STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

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Docket No. 492

CERTIFIED

Gravel Pit Solar application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 120-megawatt-AC solar photovoltaic electric generating facility on eight parcels generally located to the east and west of the Amtrak and Connecticut Rail Line, south of Apothecaries Hall Road and north of the South Windsor town boundary in East Windsor, Connecticut and associated electrical interconnection. VIA ZOOM AND TELECONFERENCE Continued Public Hearing held on Tuesday, December 1, 2020, beginning at 2 p.m. via remote access.

²¹ Held Before: ²² ROBERT SILVESTRI, Presiding Officer ²³ ²⁴

Reporter: Lisa L. Warner, CSR #061

1	Appearances:
2	
3	Council Members:
4	ROBERT HANNON
5	Designee for Commissioner Katie Dykes
6	Department of Energy and Environmental
7	Protection
8	QUAT NGUYEN
9	Designee for Chairman Marissa Paslick Gillett
10	Public Utilities Regulatory Authority
11	
12	DANIEL P. LYNCH, JR.
13	MICHAEL HARDER
14	EDWARD EDELSON
15	JOHN MORISSETTE
16	
17	Council Staff:
18	MELANIE BACHMAN, ESQ.
19	Executive Director and
20	Staff Attorney
21	
22	MICHAEL PERRONE
23	Siting Analyst
24	LISA FONTAINE
25	Fiscal Administrative Officer

1	Appearances: (Cont'd.)
2	
3	For Gravel Pit Solar:
4	PULLMAN & COMLEY, LLC
5	90 State House Square
6	Hartford, Connecticut 06103-3702
7	BY: LEE D. HOFFMAN, ESQ.
8	
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14	Also present: Pryme Tyme
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18	**All participants were present via remote access.
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MR. SILVESTRI: Good afternoon, everyone. I trust that my audio is coming through clear. This continued remote evidentiary hearing session is called to order this Tuesday, December 1, 2020, at 2 p.m. My name is Robert Silvestri, member and presiding officer of the Connecticut Siting Council.

As all are keenly aware, there is currently a statewide effort to prevent the spread of the Coronavirus. And this is why the Council is holding this remote hearing, and we ask for your patience. If you haven't done so already, I ask that everyone please mute their computer audio and/or telephone at this time.

A copy of the prepared agenda is available on the Council's Docket No. 492 webpage, along with the record of this matter, the public hearing notice, instructions for public access to this remote public hearing, and the Council's Citizens Guide to Siting Council Procedures.

I'll ask the other members of the Council to acknowledge that they are present when introduced for the benefit of those who are only on audio.

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Let's start with Mr. Morissette.

1 MR. MORISSETTE: Present. Thank you. MR. SILVESTRI: Thank you. Mr. Harder. 2 3 MR. HARDER: Present. 4 Thank you. Mr. Hannon. MR. SILVESTRI: 5 MR. HANNON: I am here. 6 MR. SILVESTRI: Thank you, Mr. Hannon. 7 Mr. Nguyen. 8 MR. NGUYEN: I was on mute. I'm sorry. 9 I'm here. Thank you. 10 MR. SILVESTRI: Thank you. Mr. 11 Edelson. 12 MR. EDELSON: I'm here. 13 MR. SILVESTRI: Thank you. Executive 14 Director Melanie Bachman. 15 MS. BACHMAN: Present. Thank you. 16 MR. SILVESTRI: Thank you. Analyst 17 Michael Perrone. 18 MR. PERRONE: Present. Thank you. 19 MR. SILVESTRI: Thank you. And Fiscal 20 Administrative Officer Lisa Fontaine. 21 MS. FONTAINE: Present. 22 MR. SILVESTRI: Thank you as well. 23 This evidentiary session is a continuation of the remote public hearing held on 24 25 November 12, 2020. It is held pursuant to the

provisions of Title 16 of the Connecticut General Statutes and of the Uniform Administrative Procedure Act upon an application from Gravel Pit Solar for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a 120-megawatt-AC solar photovoltaic electric generating facility on eight parcels generally located to the east and the west of the Amtrak and Connecticut Rail Line, south of Apothecaries Hall Road and north of the South Windsor town boundary in East Windsor, Connecticut.

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Please be advised that the Council does not issue permits for stormwater management. If the proposed project is approved by the Council, the Department of Energy and Environmental Protection, or DEEP, Stormwater Permit is independently required. DEEP could hold a public hearing on any stormwater permit application.

A verbatim transcript will be made of this hearing and deposited with the East Windsor and South Windsor Town Clerk's Offices for the convenience of the public.

And we'll see how we progress. And, if needed, we'll take a short recess somewhere around 3:30 p.m. this afternoon.

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We'll continue with the appearance of the applicant, Gravel Pit Solar, to verify the new exhibit that has been submitted, and this is marked as Roman Numeral II, Item B-10 on the hearing program.

Attorney Hoffman, could you please begin by identifying the new exhibit you have filed in this matter and verifying the exhibit by the appropriate sworn witnesses, please?

MR. HOFFMAN: Certainly. Thank you,
 Mr. Silvestri. So Item B-10, as you note, are
 Late-Filed exhibits that were requested by the
 Siting Council during our previous meeting, public
 hearing.

16 AARON SVEDLOW, 17 M O B E R G,SUE 18 CHRISTOPHER L. CLEVENGER, 19 STEVE KOCHIS, 20 AILEEN K E N N E Y,21 JONATHAN GRAVEL, 22 JEFF P E T E R S O N, 23 GORDON PERKINS, 24 ADAM HENRY, 25 DAVID GEORGE,

1	BEN COTTS,
2	AARON DEJOIA,
3	called as witnesses, being previously
4	duly sworn (remotely) by Ms. Bachman, were
5	examined and continued to testify on their
6	oath as follows:
7	DIRECT EXAMINATION
8	MR. HOFFMAN: And so what I would do is
9	I would ask for several members of our witness
10	panel to verify the authenticity of those exhibits
11	and then offer them up as full exhibits.
12	So I will start with Mr. Kochis.
13	Mr. Kochis, are you familiar with the Late-Filed
14	exhibits that were prepared as Item B-10 in the
15	program?
16	THE WITNESS (Kochis): Yes.
17	MR. HOFFMAN: Did you prepare or cause
18	to be prepared those materials?
19	THE WITNESS (Kochis): Yes.
20	MR. HOFFMAN: And are they accurate to
21	the best of your information and belief?
22	THE WITNESS (Kochis): Yes.
23	MR. HOFFMAN: And do you have any
24	changes to those exhibits?
25	THE WITNESS (Kochis): No changes.

