Q So there is already a barrier, which is the I-10;
2 correct? So they use underpasses?

3 A Yes.

4 Q And did you review the report that was done by the
5 applicant specifically -- I can identify it as an exhibit
6 here. It was in response to some data requests on desert
7 tortoise movement where all the different underpasses were
8 evaluated to determine the use?

9 A Yeah.

10 Q I'm going to keep along that line of questions, and
11 I'll get the exhibit number I'm referring to later.

12 And you reviewed that report?

13 A I did, but it has been a while.

14 Q Okay.

15 A And there's been a couple of other projects, so I'm
16 hoping I can remember it correctly.

17 Q Let me see if I can refresh your memory. Would it be
18 fair to say that the testimony that you heard of Mark
19 Masser that desert tortoise habitat and connectivity gets
20 better as you move west from the site, is that --

21 A Yes. That rings true with me.

22 Q So in this particular linkage, the project is on the
23 eastern most side of this particular linkage; correct?

24 A Actually, it is on -- with regards to what was
25 identified in the northern and eastern Colorado plan, the

1 project sits on the western side of the eastern linkage,
2 if you will.

3 Q Okay.

4 A So it's quite an a expensive linkage in there between
5 the DWMA, the Desert Wildlife Management Area, and the
6 wilderness area bisected by the I-10 corridor. But it
7 goes fairly -- it actually go fairly close to the Genesis
8 project. So it's quite a wide linkage area in there
9 that's identified.

10 Q If you were thinking of a set of tortoises living on
11 the south side of I-10, let's say directly south of the
12 Palen project, those tortoises would get to the north
13 going through one of two culverts in the vicinity of the
14 project; would that be a fair characterization?

15 A I'm not sure about the number of culverts directly
16 adjacent to the project site, particularly with regards to
17 the reconfigurations. But that is if there's two or three
18 there, then --

19 Q Okay. Fair enough. Would you think that a tortoise
20 would be trying to connect with another population of
21 tortoises that live in and around the dunes area?

22 A You know, I don't really have an answer to that. I
23 don't think that they would necessarily be going out to
24 seek other tortoises because unless -- they're looking for
25 a mate, they generally like to keep their own territories.

1 Q Would it be fair to say that the dunes are not good
2 tortoise habitat?

3 A Yeah. I think they would be traversing through them,
4 but they certainly wouldn't be able to make a borrow
5 there.

6 Q You testified about the paper on birds. Is that
7 McQuerry?

8 A Yes, that's the McQuerry paper.

9 Q That was the study that was done for the Solar I and
10 Solar II tower facilities; correct?

11 A Yes.

12 Q And while there were certainly some bird fatalities
13 recorded in that study, didn't that study also say that
14 there was a very large population of birds associated with
15 all the other agricultural and ponds around the study so
16 there were a lot of birds already existing around the
17 site?

18 A You know, I don't remember that they were saying there
19 was, like, an inordinate amount of birds. But my take on
20 this was from reading the paper there was attractive
21 nuisances around the site that would encourage birds to
22 fly through the area.

23 Q Okay. Fair enough. It's marked as an exhibit so we
24 can refer to it.

25 I actually don't have any more cross-examination.

1 Thank you very much.

2 HEARING OFFICER RENAUD: All right. Staff
3 have --

4 MS. DE CARLO: Nothing from staff.

5 HEARING OFFICER RENAUD: Redirect?

6 MS. BELENKY: No. We don't have any redirect.
7 When you're ready, we could move our exhibits and so
8 forth.

9 HEARING OFFICER RENAUD: Okay. I think this is a
10 good time to do that then.

11 MS. BELENKY: Okay. So the Center for Biological
12 Diversity, we had exhibits 600 through what was labeled
13 667, but I think there are two 667s. So we'd like to make
14 the last one also 668 and move Exhibit 600 through 668
15 into evidence.

16 MR. GALATI: No objection.

17 HEARING OFFICER RENAUD: All right. Now, these
18 pertain both to biological resources and alternatives?

19 MS. BELENKY: Yes. They're all mixed together.

20 HEARING OFFICER RENAUD: No objection from
21 applicant then.

22 Staff?

23 MS. DE CARLO: No objection from staff.

24 HEARING OFFICER RENAUD: No objections, they will
25 be admitted. Thank you.

1 (Thereupon Exhibits 600 through 668 were admitted
2 into evidence.)

3 MS. BELENKY: Thank you.

4 And we also had a request for judicial notice.
5 As part of our opening testimony, we listed a series of
6 documents that are referred to in the testimony. All of
7 these documents are available on the web. Most of them
8 are Energy Commission documents or REDI documents. And we
9 would like to have the Commission take official notice of
10 those in order to save a lot of paper for all of the
11 participants. Otherwise, we can submit them if necessary.

12 HEARING OFFICER RENAUD: Not at all. I have
13 taken note of that. They are Energy Commission documents
14 as far as I can see, every one of them is, or available on
15 our website.

16 MS. BELENKY: And REDI.

17 HEARING OFFICER RENAUD: Even that's available on
18 our website. So of course we can take official notice of
19 those. We better.

20 MS. BELENKY: And I believe that the Bureau of
21 Land Management NECO plan was also already -- is mentioned
22 in all of the documents. And I'm assuming that there
23 would be official notice of that as well so we don't have
24 to provide a full copy.

25 HEARING OFFICER RENAUD: Of course, there would

1 be. But somehow I have a recollection it's actually an
2 exhibit, too.

3 MS. BELENKY: Did someone actually print the
4 whole thing?

5 HEARING OFFICER RENAUD: Well, whatever.

6 MS. BELENKY: I think there are portions. But I
7 just think it's important to make sure it's -- it's an
8 amendment to the California Desert Conservation Area Plan,
9 which is also available on the Bureau of Land Management
10 website.

11 HEARING OFFICER RENAUD: Okay. Anything further
12 on biological resources then?

13 MS. DE CARLO: Staff does have a cleanup matter,
14 if we can go back to direct testimony for a minor issue
15 that Mr. Galati mentioned at the beginning. We reached
16 agreement in concept two a change in the table of Bio 29,
17 and we just want to read that into the record and ensure
18 that the parties do not object to the changes.

19 MS. KIELER: This is Zara Keiler with the Energy
20 Commission.

21 MS. DE CARLO: Zara has been previously sworn in.

22 MS. KIELER: This is in the staff's rebuttal
23 testimony, Table 3. We've revised the securities in Table
24 3. We used the REAT table with revisions that are already
25 addressed in the footnotes and then made adjustments based

1 on a request by the applicant to do with rounding. And so
2 we have recalculated the securities and provided it in a
3 revised Bio 29 Table 3, which everyone is getting a copy
4 of right now.

5 HEARING OFFICER RENAUD: All right. So looking
6 at what you passed out, the lower part that has a gray
7 area at the top, that's what? Replacing what was above
8 it?

9 MS. KIELER: That's correct. That's replacing
10 all the crossed out table above it.

11 MS. DE CARLO: That's a clean version.

12 MS. KIELER: Yes.

13 MS. DE CARLO: So we should probably mark this
14 Exhibit 319 for staff.

15 MS. BELENKY: I just want to make sure I
16 understand the table. It looks like the figures are
17 higher in your lower table than the -- at least --

18 MS. GUIGLIANO: It depends which phase you look
19 at.

20 MS. KIELER: It would especially be for --
21 between our numbers and the applicant's original numbers
22 for fringe-toed lizard habitat. But some numbers are a
23 little higher. Some are a little lower. And the main
24 issue had to do with rounding. So -- but we wanted to
25 make sure we were using the REAT table that we used for

1 all the projects with the modification if possible.

