

STATE OF CONNECTICUT

SITING COUNCIL

* * * * *

SOMERS SOLAR CENTER, LLC * JANUARY 15, 2013
 * (3:00 p.m.)
 *

PETITION FOR A DECLARATORY RULING *
 THAT NO CERTIFICATE OF *
 ENVIRONMENTAL COMPATIBILITY AND * PETITION NO. 1042
 PUBLIC NEED IS REQUIRED FOR THE *
 CONSTRUCTION AND OPERATION OF A *
 5.0 MW AC SOLAR PHOTOVOLTAIC *
 PROJECT LOCATED AT 458 and 488 *
 SOUTH ROAD, SOMERS, CONNECTICUT *
 *

* * * * *

BEFORE: COLIN C. TAIT, ACTING CHAIRMAN

BOARD MEMBERS: Robert Hannon, DEEP Designee
 Michael Caron, PURA Designee
 Edward S. Wilensky
 Philip T. Ashton
 James J. Murphy, Jr.
 Dr. Barbara Bell

STAFF MEMBERS: Linda Roberts, Executive Director
 David Martin, Siting Analyst
 Melanie Bachman, Staff Attorney

APPEARANCES:

FOR THE PETITIONER, SOMERS SOLAR CENTER, LLC:

ROBINSON & COLE, LLP
 280 Trumbull Street
 Hartford, Connecticut 06103-3597
 BY: JOEY LEE MIRANDA, ATTORNEY

HEARING RE: SOMERS SOLAR CENTER, LLC
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1 . . .Verbatim proceedings of a hearing
2 before the State of Connecticut Siting Council in the
3 matter of a petition by Somers Solar Center, LLC, held at
4 the Somers Town Hall, 600 Main Street, Somers,
5 Connecticut, on January 15, 2013 at 3:00 p.m. at which
6 time the parties were represented as hereinbefore set
7 forth . . .

8
9
10 ACTING CHAIRMAN COLIN C. TAIT: Ladies and
11 Gentlemen, this hearing is called to order this Tuesday,
12 January 15, 2013 at 3:00 p.m.

13 My name is Colin Tait, Vice Chairman of
14 the Council. Other members of the Council are Robert
15 Hannon, the designee for Commissioner Dan Estey of the
16 Department of Energy and Environmental Protection;
17 Michael Caron, the designee for Chairman Arthur House of
18 the Public Utilities Regulatory Authority; Philip T.
19 Ashton; Edward S. Wilensky; Dr. Barbara C. Bell; and
20 James Murphy, Jr.

21 Members of the staff are Linda Roberts,
22 Director -- Executive Director; Melanie Bachman, Staff
23 Attorney; and David Martin, Siting Analyst. The court
24 reporter is Gail Gregoriades and audio technician Aaron

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1 DeMarest.

2 This hearing is held pursuant to the
3 provisions of Title 16 of General Statutes -- of the
4 Connecticut General Statutes and the Uniform
5 Administrative Procedures Act upon a Petition from Somers
6 Solar Center, LLC for a Declaratory Ruling that no
7 Certificate of Environmental Compatibility and Public
8 Need is required for the construction and operation of a
9 5.0 Megawatt AC Solar Photovoltaic Project located at 458
10 and 488 South Road, Somers, Connecticut. This petition
11 was received by the Council on October 31, 2012.

12 As a reminder to all, off-the-record
13 communications with a member of the Siting Council or a
14 member of the Council staff upon the merits of this
15 petition is prohibited by law.

16 The parties and intervenors to the
17 proceeding are as follows: The Petitioner is Somers
18 Solar Center, LLC, represented by Joey Lee Miranda,
19 Esquire, of Robinson and Cole.

20 We will proceed in accordance with the
21 prepared agenda, copies of which are available here.
22 Also available are copies of the Connecticut's Citizens
23 Guide to Siting Council Procedures.

24 At the end of this afternoon's session, we

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1 will recess and resume again at 5:00 (s.i.c.) p.m. The
2 7:00 p.m. hearing will be reserved for the public to make
3 brief oral statements into the record. I wish to note
4 that parties and intervenors, including their
5 representatives, are not allowed to participate in the
6 public comment session.

7 I also wish to note for those who are here
8 and for the benefit of your friends and neighbors who are
9 unable to join us for the public comment session, that
10 they or you may send written comments to the Council
11 within 30 days of the date hereof. And such written
12 statements will be given the same weight as if spoken at
13 the hearing.

14 If necessary, party and intervenor
15 presentations may continue after the public comment
16 session if time remains.

17 A verbatim transcript will be made of the
18 hearing and deposited with the Town Clerk's Office of
19 Somers for the convenience of the public.

20 Are there comments by any -- the First
21 Selectman is here I understand. Would you like to make
22 some comments or just be a spectator?

23 A VOICE: I'll be a spectator --

24 ACTING CHAIRMAN TAIT: At anytime just

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1 raise your hand.

2 A VOICE: Thank you.

3 ACTING CHAIRMAN TAIT: Okay. Are there
4 any motions? No.

5 I wish to call your attention to those
6 items shown in the hearing program marked as Roman
7 Numeral I-D, Items 1 through 36. Does the Petitioner or
8 any party or intervenor have an objection to these items
9 that the Council is taking administrative notice?

10 MS. JOEY LEE MIRANDA: No objection.

11 ACTING CHAIRMAN TAIT: Hearing no
12 objection, they shall be noticed.

13 Will the Petitioner present their witness
14 panel for the purposes of taking the oath.

15 MS. MIRANDA: Thank you, Vice Chairman.
16 For the record, Joey Lee Miranda from Robinson and Cole
17 on behalf of the Petitioner Somers Solar Center, LLC.

18 I'll start on my far left introducing the
19 panel. First we have Nelson Teague, who is the Co-
20 Founder and General Counsel of HelioSage, LLC. To
21 Nelson's right is Craig Wetmore, and he is the Director
22 of Acquisitions for CleanPath Ventures. To Craig's right
23 is Richard Knox, EIS Process Advisor for Kleinfelder. To
24 my immediate right is Donald Lussier, Project Manager

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1 with Fuss & O'Neill. And to Don's right is Craig
2 Lapinski, who is Associate Project Director with Fuss and
3 O'Neill.

4 ACTING CHAIRMAN TAIT: Please administer
5 the oath.

6 MS. MELANIE BACHMAN: Please rise and
7 raise your right hand.

8 (Whereupon, the Petitioner's witness panel
9 was sworn in.)

10 MS. BACHMAN: Thank you.

11 ACTING CHAIRMAN TAIT: Will the Petitioner
12 please begin by numbering the exhibits and filings made
13 in this matter.

14 MS. MIRANDA: Thank you, Mr. Vice
15 Chairman.

16 The Petitioner offers as exhibits for
17 identification purposes to start the items listed in the
18 hearing program at Roman II-B, 1 through 7.

19 ACTING CHAIRMAN TAIT: They will be so
20 noticed for identification purposes.

21 MS. MIRANDA: Thank you.

22 (Whereupon, Petitioner Exhibit Nos. 1
23 through 7 were marked for identification purposes.)

24 MS. MIRANDA: Starting with Mr. Teague and

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1 coming straight down the line, I'll start with the first
2 question, did you prepare, direct, or assist in the
3 preparation of the items listed at Roman II-B, Items 1
4 through 7 on the hearing program?

5 MR. NELSON TEAGUE: Yes, I did.

6 COURT REPORTER: Move that closer --

7 MR. TEAGUE: Yes, I did.

8 MR. CRAIG WETMORE: Yes, I did.

9 MR. RICHARD KNOX: Yes, I did.

10 MR. DONALD LUSSIER: Yes, I did.

11 MR. CRAIG LAPINSKI: Yes, I did.

12 MS. MIRANDA: And do you have any hearings
13 -- excuse me -- any corrections, modifications, or
14 amendments to those exhibits at this time? Starting
15 again with Mr. Teague.

16 MR. TEAGUE: I do not.

17 MR. WETMORE: Yes, we do. We have one
18 minor correction to II-B-3, relative to the answer in the
19 interrogatories, Question No. 24. The shade study
20 analysis that was conducted was actually conducted on
21 November 8, 2012 and not November 1, 2012. And the
22 average available solar installation will be in the range
23 of 90 to 97 percent year-round on that land currently
24 designated for the facility. And those are the only two

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1 corrections.