1 MR. HOFFMAN: And do you adopt them as 2 your sworn testimony here today? 3 THE WITNESS (Kochis): Yes, I do. 4 MR. HOFFMAN: Mr. Peterson, are you 5 familiar with those materials that are Late-Filed 6 Exhibits identified in Item B-10 in the program? 7 I'm sorry, sir, you're on mute. 8 THE WITNESS (Peterson): Yes. 9 MR. HOFFMAN: And did you prepare or 10 cause to be prepared those materials? 11 THE WITNESS (Peterson): Yes. 12 MR. HOFFMAN: And are they accurate to 13 the best of your knowledge and belief? 14 THE WITNESS (Peterson): Yes. 15 MR. HOFFMAN: And do you have any 16 changes to those materials? 17 THE WITNESS (Peterson): No. 18 MR. HOFFMAN: And do you adopt them as 19 your sworn testimony here today? 20 THE WITNESS (Peterson): I do. 21 MR. HOFFMAN: Mr. Svedlow, same series 22 of questions to you. Are you familiar with the 23 Late-Filed exhibits in Item B-10 in the program? 24 Mr. Svedlow? 25 THE WITNESS (Svedlow): Can you hear me

1	now?
2	MR. HOFFMAN: Yes, sir.
3	THE WITNESS (Svedlow): Yes, I am
4	familiar.
5	MR. HOFFMAN: And did you prepare or
6	cause those materials to be prepared?
7	THE WITNESS (Svedlow): Yes, sir.
8	MR. HOFFMAN: And are they accurate to
9	the best of your knowledge and belief?
10	THE WITNESS (Svedlow): Yes, they are.
11	MR. HOFFMAN: And do you have any
12	changes to them?
13	THE WITNESS (Svedlow): No, I do not.
14	MR. HOFFMAN: And do you adopt them as
15	your sworn testimony here today?
16	THE WITNESS (Svedlow): Yes, I do.
17	MR. HOFFMAN: Mr. Gravel, I think
18	you're going to get the theme here. Are you
19	familiar with the Late-File Exhibits put in the
20	program as Item B-10?
21	THE WITNESS (Gravel): Yes.
22	MR. HOFFMAN: And did you prepare those
23	materials or cause them to be prepared?
24	THE WITNESS (Gravel): I did.
25	MR. HOFFMAN: And are they accurate to

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1 the best of your knowledge and belief? 2 THE WITNESS (Gravel): Yes. 3 MR. HOFFMAN: And do you have any 4 changes to those materials? 5 THE WITNESS (Gravel): I do not. 6 MR. HOFFMAN: And do you adopt them as 7 your sworn testimony here today? 8 THE WITNESS (Gravel): I do. 9 MR. HOFFMAN: And Ms. Kenney, we will 10 end with you. Are you familiar with the materials 11 that were prepared and listed in Item B-10 in the 12 program? 13 THE WITNESS (Kenney): I am. 14 MR. HOFFMAN: And did you prepare those 15 exhibits or cause them to be prepared? 16 THE WITNESS (Kenney): I did. 17 MR. HOFFMAN: And are they accurate to 18 the best of your knowledge and belief? 19 THE WITNESS (Kenney): Yes. 20 MR. HOFFMAN: And do you have any 21 changes to those exhibits? 22 THE WITNESS (Kenney): No. 23 MR. HOFFMAN: And do you adopt them as your sworn testimony today? 24 25 THE WITNESS (Kenney): I do.

1 MR. HOFFMAN: Mr. Silvestri, with that, 2 the rest of the witness panel is obviously 3 available for cross-examination but did not have a 4 role in the preparation of the Late-Filed 5 Exhibits. So I would ask at this point that they 6 be admitted as full exhibits into this record. 7 MR. SILVESTRI: Thank you, Attorney 8 Hoffman. The exhibit is hereby admitted. Thank 9 you. 10 (Applicant's Exhibit II-B-10: Received 11 in evidence - described in index.) 12 MR. SILVESTRI: Before we continue with 13 cross-examination of the applicant by the Council, 14 I do want to acknowledge that I missed Mr. Lynch 15 in our roll call, so Mr. Daniel Lynch is with us 16 as well today. 17 So continuing with cross-examination of 18 the applicant, I'd like to start with Mr. Perrone, 19 please. 20 MR. PERRONE: Thank you, Mr. Silvestri. 21 CROSS-EXAMINATION 22 MR. PERRONE: I'm going to begin with 23 Late-File Exhibit B which is the ISO installed 24 capacity. Based on the 2019 solar PV forecast and 25 the 2020 solar PV forecast, GPS is noting that

they used projects 5 megawatts or greater. Looking at the 2020 PV forecast, page 12, they listed a number of projects greater than 5 megawatts, and it said they were not included in this forecast and excluded in the totals. Would these two forecasts be based on items less than 5 megawatts?

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THE WITNESS (Svedlow): So it's our understanding that those forecasts are based on projects that are connected or plan to be connected to the ISO system.

MR. PERRONE: So as far as connected to the system, do you mean both on the transmission level and on a smaller DG level?

THE WITNESS (Svedlow): Yeah. I mean primarily on the ISO administered transmission level system. That's our understanding of that forecast.

MR. PERRONE: Okay. At the last
 hearing, page 74 of the transcript, Mr. Svedlow,
 you had mentioned that ISO uses about 40 percent
 of the nameplate capacity in FCA for summer
 operation. Do you know why they use a fraction of
 the nameplate for summer?

THE WITNESS (Svedlow): That's a good

question. I don't. It has just been what ISO has done historically, and it's an approximate number. I have not seen any projects that I've worked on qualify for more than 40 percent of nameplate capacity. I have seen projects qualify for less than that though.

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MR. PERRONE: Mr. Clevenger, at the last hearing we had a discussion about the drive mechanisms for the tracking panels. There was mention of a solar cell and battery system just for the drive motors. My question is, would you have solar cells completely separate from the proposed arrays and be dedicated to the drive system alone?