2 MS. BELENKY: I guess we're just trying to figure
3 out how one of the cells went to zero for the borrowing
4 owl in Phase 2 of the reconfigured three alternative.

5 MS. KIELER: Correct. The entirety of the
6 borrowing owl impacts are assessed in Phase I of each of
7 the alternatives. That originally was a typo. Yes.

8 MS. BELENKY: Okay.

9 MR. GALATI: The applicant has reviewed and
10 approves or agrees with Bio 29 Table 3.

11 That leaves the only dispute associated with Bio
12 29, which is related to the two issues on Mojave
13 fringe-toed lizard that is when should indirect impacts be
14 assessed and a footnote that talked about if they are
15 assessed. So that's in Table 2 and Table 1. But we agree
16 to Table 3 as modified by this exhibit, which I guess
17 we'll mark as the --

18 HEARING OFFICER RENAUD: Yes. I believe we
19 marked for identification as 319. Would you like to move
20 that into evidence?

21 MS. DE CARLO: Yes, please.

22 HEARING OFFICER RENAUD: Is there any objection
23 to that?

24 MR. GALATI: No objection.

25 HEARING OFFICER RENAUD: CBD?

1 MS. BELENKY: No objection.

2 (Thereupon Staff Exhibit 319 was admitted
3 into evidence.)

4 HEARING OFFICER RENAUD: And with all almost
5 everything this days, there is a disclaimer which says
6 "Security amounts may change based on final project
7 footprint." And believe me, they will, if past experience
8 is any teacher. All right.

9 Anything else on biological resources?

10 Biological resources, anything else?

11 MR. GALATI: None from us.

12 MS. DE CARLO: None from cumulative.

13 HEARING OFFICER RENAUD: CBD?

14 MS. BELENKY: Are we going to do alternatives
15 next? I would call my witness.

16 HEARING OFFICER RENAUD: Yeah. I think that
17 makes sense. Alternatives would be next. Let me ask does
18 anybody plan to call witnesses or present testimony on
19 soil and water resources?

20 MS. DE CARLO: We have witnesses available, and
21 we understand CBD does have some questions for our
22 witnesses, so that might be a quick couple of questions.

23 MS. BELENKY: Yeah, it would be quick.

24 HEARING OFFICER RENAUD: I can leave that to
25 CBD. Your choice.

1 MS. BELENKY: I really just had one question for
2 or two questions for the staff about the soil and water.

3 HEARING OFFICER RENAUD: All right. Why don't we
4 take care of that, and then we'll go to alternatives.

5 MS. DE CARLO: And our witnesses are Michael
6 Donovan, John Thorn, and Michael Daly for soil and water,
7 staff's witnesses, and they need to be sworn.

8 (Whereupon the witnesses were sworn.)

9 MS. DE CARLO: And their exhibits have already
10 been moved in and their testimony on -- or marked rebuttal
11 testimony Exhibit 303 and their opening testimony, which
12 was part of the revised staff assessment.

13 Do the parties stipulate to their expertise and
14 their sponsoring of their testimony?

15

16 DIRECT EXAMINATION

17 BY MS. DE CARLO:

18 Q Have you reviewed -- for the Committee, can you just
19 please summarize your conclusions regarding the project
20 potential for impacts to soil and water resources?

21 MR. DONOVAN: We have reviewed the applicant's
22 proposed projects, and there is a potential for
23 significant impacts to both surface water and groundwater
24 hydrology and water quality. We have prepared Conditions
25 of Certification, which would mitigate those potential

1 impacts to insignificant. And we feel that the
2 implementation of those Conditions of Certification would
3 cover any potential aspects related to the proposed
4 project.

5 Q And did you review the applicant's opening testimony
6 in soil and water and their proposed changes to Conditions
7 of Certification?

8 A Yes, I did.

9 Q Do you agree with those changes?

10 A Yes, I do.

11 Q Does that conclude your testimony?

12 A That concludes my testimony.

13 MS. DE CARLO: And the witnesses are available
14 for cross.

15 HEARING OFFICER RENAUD: All right. Applicant?

16 MR. GALATI: No cross-examination.

17 HEARING OFFICER RENAUD: CBD?

18 MS. BELENKY: Yes, I have a couple of questions.

19

20 CROSS-EXAMINATION

21 BY MS. BELENKY:

22 Q First, on the cumulative impacts to water, the RSA
23 states that cumulatively this project and the others in
24 this area will have -- will put the area into overdrive.
25 But the mitigation only looks at the effects at the Palo

1 Verde basin border; is that correct?

2 MR. DONOVAN: That is correct. The basin was --
3 what we did is we took all potential projects, both energy
4 projects and other projects, which accumulated to
5 approximately ten overall projects within the Chuckwalla
6 Valley. All of these projects would put the basin into
7 overdraft with respect to more water would be withdrawn
8 that would be going into the basin. However, due to the
9 substantial amount of water and storage, approximately 15
10 million acre feet in storage in the groundwater basin,
11 over the 30-year life of the project, it would only
12 accumulate approximately .38 percent of the total
13 groundwater in storage. And so the impact was considered
14 insignificant.

15 Q And in making that, I guess, conclusion that the
16 impact would be insignificant, did you look at the height
17 of the water table and how that might effect surface
18 resources?

19 A The groundwater table at the project site is
20 approximately 180 feet below ground surface. There is a
21 potential for the groundwater levels to decrease away from
22 the proposed wells. And Conditions of Certification have
23 been written to monitor those potential impacts and
24 address impacts to adjacent water well users. So it has
25 been put into the Conditions of Certification for

1 mitigation of any impacts associated with lowering of the
2 water table around the project site.

3 Q I just want to make sure I understand. The monitoring
4 will be for adjacent water well usage not for any surface
5 resource impact; is that correct?

6 A With respect to surface water impacts, are you
7 referring to phreatophytes?

8 Q There's also the discussion that phreatophytes in the
9 biological section. I'm trying to make sure that two
10 sections match up, I think.

11 A Corrects. I mean, the monitoring with respect to the
12 phreatophytes is covered with respect to -- in Bio 23 and
13 24. The COCs with respect to impacts to groundwater
14 resources are covered within these Conditions of
15 Certification in the soil and water section.

16 Q Okay. Thank you.

17 And then you testified that you accept -- that
18 you would accept all of the changes made to these
19 Conditions of Certification by the applicant. I guess I'm
20 somewhat concerned about this. If you look at Soil and
21 Water 14, it appears that some of these changes would be
22 significant. In particular, there's this additional
23 language, which I think is additional -- it's a little
24 confusing the way these are written -- that says talking
25 about mitigation measures that would be acceptable for

1 offsetting impacts to the Palo Verde basin. And it talks
2 about paying for irrigation improvements, payment for
3 irrigation improvements in another district, purchasing
4 water rights, and tamarisk removal program, and then it
5 says "or other proposed mitigation activities acceptable
6 to the CPM." And you -- seems extremely vague. Is there
7 some set of other mitigation activities that would be
8 acceptable in your estimation?