2 MS. MIRANDA: Mr. Knox, any corrections?

3 MR. KNOX: No corrections.

4 MR. LUSSIER: No corrections.

5 MR. LAPINSKI: I have no corrections.

6 MS. MIRANDA: Again starting with Mr.
7 Teague, with that -- with those corrections are they true
8 and accurate to the best of your knowledge?

9 MR. TEAGUE: They are.

10 MR. WETMORE: Yes, they are.

11 MR. KNOX: Yes, they are.

12 MR. LUSSIER: Yes.

13 MR. LAPINSKI: Yes, they are.

14 MS. MIRANDA: The Petitioner offers them
15 as full exhibits.

16 ACTING CHAIRMAN TAIT: Any objections to
17 these exhibits? Hearing none, they're accepted as full
18 exhibits.

19 (Whereupon, Petitioner Exhibit Nos. 1
20 through 7 for identification were received into evidence
21 as full exhibits.)

22 ACTING CHAIRMAN TAIT: I understand you
23 have no administrative notice items?

24 MS. MIRANDA: That is correct, Mr. Vice

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1 Chairman.

2 ACTING CHAIRMAN TAIT: Alright. Dave, I
3 guess you're on.

4 MR. DAVID MARTIN: Thank you, Mr.
5 Chairman.

6 At the field review you were explaining to
7 us that the number of solar panels might vary depending
8 on the decision you make regarding single axis tracking
9 or the variable tilt tracking. Could you kind of
10 explain that again while we're -- now that we're on the
11 record?

12 MR. WETMORE: Sure. So relative to the
13 ultimate design that we decide upon, the tracking
14 facility requires more land for the same DC output that
15 the fixed tilt would require. So depending on how things
16 ultimately shake out with the design, we might see some
17 variability there. Currently, we're leaning towards the
18 tracking system, but we'll see.

19 MR. MARTIN: So in the petition
20 application there's an estimate of 30 -- 31,000 solar
21 panels. That would be the maximum possible --

22 MR. WETMORE: Yeah, that's correct. I
23 believe Nelson made the point that we tried to be as
24 conservative as possible and show you effectively the

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1 largest facility that we might build, and that would be
2 the largest number that we would use.

3 MR. MARTIN: And what would be the bottom
4 number?

5 MR. WETMORE: Probably 20 percent less
6 than that.

7 MR. MARTIN: Okay. And you have
8 designated certain areas A, B, C, and D. Is there one
9 particular area that would not be developed if you chose
10 to go one route versus another route?

11 MR. WETMORE: So if we end up going just
12 fixed tilt, it will likely just be the southeast and
13 southwest portions, A and B.

14 MR. MARTIN: Okay.

15 MR. WETMORE: If we utilize the tracking
16 array, it will be A, B, C, and D.

17 MR. MARTIN: Okay, thank you. Has the
18 State of Connecticut Department of Agriculture purchased
19 any development rights for the proposed site as part of
20 the State program for the preservation of agricultural
21 land?

22 MR. TEAGUE: To our knowledge, they have
23 not.

24 MR. MARTIN: Okay, thank you. And has SSC

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1 completed the system impact study required for the
2 interconnection process?

3 MR. WETMORE: Yes, it has.

4 MR. MARTIN: Okay. And are there any
5 additional steps or studies that would be required before
6 you enter into your interconnection agreement?

7 MR. WETMORE: There are not.

8 MR. MARTIN: Okay. And would the
9 installed solar panels require any regular cleaning or
10 similar maintenance?

11 MR. WETMORE: Sure. So it depends a bit
12 on the weather. If it rains a lot, then the answer is
13 no. If it doesn't rain a lot, then maybe we would clean
14 them once or twice a year.

15 MR. MARTIN: And how do you -- how do you
16 clean a solar panel?

17 MR. WETMORE: Just with water.

18 MR. MARTIN: Not Windex -- (laughter) --

19 MR. WETMORE: No. That would be a lot of
20 Windex.

21 MR. MARTIN: Do you use like a squeegee or
22 something to --

23 MR. WETMORE: Yeah.

24 MR. PHILIP T. ASHTON: There's your summer

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1 job, Dave.

2 MR. MARTIN: Oh, great -- (laughter). And
3 how would you control the vegetative growth to make sure
4 the solar panels are clear?

5 MR. WETMORE: Mechanically with a ride-
6 along lawnmower for example.

7 MR. MARTIN: Okay. And the ride-along
8 lawnmower can get underneath the panels?

9 MR. WETMORE: It can. The tracker likely
10 that we'll use, rotates like this, so you could mow
11 different parts of the day. We won't be using any
12 herbicides or pesticides or anything like that.

13 MR. MARTIN: Okay. And how would you
14 remove snow cover from the panels?

15 MR. WETMORE: The panels are actually
16 slightly warm when they're in use. So likely the snow
17 will not accumulate on them for long. If there was a huge
18 snowfall, we would contemplate actually going out there
19 and removing it manually again.

20 MR. MARTIN: The same -- pretty much the
21 same process --

22 MR. WETMORE: Yeah.

23 MR. MARTIN: Okay. And -- let's see --
24 okay -- the application states that the project will have

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1 a design life of 30 years. However, I would expect that
2 during that time there could be great leaps forward in
3 the technology of solar panels. And if there are
4 advances made, how do you replace kind of obsolete panels
5 with newer ones?

6 MR. WETMORE: That's a good question. It
7 -- it certainly could be done. It would depend
8 ultimately on the economics in those out years. So for
9 example, if at the end of 20 years Connecticut Light and
10 Power doesn't want to buy the power any more from us, we
11 probably wouldn't repower the facility at that point in
12 time.

13 Additionally, the costs aren't 100 percent
14 known as to what it would -- actually what are required
15 to replace for example all 30,000 panels that might be on
16 the site, so there would be a cost-benefit analysis in
17 the future. But it really does remain to be seen to some
18 extent.

19 MR. MARTIN: I mean what's involved with
20 replacing one panel -- or let's say a bird hits it or
21 something --

22 MR. WETMORE: Sure --

23 MR. MARTIN: -- and you have to replace a
24 panel?

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1 MR. WETMORE: That's actually relatively
2 straightforward. However, if there were great technology
3 advances between now and say 20 or 35 years, they might
4 require different wiring on the back end. So for
5 example, you can replace all your lights now with LEDs
6 without changing the wiring in the building. In 20 years
7 you might require a wiring change for the next light
8 bulb. I don't know if we'd actually do that for this
9 facility.

10 MR. MARTIN: Okay, thank you. Let's see -
11 - and -- I guess you mentioned it a little bit, but say
12 we reach the end of the lease period you have and CL&P is
13 still interested in buying renewable power and the
14 property owner is still interested in leasing his
15 property to you, at that time would you just go forward
16 with the solar panels you have or would you replace the
17 ones that have become obsolete, or what would you do at
18 the end of kind of the lease period --

19 MR. WETMORE: Sure --

20 MR. MARTIN: -- I'm looking far ahead, but
21 --

22 MR. WETMORE: Yeah. It really does
23 depend, but -- but to your point, we do have the ability
24 to extend the lease out another 10 years, two five-year

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1 periods as it's currently drafted. We anticipate that
2 the panels will yield about 80 percent of today's
3 capacity in 20 years. So again, it will depend a bit on
4 the economics of a complete rebuild. And we'll cross
5 that bridge when we come to it.

6 MR. MARTIN: When you say a rebuild, that
7 would be like the -- kind of the framework that the
8 panels sit on or -- I guess it depends on the technology
9 20 years from now --

10 MR. WETMORE: It depends a bit on the
11 technology. That tracker has a 20-year warranty on it,
12 on the actual steel. So, I -- I don't anticipate that we
13 would take that out of the -- but again, that technology
14 could improve as well.

15 MR. MARTIN: Okay. And -- and we had this
16 question during the field review, but let's put it on the
17 record. Would -- do you anticipate the glare from the
18 panels presenting any problems for nearby property
19 owners?

20 MR. KNOX: No, we don't anticipate glare
21 being an issue with the project. As I had mentioned in
22 the field, glare from PV panels is similar to glare
23 associated with a lake. The glare that comes from snow
24 is even significantly more than the glare that comes from

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1 PV panels. Key observation points, visual simulations
2 have been completed for five locations around the site.
3 Visual access is limited during the leaf-off period.
4 It's constrained during the leaf-on period. Topographic
5 screening as well assists in the visual access onto the
6 site.

7 MR. MARTIN: Okay, thank you. And would
8 SSC be liable for local property taxes and -- or would it
9 enter into some kind of host community agreement with the
10 local municipality?