15 THE WITNESS (Clevenger): Yes. So the 16 most common technology used is what's called an 17 SPC or self-powered controller. It is a very 18 small, low wattage cell which is mounted on the 19 tracking array between two strings of modules so 20 it doesn't take up any space that you would 21 traditionally view as array. It is then mounted 22 also in an east-west orientation, so it tracks 23 with the array and keeps the battery that is used 24 to control the tracker charged. So it is 25 independent of the nameplate capacity and DC

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overbuild. It is strictly for charging the battery used in tracking.

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MR. PERRONE: Okay. Changing topics, has GPS had any discussions with the Connecticut Department of Agriculture since the last hearing?

THE WITNESS (Svedlow): We have not. We have reached out to them twice. There was a call made to them prior to the Thanksgiving break and an email follow-up after the Thanksgiving break to try to schedule a follow-up meeting with them and continue our discussions. We've not scheduled that meeting yet though.

MR. PERRONE: At the last hearing, pages 51 and 52 of the evidentiary transcript, I had asked GPS about the status of its consultation with DEEP NDDB. GPS had noted that they requested another meeting with DEEP NDDB staff. Could you provide us with any additional updates on your consultations with DEEP NDDB?

THE WITNESS (Svedlow): Certainly, we
 can.

Mr. Gravel, Ms. Moberg, would you mind
 addressing that, please?

THE WITNESS (Gravel): Sure, I'll start. And Sue, if you have anything to add, please do. We did have a follow-up meeting with NDDB. It was on November 20th. It was a productive call and just kind of picking up where we left off where previously in October NDDB provided a list, kind of draft safe harbor determination. So we discussed that on the 20th and feel good about the progress we made.

THE WITNESS (Moberg): I'll just add that I think we ended that call being substantially in agreement with Ms. McKay, and we left it that she would be drafting a revised safe harbor letter for us, although we have not received it yet.

MR. PERRONE: Similarly, at the last hearing I had asked about the status of GPS's consultations with the State Historic Preservation Office. Do you have any updates on your consultations with SHPO since the last hearing, particularly related to the aboveground structures?

THE WITNESS (Kenney): We haven't had any additional consultations with the SHPO since the last hearing. What we did do is we went to the site and did a detailed assessment with a construction expert to kind of determine which

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barns we feel like we could keep safely, which barns we felt would be safe from a public safety point of view, both people entering or other potential risks. So now our next step is to go back to SHPO and talk through the barns in more detail and come to an agreement with them.

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MR. PERRONE: Also at the last hearing, page 106 of the transcript, Ms. Kenney, you had also alluded to a potential safety concern regarding having an unoccupied structure on the Could you elaborate on that? site.

12 THE WITNESS (Kenney): I think we just 13 generally get concerned about people going into 14 the barns, whether it be kids to teenagers, to do 15 what teenagers do, or anything else as much as 16 even, you know, things like fire. So we look at 17 the full gamut of safety. And that's a lot of 18 what we looked at when we were out there this time. We took the detailed assessment that 20 Mr. George had completed and then we layered on 21 our assessment of the safety risks. And so we 22 hope that we'll be able to come to an agreement 23 with the SHPO about which barns should remain. 24 And certainly all of the ones along the main road 25 will remain. So I think that we're still planning

to use them for screening. And it's just more of the interior barns that we're thinking about, if there's no access to them except -- no easy access for public safety officials.

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MR. PERRONE: Turning back to page 56 of the transcript, Mr. Svedlow, are discussions still underway with the East Windsor Sportsmans Club regarding the potential purchase of a portion of the property?

THE WITNESS (Svedlow): Yes, they are. We're still in negotiations with them. We believe we've reached commercial terms.

MR. PERRONE: On page 61 of the transcript Mr. Gravel had testified that GPS is looking at running its AC collection lines underground. My question is about the DC lines between the panels and the inverters. Would you fasten them to the racking aboveground, run underground or some combination?

THE WITNESS (Clevenger): I'm happy to answer that. Industry practice has changed over the past two years, and more of the DC string wire and DC collection lines have now moved aboveground into what's called a CAB racking system, just a tray that the DC collection sits in. I would say

that that is possible but not 100 percent certain. It's usually based on the EPC firm's preference. So DC collection can be either aboveground or underground. We have just seen more and more firms switching to aboveground for usually cost of construction and long-term maintenance reasons.

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MR. PERRONE: Turning to page 55 of the transcript also on the electrical topic, Mr. Svedlow, I asked about Eversource's piece of the project, and you had said that they would file a petition for the pole structure and line loop. So basically is it correct to say that the Eversource petition would be for the final connection from the switchyard to the transmission?

THE WITNESS (Svedlow): Yeah, that's our expectation. We're still discussing the specifics of that with Eversource. We actually have a call later this week on that, but that is our expectation.

MR. PERRONE: And lastly on that topic, I understand the total cost is 125 million, and you had testified that includes the substation and switchyard. Would Eversource's interconnection from the switchyard to transmission, would that be included in the 125, or is that potentially

separate?

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THE WITNESS (Svedlow): That's our estimate of the entire facility at this point. We will need to pay for Eversource's loop and interconnection, as required in the interconnection agreement.

MR. PERRONE: On page 108 of the transcript and also in the visual assessment, there was mention of an alternative fence design with wood posts and metal wire mesh. Is the alternative fence design an option GPS is considering at this time in lieu of chain link?

THE WITNESS (Svedlow): Yes, it is. It's our base case for the perimeter of the project.

MR. PERRONE: And lastly on that topic, what are the pros and cons of the alternative fence design with the wood posts versus like an all-steel chain link design?

THE WITNESS (Svedlow): So I can touch on a little bit of that, and then I would ask Mr. Clevenger maybe to fill in some gaps there. But the primary advantage of the alternative fence design is the improved aesthetics, and that's why we have proposed it. In our conversations with

the Town of East Windsor, the aesthetics of the fence were a concern for them.

In terms of the cons, Chris, Mr. Clevenger, would you please opine on that?

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THE WITNESS (Clevenger): Frankly, we have seen over the past five years most every project we build has shifted to this wood post and square mesh fencing primarily for the reason Mr. Svedlow described. You know, there is a slight cost differential depending on the part of the country you're in. We are required to use chain link and three-strand barbed wire in high voltage and the substation, obviously. In my opinion, being a good neighbor and still providing adequate security, this is a really good balance, and that's why we have seen it shifted to pretty much exclusively. The posts are very long-term pressure treated wood posts that have an extremely long useful life, so we don't see major long-term O&M concerns either.