9 A What the concept was is to offset the amount of water
10 and the amount of water may be extremely small. And it
11 will be dependant on what amount of water would have to be
12 offset, if any, with respect to that. But what particular
13 offset would be appropriate for that particular amount of
14 water.

15 Q But this is saying that there are other measures or
16 activities that haven't even been annunciated here and
17 have not been evaluated that would be acceptable. Do you
18 have a list of some other acceptable activities?

19 A Not at this time.

20 Q Okay. So this is just an open-ended statement that's
21 now put into these conditions. Is an open ended area that
22 someone else can come up with something that we haven't
23 evaluated here?

24 A With respect to the thing, it has to be acceptable to
25 the CPM in order to be considered as an offset. It is not

1 a open ended list of potential offsets.

2 MR. GALATI: Just for the record, I want to lodge
3 an objection to that characterization. The condition has
4 a performance standard of offsetting a certain amount of
5 water. And so the determination of how the offsets are
6 obtained, that's not that completely open ended. So from
7 my perspective, I want to just get an objection on the
8 record.

9 HEARING OFFICER RENAUD: It's noted. Thank you.

10 BY MS. BELENKY:

11 Q But there is no list or -- there is no list of
12 activities that would be acceptable. This is in that
13 sense left to later determination; is that correct?

14 A That is correct.

15 Q Thank you.

16 I think -- so just going back to this cumulative
17 impact within the basin, in your estimation, did you look
18 at the time that it would take for the basin to recover
19 from this amount of overdraft?

20 A No, we did not. The assumption was is that over the
21 course of the 30 years that the amount of water that would
22 be coming into the basin would be considered average
23 conditions. And so it would be dependant on climatic
24 conditions prevailing at the time that the overdraft
25 occurred, whether it would come back quickly or take a

1 period of time.

2 But as I said before, the amount of water that is
3 lost in storage with respect is very small, less than .5
4 percent of the total water in storage.

5 Q Thank you.

6 I think those are all the water.

7 On the surface water, we did have one question
8 again as to the cumulative impacts to surface flow.

9 There's two issues with sand. There is obviously the sand
10 transport by wind, and then there's the sand source coming
11 in, which is through fluvial processes. Did you take
12 these into account when you were doing your surface water
13 analysis?

14 MR. DALY: This is Mike Daily. We did not do a
15 sediment transport analysis, per se.

16 MS. BELENKY: Okay. So you didn't do one either
17 for the site specific or for the basin, that northern
18 Chuckwalla Valley as a whole?

19 MR. DALY: We did not. Or the applicant did not.
20 We did not review such a study.

21 MS. BELENKY: Thank you. That's it.

22 HEARING OFFICER RENAUD: All right. Thank you.

23 Just clarification for the Committee, the
24 statement that staff approves of applicant's changes to
25 the Conditions of Certification, those changes are

1 embodied in applicant's opening testimony on this topic?

2 Are those the ones?

3 MR. GALATI: That's correct.

4 HEARING OFFICER RENAUD: All right. Just wanted
5 to make sure.

6 MS. DE CARLO: Couple questions of redirect.

7 HEARING OFFICER RENAUD: Yes.

8

9 REDIRECT EXAMINATION

10 BY MS. DE CARLO:

11 Q Mr. Donovan, Soil and Water 14, it identifies a couple
12 of different mitigation measures that could be used to
13 meet the requirements contained in the Soil and Water 14;
14 is that correct?

15 A That is correct.

16 Q And is it your conclusion that those mitigation
17 measures identified are feasible and could obtain the
18 necessary reductions?

19 A Yes, they could.

20 MS. DE CARLO: That's all.

21 HEARING OFFICER RENAUD: Thank you.

22 Further questioning?

23 MR. GALATI: There was an issue raised that I
24 think needs some clarification. May I ask a question or
25 two of this witness?

1 HEARING OFFICER RENAUD: Of course.

2 MR. GALATI: Thank you.

3

4 RE-CROSS-EXAMINATION

5 BY MR. GALATI:

6 Q Mr. Donovan, basically what the applicant is going to
7 offset is the amount of reduction in flow to the Palo
8 Verde basin; correct?

9 A That is correct.

10 Q So there is a certain amount of water that is flowing
11 out of the Chuckwalla Valley basin and flowing into the
12 Palo Verde basin; correct?

13 A Corrects.

14 Q And applicant's impact is not an impact to Chuckwalla
15 Valley basin; the impact that's being offset is possible
16 that it could reduce that flow so less water goes into
17 Palo Verde; correct?

18 A Correct.

19 Q So the Chuckwalla Valley basin when you said it's 15
20 million in storage, it's actually some water is flowing to
21 Palo Verde?

22 A Correct.

23 Q And all of the modeling ignored any recharge; correct?

24 A Correct.

25 MR. GALATI: No further questions.

1 HEARING OFFICER RENAUD: All right. Thank you.

2 Questions by CBD?

3 MS. BELENKY: Well, now I'm a little confused,
4 because the RSA does say that there will be overdraft in
5 the basin. So that was taking into account recharge.

6 MR. DONOVAN: That analysis it took in recharge.
7 What Mr. Galati is referring to with respect to water
8 levels, when water levels were calculated, recharge was
9 not taken into account.

10 MS. BELENKY: Thank you.

11 HEARING OFFICER RENAUD: Okay. Thank you.

12 Anything further on soil and water resources?
13 Applicant? Staff? CBD? No witnesses? No further
14 questions?

15 All right. Thank you. We are done with that
16 topic then.

17 And what remains then is alternatives. Let me
18 ask if applicant wishes to call any witnesses on
19 alternatives.

20 MR. GALATI: No, we did not. We filed our
21 testimony, and we agreed that staff's analysis was
22 thorough to satisfy CEQA obligation. And we don't have
23 any live testimony.

24 HEARING OFFICER RENAUD: Thank you.

25 Staff witnesses?

1 MS. DE CARLO: We have two witnesses for
2 alternatives, Susan Lee and David Vidaver. They need to
3 be sworn.

4 MS. BELENKY: Can I check if my witness is on the
5 phone?

6 MR. POWERS: I am here, Joe Powers.

7 MS. BELENKY: Great. I want to make sure you
8 heard the staff witnesses.

9 MS. DE CARLO: They need to be sworn.

10 MS. BELENKY: Can you swear Mr. Powers at the
11 same time?

12 (Whereupon the witnesses were sworn.)

13 MS. DE CARLO: I would like to have an exhibit
14 marked 314, Blacken Veatch solar PV performance and cost
15 estimates.

16 HEARING OFFICER RENAUD: All right.

17 MS. DE CARLO: Could that be moved?

18 HEARING OFFICER RENAUD: Any objection?

19 MR. GALATI: No objection.

20 HEARING OFFICER RENAUD: CBD, any objection?

21 MS. BELENKY: No objection.

22 HEARING OFFICER RENAUD: Thank you that will be
23 admitted.

24 (Thereupon Exhibit 314 was admitted
25 into evidence.)

1

2

DIRECT EXAMINATION

3 BY MS. DE CARLO:

4 Q Ms. Lee, did you prepare the testimony entitled
5 "Alternatives" in the revised staff assessment, part one,
6 Exhibit 300?

7 A Yes, I did.

8 Q Did you also prepare the testimony entitled
9 "alternatives" in revised staff assessment part two,
10 Exhibit 301?

11 A I did.

12 Q Did you also help prepare the testimony entitled
13 "Energy Commission Staff Rebuttal Testimony:
14 Alternatives" in the Palen solar power project staff
15 rebuttal testimony Exhibit 303?