11 MR. WETMORE: Currently, we are very much
12 anticipating local property taxes.

13 MR. MARTIN: Okay, thank you. And let's
14 see -- could -- are there crops that could be grown on
15 the property with the solar panels in place?

16 MR. WETMORE: We don't anticipate that
17 now, no.

18 MR. MARTIN: Okay. And I guess -- this
19 next question talks about the fixed tilt or the single
20 axis trackers. You haven't made that final determination
21 yet at this point?

22 MR. WETMORE: We're pretty -- pretty close
23 to determining that we'll utilize the tracking system,
24 yes.

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1 MR. MARTIN: Okay. And based on the
2 results of your shade study analysis, do you anticipate
3 shady to present any significant problem for the proposed
4 project?

5 MR. WETMORE: We do not.

6 MR. MARTIN: Okay. And how would power
7 outages affect the electrical output of the project?

8 MR. KNOX: More specifically, would that
9 be grid power outages?

10 MR. MARTIN: Yes, grid power outages.

11 MR. KNOX: Okay. And so the -- there's a
12 switching gear that would be connected to CL&P's system.
13 And the -- the switching gear would be turned off during
14 grid power outages.

15 MR. MARTIN: And that's something that
16 would occur automatically?

17 MR. KNOX: That's correct.

18 MR. MARTIN: Okay. Those are all my
19 questions, Mr. Chairman.

20 ACTING CHAIRMAN TAIT: Thank you. Dr.
21 Bell.

22 DR. BARBARA C. BELL: Thank you, Mr.
23 Chair.

24 Just a quick question on the switchyard

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1 and the distribution line from the CL&P system. Is that
2 your responsibility or CL&P's responsibility?

3 MR. KNOX: So there's -- there's two
4 parts. There's the project part, and that would be
5 underground along the access road that we walked this
6 morning --

7 DR. BELL: From the inverters, yes.

8 MR. KNOX: From the inverters to a pole to
9 the switching gear. After the switching gear would be
10 CL&P's contribution to the project.

11 DR. BELL: Okay. On page 16 of the
12 application you say the electrical interconnect would be
13 visible, but would be located in an area that currently
14 has been visually modified, thus reducing the visual
15 impact. That's very general. What does that -- what do
16 you mean by visually modified? Are you talking about
17 there's a sand -- there was a sandpit there or --

18 MR. KNOX: Yeah, so -- so there's already
19 existing electrical poles along South Road. And so there
20 would be one -- there would be one riser, one pole in
21 which the switchgear would be located, and so it wouldn't
22 be out of place.

23 DR. BELL: Okay. The sanitary waste pile
24 that's mentioned in various places, I asked at the field

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1 review what happened to that. Somebody said to me that
2 they thought it had been removed. What's the status of
3 that at the moment? We saw the other -- we saw the other
4 pile mentioned in the application, but the sanitary waste
5 pile, I don't know what that is?

6 MR. LUSSIER: So -- well -- so the -- the
7 sanitary waste pile that's mentioned in the application
8 was observed during Fuss and O'Neill's environmental site
9 assessment. It was sort of a coincidental thing, our
10 inspector was on site and observed the truck depositing
11 material. Subsequent to that, we had a conversation with
12 the proponent of the project and the property owner. The
13 material came from one of the property owner's rental
14 properties. But since that time, we can't find any
15 evidence of it remaining on site. I don't know if it was
16 physically removed or simply bio-degraded.

17 DR. BELL: Okay. Regarding the FEMA map,
18 in one place in Tab C, you have an aerial photo from the
19 FEMA map, but not the diagram from the FEMA map or any
20 other material. In another place, Tab J, Figure 4, you
21 do have more of an indication of what's actually on the
22 FEMA map in terms of areas. But it's very hard to make
23 any headway with that map for Tab J because it doesn't
24 show where the arrays would be, although it does show --

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1 I'm sorry, it doesn't show exactly the extent of the
2 arrays. So I'm wondering do you have any other FEMA
3 maps? And these are just the ones -- do you actually
4 have the diagrammatic FEMA map that would show the actual
5 extent of area, of the X FEMA marking and then any hatch
6 marks which show the five -- the one hundred to five-
7 hundred foot flood and so forth?

8 MS. MIRANDA: Dr. Bell, just before they
9 answer the question, I want to confirm when you're --
10 when you're referring to Tab C and J, you're referring to
11 the petition itself, which is Exhibit 1 from the
12 Petitioner --

13 DR. BELL: That's correct --

14 MS. MIRANDA: -- is that correct?

15 DR. BELL: Yes.

16 MS. MIRANDA: Thank you.

17 MR. LUSSIER: So the FEMA mapping that's
18 included in Tab J is -- is a printout from the FEMA
19 website. It shows the subject parcel and the flood zones
20 that have been delineated in association with Abbey Brook
21 --

22 DR. BELL: Yes --

23 MR. LUSSIER: -- and I -- I believe it is
24 true that none of those flood zones are on the subject

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1 property. So -- the -- the mapping on Tab J shows the
2 labels for areas A, B, C and D --

3 DR. BELL: Yes, it does show the labels,
4 but --

5 MR. LUSSIER: It doesn't show the extent,
6 but you can kind of see in that picture the cleared areas
7 that are the open farmland. The -- the flood zones that
8 are indicated, all of them are a hundred-year floodplain.
9 There's no 500-year floodplains within that graphic. And
10 as far as I remember from preparing these documents, none
11 of the subject parcel actually even touches those
12 floodplains.

13 DR. BELL: Okay. I guess what I'm asking
14 for since really these are not from, my point of view,
15 what we see on similar types of applications, what we
16 really need to see is something that shows the diagram
17 portion of the FEMA flood path -- flood map as opposed to
18 just the aerial photo. More like what you have in Tab J,
19 but then a real marking of the extent of the areas A, B,
20 C, and D, so that we know -- so we have some evidence for
21 the statement you're making to me. Do you see what I'm
22 saying?

23 MR. LUSSIER: Yes, I do. I think that the
24 simple answer is we didn't delineate the flood lines on

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1 the mapping because they weren't on the parcel.

2 DR. BELL: Okay.

3 MR. LUSSIER: I mean we could --

4 DR. BELL: Then --

5 MR. LUSSIER: -- we could add the outline
6 of the project limits to that graphic.

7 DR. BELL: I guess that would help.

8 MS. MIRANDA: Just -- Mr. Chairman, just
9 procedurally how do you want to handle that? We do not
10 have that document currently created, so they would
11 actually need to create it. And we are hopeful, given
12 that there are no parties and intervenors, that we will
13 be able to close the hearing today. So --

14 DR. BELL: Could you make it a late file
15 or could you include it with the D&M plan?

16 ACTING CHAIRMAN TAIT: (Indiscernible) --

17 DR. BELL: Yes, I know there are --

18 COURT REPORTER: Your microphone please.

19 ACTING CHAIRMAN TAIT: The question is do
20 we need it to prove the negative? The mindset is not to
21 have late files because with late files we have to send
22 them out to all the parties and get comments back on
23 whether they want to ask questions. So my question is -
24 -

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1 DR. BELL: It's up to you, Mr. Chair. I -

2 -

3 ACTING CHAIRMAN TAIT: I would wait until
4 the D&M plan --

5 DR. BELL: Okay --

6 ACTING CHAIRMAN TAIT: -- in the interest
7 of closing tonight.

8 MS. MIRANDA: Mr. Chairman, we may be able
9 to provide it after the dinner break. It won't be a
10 computer generated graphic. It would be more of a hand-
11 drawn graphic, but we may be able to provide that after
12 the dinner break --

13 ACTING CHAIRMAN TAIT: Eat fast and don't
14 take too long -- (laughter) -- there's a snowstorm
15 coming.

16 MS. MIRANDA: Okay.

17 DR. BELL: On -- on page 6 of the
18 application you talk about an efficiency loss of 0.1
19 percent a year. Now elsewhere you talk about another
20 type of D rating. I'm trying to figure out what is the
21 difference between an efficiency loss and a D rating. It
22 seems as if there is a difference. And if so -- I
23 understand what the D rating is because you discussed
24 that. But what then is the efficiency loss in addition

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1 to the D rating?

2 MR. LUSSIER: The -- the D rating is the
3 efficiency that's lost between the conversion of DC power
4 to AC power through the inverter. The efficiency loss
5 in the panels is about two percent -- two percent a year
6 --

7 A VOICE: No, no -- (pause) -- about --

8 DR. BELL: It says .1 --

9 MR. WETMORE: -- about half of a percent a
10 year is the D --

11 MR. LUSSIER: Oh, I'm sorry --

12 MR. WETMORE: -- rating per year.

13 DR. BELL: Well now I'm confused again
14 because now you're using the word D rating. And this
15 says -- on page 6, you -- you talk about an efficiency
16 loss. Are they or are they not the same thing?