MR. PERRONE: Thank you. That's all I
have.

MR. SILVESTRI: Thank you, Mr. Perrone.
 I'd like to continue with
 cross-examination of the applicant by Mr.

Morissette, please.

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MR. MORISSETTE: Thank you, Mr. Silvestri.

Good afternoon, everyone. Just for the record, I'd like to announce that I have driven the project area today on my way to Enfield to do some Christmas shopping, so I had the opportunity to review the roads and the surrounding area, not within the project site itself.

My first question is, could you please identify where the nuisance and illicit activities are occurring, is it primarily the gravel pit area, or is it also occurring in some of the farmland as well?

THE WITNESS (Svedlow): I'd be happy to do that. It might be easiest to go to one of the exhibits for that. So perhaps --

MR. MORISSETTE: That would be great.

THE WITNESS (Svedlow): Okay, we can do that. So I'll start off by saying the primary locus of activity is in the gravel mine, actually, not the primary gravel mine but the one south of the railroad. And that area has been the subject of some YouTube videos as has secondarily the gravel pit north of the railroad tracks. The farm fields themselves have on occasion, it's my understanding, been used and traversed by ATVs, but the majority of the traffic is within the wooded areas on the periphery of the farm fields heading towards the gravel pit, specifically that one south of the railroad. I believe there's a photo of this in the photo record.

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There is a well trafficked, it's essentially a road at this point, going from the northern part of the project area south across the railroad tracks and through Ketch Brook into the southern part of the area, and then there is also essentially an ad hoc woods road that folks have been using on the eastern side of the project area south of the railroad to, again, access that gravel pit area. And then when you're in the gravel pit itself, there's just tremendous amounts of evidence of activity in that area. Every neighbor that I've met with has mentioned this as being an issue, and they're concerned about it.

MR. MORISSETTE: Sure. It looks like a prime area for that type of activity.

Okay. Moving on to, I have a follow-up
 question or a question relating to Interrogatory
 Set One, Question No. 56 having to do with

1 critical terrestrial habitat. I'm not sure who 2 would answer the question, but my question 3 basically is, the U.S. Army Corps vernal pool BMPs 4 recommend limiting development to less than 25 5 percent. So I'm a little confused where the 6 predevelopment table for critical terrestrial 7 habitat for Vernal Pool 1 and 6 is already over 25 8 percent in the developed area, and then after 9 development it goes up to 42 percent and 61 10 percent respectively for Vernal Pool 1 and 6. 11 Could someone explain to me how the 25 12 percent relates to those two percentages that I 13 pointed out? 14 THE WITNESS (Svedlow): Yeah. I think, 15 Mr. Peterson, would you be able to address that? 16 THE WITNESS (Peterson): Just give me a 17 second to find that exhibit. 18 MR. MORISSETTE: Sure. Thank you. 19 THE WITNESS (Peterson): Anyone who has 20 the letter for that and wants to call it out, that 21 would be helpful. 22 THE WITNESS (Moberg): Jeff, it was our 23 responses to the comments, if you look in the 24 folder that Steve set up for us. 25 THE WITNESS (Peterson): Okay. And it

1 is GPS to CSC? 2 THE WITNESS (Moberg): That's it. 3 THE WITNESS (Peterson): Okay, yeah. 4 And Mr. Morissette, you said that was number 56? 5 MR. MORISSETTE: Yes. б THE WITNESS (Peterson): Sorry, I'm 7 taking a little bit of time. I'm just getting 8 there. 9 MR. MORISSETTE: Okay. Thank you. 10 THE WITNESS (Peterson): It's not 11 helpful that it's split onto two pages, is it? 12 I'm sorry, Mr. Morissette, could you ask that 13 question again? 14 MR. MORISSETTE: Oh, boy. Okay. 15 THE WITNESS (Peterson): Sorry. It 16 took me a while to navigate to the section. 17 MR. MORISSETTE: Okay. Well, first of 18 all, the Army Corps vernal pool BMPs recommends 19 limiting development to less than 25 percent. 20 Okay. So Table 1, Vernal Pool 1 and 6, under the critical terrestrial habitat, has developed 35 21 22 percent for Vernal Pool 1 and 56 percent for 23 Vernal Pool 6. 24 THE WITNESS (Peterson): That's 25 correct.

MR. MORISSETTE: So, right off the bat you're over the 25 percent. And then after the post-development it goes up to 42 and 61 percent respectively. So how does that relate to the 25 percent?

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THE WITNESS (Peterson): Well, no, certainly it exceeds the 25 percent in both cases under existing conditions. You know, I think what we're showing here is that we're not crossing a particular threshold with the proposed new development on the site. For those areas that are under 25 percent existing, they remain under 25 percent, you know, post project. So that I agree with you that there are two cases. One of them is, like you said, Vernal Pool 1 which is guite close to the railroad, and Vernal Pool 6, again, which is basically formed at the -- is sort of impounded by the railroad embankment. So yeah, both of these have exceeded the recommended development by the Army Corps of Engineers for critical terrestrial habitat, I concur with your statement.

MR. MORISSETTE: Okay.

THE WITNESS (Gravel): If I could add
 to that? If you look at kind of our layout of the

project, these vernal pools are kind of set in a wooded area which we do clip some of those forested areas but kind of on an edge and leave a lot of the core habitat existing around those vernal pools. So I just wanted to point out the minimization of kind of keeping the project centered along already cleared areas and kind of leaving the critical terrestrial habitat as much as kind of intact as possible.

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MR. MORISSETTE: Okay. Thank you. Mr. Peterson, while we're on the same -- while I've got you, concerning Vernal Pools 11, 14 and 15, you've got less than 50 feet. What impact would it be on the project to increase the buffers of those wetlands to 100 feet?

THE WITNESS (Peterson): Now you're talking about wetlands or vernal pools in this case?

MR. MORISSETTE: I'm talking about
 wetlands.

THE WITNESS (Peterson): Okay. You know, Mr. Gravel, would you like to respond to that? I can talk to, you know, the natural habitat conditions that are out there, but in terms of the effect on the project of changing the

buffer zone, I think that that's more of a development issue than, you know, a natural resource.