16 A Yes.

17 Q Was the statement of your qualifications included in
18 the revised staff assessment and rebuttal testimony?

19 A Yes.

20 Q Do the opinions contained in the testimony you are
21 sponsoring represent your best professional judgment?

22 A Yes.

23 MS. DE CARLO: Mr. Vidaver, did you help prepare
24 the testimony Exhibit 303?

25 A Yes.

1 Q Was the statement of your qualifications attached to
2 this?

3 A Yes.

4 Q Do the opinions contained in the testimony you are
5 sponsoring represent your best professional judgment?

6 A Yes.

7 MS. DE CARLO: Panel, can you please summarize
8 your conclusions with regard to your alternatives
9 analysis?

10 MS. LEE: Yes, I will.

11 This project essentially presents sort of an
12 alternatives success story I think because the
13 alternatives that are on the table now and that have, in
14 fact, been analyzed by staff are the result of a
15 collaboration of staff, the wildlife agencies, BLM, and
16 the applicant in developing on-site alternatives that
17 ultimately did reduce the impacts of biological resources
18 to less than significant.

19 Throughout the process, we actually looked at
20 four different on-site alternatives as variations around
21 the proposed project configuration. And in fact many,
22 many more configurations than that were considered but not
23 ultimately published.

24 In the March staff assessment, we presented an
25 analysis of a 500-megawatt reconfigured alternative that

1 was developed by the applicant in response to staff data
2 requests. We also analyzed a 375 megawatt reduced acreage
3 alternative that was developed by staff in order to
4 eliminate the areas of the project that had the greatest
5 potential for biological resources impacts.

6 In that staff assessment, the original staff
7 assessment, the 500 megawatt reconfigured alternative,
8 while it was preferred to the proposed project, still had
9 significant impacts as was described also this morning.
10 But the reduced acreage alternative was successful in
11 eliminating the significant impacts to biological
12 resources.

13 After a publication of the staff assessment in
14 March, the applicant developed two new reconfigured
15 alternatives that would both retain the 500 megawatts of
16 capacity, but reduce the impacts to biological resources.
17 The revised staff assessment includes the impact analysis
18 of reconfigured alternative two and reconfigured
19 alternative three, both of which are found by staff to
20 eliminate the significant impacts of biological resources.

21 In addition to the on-site alternatives
22 basically, the alternatives analysis also looked at an
23 off-site private land alternative. It looked at a no
24 project alternative as required by CEQA, four other
25 alternative sites that were identified by the applicant,

1 and 14 different renewable and conventional generation
2 technologies.

3 The private land alternative, which was a request
4 of several of the parties in the scoping phase, was an
5 alternative called the North of Desert Center Alternative.
6 It's about a 5,000-acre site that's located northwest of
7 the Palen site entirely on private land and primarily
8 disturbed agricultural land either currently in use or
9 previously in use as agricultural land. And it is found
10 in the alternatives section to have less impacts than the
11 proposed project primarily to biological and cultural
12 resources because it's a disturbed site. So it's not a
13 site that requires disturbance the first time through
14 basically.

15 The big challenge with this private land site is
16 that in order to get the 5,000 acres that's needed for 500
17 megawatts, this would have required aggregation of 151
18 separate parcels of lands and 40 different land owners.
19 So that really illustrates the challenge of developing
20 private land for a project of this size.

21 I'll talk just briefly about the solar
22 photovoltaic alternative. We looked both at a utility
23 scale, which I won't discuss, but also at solar
24 photovoltaics at the distributed level.

25 We looked at -- the components of this

1 alternative that we looked at included both residential
2 and industrial rooftops, as well as small scale up to a
3 couple hundred acres of disturbed land development. And
4 these systems certainly are feasible on their own and they
5 are on their own also an essential component of
6 California's renewable portfolio. And also they are not
7 likely to have significant environmental effects because
8 of the places that they're developed in more urban areas.
9 But we don't think that it makes sense to consider this
10 type of alternative photovoltaics as an alternative to a
11 utility scale solar project.

12 The development of 500 megawatts of this type of
13 distributed photovoltaics as an alternative to Palen would
14 still be challenging. It's a more expensive technology.
15 It's not being installed at a fast enough pace to keep up
16 with the size of the utility scale solar.

17 And one example of that, which we presented in
18 our testimony, is Southern California Edison's project
19 which is a 500 megawatt commitment approved by the CPUC,
20 but in fact in two years they've only installed three
21 megawatts of that 500.

22 So that concludes my summary.

23 MS. DE CARLO: Thank you. The witnesses are
24 available for cross.

25 HEARING OFFICER RENAUD: Applicant?

1

2

CROSS-EXAMINATION

3 BY MR. GALATI:

4 Q Your understanding that the applicant is requesting
5 the Committee to permit both reconfigured alternative two
6 and reconfigured alternative three; correct?

7 MS. LEE: I understand that, yes.

8 MR. GALATI: No further questions.

9 HEARING OFFICER RENAUD: All right. CBD,
10 questions?

11 MS. BELENKY: Yes. And I will ask a question or
12 two, and then I may ask my expert to ask a question
13 because he's the expert and understands some of these
14 things more than I do, if you'll indulge us.

15 HEARING OFFICER RENAUD: We'll allow it.

16 BY MS. BELENKY:

17 Q I just wanted to ask a couple of questions first. Did
18 you look at any, fully evaluate any alternative that would
19 not impact any of the sand corridor area?

20 MS. LEE:

21 A The private land alternative that I described that the
22 North of Desert Center Alternative isn't one that would
23 fully avoid that sand corridor.

24 Q But none of the public sand alternative avoided the
25 sand corridor?

1 A None of the ones that were carried forward for full
2 analysis. There were a few other ones that were evaluated
3 but not evaluated in detail.

4 Q Thank you.

5 And when you talked about the private land
6 alternative, you discussed the need to aggregate 5,000
7 acres, although I believe the project now is down to
8 something closer to 4,000 acres; is that correct?

9 A Yeah. That's correct. We didn't look at the
10 difference in the number of parcels that would be
11 required.

12 Q And did you look at an alternative that instead of one
13 large pot would have two 250 blocks and the amount of
14 acreage that would be needed for that?

15 A No.

16 Q Thank you.

17 I think turning to the photovoltaics and
18 distributed alternative, so you said that the -- in your
19 understanding the Southern California Edison project where
20 they got approval for the 500 megawatts and they've only,
21 in your understanding, actually developed three megawatts.
22 Do you have any information on the amount of effort that
23 they've made to do so?

24 A No. This is based on reports on their website.

25 Q Thank you.

1 Now I'd like to ask Mr. Powers if he has any
2 questions for staff on their rebuttal or any of their
3 testimony.

4 MR. POWERS: Yes. I would like to make a
5 clarifying statement on the project, the 500 megawatts --

6 HEARING OFFICER RENAUD: We're looking for
7 questions at this point. You can make statements when
8 Ms. Belenky asks you questions.

9 BY MR. POWERS:

10 Q Ms. Lee is -- she made the statement that a rooftop
11 were, to be fair, a rooftop were to be distributed, ground
12 mounted, PV program would be more costly than Palen.
13 Could -- I would like her to explain that in a bit more
14 detail.