17 MR. LUSSIER: No, they're not the same
18 thing. So --

19 DR. BELL: Okay.

20 MR. LUSSIER: The -- the -- the D rate
21 again is the -- is the difference between the conversion
22 of the electricity between DC and AC --

23 DR. BELL: Yes, and that -- and that D
24 rating loss is -- tell me what it is again?

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1 MR. LUSSIER: You know, it's between .77
2 and .81 percent.

3 DR. BELL: Okay. So then what is the --
4 the efficiency loss is the loss of efficiency in the
5 panels themselves --

6 MR. LUSSIER: That's correct --

7 DR. BELL: -- that's proceeds at .1
8 percent per year because that's what you say in the -- in
9 the application --

10 MR. LUSSIER: It's -- it's about a half a
11 percent a year.

12 DR. BELL: So that would be .5 percent,
13 correct?

14 MR. LUSSIER: Correct.

15 DR. BELL: Okay. So the application is
16 not correct on that. It should be .5?

17 MR. LUSSIER: That's correct.

18 DR. BELL: Okay. I'm trying to make sense
19 of what went on with the NDDB applications or reviews.
20 It seems to me that there were two NDDB reviews at
21 different times. Is that correct?

22 MR. LUSSIER: That's correct. We
23 initially did an NDDB research request, and I -- I
24 believe it was April of 2012 -- based on the preliminary

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1 scope of the project. Subsequent to that request, the
2 project scope expanded to include what we're now calling
3 and referring to as Array D. In order to incorporate
4 that array into our request and document that we had, you
5 know, included that, we did an updated request and got a
6 response back from the State.

7 DR. BELL: Okay. And so the -- in the
8 application you say you have 106 acres. But the
9 application to the DEP -- or to the NDDDB says 95 acres.
10 So that represents the amount of the territory without
11 Area D, is that correct?

12 MR. LUSSIER: No, it -- that 95 acres does
13 include Area D. When we submitted the request, it wasn't
14 fixed in stone as to where the delineation of Area D was
15 going to be. It was simply, you know, approximately
16 here. And we estimated that area to be about 95 acres
17 preliminarily. We provided the NDDDB staff with mapping,
18 including a delineation and field survey of the wetlands
19 that's immediately to the east of Area D. And that's
20 what they used to do their field research -- or excuse
21 me, not their field research, but their research into the
22 potentially affected species.

23 DR. BELL: So 106 acres is closer to what
24 it actually will be in terms of the project now that you

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1 have looked at Area D or you've been able to get a better
2 bead on it, is that correct?

3 MR. WETMORE: As it's currently designed,
4 it will likely only be the 95 acres.

5 DR. BELL: Okay. We're going back and
6 forth with this. I just want a fix on some kind of --
7 some number.

8 MR. LUSSIER: Dr. Bell, excuse me, the 106
9 acres is the sum area of both parcels, 258 and 288 --

10 A VOICE: Four --

11 MR. LUSSIER: 458, excuse me, and 488
12 South Road. Only 95 acres, plus or minus, of that is
13 included in the project area.

14 DR. BELL: And so -- so the 95 -- so that
15 would be closer to what's in the lease --

16 MR. LUSSIER: That's right --

17 DR. BELL: -- the 95 acres?

18 MR. LUSSIER: Correct.

19 DR. BELL: Okay.

20 MR. LUSSIER: Okay.

21 DR. BELL: Alright. I'm not a lawyer, so
22 that didn't occur to me -- (laughter).

23 On Tab G you have sheets for what appear
24 to be four sampling points. But I don't see any map or

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1 figure showing where those sampling points are. And so I
2 don't understand what is the rationale for those sampling
3 points?

4 MS. MIRANDA: Dr. Bell, you're referring
5 to Tab G of the petition --

6 DR. BELL: Yes --

7 MS. MIRANDA: -- is that correct?

8 DR. BELL: Yes.

9 MS. MIRANDA: Thank you.

10 MR. LUSSIER: So Dr. Bell, I think you're
11 referring to the sampling points in the soil scientist
12 wetland determination data forms?

13 DR. BELL: Yes.

14 MR. LUSSIER: Okay.

15 DR. BELL: I mean there's -- there's sets
16 of these data forms --

17 MR. LUSSIER: Correct --

18 DR. BELL: -- and there are four --
19 basically four sets and they have -- they're linked to
20 wetland flag numbers. So -- but my question is what are
21 these sampling points showing me?

22 MR. LUSSIER: So those data forms relate
23 to transects that the soil scientist prepares as he's
24 doing his field investigation. The flag numbers --

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1 DR. BELL: I see what the flag numbers
2 are. So are you --

3 (pause)

4 MR. LUSSIER: So I think your question is
5 where were those transects taken?

6 DR. BELL: Yeah, just to have some sense
7 of -- you know, here's data, but I have no idea what the
8 significance of it is. I know the soil scientist went
9 out there and he filled out the forms that talk about the
10 characteristics of the soil and hydrology in the area,
11 but I don't really understand what it means in terms of
12 how one is supposed to evaluate.

13 MR. LUSSIER: Okay. Would that be
14 something again where we can hand annotate a map to show
15 the location of those?

16 DR. BELL: I just want to know the
17 relevance to -- I'm not interested in -- I mean I trust
18 that the data is correct. That's not my point. I just
19 want to understand how does this have -- what is the
20 bearing of this on our evaluation of the relationship
21 between the solar panel installations and the wetlands -
22 -

23 MR. LAPINSKI: Alright, so --

24 DR. BELL: -- or what -- what am I looking

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1 at?

2 MR. LAPINSKI: Right. So a Fuss and
3 O'Neill soil scientist licensed in the State of
4 Connecticut went to the site and flagged the limits of
5 wetland soils. And you have to look at not only
6 vegetation, but the soil itself. So that's why you see
7 things like borings for instance. Based on that
8 delineation, we've delineated the extent of wetlands on
9 the site. And we are at least a hundred feet away from
10 any existing wetlands as delineated by the soil scientist
11 on the site. And the location of the wetlands flags is
12 mapped and is included in the information that's in front
13 of you. So you know, that's really the -- the borings
14 are the process by which -- where we got to with the
15 flags. But the important thing is really what's the
16 limit of the wetlands, and to make sure that we stay far
17 enough away from that limit, which I think we show
18 clearly we do.

19 DR. BELL: Okay, that I understand --

20 MR. LAPINSKI: Okay -- --

21 DR. BELL: -- it just wasn't clear -- I
22 mean I --

23 MR. LAPINSKI: I'm not a soil scientist,
24 so --

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1 DR. BELL: It just wasn't clear to me --

2 MR. LAPINSKI: Right --

3 DR. BELL: -- where those borings were
4 taken, whether -- you know, whether they were supposed to
5 establish the limitations of the wetlands because I
6 wasn't -- I didn't have any point of reference. But I --
7 I understand the relevance that you've given to me and
8 I'll take that as an answer. Thank you.

9 MR. LAPINSKI: Okay.

10 DR. BELL: Have you -- and earlier you
11 were asked could any crops be grown and your answer was
12 no. My question is have the applicants investigated any
13 way to enhance the value for wildlife of these acres that
14 are shifted from wildlife habitat? And of particular
15 interest today is -- as we were walking, I saw there were
16 bird boxes. I saw one bird box. And I think I saw
17 another bird box across a field, so perhaps there were
18 more. And I guess my question is, is -- has anybody
19 taken any interest in perhaps enhancing areas of the
20 project for bird boxes or bees or anything that could
21 help out since a lot of their habitat is going away?

22 MR. TEAGUE: We have not taken any
23 specific measures or considered any specific measures
24 with respect to additional bird boxes or anything to that

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1 effect. Largely based in part on Fuss and O'Neill's work
2 and analysis of the site, we, you know, did not
3 anticipate sort of disruption of normal habitat or
4 anything to that effect that would make us then take that
5 next step to make sure that we're mitigating that. So we
6 have not done anything in particular.

7 MR. LUSSIER: I would just add to that.
8 Respectfully, I would suggest that habitat is not being
9 removed as part of this project. Currently, the farmland
10 is farmed as we heard today for hay crop, which means
11 it's cut periodically throughout the season, typically
12 two or three times during the course of the growing
13 season for hay. So if there are, you know, ground
14 nesting birds or that sort of wildlife using it, they're
15 already disturbed in the same way that the proposed
16 operation would disturb that -- those organisms or
17 animals. In fact, I would suggest that the proposed
18 operations will reduce the disturbance on the property
19 because there will be less traffic and less activity,
20 noise and such.