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THE WITNESS (Gravel): Sure, yeah. So just stepping back at kind of high level, in our project we spent a lot of time in thinking of avoiding impacts to wetlands and minimizing impacts to their buffers. And what we've designed here, I feel, is a fair balance of what exists out there and where our impacts are being calculated now for wetlands that are, you know, have been impacted, have been created by gravel activities, are adjacent to existing fields. So I think your question was, you know, what -- can you repeat your question, something about 50 feet?

MR. MORISSETTE: No. The question is, is what would be the impact on the project if you increase the wetland buffers to 100 feet.

THE WITNESS (Gravel): The impact would be -- I mean, I haven't calculated that, but that would be a loss of output for the project. And as I was trying to point out, you know, I think we located -- where we locate the project within 100 feet, you know, a lot of that is existing kind of open agricultural land, gravel pit areas, and

areas that have already been previously impacted. So that's the reason why we are located there. But there would be some overall impacts to the output of the project.

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MR. MORISSETTE: Okay. Thank you. All right. I'm going to switch gears now to the PPAs. Are the power purchase agreements based on a percentage of output, or are they based on a megawatt value?

THE WITNESS (Svedlow): They're based on a percentage of the nameplate of the facility which is essentially the same thing as a percentage of output, but they are in the agreements based on a percentage of the facility -- facility's nameplate.

MR. MORISSETTE: Okay. Thank you. Is there a way to break down the value, the megawatt value of the gravel pit area, versus the areas in which are prime farmland?

THE WITNESS (Svedlow): Are you asking -- apologies. Are you asking for the megawatts that are located on the agricultural fields and the capacity located in the gravel areas?

MR. MORISSETTE: Yes.

THE WITNESS (Svedlow): I don't have those numbers off the top of my head, but that's certainly something that could be calculated.

MR. MORISSETTE: Do you have a guesstimate, is it 30 percent to 70 percent?

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THE WITNESS (Svedlow): I think it's closer to 40/60 just based on the overall just land uses on the property.

MR. MORISSETTE: Okay. So if the size of the project was smaller, then the PPAs would be based on what that value is based on a percentage, whatever that may be, or could be?

THE WITNESS (Svedlow): I guess I don't follow entirely. Our PPAs are based on a megawatt value. So, you know, 50, 20, what have you, each PPA has a megawatt nameplate capacity value that we have to hit.

MR. MORISSETTE: I misunderstood you. I thought you said it was based on a percentage of your capacity.

THE WITNESS (Svedlow): Yeah, I understand. Maybe I didn't state that quite in a way that was clear enough. So, for example, let's take the Eversource PPA. It is X number of megawatts. Okay. I believe it's 18 megawatts.

I'd have to bring up the table. We're required to hit that 18 megawatt target.

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MR. MORISSETTE: Okay. So just a hypothetical. I'm just making this up. Let's say that at the end of the day it ends up being 100 megawatts. So you serve CL&P their 18 megawatts. Do the other PPAs adjust by a percentage or do they also have fixed megawatts?

THE WITNESS (Svedlow): They all have fixed megawatts. I apologize. I think I misinterpreted your earlier question. So each PPA has a required megawatt target that we have to hit. And if we're not hitting that capacity, right, so the CL&P one is 18-ish. The National Grid Narragansett Electric one is around 50 megawatts. We're required to build that size a facility for them, and they will take all of the power from there. I was thinking about how we would calculate the energy sales from the project when you asked me that previous question. But the PPAs themselves require us to hit a nameplate target.

MR. MORISSETTE: So what would happen
 if you didn't come up with the same amount of
 megawatts?

1 THE WITNESS (Svedlow): We would be in 2 default of our power purchase agreement. 3 MR. MORISSETTE: Okay. Interesting. 4 MR. SILVESTRI: Mr. Morissette, while 5 you're thinking, I want to interrupt for one 6 second. And I'll apologize. 7 MR. MORISSETTE: Sure. 8 MR. SILVESTRI: Mr. Svedlow, when you 9 mentioned the 40/60 percent of your estimate, what 10 was 40 percent and what was 60 percent? 11 THE WITNESS (Svedlow): Yeah. 12 Approximately 40 percent of the nameplate is 13 installed in active or previously mined gravel 14 mine areas, and the remainder is on a mixture of 15 farmland and forest, primarily farmland. 16 MR. SILVESTRI: Great. Thank you for 17 the clarification. 18 MR. MORISSETTE: Mr. Silvestri, would 19 it be appropriate to ask for a Late-File to 20 clarify a bit more as to what that breakdown would 21 look like? 22 MR. SILVESTRI: No, I believe we're not 23 looking at any Late-Files at this point, Mr. 24 Morissette. 25 MR. MORISSETTE: Okay. Very good.

That concludes my questioning. Thank you very much.

MR. SILVESTRI: Thank you, Mr. Morissette.

I'd like to continue cross-examination of the applicant by Mr. Harder at this time, please.

MR. HARDER: Yes. Thank you, Mr. Silvestri. I have a few questions.

The first one is on the project life and what might happen after that. I think it's indicated that you estimate a 35 to 40 year project life, and then it's possible that the system would be dismantled and decommissioned. But my question is, and I guess based on your experience from other locations, which I gather have been in existence and producing power for a number of years, what are your thoughts on this system continuing beyond the 35 to 40 years, would it be likely that it would be extended, and what factors have a bearing on that decision?

THE WITNESS (Svedlow): Thank you, Mr. Harder. I'll start addressing that, and then I'd like to have Mr. Clevenger add some color as well. There are two lease agreements associated with the

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project. Those lease agreements are for up to, I believe, both for 40 years. So at the end of those leases we are required per those lease agreements to decommission the facility. The balance of the project properties will be owned.

Mr. Clevenger, can you speak to a little bit how we view decommissioning at some of our other projects and how we would view it at this project?

10 THE WITNESS (Clevenger): Happy to. We 11 have a decommissioning report which is something we produce in all of our projects that analyzes the cost adjusted for time for decommissioning a project. It assumes the project is decommissioned at the end of the PPA period, or its useful life, whichever is longer. There are instances that I cannot predict what will happen in the future with this project, but given that the lease term and the probable useful life is 35 years, I would think that at the end of that period of time, you know, the first step is analyzing equipment, the offtake, and any interest from the leaseholders. Frankly, and this situation is most probable, the facility will be decommissioned at that time and returned to agricultural land.

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 MR. HARDER: Go ahead, Mr. Svedlow.