15 MR. VIDAVER: The conclusion that central station
16 solar thermal is likely to be less -- located in the
17 Mojave desert is likely to be less expensive than smaller
18 scale distributed alternatives is based on the Black and
19 Veatch study that's been entered as an exhibit.

20 We, of course, cannot -- at least I do not know
21 the exact costs associated with developing the Palen
22 project and the offer price that it would make itself
23 available for in a utility or FO, for example, or in the
24 ISO's real time. The price would be willing to accept in
25 the long run and the ISO real time energy market. But the

1 Black and Veatch study produces estimates of capital costs
2 at post DOD levelized costs of energy that developers
3 would need depending on technology size and location. And
4 they estimate that central station solar thermal located
5 in the Mojave Desert would be substantially less expensive
6 than smaller alternatives and those located in other areas
7 of California.

8 Q I have a follow-up question. And the follow-up
9 question is, as I recall, a June 18th, 2010 Black and
10 Veatch PowerPoint which was also put together by D3 said
11 nothing about solar thermal. It is exclusively about the
12 cost of the different types of P and D. Black and Veatch
13 did issue a report in the renewable energy one month
14 before in May of 2010 where they explicitly identified
15 both the cost, levelized cost of energy for distributed
16 photovoltaic system to 20 megawatts and up and solar
17 thermal facilities like Palen. And there is a tremendous
18 difference in the levelized cost of energy with the
19 levelized cost of energy of the distributed PV systems
20 being on the order of 50 percent less than the solar
21 thermal systems like Palen. Are you familiar with that
22 report which is called the REDI H2B final report?

23 A I've not read the REDI Phase 2B final report, no.

24 Q Are you aware that the Black and Veatch directly
25 contradicts in its June 18th PowerPoint the information

1 that it provides in a much more thorough -- in that much
2 more thorough REDI Phase 2B final report?

3 MR. GALATI: Object. Assumes facts not in
4 evidence.

5 MS. BELENKY: The REDI report is in evidence.

6 MR. GALATI: The questioner is testifying as to
7 the character of that evidence, and I object that that
8 assumes those facts are not in evidence.

9 HEARING OFFICER RENAUD: We'll allow the witness
10 to correct the question if it needs correcting.

11 MR. VIDAVER: I require some clarification. Are
12 you saying that the report issued on June 18th by Black
13 and Veatch directly contradicts a report issued by the
14 same firm one month prior to that?

15 BY MR. POWERS:

16 Q That's exactly what I'm saying.

17 A No, I am not aware that is the case.

18 Q That's an acceptable answer.

19 I do have an additional question which relates to
20 the comments about the SCE program. And I am familiar
21 with the schedule on that program. SCE was planning to
22 build five megawatts in the first year of the program,
23 which they have done. And those five megawatts are all
24 thin film, which require more space, but that SCE had a
25 commitment to put in 45 megawatts in the second year of

1 the program and 50 megawatts in each subsequent four
2 years. SCE has signed contracts so the remaining 245
3 megawatts, the 250 megawatts is silicon PV so it be
4 provided by Sun Power and Trina Solar and the comments
5 regarding --

6 HEARING OFFICER RENAUD: Is this going to be a
7 question, Bill?

8 MR. POWERS: Well, the question is: Are either
9 of the experts for the Commission familiar with the
10 project implementation schedule that SCE has committed to
11 turning out?

12 HEARING OFFICER RENAUD: Thank you.

13 MS. LEE: No. We have just been tracking its
14 progress to date.

15 MR. POWERS: Very good.

16 MS. BELENKY: Well, Bill, if that's all your
17 questions, maybe we could go to direct testimony.

18 HEARING OFFICER RENAUD: Before we do that, let
19 me make sure we're done here with the staff's witnesses.

20 MS. DE CARLO: I do have one redirect question.

21

22 REDIRECT EXAMINATION

23 BY MS. DE CARLO:

24 Q Ms. Lee, with regard to the ultimate size of the
25 project being closer to 4,000 acres, if you had looked for

1 an alternative site of that size in the private -- using
2 private acres, would that have changed your ultimate
3 conclusion that private acre parcel would be infeasible?

4 A No. I think the parcel size would be fairly
5 proportional. So reduction of 20 percent in those 150
6 parcels is what I would expect. We wouldn't make a
7 dramatic difference and the conclusion would be the same.

8 MS. DE CARLO: Thank you. That's all.

9 HEARING OFFICER RENAUD: All right. Mr. Galati?

10 MR. GALATI: I just have one. No questions, but
11 I just wanted to raise an issue on the scope of the next
12 testimony. And --

13 HEARING OFFICER RENAUD: Before you talk about
14 the CBD's witnesses?

15 MR. GALATI: Correct.

16 HEARING OFFICER RENAUD: Before we do that, let's
17 finish with staff.

18 I have a question for the staff.

19 In response to a question from Mr. Galati, you
20 stated that you're aware that the applicant is requesting
21 license to build either Alternative 2 or Alternative 3.
22 Does the staff have a preference for one of those in any
23 discipline that you're aware of?

24 MS. LEE: This is actually something that I can't
25 speak to because the impact analysis for Alternatives 2

1 and 3 are contained in each of the other staff's
2 testimony. I don't know if it's okay for me to say. I
3 asked the biology witnesses earlier if they could
4 summarize for me their comparison, and they felt they were
5 comparable because there were trades-off between the two.
6 I am not the person to testify to that conclusion.

7 HEARING OFFICER RENAUD: All right.

8 MR. GALATI: Mr. Renaud, if I could clarify. The
9 reason that we are asking for two and three, one includes
10 private land that we do not have control over. So if the
11 Committee were to choose a section of which we do not have
12 control over, I couldn't have got data adequacy for that.

13 But since there is always a preference for
14 developing on private land, the applicant decided to while
15 reconfiguring, refigure in case they are capable of
16 getting the private land that they would not have to come
17 back to the Commission and start the process over in a way
18 that would take a lot of time and energy. But we can't
19 have the Commission elect that alternative now as an early
20 alternative because we don't have site control.

21 HEARING OFFICER RENAUD: All right. Thank you.
22 Anything further of staff witnesses?

23 MS. DE CARLO: Nope. That's all.

24 HEARING OFFICER RENAUD: Okay. Thank you very
25 much.

1 CBD. Do you have anyone? Obviously you do.

2 MS. BELENKY: Yes. I would like to have our
3 witness, Bill Powers testify.

4

5 DIRECT EXAMINATION

6 BY MS. BELENKY:

7 Q And Bill, I just wanted to go through a few basic
8 questions. Did you prepare the written testimony
9 entitled, "Testimony of Bill Powers," submitted to the
10 Commission?

11 A I did.

12 MR. GALATI: I'd like to --

13 HEARING OFFICER RENAUD: Let her ask these
14 preliminary questions, and then we'll get to your.

15 MR. GALATI: I think he needs to be sworn.

16 HEARING OFFICER RENAUD: He was.

17 BY MS. BELENKY:

18 Q And do you adopt the testimony that you submitted?

19 A I do.

20 Q Do you have any additions or corrections to your
21 testimony at this time?

22 A No.

23 Q And did you review the rebuttal from staff on the
24 alternatives?

25 A I did.

1 Q And then I'd like in response to the rebuttal and what
2 was said here today to see if you have any additional
3 information that you'd like to provide to the Commission
4 regarding the alternatives analysis issues?

5 A In terms of more recent information that has come in
6 since this was submitted?

7 Q Yes. Or in terms of the rebuttal, if there were any
8 specific statements you wanted to make or testimony that
9 you wanted to give that related to the rebuttal.