21 DR. BELL: Have -- are you -- I take your
22 answer and I understand what you're saying to me. It's
23 an interesting matter. I'm cranking it through my
24 cranium here, but I take your answer. Okay.

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1 Now I'm going to ask just a couple of
2 questions more on Exhibits A and B that are attached to
3 the responses.

4 MS. MIRANDA: The interrogatory responses,
5 Dr. Bell?

6 DR. BELL: Yes.

7 MS. MIRANDA: Thank you.

8 DR. BELL: In Exhibit A, it's just a table
9 that's put out by the software program PV watts and -- so
10 in this software program you specify the cost of the
11 electricity down at the bottom of the table on the left-
12 hand side. You specify the location of the panels and DC
13 rating and so forth. And then down at the bottom it says
14 energy specifications and then it says the cost of
15 electricity. So -- and it says 17.2 cents per kilowatt
16 hour. So my -- it looks to me like you're specifying the
17 cost of electricity in order to come up with the material
18 on the right-hand side of the table, which tells you the
19 energy value in dollars. So my question is -- I'm sort
20 of surprised that you're asked to specify the cost of
21 electricity since that's a dynamic number. And then --
22 so further my question would be so why do you specify
23 17.2 cents? Is that a contracted number? Is that --
24 what?

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1 MR. WETMORE: Sure. The -- the short
2 answer is that this was done by a third-party and they
3 don't know the price of electricity within the power
4 purchase agreement that we signed with Connecticut Light
5 and Power because it's not widely public. So that's just
6 a placeholder number. The power purchase agreement that
7 we signed with Connecticut Light and Power is different
8 than that number and it's escalating at I believe three
9 percent a year for the next 20 years. That was just a
10 placeholder in this specific model that that third-party
11 ran.

12 DR. BELL: Okay. And finally, in the
13 shade study, you have a map at the very -- or it's an
14 aerial photo, it's not a map, at the very back of this
15 shade study, and it's very hard to read, but I made out
16 where Somers 1, 2, 3, 4, 5 and 6 are, which are the
17 numbers that correspond to the shade study material. So
18 my question is how these relate to A, B, C and D -- I'm
19 just trying to understand from the aerial photograph --
20 it looks as if -- I'm okay with the ones in the south, 1
21 and 2. And I'm okay with No. 6 and C -- which looks as
22 if it corresponds with C. But what I'm having trouble is
23 with Numbers 3, 4, and 5, which correspond with D I
24 think, more or less, and to understand the installation.

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1 No. 3 is -- the No. 3 has a curvy -- it's delineated by a
2 curvy road around it, it seems. And then 5 and 4 are
3 north of 3. But my question is does the -- does the
4 study done of No. 5 extend all the way south adjacent to
5 3 or does it stay up in the north part?

6 MR. KNOX: So -- so Area 5 stays up in the
7 north part. Area 3 is -- is a straggler, if you will.
8 That -- that piece of land would not be developed on.
9 And so when we conducted the shade study, this was a
10 sampling, it was a sampling of the shade effects. And at
11 that time the option site control was not gained for Area
12 D. So the gentleman that went out and conducted this
13 study -- he was out there taking these measurements not
14 knowing what the final configuration of the site
15 footprint was going to be. I think --

16 DR. BELL: So -- so the --

17 MR. KNOX: That's correct, so it -- it
18 includes slightly more area than what's being requested,
19 which would be the area -- Somers 3 that you see on that
20 map.

21 DR. BELL: I see, okay. So that's -- that
22 really isn't part of D?

23 MR. KNOX: That's correct.

24 DR. BELL: Okay. Those are my questions,

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1 Mr. Chair.

2 ACTING CHAIRMAN TAIT: Jerry.

3 MR. JAMES J. MURPHY: Thank you, Mr.
4 Chairman. Just a few things left on my list.

5 The fixed and the tracking system, which
6 hasn't been determined yet, when Mr. Martin asked the
7 question about the determination as to which it might be,
8 the response was it was a question of the land usage.
9 And I don't really understand that because you indicate
10 that you're apparently leaning towards the tracking,
11 which as I understand it takes more land. So -- I assume
12 your lease is for the whole thing and you've already got
13 enough land. So I don't understand why land is a factor
14 in your determination. It would seem to me the cost, the
15 number of panels, maintenance, and things like that would
16 be a factor.

17 COURT REPORTER: One moment please.

18 (pause - tape change)

19 MR. WETMORE: Just so I understand, you're
20 asking what's driving us towards that decision?

21 MR. MURPHY: What the factors are and
22 what's driving --

23 MR. WETMORE: Sure. So to your point,
24 yes, we do have land option for the entire 95 acres that

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1 we would use if we were to utilize the tracking system.
2 As you might imagine, the tracking system is more
3 expensive than a fixed tilt system, but the manner in
4 which this PPA with CL&P is written, it makes sense to
5 produce as much power from the site as possible. And so
6 although we're effectively paying more to build it, we're
7 selling more power to the utility.

8 MR. MURPHY: So it may be more profitable
9 for you, which is --

10 MR. WETMORE: From an economics
11 perspective --

12 MR. MURPHY: -- which is a factor
13 certainly for anyone --

14 MR. WETMORE: Right --

15 MR. MURPHY: -- in a venture of this
16 nature. Okay. You indicate there's an option. Assume
17 that you go to the fixed and you don't use all of what we
18 have seen today, one section will not be used as I
19 understand it, would that continue to be part of the
20 lease or would it go back to the domain of the landlord
21 to be farmed or what have you?

22 MR. TEAGUE: That's a good question. We
23 could address it either way. If -- when we settle on the
24 final --

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1 MR. MURPHY: I assume then the amount that
2 you're leasing is not really fixed at this point?

3 MR. TEAGUE: No, it -- it -- it is fixed
4 under the terms of the lease, but we put a mechanism in
5 that once the final site design is done, we'll do a
6 survey of that and attach that to our lease as the
7 defined site under the terms of the lease. So there
8 would be a point where if we know with a hundred percent
9 certainty that we're doing fixed tilt, we don't need some
10 additional acreage and we will never need it in the
11 future, then, yes, we would exclude --

12 MR. MURPHY: So you have -- you have the
13 flexibility --

14 MR. TEAGUE: We do --

15 MR. MURPHY: -- then to --

16 MR. TEAGUE: -- correct --

17 MR. MURPHY: -- sort of not go up in the
18 number of acres from -- what we're talking about today?

19 MR. TEAGUE: That's -- that's correct.

20 MR. MURPHY: Okay. Well that takes care
21 of that. The other thing I was curious about is there's
22 a mention in the interrogatories and in the response that
23 there was an information hearing in town here a couple of
24 days before and where it was held, but nothing about how

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1 many people came and what the interest and response was
2 from the town. And that's what I'd like to ask you --

3 MR. TEAGUE: So --

4 MR. MURPHY: -- and I assume members of
5 this panel were in attendance at that public information
6 --

7 MR. TEAGUE: Correct. And just a quick
8 piece of background. So that information session was
9 originated by HelioSage, actually by me, in connection
10 with --

11 MR. MURPHY: Well, we -- we encourage this
12 --

13 MR. TEAGUE: Right. It was in connection
14 with our understanding that we thought we needed to do a
15 local Town of Somers Special Use Permit, and it was part
16 of the process of a special use permit. So that's the
17 genesis for the informational session. The level of
18 interest was -- Craig and myself were the only two there.
19 Nobody from the public attended the session other than
20 the landowner as well.

21 MR. MURPHY: What's -- what sort of
22 publicizing of the event was -- took place?

23 MR. TEAGUE: I can't remember off the top
24 of my head what's required under the regs, but it was

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1 published in a local paper pursuant to whatever the Town
2 of Somers' regulations require.

3 MR. MURPHY: And were the town officials
4 notified that this hearing was going to be held?

5 MR. TEAGUE: Yes. And it was in
6 connection with --

7 MR. MURPHY: I guess it would be because
8 it was held here --

9 A VOICE: Yeah --

10 MR. TEAGUE: It was just -- it was in a
11 room over here and it was in connection with a town
12 zoning commission meeting.