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 Sorry.

THE WITNESS (Svedlow): Apologies. I was just going to add that, you know, in addition to returning the agricultural land to agricultural use, the current gravel mine areas will have undergone a significant amount of restoration as part of our project construction. They'll have topsoil and feed on them for a long period of time and could potentially be used for agricultural purposes or other purposes after the useful life of the project which currently they're not suitable for really anything else at this point.

MR. HARDER: I guess it's always been a little odd to me when we review these applications that one of the points made, and sometimes it's in response to the concerns about taking agricultural land out of production, and the point is made, well, after 20 or 30 years the site can go back into agricultural land. And I always thought, well, okay, that's possible, but because, you know, the world is moving more in the direction of renewable energy, it always seemed to me it was more likely that these systems would continue in operation, at least most of them, perhaps with

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updated panels, more efficient panels, and that kind of thing. Some may be taken out of production altogether.

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But in this situation we're talking about the largest single system in New England, I guess, certainly the largest in Connecticut, a huge producer of power, and I guess I'm surprised, I'm amazed that your best guess maybe at this point is that it would be completely decommissioned and returned to agricultural use.

I mean, I guess I'm not asking a question. I'm just surprised that the system -maybe this is -- and apparently I think it probably is something that the state needs to wrestle with, maybe other agencies are, but that these integral components of the state's renewable energy future are one by one going to be shut off. It's amazing to me. Now, I'm not -- not negative, I suppose, on your end or anything that you should be faulted for, but I don't know, I'm just surprised. But anyway, we'll move on.

Could you -- I'm interested. I guess I
 want to push a little more on some of the points
 that Mr. Morissette raised regarding the
 development of the project and, you know, the
possibility of changes being made or proposed or maybe mandated by the Council and what kind of flexibility you have there. So could you discuss the chronology a little bit and typically what the sequence of decisions is? What I have in mind, one of the things I have in mind is in this project narrative, Section 3.3, Site Selection, a point is made, something to the effect that the site was the only one that met the criteria for an approximately 120 megawatt facility. So it seems that you choose or have chosen the size of the facility and then you look for a site to fit that facility.

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And so I'm wondering with all the agreements, power purchase agreements, contracts, whatever, you enter into through the course of this whole process, you know, how much are you limited and how much -- at what point do you violate those agreements if we at the Council, for example, were to mandate a change?

You know, one question I have is
related to Wetland 10. Originally you proposed
eliminating it. Now you're proposing to construct
panels in it. I think your point is that its
value is fairly limited at this point and won't be

2 there are several other areas where buffers are 3 less than what's recommended by the town. 4 So could you, I guess, share some 5 thoughts on that and just generally, I suppose, 6 but also specifically with regard to at what point 7 after perhaps making some changes to the project 8 do you run up against your contractual 9 obligations? 10 THE WITNESS (Svedlow): Sure. Yes, 11 certainly. I appreciate the question. I'11 12 handle it in a few different sort of chunks, if 13 that's okay. I'll start off with sort of how we 14 approach this type of project and this type of 15 development. 16 So the project area itself needs to be 17 a balance of, you know, avoiding impacts and 18 assuring that we meet our needs and requirements 19 for energy production as part of our PPA, and 20 ultimately to help Connecticut and the region 21 achieve its renewable goals. So when we look at, 22 you know, setbacks and impacts, we're certainly 23 prioritizing the highest quality resources on the 24 site and doing our utmost to avoid those impacts. 25 There are certainly some tradeoffs with

changed much. But as Mr. Morissette alluded to,

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that. You know, we can, when we think about development, and I'll use maybe a sort of awkward analogy between sort of full fat ice cream and low fat frozen yogurt, right, you can have one scope of full fat ice cream or you can have two scoops of low fat frozen yogurt. What I mean by that is, you know, essentially if we concentrate our development, you know, this 120 megawatts into this one area, we can avoid having two scoops, right, we can avoid a larger project area elsewhere. Are we going to have some impacts associated with that concentrated type of development? We certainly are. We are obviously doing our best to avoid those.

15 One of the things that's come up as 16 part of our conversation with Connecticut DEEP's 17 NDDB office is the priority of observing a setback 18 from Ketch Brook and the wetlands, the high 19 quality, high value wetlands associated with Ketch 20 Brook, that has been their highest priority when we've spoken to them. And we've demonstrated that 21 22 we're maintaining above and beyond the 100 foot 23 setback for Ketch Brook and the wetlands, and 24 actually in I think 98 percent of the area -- Sue 25 or Jon, jump in if I'm misstating that -- we're

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actually observing something closer to 300 foot setback from those areas. But as a result of that, and as a result of sort of that trade-off in terms of trying to develop a concentrated site that avoids impacts, we in turn have impacts to these lower quality resources. So the wetlands that you mentioned, Wetlands 11, Wetlands 10, they're not associated with that Ketch Brook complex, they're actually higher up in topography and aren't connected. They're also, it's my understanding, not core jurisdictional waters of the U.S. So in looking at those tradeoffs, we made the decision to have those, albeit limited, impacts to those wetland areas as opposed to impacts to other potential higher quality resources on the site. So that's one piece.

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I'll add to that a little bit in saying
that we did review these impacts, in particular,
and the project design as a whole with East
Windsor's wetland commission, and the town remains
very supportive, and there were no concerns raised
with those impacts.

And then finally I'll address your
point about the need to fulfill the power purchase
agreements. As we developed this project, we've

made these commitments to the offtakers to provide them with 50 megawatts, 20 megawatts, 50 megawatts, sort of in those groups. If we don't meet those targets to those offtakers, it puts the project at risk. On the individual power purchase agreement level we would be potentially subject to liquidated damages that would be fairly extensive and be very problematic for the project.

On the interconnection side, it's an economic trade-off where we are electing to build a switchyard on an existing 115 kV system. What that does is it allows us to interconnect on the site. But in order to afford that switchyard, we need to develop a project that's large enough to generate enough capital revenues to pay for that interconnection. So if the project were smaller, I'm not confident we'd be able to pay for that switchyard. That would necessitate potentially a much more impactful and much more expensive generation tie line or interconnection point somewhere else off site which would have environmental consequences, cultural resource consequences, potentially visual impact consequences. So it is a balancing act, and it is a trade-off between the cost and the impacts of

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I guess I'll pause there and see if there's follow-up questions.