10 A Well, the one statement I do want to make gets back to
11 this issue of just a sweeping statement that a distributed
12 photovoltaic -- and by distributed photovoltaic I mean
13 systems 20 megawatts and less that could be either ground
14 mounted or rooftop mounted and tied into the distribution
15 level of the grid. That a recent development in Texas
16 where a Tessera Stirling thermal system was originally
17 proposed for the public utility in San Diego, but that
18 contract was canceled recently by Tessera because they
19 could not find investors to build that project at the
20 contract terms.

21 That project has been substituted now with three
22 ten-megawatt distributed photovoltaic systems around San
23 Antonio. And in this case, they published the contract
24 price, which is \$150 per megawatt hour. And the lowest
25 estimated price in the REDI Phase 2B final report that I

1 just mentioned, Black and Veatch prepared, the lowest cost
2 at the best site in the California Mojave Desert is
3 estimated at \$195 per megawatt hour. And San Antonio does
4 not have as good as sun as most of California's main
5 population has.

6 Q Thank you. And then I just wanted to ask you a
7 couple --

8 MR. GALATI: Can I just lodge at least a request
9 if not an objection. Is that evidence --

10 HEARING OFFICER RENAUD: Go ahead.

11 MR. GALATI: Is that evidence that has been
12 submitted in the contract so we can see if it has any of
13 the qualifiers that Texas might be different than
14 California? I don't know if there are subsidies involved.
15 There is a lot of issues there. Otherwise, it's hearsay
16 and should be objected on that ground unless he produces
17 that document.

18 HEARING OFFICER RENAUD: Well, Mr. Powers has not
19 produced the document. He did say what he read in it.
20 That could be considered hearsay. We are pretty liberal
21 here about what we hear. We assign it the weight to which
22 it's deemed appropriate. And so we'll take your comment
23 into account, but not going to ask that the testimony be
24 stricken or anything like that.

25 MS. BELENKY: And I just wanted to say we're

1 happy to submit the exhibit if the record remains open.
2 We're unable to put together additional exhibits for this
3 hearing due to other deadlines. But certainly if you
4 would like to see it, we can get it for you and submit it.

5 HEARING OFFICER RENAUD: Mr. Galati, is that a
6 request the applicant would like to make? There's no
7 problem with doing that as far as the Committee is
8 concerned.

9 MR. GALATI: Yes. The applicant would like to
10 see the exhibit.

11 HEARING OFFICER RENAUD: So if you can submit
12 that as soon as you get that.

13 MS. BELENKY: We'll do that.

14 BY MS. BELENKY:

15 Q So Mr. Powers, I just wanted to ask you a couple of
16 questions about the distributed photovoltaics alternative.
17 When you're talking about a distributed alternative -- I'm
18 just trying to think how to phrase this.

19 The question isn't whether it would be installed
20 all at once in the same way as these large scale solar.
21 They might not be simply constructed over a two-year
22 period and installed. They might take a longer time
23 frame; is that true?

24 A Yes and no. They can be installed very quickly. The
25 time frame is really negotiable. For example, the germans

1 installed 4,000 megawatts AC nearly 5,000 megawatts of DC
2 of primarily roof top solar in the first eight months of
3 2010. That's as much capacity as we currently have on our
4 CEC pipeline for the solar thermal project. So obviously
5 we could install a distributed PV at a much faster rate
6 than these solar thermal projects if we chose to do that.

7 Q So there's nothing inherent about the distributed PV
8 model that would make it any slower to install than the
9 large scale solar in the desert; is that correct?

10 A That is consider correct.

11 Q Thank you.

12 I don't think I have any further questions at
13 this time.

14 HEARING OFFICER RENAUD: All right. Thank you.
15 Is there any cross-examination from the applicant?

16

17 CROSS-EXAMINATION

18 BY MR. GALATI:

19 Q Mr. Powers, this is Scott Galati.

20 Did you -- have you permitted any distributed
21 photovoltaic?

22 A I'm currently working on permitting one system.

23 Q How is that going?

24 A Can you repeat that?

25 Q How much time is it taking you?

1 A Permit was submitted the first week of September, and
2 we are waiting a decision on that. But there's no CEQA or
3 NEPA issues related to that project. We simply are
4 waiting an acceptable contract.

5 Q Where is that project?

6 A The contract is in San Diego County.

7 Q And there is no CEQA review?

8 A No. It's on a closed landfill.

9 Q Do you know how long it took the SCE project to get
10 its permits for 500 megawatts of roof top PV?

11 A Again, could you repeat that question?

12 Q Do you know how long it took the Southern California
13 Edison to get its roof top PV program permitted?

14 A I'm not sure that's quite the proper context --

15 Q No. I need to ask you a question.

16 Do you know how long it took SCE to get a permit
17 for its roof top program?

18 A What I'm saying is you're asking the question in a way
19 I cannot answer. They're not seeking permits. All they
20 needs are building permits, which are arrays and the
21 warehouses in the L.A. basin.

22 Q They had to have authorization from the California
23 Public Utilities Commission; correct?

24 A Not for the individual projects. They needed that for
25 the 500 megawatt project as a whole.

1 Q Do you know how long that took to get?

2 A I know they applied initially in March of 2008. They
3 received their approval I think in June of 2009. So that
4 would have been 14 or 15 months for the 500 megawatt
5 project.

6 Q Okay. And when you're comparison to eight months to
7 install in Germany in 2010, was that just construction
8 time? Is that what you're referring to?

9 A Correct. I'm talking about the amount of capacity
10 that was built and made operational in that eight-month
11 period.

12 Q Okay. So that's the beginning of construction to the
13 amount made operational, it was eight months.

14 A Correct.

15 Q Mr. Powers, is your point that the Commission should
16 deny the Palen project and instead -- well, what should it
17 do instead? Just deny the Palen project?

18 A No. Well, yes. The short answer is yes. But the
19 longer answer is I'm involved in looking at an
20 alternative -- two alternatives. One is distributed
21 photovoltaics. The other is the wetlands competitive
22 renewable energy zone.

23 Either of those alternatives for this amount of
24 capacity, in my opinion, is not only superior
25 environmentally, it's also better cost. So question the

1 Commission should find Palen is inferior to these two
2 alternatives and direct if one of those two alternatives
3 substitute for the capacity that is proposed to be
4 developed with Palen.

5 Q Mr. Powers, do you have a legal background?

6 A I'm a mechanical engineer.

7 Q You're not -- so when you say interior, you're not
8 using any CEQA analysis? You're just saying in your
9 opinion the photovoltaics projects that you quoted would
10 be superior to Palen; correct?

11 A I think I can state as an a mechanical environment
12 that the impact of either of the two alternatives is
13 substantially less than it would be at Palen.

14 Q Is that before or after the Palen project is
15 mitigated?

16 A After.

17 Q I would also ask are you aware that the Energy
18 Commission does not have the authority to permit the
19 photovoltaic project?

20 A I am aware of that.

21 Q I think that gets to my main point is, shouldn't this
22 discussion be taking place not in a permitting project but
23 in a broader forum of what should be our long-term
24 renewable energy portfolio?

25 A No, it shouldn't. The only option we have since CEQA

1 and NEPA are conducted in the CEC permitting process in
2 this case is that we have no other option but the address
3 it here. It would be nice to have a more strategic forum,
4 but we have to work with what we've got.