13 MR. MURPHY: Okay. Thank you, Mr.
14 Chairman. Those -- that's really all I have.

15 ACTING CHAIRMAN TAIT: (Indiscernible) --

16 MR. ASHTON: Thank you. I'd like to focus
17 a little bit on the electrical system. The substation
18 switchyard out at South Road, that's the developer's
19 responsibility except for the tap from the pole line
20 coming into the yard I assume?

21 MR. KNOX: That's correct.

22 MR. ASHTON: And what is the nature of
23 that switchyard? Is there any voltage control there at
24 all or is that voltage control elsewhere on the

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1 property?

2 MR. KNOX: Yes. So -- the voltage control
3 would be in the control building -- there's a control
4 building --

5 MR. ASHTON: At the switchyard itself?

6 MR. KNOX: No, that would be in a
7 different location.

8 MR. ASHTON: Okay. Do you know what the
9 CL&P voltage is out on the street? Is it 13,800 or 23 -
10 -

11 MR. KNOX: Twenty -- twenty-three-seven.

12 MR. ASHTON: Twenty-three thousand --
13 okay. That does make it a little easier. My question
14 was going to poke a little bit at regulation, i.e.
15 whether you get flicker depending on whether this thing
16 comes on-line or off-line --

17 MR. KNOX: Mmm-hmm --

18 MR. ASHTON: -- if you're at 13,000 or
19 14,000 nominal volts, you've got about 220 amps for 5
20 megawatts, but you're -- at 23 you get about 145 --

21 MR. KNOX: Mmm-hmm --

22 MR. ASHTON: -- so that makes a big
23 difference. I can't recall what the source of this is,
24 but my concern was -- and I assume CL&P has blessed it --

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1 is that there will not be a flicker problem as this thing
2 comes on-line or off-line?

3 MR. KNOX: Yeah, that -- that's correct.
4 When we spoke --

5 MR. ASHTON: The neighbors would get a
6 little upset if they saw the lights going up and down
7 over at your place --

8 MR. KNOX: Precisely. And so -- to your
9 point, and specifically we spoke with CL&P two weeks ago
10 specific to this question of flicker, it was one of two
11 concerns that they -- that they raised with the project,
12 and the way they addressed it was if flicker is an issue
13 and they do receive complaints from the customer-base,
14 they will address it then because there's nothing that
15 they can do preemptively now to mitigate flicker --

16 MR. ASHTON: Yeah --

17 MR. KNOX: -- when it's unknown.

18 MR. ASHTON: I was going to say at 23 it's
19 a lot easier than at 14-kV.

20 MR. KNOX: Yes.

21 MR. ASHTON: Is the switchyard itself
22 metal clad enclosed gear or is this open bus or what?

23 MR. KNOX: You know, I don't -- I don't
24 know if the specs have been worked out yet.

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1 MR. ASHTON: The difference would be
2 significant in terms of appearance along a semi-
3 residential street.

4 MR. KNOX: Yeah. And -- and I think we'll
5 know that answer in a couple of weeks.

6 MR. ASHTON: Okay. We could pick this up
7 at the D&M and pursue it there.

8 A question about decommissioning. Can the
9 developer just walk away from this?

10 MR. TEAGUE: No. We have contractual
11 obligations under the terms of our lease agreement with
12 the landowner that on either expiration of the PPA by its
13 -- or excuse me, of the lease by its term or an early
14 termination of the lease for some default or the like,
15 then we have removal obligations.

16 MR. ASHTON: Is there anything in back of
17 that to guarantee it?

18 MR. TEAGUE: There is not.

19 MR. ASHTON: Okay. What is the purchase -
20 - the length of the purchase -- the power purchase
21 agreement? Twenty years?

22 MR. WETMORE: Twenty years.

23 MR. ASHTON: With an option to renew or
24 what?

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1 MR. WETMORE: No.

2 MR. TEAGUE: There's no option.

3 MR. ASHTON: But you are talking about a
4 30-year life. Does this mean that you've got -- you and
5 the utility have got to contractually sit down and hammer
6 out a new contract or what?

7 MR. TEAGUE: That would be one option.
8 The other would be, depending on what the power markets
9 are like at that time, if there's an opportunity to sell
10 at what's called a merchant facility, you know, we'd want
11 to reserve that option. Obviously once we've made this
12 capital commitment to the project, we'd like to take it
13 out as long as we possibly can.

14 MR. ASHTON: Okay. In -- I forget where
15 it is, but you mention that it's a 30-year life of the
16 project or the facility, is that correct?

17 MR. TEAGUE: Correct.

18 MR. ASHTON: Okay. One of the things that
19 surprised me is you've got -- and this goes back to Dr.
20 Bell's questioning -- you did state that it's an 80
21 percent rating after 20 years. How does that jive with
22 the numbers that you and Dr. Bell were talking about?

23 MR. WETMORE: Effectively if the panels
24 degrade a half a percent a year, in 20 years you'll get

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1 78 to 82 percent of day one efficiency.

2 MR. ASHTON: Okay. This is -- this is a
3 half percent of a constant amount --

4 MR. WETMORE: Yes --

5 MR. ASHTON: -- so it's a half percent of
6 five -- five megawatts, is that --

7 MR. WETMORE: It's a little bit more
8 nuance than that. It would be at the DC level. So if we
9 --

10 MR. ASHTON: Yeah -- yeah, I -- I
11 understand.

12 MR. WETMORE: Yeah.

13 MR. ASHTON: That raises another question
14 in my mind. When you were talking out in the field, you
15 mentioned that it was a six and a half megawatt DC, 5
16 megawatts AC. And I was a little bit surprised at the
17 relatively high losses there. What's the bulk of the
18 loss? Are the inverters that bad? I didn't think an
19 inverter was that bad.

20 MR. WETMORE: No. So we were talking
21 about it in the sense that the nameplate capacity,
22 meaning the AC side is at 5 per the RFP of HelioSage for
23 the interconnection for the PPA. You can put more DC
24 photovoltaics on the site. And effectively if you

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1 imagine the 5 megawatt AC as a pipe, the DC will
2 effectively fill up that pipe to various levels, but
3 never go above 5 depending on the time of day and time of
4 year.

5 MR. ASHTON: Okay. Okay. I think that
6 was it. Thank you, Mr. Chairman.

7 ACTING CHAIRMAN TAIT: (Indiscernible) --

8 MR. MICHAEL CARON: Thank you, Mr.
9 Chairman.

10 I guess I'd like to touch base on the
11 decommissioning a little bit. On the site visit it was
12 discussed that piers would be sunk -- I forget -- eight
13 feet, ten feet, twelve feet, or something like that.
14 Upon decommissioning would those piers be removed from
15 the ground?

16 MR. KNOX: That's correct.

17 MR. CARON: And one other question that
18 came to my mind was if you're using the motorized tilt
19 mechanism, you would be powering those through the grid
20 as opposed to creating its own energy and moving its own
21 motor? So --

22 MR. WETMORE: Yes.

23 MR. CARON: -- so that's just based on the
24 purchase power agreement, to sell X amount of kilowatt

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1 hours to --

2 MR. WETMORE: The purchase power agreement
3 has a maximum amount of power that we can sell in any
4 given hour, yes.

5 MR. CARON: Okay, thank you. Alright,
6 that's it, Mr. Chairman.

7 ACTING CHAIRMAN TAIT: Thank you --
8 (indiscernible).

9 MR. EDWARD S. WILENSKY: Not having had
10 much experience with solar panels and maybe no
11 experience, so I hope my questions won't sound too
12 stupid. Actually just somebody explain to me how do
13 these solar panels work? Do you store energy? Do you
14 need the sun? And do they -- do you store energy 12
15 months out of the year or just how does this work? And
16 for the record, I thought this might not be a bad idea to
17 find out this information.

18 MR. KNOX: So -- you know, so -- solar
19 panels have a -- have a positive and a negative lead on
20 them and that's how they're -- that's how they're wired,
21 a positive and a negative. The material between the
22 positive and negative captures the sunlight and the
23 material is agitated. And as the material is agitated by
24 the sunlight, it creates a charge. And the charge then

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1 is discharged into the wiring. And then one panel then
2 is plumbed or wired to another panel, and you have an
3 aggregate of energy, of electricity that's built up. But
4 it's through the agitation of the material that the
5 actual panel is made from that's caused by the sun.

6 MR. WILENSKY: You talk about -- one of
7 the questions asked was can it be adjusted during the
8 year to maintain optional alignment with the sun's
9 changing path. But you also talk about trackers. What
10 is a tracker? When -- what is the terminology -- and
11 you're not using trackers as I understand it -- and what
12 -- what is a tracker? What would that have
13 accomplished?