MR. HARDER: Yes, one follow-up. But first I appreciate that explanation. That was very helpful. But what I want to do is, I guess, push for a little more specifics. Can you tell us at what point, if your PPA is focused on 120 megawatts, at what point below that, what number causes you to violate those conditions or those agreements, you know, how much leeway do you have?

THE WITNESS (Svedlow): We don't have any. We have to fulfill those requirements.

MR. HARDER: So 120 megawatts?

THE WITNESS (Svedlow): We have to provide 120 megawatts AC at this project site, that's correct.

MR. HARDER: Okay. Do you have any flexibility in terms of -- I mean, say the Council or as a result of something, you propose eliminating some panels somewhere. Do you have the ability to utilize higher output panels to make up for that, is that an option?

THE WITNESS (Svedlow): So the project has been designed currently with a fairly high

rated panel. I know that we have a range of panels in our Siting Council application, and that is a result of sort of the liquid market. And when we make a panel purchase and selection, there could be a variety of different panel sizes available to us. But the panel sizes that we've designed the project around, which I believe is 500 watts, is a large panel. It is probably, I think, the largest panel currently projected on the market for this year. There could be larger panel sizes in the future.

So we believe that we've already concentrated the production in as small an area as we can. You know, shifting arrays significantly will affect the total DC capacity wattage on the project site which will affect our ability to produce 120 megawatts AC.

MR. HARDER: Okay. All right. Thank you. I appreciate that discussion. My next question concerns your proposed stormwater basins. You've got a variety, I guess, of types and locations. Some are adjacent to the panel areas, some are within the panel areas, some are in wooded areas, some not. It's quite a variety. Could you just discuss generally, I guess, to

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start anyway, how do you see utilizing those, what real functions they are, are any of them intended to be used to settle solids that might run off, or is it just more for stormwater attenuation, volume attenuation, and if any maintenance is required, how do you address any concern that we might have regarding maintaining those basins that are within panel areas or in wooded areas, for example?

THE WITNESS (Svedlow): Yeah, certainly. And that's something we spent a lot of time thinking about and working with DEEP on.

Mr. Kochis, would you mind addressing that?

THE WITNESS (Kochis): Yeah, certainly, Mr. Svedlow. Steve Kochis, senior project engineer from VHB. Mr. Harder, I'll walk you through each of the types of basins that we're proposing at this site. But to generally answer your question at first, each basin type that we're proposing meets all the criteria for CT DEEP as far as sediment collection during construction as well as water quality treatment following the end of construction and peak rate attenuation.

24 So going down the basin types, the sediment trap is essentially a sediment trap

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during construction, but then it will also act as an infiltration basin following construction.

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The farm depressions, as we have listed, are existing depressions in the farm fields, and in many cases they exhibit enough volumetric capacity to handle peak rate of runoff, water quality treatment, and sediment collection.

The kettle holes are the large volumetric depressions generally in the forested areas off the edges of the farm fields which have a massive capacity, and generally speaking, they will handle the 100 year rainfall event completely without discharging to the brook.

And finally, the valley berms are berms that we are proposing to place within the glacial valleys to block stormwater, and they will also treat peak rate attenuation, water quality treatment, and active sediment traps during construction.

To answer your second question about how these are all maintained, we have gone into each of these places to perform stormwater test pits, so we are confident that we can get machines down there to install things, to maintain things throughout and after construction. And then

regarding the features that are proposed within the solar panel array, that will be very similar to what was done at the Tobacco Valley Solar project, and it's anticipated that those will have to be maintained by hand between the arrays which was done to success at Tobacco Valley Solar.

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MR. HARDER: So when you say "by hand," you mean sediment removal by hand?

THE WITNESS (Kochis): Yes, that would be sediment removal and maintenance of the basin itself.

MR. HARDER: Right. Same for wooded areas?

THE WITNESS (Kochis): Well, I think to the degree that we can get machines down there, the wooded areas can be handled with equipment.

17 MR. HARDER: I would think it wouldn't 18 seem to be a problem just relying on wooded areas 19 for some sediment collection without removal over 20 time, I mean, it would just become part of the 21 wooded area, you know, would be fine. I'm just 22 wondering if for whatever reason you had a large 23 deposit, it seems like it would present 24 difficulties unless, you know, you've evaluated 25 those specific areas. And given the nature of

those wooded areas, maybe they're not particularly thickly wooded, you know, it would be feasible. So is that what you're saying?

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THE WITNESS (Kochis): Yeah, that's Like I said, we did perform stormwater correct. test pits with equipment to dig the holes, and we're confident that -- the wooded areas around the edges of the farm fields don't have much underbrush, and the trees are spaced apart at quite a distance, so it should be fairly easy to navigate around the wooded areas with equipment. And of course the anticipation is that during construction the stormwater pollution prevention inspector will check those areas and recommend when they need to be cleaned of sediment.

16 MR. HARDER: Okay. So socially distant trees is what you're saying, right?

THE WITNESS (Kochis): That's a good way of putting it.

20 MR. HARDER: Okay. I had a question on 21 basin number 74, which is described, I think, as a 22 permanent stormwater basin which is presently, 23 it's an existing process water pond. I'm 24 wondering, I recall in my early years at DEP 25 seeing a few sand and gravel operations where they

had process water ponds where they had a lot of fish in them, and I'm wondering if this particular basin, this pond, has been evaluated for aquatic life and if you have considered that at all in the context of using it as a stormwater basin. Again, do you see it as a basin that would collect a lot of the sediment? Obviously, if it's been used as a process water pond, I assume it's collected a lot of sediment already, but I'm just wondering what you think about that.

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THE WITNESS (Svedlow): Yes. Steve, I don't know if you want to address that, or Jeff would like to talk about the biota associated with that pond. It is within the partially restored and partially active gravel mine area, correct?

16 THE WITNESS (Kochis): Yeah, that's 17 Today it receives a lot of sediment that correct. comes out of the gravel pit. And the anticipation 18 19 is that in the future it will act as a sediment 20 It will collect the 100 year rainfall trap. 21 To speak to the aquatic habitat, I'd event. 22 recommend Mr. Peterson speak to that.

THE WITNESS (Peterson): Mr. Harder, the pond does support some aquatic life right now. It has several pump intakes that are used by the pit for dust control and other activities where they need to withdraw water from the site. And also it is the low point in the entire mine where they do use it for trapping sediments. But we did observe a green frog and painted turtle in that pond.