5 Q I would throw this out for your consideration. I'd
6 like you to respond is if the Commission finds that
7 photovoltaic is not feasible for the Palen project, isn't
8 that detrimental to your long-term goal to be able to
9 promote photovoltaic development in a distributed way?

10 MS. BELENKY: This is not a proper question for
11 this witness.

12 MR. GALATI: We've crossed a boundary into the
13 policy.

14 MS. BELENKY: You have crossed a boundary into
15 policy. This witness is testifying as to alternatives
16 which we have provided testimony on and which are directly
17 related to this project. You are now testifying, I would
18 assert, on questions of policy and asking a witness who is
19 an engineer and has testified about engineering solutions
20 and alternatives policy questions.

21 MR. GALATI: I posed a hypothetical and asked for
22 a response.

23 HEARING OFFICER RENAUD: I'm going to cut this
24 discussion off. I think we need to try to limit the
25 questioning to be fairly narrow on the issues of

1 alternatives and not get too heavily into policy issues,
2 because again what we really are looking at here in this
3 proceeding is impacts.

4 MR. GALATI: I would agree. That's why I wanted
5 to make the objection at the beginning, because it's
6 beyond that. It has been and the testimony is beyond
7 that. And the reason that it is is because the under CEQA
8 and the legal standard here is to look at feasible
9 alternatives and not alternatives that would be better,
10 but alternatives that take an impact that is unmitigatable
11 and take and make it now mitigatable. There is a standard
12 and We are beyond that.

13 What we're now talking about is what would be
14 better for California. I know they phrased in the concept
15 of Palen, but we have crossed into that particular
16 boundary. Be more than happy to brief this more, but I
17 wanted to explore from this witness whether or not he is
18 crossing those policy boundaries.

19 And I'll stop my questioning now, but I wanted to
20 give the Committee -- it was not intentionally wasting
21 time. It was intentionally to tease out where I think
22 we're in the wrong forum.

23 MS. BELENKY: I would object to counsel's
24 statements. He's not here to testify on these issues. In
25 fact, the RSA itself looks at this alternative. If you're

1 objecting, you're also objecting to the RSA looking at the
2 this alternative.

3 HEARING OFFICER RENAUD: Technically, the scope
4 of the cross-examination is limited to the direct. The
5 direct is quite broad. Looking at all those exhibits, it
6 covers a lot of areas. And so theoretically, I could
7 probably say Mr. Galati can almost ask anything, and we
8 could find something in Mr. Power's testimony that it
9 would be responsive to. But let's try to limit things to
10 the practical matters that are set forth in the
11 alternatives discussions in the AFC and the staff --

12 MR. GALATI: I will cease my cross-examination
13 now. I would like the ability to again look at this
14 exhibit. And should I be able to see the exhibit, provide
15 additional testimony if the record is left open for that.
16 This is apparently a contract from Texas, if the Committee
17 is open to that. But I don't northern boundary what is
18 said in that contract and I don't want the Committee to
19 take a 15 cent price as a PV is 15 cent project.

20 HEARING OFFICER RENAUD: You can submit anything
21 you want. It is -- off the top of my head, it sounds like
22 it's getting a bit far afield of what we're trying to do
23 here and it is in a different state. But it's your
24 choice. All right.

25 Any other cross-examination?

1 MR. GALATI: None from me.

2 HEARING OFFICER RENAUD: Staff?

3 MS. DE CARLO: Just a few questions.

4 BY MS. DE CARLO:

5 Q Mr. Powers, you mention the speed with which Germany
6 was able to get its PVs up and running. Do you know what
7 prices and subsidies were paid in Germany for their PVs?

8 A Do I have the existing price schedule? I do know
9 approximately what they're paying for the PV in Germany.

10 Q And what is that?

11 A I think in residential can be as high as 50 cents a
12 kilowatt hour, in that range. But they do not have a 30
13 percent tax credit as we do in this country. And so
14 prices that are in the German feed-in tariff are gross
15 prices with no adjustment, unlike what we do in this
16 country.

17 Q How would that compare to California, to implementing
18 roof top PV in California?

19 A Well, the only number I had in any head is for
20 residential. I am not advocating that the substitute be
21 residential PV. But that would work out to be in a range
22 of 35 cents a kilowatt hour in Germany, which has may be
23 one-half to two-thirds the solar insolation of California.

24 MS. DE CARLO: Okay. Thank you.

25 HEARING OFFICER RENAUD: All right. Do you wish

1 to ask any redirect questions, Ms. Belenky?

2 MS. BELENKY: No. Not at this time. Thank you.

3 HEARING OFFICER RENAUD: All right. Thank you.

4 Any further witnesses on alternatives?

5 MS. BELENKY: No.

6 HEARING OFFICER RENAUD: Okay. Any rebuttal on
7 alternatives?

8 MR. GALATI: Nothing from the applicant.

9 HEARING OFFICER RENAUD: Staff?

10 MS. DE CARLO: No.

11 HEARING OFFICER RENAUD: Thank you. Thank you,
12 Mr. Powers. I believe we're done. All right.

13 Well, that covers the four topics that we are
14 noticed to cover today. Any party wish to offer anything
15 about any of those four topics before we move into some
16 general matters? Housekeeping matters?

17 MS. BELENKY: I had a general, but it's not
18 necessarily only these four. I just -- if this is an okay
19 time.

20 We've seen in some of the other projects that and
21 in this project as well that a lot of the mitigation and
22 so forth depends on plans that are going to be finalized
23 after an approval process. And there has been some
24 confusion about those plans being made public, that they
25 are public records, and will be made available to the

1 public.

2 So we would like very much if at least for this
3 project the record reflects quite clearly in the final
4 decision that those plans which are coming after the fact
5 will be made public. They are public records, and they
6 will be made readily available to the public.

7 HEARING OFFICER RENAUD: Well, I know this
8 question has been come up before. And I don't know. It
9 sounds to me -- I have on my list to cover the briefing
10 topics. Would the parties be interested in briefing this
11 issue?

12 MR. GALATI: I don't disagree with what Ms.
13 Belenky said. And I think that all of the documents that
14 are submitted are public to the Energy Commission.

15 My concern last evidentiary hearing and at the
16 pre-hearing conference was raised of whether or not there
17 is a public approval process of each and every one of
18 those plans. And that's what I object to.

19 But they are public and they can be put on the
20 public line. A lot of the plans have been submitted
21 already in draft here. We don't have any problem with
22 those. We believe they are submitted to a public agency.
23 So that they're subject to a FOIA request. Why make
24 anybody go through that? We'll give them -- make them
25 public. I just didn't want a public review process that I

1 think is unnecessary for CEQA.

2 HEARING OFFICER RENAUD: Okay. Appreciate that.

3 Do you want to address that question?

4 MS. DE CARLO: We agree they are public record
5 subject to Public Records Act request. We'd be more than
6 happy to make them available. It's just currently I don't
7 think we have a consistent approach to putting compliance
8 documents onto the web, if that's what Ms. Belenky is
9 indicating when she means readily available. If we were
10 directed to do so by the Committee, I am sure that
11 wouldn't be a problem. But I think our current compliance
12 approach is a little bit spotty just because we haven't
13 had this focus on compliance documents in the past.