14 MR. KNOX: Yeah, okay. So there's --
15 there's essentially three buckets of technology that are
16 -- that are employed for photovoltaic systems or PV
17 systems. One is fixed tilt in which the azimuth is set
18 at a specific direction, typically south. And then the
19 tilt of the panel is fixed so it doesn't move. And
20 depending on where you are in the country, in Arizona we
21 like to fix the tilt at around 33 degrees. Here because
22 you're a little further north than Phoenix is, it might
23 be 28 or 29 degrees. So that's the first bucket, so it's
24 fixed tilt.

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1 The second bucket includes the trackers.
2 And you can have a horizontal tracker and you can also
3 have a dual axis tracker that not only tracks vertically
4 but also tracks horizontally. What's being proposed for
5 this project is a vertical tracker, a single axis
6 tracker, a tracker in which -- if you can imagine a --
7 okay, so -- so the tracker would not -- the tracker would
8 not move horizontally with the position of the sun across
9 the sky through the seasons, rather it would move only
10 vertically with the sun as the sun tracks across the sky.
11 So it only tracks in one -- in one direction, in the
12 vertical direction, left to right if you will. It
13 doesn't track horizontal, north to south --

14 MR. WILENSKY: But you're not using
15 trackers here?

16 MR. KNOX: No, one -- that's -- that's the
17 preferred option at this time, is -- it's a single axis
18 tracker. So it's a tracker that will track the sun
19 vertically through the sky.

20 MR. WILENSKY: And also too, you talked
21 about -- for the -- moving the energy you'd have to put
22 poles in, 50-foot poles. How many of these poles would
23 be necessary?

24 MR. KNOX: So the -- the estimate right

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1 now is around eleven hundred -- slightly -- slightly less
2 than twelve hundred cylindrical pipe, steel pipe that
3 would be embedded in the ground anywhere between eight
4 and twelve feet. And so --

5 MR. WILENSKY: How many -- I'm sorry, I
6 lost you on the amount of poles. You referred to them as
7 --

8 MR. KNOX: Oh --

9 MR. WILENSKY: I'm trying to remember
10 where it was in there, but you talked about 50-foot poles
11 --

12 MR. KNOX: Yeah, okay. So you're -- I'm
13 sorry, I -- I -- I incorrectly answered the question you
14 asked about. So you're asking about the distribution
15 line pole --

16 MR. WILENSKY: Yes -- yes --

17 MR. KNOX: Okay. And so the riser or the
18 pole -- so right now CL&P -- it's CL&P's position based
19 on the system impact study that five poles would be
20 required across the site to take the electricity on to
21 the grid. And the reality is that CL&P hasn't been on
22 the site yet. And we think that's -- we think that's a -
23 - we think there's room for improvement with the number
24 of risers that are required for the project. And we

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1 think that we can go underground along the access road
2 that you walked this afternoon and --

3 MR. WILENSKY: Yes. I rode, you walked --
4 (laughter) --

5 MR. KNOX: I didn't fall this time. I did
6 the last week when it was icy. To one pole near South
7 Road, near State Route 83, to one 50-foot pole in which
8 switchgear would be at the base of the pole, and then you
9 would interconnect with the grid at that point.

10 MR. WILENSKY: These would just be 50 feet
11 high, right?

12 MR. KNOX: That's correct.

13 MR. WILENSKY: And you said -- I'm sorry,
14 I didn't get the amount that you're going to have?

15 MR. KNOX: Well it's anywhere between one
16 and five poles.

17 MR. WILENSKY: Okay. That's what I
18 thought you said. Okay. I think that's pretty much --
19 oh, just a question -- how many employees would you have
20 on -- once this site is completed, how many employees
21 will you have?

22 MR. KNOX: So it's -- it's an unmanned
23 site. There would be an operations and maintenance
24 agreement with --

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1 MR. WILENSKY: An unmanned site?

2 MR. KNOX: Unmanned, that's correct.

3 MR. WILENSKY: And how many in the
4 construction process?

5 MR. KNOX: You know, I think 30 to 50 is
6 probably a fair number.

7 MR. WILENSKY: For a period of what,
8 several months?

9 MR. KNOX: Yeah, five to seven months,
10 four to six months.

11 MR. WILENSKY: It puts people to work
12 anyway.

13 MR. KNOX: It sure does.

14 MR. WILENSKY: Yes. Thank you. Thank you
15 very much, Mr. Chairman.

16 ACTING CHAIRMAN TAIT: Bob.

17 MR. ROBERT HANNON: Good afternoon. I
18 have a few questions, some are just to clarify some maybe
19 different numbers that I saw in the document.

20 My understanding is that the ground cover
21 area of the panels will be about 40 to 45 acres,
22 roughly?

23 MR. WETMORE: Yes.

24 MR. HANNON: Okay. And the only reason

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1 I'm asking that is because I'd like a clarification with
2 one of the documents that was submitted for the Natural
3 Diversity Database and it talked about like 14.8 acres.
4 Can you just explain what the difference is in the area?

5 MR. LUSSIER: So the -- the 14.8 acres is
6 the horizontal extent of the physical panels themselves.
7 It doesn't incorporate the space between panel assemblies
8 that's required to prevent the shading that we talked
9 about earlier in the day.

10 MR. HANNON: Okay, thank you. One of the
11 questions I do have is on some of the drainage that's
12 being proposed. There is a comment on page 20 of 22
13 where -- I take that back -- on page 21 of 22, and the
14 project will employ a stormwater management plan that
15 will result in no net increase in runoff to any
16 surrounding property. But yet if I'm reading the table
17 correctly, on page 4 of the summary, it talks about there
18 is an increase with the proposed peak discharges. And
19 I'm just kind of curious as to why that would be
20 occurring, especially on a site that is as well drained
21 as it is?

22 MS. MIRANDA: Mr. Hannon, I just want to
23 clarify for purposes of the record. When you're
24 referring to page 21 of 22, that's of the petition, is

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1 that correct?

2 MR. HANNON: That is correct.

3 MS. MIRANDA: And -- and the other
4 document to which you were referring?

5 MR. HANNON: Was a summary that was
6 included with it.

7 MR. LUSSIER: So, I would like to correct
8 the statement, the bullet point on page 21 where it says
9 as you previously mentioned will -- will employ a
10 stormwater management plan that will result in no net
11 increase in runoff to any surrounding properties. Our
12 stormwater analysis demonstrated that the project will
13 have a very minor net increase in stormwater discharge
14 during the two twenty-five and one hundred year storm
15 events. That additional runoff is attributed to slightly
16 less pervious gravel roadways, maintenance access
17 roadways that are proposed around each of the arrays, as
18 well as we accounted for the impermeability of the
19 concrete foundations for the systems themselves.

20 Now our stormwater -- I will mention that
21 our stormwater analysis at the time we did it, we didn't
22 know the foundation system, so you know, in keeping with
23 our guidance from the owner and the developer to have,
24 you know, the most conservative approach, we assumed a

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1 36-inch concrete foundation. That's one of the
2 manufacturer's options for founding the tracking systems.
3 So we accounted for, you know, 12 -- twelve hundred and
4 fifty seven I think of these concrete foundations, 36
5 inches in diameter being impervious surface. That
6 resulted in an increase in discharge. For example,
7 during the 25-year storm, one of the drainage areas
8 increased .6 cubic feet per second, and the other
9 drainage area increased 2.2 cubic feet per second. So
10 there's very minimal increase in relation to the size of
11 the receiving water body, but we don't think it's
12 significant.

13 MR. HANNON: Well the reason I'm even
14 raising the question is because if you have approximately
15 half of the site that's being utilized is excessively
16 drained, another 21 acres that's somewhat excessive
17 drained, and the balance is basically well drained, I'm
18 surprised there's any increase in runoff in the first
19 place.

20 MR. LUSSIER: Yeah, it -- it is pretty
21 minor and it's a very conservative analysis. With the
22 concept that's being currently proposed, the driven pipe
23 piles, that, you know, 7.25 square feet per pipe pile
24 reduces to less than a square foot of impervious surface

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1 --

2 MR. HANNON: Okay --

3 MR. LUSSIER: -- so it -- our report
4 overstates -- the bottom line is our report overstates
5 the increase that will actually be expected.