14 HEARING OFFICER RENAUD: All right. Well, I
15 think I'm going to suggest to CBD that if a situation
16 should arise in the future where you want a plan or
17 document of the type you're referring to and can't find
18 it, you should speak up and approach the CPM I would think
19 first and see if you can work that out.

20 MS. BELENKY: Well, the reason I'm raising it is
21 because we did have a very large problem getting documents
22 from the CPM in a timely fashion on another project. It
23 took over a week to even get an acknowledgement they
24 existed, that they had been submitted, and it took another
25 half a week just to get a copy of the document that was

1 already in PDF format.

2 So rather than having to go through that
3 repeatedly with all of these -- and Public Records Act
4 take between 10 and 20 days minimum, that just seems -- it
5 seems like so many of the parts of these projects are
6 being deferred to these plans. Very important issues are
7 going to be in these plans that other parties as well as
8 the public have a right to review them. Whether or not
9 there is a public approval process, there is a CPM
10 approval process. And the public and the other parties
11 have a right to review these records. And they should be
12 provided in a timely manner and not just that we have to
13 go through some whole process of asking does it exist, if
14 it exists, can I have it? When can I have it? And going
15 around in circles with the CPM, who is also very busy.
16 And I think we would submit that having a procedure for
17 providing them to the public would be a much better way to
18 go.

19 HEARING OFFICER RENAUD: All right. That
20 actually sounds like kind of a broader Commission issue
21 than just this case, that you're addressing.

22 MS. BELENKY: Yes.

23 HEARING OFFICER RENAUD: I can tell you right
24 away that the Commission would not in any way want to
25 hinder access to any public document. And to the extent

1 that we are informed of difficulties getting such
2 documents promptly, I'm sure that every effort would be
3 made to remedy that situation and make a better system.

4 But the only way anybody will know about that is
5 if they're informed about it at the time. So I would
6 encourage that you proceed in that way and --

7 MS. BELENKY: We have no way of knowing the plan
8 has been submitted.

9 MS. DE CARLO: Is it a limited number of plans
10 that you're specifically interested in? Or we just
11 talking about any plan filed for compliance?

12 MS. BELENKY: I think for this project there are
13 multiple plans that are involved that are related to
14 biological resources, water resources, and others, and we
15 have no way of knowing exactly when they're submitted in
16 order to ask at the right moment.

17 I submit it would be better to have a system in
18 which these were made public. Perhaps not -- if for some
19 reason it's too difficult to put them on the web, at least
20 made public that they have been submitted and they can be
21 requested.

22 MR. GALATI: No problem with the plans.

23 I just want people to understand the volume that
24 we're talking about. The volume of a compliance project
25 would outweigh probably the volume of the permitting

1 process, three or four projects just the volume of. We're
2 talking 24-by-30. There are lots of plans. It would be
3 best if we specified which plans, because there are I
4 think 100-some-odd submittals prior to construction and
5 then there's 40 or 50 prior to construction of certain
6 things. And many of these are huge rolled up 24-by-36
7 inch sheets and things, not all of which members of the
8 public will want to see the lighting plan, for example, or
9 the foundation plan. But so I don't want us to consider
10 creating for this project or others a requirement that
11 everything be posted because I don't think the Commission
12 can actually accommodate such a request.

13 MS. DE CARLO: I do think we are constrained in
14 our Internet storage capacity so it would be a concern
15 about overloading that system.

16 HEARING OFFICER RENAUD: Again, I'm not sure this
17 is the forum to discuss this sort of broad question. But
18 thank you for raising it and it will be addressed.

19 CBD, I have a question for you. At the October
20 13th evidentiary hearing, which you did not attend, the
21 applicant moved its exhibits into evidence, subject to any
22 objection from CBD, which you would make today if you had
23 one. And I just wanted to make sure you don't.

24 MS. BELENKY: No, we have no objection to
25 exhibits submitted.

1 HEARING OFFICER RENAUD: Thank you very much.

2 Okay. Briefing, is there any topic that any
3 party wishes to brief? I don't think the Committee senses
4 a need for briefs on anything. But if any party has an
5 aching desire to brief something, let us know.

6 MR. GALATI: No, we don't have any desire to
7 brief anything, unless the Committee has a desire to read
8 something that needs to be briefed.

9 HEARING OFFICER RENAUD: We have plenty to read.
10 Staff?

11 MS. DE CARLO: No briefing necessary from staff.

12 HEARING OFFICER RENAUD: Nothing. CBD?

13 MS. BELENKY: Well, if nobody else is going the
14 brief anything, then I don't suppose I will.

15 HEARING OFFICER RENAUD: All right. Very good.

16 Well, does anybody else have anything else they
17 wish to raise with respect the Palen Solar Power Project
18 AFC proceeding before we close the record? I'm not
19 hearing anything.

20 MR. GALATI: I actually have one, and that is
21 could we keep the record open in air quality for the
22 purposes of the DFOC?

23 HEARING OFFICER RENAUD: Very good. Good point.
24 All right. So --

25 MS. BELENKY: And the exhibit.

1 HEARING OFFICER RENAUD: We're going to keep the
2 record up for purposes of the FDOC and the Texas contract
3 that we heard about this afternoon. And --

4 MS. DE CARLO: If staff needs to make any changes
5 based upon the FDOC, any changes we need to submit. May
6 be a one or two page outline and changes.

7 HEARING OFFICER COTE: That's fine. Not a
8 problem. All right.

9 Other than that, then I think we'll go ahead and
10 close the evidentiary record. We're planning to issue the
11 Presiding Member's Proposed Decision on November 12th.

12 And with, that we'll come out the Notice of
13 Availability, which will also advise when the Committee
14 conference will be held to discuss the PMPD.

15 MR. GALATI: In considering the Committee
16 Conference setting, if we would take into account the FDOC
17 schedule, which is the public comment period closes on the
18 FDOC November 26th. So if could set the PMPD conference
19 after that. And I would also ask the Committee to avoid
20 what happened in one of our other projects while -- that
21 we on the PMPD that parties be forced the file comments
22 prior to the PMPD conference hearing rather than the
23 30-day comment period. That way the PMPD conference
24 hearing becomes productive as opposed to trying to do that
25 at the business meeting.

1 HEARING OFFICER RENAUD: Yes. That's already in
2 the works. And thank you for reminding us. But that's
3 the way we will be presenting that in the Notice of
4 Availability.

5 I can tell you that the tentative date for the
6 Committee Conference is in December. So the FDOC will be
7 provided.

8 All right. Let me ask if there is anyone on the
9 phone who wishes to address the Committee and make a
10 comment? All right.

11 Is there anyone here in the room who wishes to
12 address the Committee and make a comment? All right.
13 Seeing none, we're adjourned. And thank you. 04:17 PM

14 (Thereupon the hearing adjourned at 4:17 p.m.)

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1 CERTIFICATE OF REPORTER

2 I, TIFFANY C. KRAFT, a Certified Shorthand
3 Reporter of the State of California, and Registered
4 Professional Reporter, do hereby certify:

5 That I am a disinterested person herein; that the
6 foregoing hearing was reported in shorthand by me,
7 Tiffany C. Kraft, a Certified Shorthand Reporter of the
8 State of California, and thereafter transcribed into
9 typewriting.

10 I further certify that I am not of counsel or
11 attorney for any of the parties to said hearing nor in any
12 way interested in the outcome of said hearing.

13 IN WITNESS WHEREOF, I have hereunto set my hand
14 this 2nd day of November, 2010.

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