6 MR. HANNON: Okay. And then the other
7 area that I'd like to maybe get some clarification on is
8 in looking at -- it was in -- let's see -- Section G --
9 or Appendix G where it talked about some of the trees,
10 the shrubs, the earth and things of that nature. There
11 is apparently a number of invasive species out here. And
12 with the area being disturbed, I'm just wondering if
13 there was any plan in trying to make sure that the
14 furtherance of invasive species is mitigated. So I'm
15 just wondering if somebody may have put together a plan
16 or if that's something that you can take a closer look at
17 so that we don't have an expansion of the invasive
18 species?

19 MR. LUSSIER: So -- we're not proposing an
20 invasive species mitigation as part of the project. I
21 will note -- you mentioned that the area is going to be
22 disturbed. There's no disturbance proposed for the
23 wetlands themselves --

24 MR. HANNON: I understand --

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1 MR. LUSSIER: -- and the invasive species
2 I believe that we talk about in that wetlands report are
3 specifically species that were observed by the soil
4 scientist within the wetlands.

5 MR. HANNON: But they do have a tendency
6 to expand. You know, so I'm just -- you know, just to
7 make sure, you're talking about putting in a road, you're
8 talking about removing the top six to twelve inches of
9 soil there, so I mean you can start getting some of
10 materials there -- I just don't want to see something
11 happen where it's going to create a problem with the
12 solar panels where you've got to try to do something
13 there. I mean you're talking about the life of the
14 project of anywhere from 20 to 30 years. So I think the
15 last thing you're looking for is having some type of
16 invasive species encroaching into that area.

17 MR. LAPINSKI: Yeah. And I would also say
18 that, as we said before, there will be periodic mowing,
19 and it's really in their best interest to keep invasive
20 species out because anything that causes shading is going
21 to reduce the efficiency. So just by the nature of the
22 operations, they're going to want to keep it clean of
23 anything should happen to go up there, which we really
24 don't think will.

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1 MR. HANNON: I mean if that's something
2 that you can address when you submit some of the other
3 plans later on just as a way of possibly dealing with
4 some of the invasives with the mowing and things of that
5 nature and you'd expect be able to control it. I have no
6 other questions.

7 ACTING CHAIRMAN TAIT: (Indiscernible) --

8 COURT REPORTER: Microphone.

9 ACTING CHAIRMAN TAIT: Who's your bird
10 expert?

11 MS. MIRANDA: I believe the gentleman from
12 Fuss and O'Neill should be able to assist in that.

13 ACTING CHAIRMAN TAIT: Connecticut has --
14 I'm concerned about grassland birds and the disappearing
15 habitat for the grassland birds. I know -- at Bradley
16 Field I'm pretty sure there have been set asides that
17 aren't mowed to protect the grasshoppers, the Sparrows,
18 the Bob-o-Link. I would -- at the D&M level I would like
19 to have a report from DEP as to whether this site has any
20 potential for preserving grassland birds. You're
21 covering up a huge grassland. There must be perimeter
22 areas that might work and not be mowed or mowed after
23 July 15th or something so that the birding season is
24 over. And I'd an inquiry as to whether the property has

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1 any value for grassland birds.

2 MR. LUSSIER: Okay, thank you, Mr. Vice
3 Chairman. I would note that as part of the project's due
4 diligence, we did the Natural Diversity Database. We
5 searched with the DEP staff. That was precipitated by
6 our observation of what the DEP calls a blob. On their
7 mapping they indicate the potential presence of a
8 threatened, endangered, or special concern species. That
9 -- that blob that we observed was actually off of the
10 project site, but the regulations say if there's a blob
11 within a half-mile upstream or downstream of a water body
12 that's in the vicinity of your project, you should also
13 do the request. So we did. The correspondence we
14 received back from DEP indicated that the blob was due to
15 the presence of a climbing fern. And that climbing fern
16 population was present on the western side of Egypt Road.
17 There's -- there was no documentation of any special
18 concern bird species.

19 With that said, you know, I -- I -- we
20 didn't have any discussion with DEP as to whether or not
21 there's ways to incorporate, you know, bird sanctuaries
22 as part of the project.

23 ACTING CHAIRMAN TAIT: Would you inquire
24 with them if there's any potential there that they would

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1 think would be worth preserving?

2 MS. MIRANDA: Mr. Chairman --

3 ACTING CHAIRMAN TAIT: At the D&M plan to
4 know whether the actual placement of things on the ground
5 might be altered to encourage grassland birds in the area
6 that wouldn't interfere with your operation.

7 MS. MIRANDA: Mr. Chairman, I'm told by my
8 client we will be -- we would be willing to do that as
9 part of the D&M efforts.

10 ACTING CHAIRMAN TAIT: Thank you. Any
11 further questions from the Council? Any redirect by the
12 applicant?

13 MS. MIRANDA: Can we take just a two-
14 minute break --

15 ACTING CHAIRMAN TAIT: Sure --

16 MS. MIRANDA: -- so I can check?

17 ACTING CHAIRMAN TAIT: Yep.

18 MS. MIRANDA: Thank you.

19 (off the record)

20 MS. MIRANDA: Mr. Chairman, whenever
21 you're ready to go back on the record.

22 ACTING CHAIRMAN TAIT: You're on.

23 MS. MIRANDA: Thank you, Mr. Chairman.

24 Just one question. There was -- there seemed to be some

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1 confusion about the number of acres that the Petitioner
2 is leasing, using, etcetera, and so I would just ask if
3 Mr. Teague could take two minutes and explain that to the
4 Council.

5 MR. TEAGUE: So -- again you heard
6 basically three numbers, 106 acres, 95 acres, and then
7 roughly 45 acres. So I think we've answered the
8 question, but it was in segments. So just to condense
9 it down, the 106 acres is the landowner's property. The
10 --

11 ACTING CHAIRMAN TAIT: (Indiscernible) --

12 MR. TEAGUE: Correct. Now our lease makes
13 reference to the entire acreage as the property, but we
14 actually only lease what we define as the site, which
15 will be the physical footprint, the area that we need to
16 install, to maintain, and to have access to the site.
17 The 45 acres that we mention is the actual footprint. If
18 you took the panels and just laid them all on the ground
19 together with the appropriate spacing, it would cover the
20 45 acres. So what we -- the reason we ultimately lease
21 more land than our physical footprint is because we need
22 to have ingress and egress, and we need to ensure that
23 there's no activity taking place in close proximity to
24 panels that may create shading or -- and a safety issue

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1 for that matter. So hopefully that sort of explains the
2 three different acreage that we made reference to.

3 ACTING CHAIRMAN TAIT: (Indiscernible) --

4 COURT REPORTER: Mr. Chair, your
5 microphone please.

6 ACTING CHAIRMAN TAIT: If you subtract the
7 45 from the 95, you've got 50 acres you don't have
8 anything on?

9 MR. TEAGUE: We won't have any of the
10 facility on, but we'll have the access road and there
11 will -- there may be some underground cabling, but we
12 won't have any of the panels on that, correct.

13 MR. ASHTON: How -- how does -- do those
14 numbers relate to the fenced area? What's the fenced
15 area?

16 MR. TEAGUE: So the fenced area will be
17 the perimeter of the 95 acres.

18 MR. ASHTON: That will be the 95?

19 MR. TEAGUE: Correct.

20 MR. ASHTON: Okay. I got --

21 MR. MURPHY: What if --

22 MR. ASHTON: -- I got dazzled by the
23 footwork too.

24 MR. MURPHY: What if you go fixed and you

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1 don't use that other part?

2 MR. TEAGUE: Then -- I think you had
3 asked the question earlier if we determined to do that
4 and we knew we wouldn't need that additional land, then
5 our 95 acres measures to 75 and it would scale
6 accordingly.

7 ACTING CHAIRMAN TAIT: Dave.

8 MR. MARTIN: Would the D&M plan that you
9 present, assuming that this will be approved, would that
10 reflect your decision to go with the axis tracker or the
11 single -- the fixed --

12 MR. TEAGUE: Yes --

13 MR. MARTIN: -- panels?

14 MR. TEAGUE: Yes.

15 MR. MARTIN: And that would reflect the
16 actual amount of acreage that you would be using?

17 MR. TEAGUE: Correct.

18 MR. MARTIN: Okay.

19 MS. MIRANDA: Nothing further, Mr.
20 Chairman. That was the only --

21 ACTING CHAIRMAN TAIT: (Indiscernible) --

22 COURT REPORTER: Mr. Chair, your
23 microphone please.

24 MR. ASHTON: These new fangled things,

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1 Colin.

2 ACTING CHAIRMAN TAIT: We stand adjourned
3 until 7:00 p.m. for the public session.

4

5 (Whereupon, the hearing adjourned at 4:16
6 p.m.)

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