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And, you know, we would assume that over time with the solar project revegetating the contributing watershed that conditions, you know, would probably improve. I mean, right now the banks around the pond are periodically cleaned and re-excavated, you know, and are quite steep, but over time, you know, you may be able to develop some sort of a warm water fishery or whatever in that pond, but as of right now it is part of the active gravel pit.

MR. HARDER: Okay. Thank you. Is the
intent to either, to perhaps regrade the
embankments, stabilize the embankments, what's
planned for that? I mean, I can assume that
there's a fair amount of erosion just from the
embankments around the pond.

THE WITNESS (Svedlow): Yeah, I can address a little bit of that, and then I'd defer to Mr. Kochis to fill in some color there. There

will be a fair amount of regrading in that area, in the gravel mine area, and restoration of that area, and vegetation of that area.

Specifically the banks of that stormwater basin or that pond, as it exists now, Steve, can you speak to that?

THE WITNESS (Kochis): Yes, sure. So as of right now, it is not currently proposed to necessarily regrade the banks of that pond or to enlarge it or anything of that nature. However, as part of this application, as Mr. Svedlow noted, those banks will be stabilized with erosion control materials, as necessary, and also revegetated.

MR. HARDER: Okay. Thank you. I had a question about the response to Interrogatory Number 40, which is on page 14 of the response, concerning the issue of pesticide contamination or generally contamination that might be present related to, possibly related to the use or redistribution of any cut material. The thing that concerns me, and perhaps I'm misreading it, perhaps it's just poor choice of words, but what it says there, the response says something to the effect that GZA was not aware of testing that

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revealed pesticides so therefore sampling for pesticides was not completed. I mean, it sounds, maybe this is harsh, but it sounds kind of like a hear no evil, see no evil kind of statement, because you weren't aware of testing that revealed pesticides, that decision was made not to sample for pesticides. I'm assuming that's not what happened.

What concerns me, and again from my prior knowledge just generally, where they've used pesticides, assuming they used it in these areas, 12 they had to store it somewhere. So the question 13 is, or one other question is, were any samples 14 taken around storage areas, were any barns 15 inspected for, you know, what kind of practices 16 they had for storage and handling within those 17 areas as opposed to where they actually applied 18 I would be concerned, especially if any of it? those areas were proposed for regrading or cutting 20 material, redistributing it to other areas. So 21 could you or could someone address those comments? 22 THE WITNESS (Svedlow): Yeah,

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24 Mr. Henry, would you mind addressing 25 that, please?

THE WITNESS (Henry): Sure. Thank you, Mr. Harder. And yeah, you're correct, that's just a miswording. So the reason no testing was done was not because we weren't aware of any, but that should read we're not aware of any testing, and sampling for pesticides was not completed. So it's just a typo.

But to your point, we did complete phase 1 environmental site assessments, you know, which included inspections in the barns. We didn't observe any evidence of pesticide storage or areas where pesticides were mixed. There was no indication in any of the records we reviewed of anything other than, you know, typical pesticide applications that would be expected to be associated with the agricultural fields.

17 And, you know, similar to the Tobacco Valley Solar project, we would anticipate that, 18 you know, there may be residual pesticides in the surficial soils, and provided appropriate soil management practices were employed, soil erosion controls, as will be done under the D&M plan, we don't see that residual pesticides would lead to any impacts. There's no soil that's being proposed to be removed from the site. The only

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soil management on the site will be some regrading in areas, and, again, provided that's done with proper erosion control and dust control practices, we don't see that as being a concern.

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MR. HARDER: Could you just repeat again what you were saying as far as how that statement or that section or that part of the response number 40 should have been stated? I didn't quite understand what you were saying.

THE WITNESS (Henry): Sure. So I think the word "therefore" is incorrect. So to revise that sentence it should read, GZA indicated that it is not aware of any testing that reveals the presence of pesticides, and sampling for pesticides was not completed by GZA.

MR. HARDER: So two kind of separate statements, not the second one flowed from the first one?

THE WITNESS (Henry): Correct.

MR. HARDER: And were you also saying
that as far as you could tell from your
inspections and perhaps conversations with people
that you weren't aware of any storage practices?
I mean, it's hard to believe for tobacco growing
operations that large that there weren't any

pesticide storage activities on the site. I mean, it sounds like they would have just brought it in the vehicles from off site and applied it directly with no storage. That seems odd.

THE WITNESS (Henry): So, I didn't mean to say that we didn't see any storage of pesticides. I mean, there were certainly evidence that pesticides had been used and applied, but no designated storage areas that I would associate with any large storage area containing pesticides.

Okay. I had one other MR. HARDER: In response to number 63, there was a question. statement -- let me see if I can get it up here -something to the effect of there was a discussion of how to handle a large area on site in the gravel pit area. Let me see if I can find that. (Pause) Here we go. Number 63. Sorry, my system, I lost my internet service yesterday and I've been trying to deal with it.

20 The first paragraph of the response 21 talked about additional discussions regarding the 22 handling of a large area on site are ongoing. 23 Could you, or could someone explain that a little 24 bit, what's meant by handling the large area? Is 25 that an area -- I gather it's an area where panels

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will not be installed. So can someone explain that a little bit? THE WITNESS (Svedlow): Certainly, Mr. Harder. Would you mind just telling me which

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document you're referring to, is it the interrogatory responses?

MR. HARDER: Yes, it's your response to interrogatories, number 63. It's under the category of Facility Construction.

MR. HOFFMAN: Mr. Svedlow, I think Mr. Kochis would have the answer to that.

12 THE WITNESS (Kochis): Yeah, I was 13 going to hop in. Sorry about that. So the large 14 area on site, it does actually refer to areas 15 where panels are proposed. It's generally the 16 areas on the site which discharge the 100 year 17 rainfall event to groundwater. The significance 18 of those areas is that under the Connecticut DEEP 19 general permit, areas which discharge the 100 year 20 rainfall event to groundwater completely without 21 going off site are not considered within that 22 general permit. They are exempt. They would be 23 exempt from the general permit. So the 24 conversations with CT DEEP that the project team 25 has had have been around whether those portions of

the site which discharge completely to groundwater need to be included in the overall permit application or how they should be handled.

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MR. HARDER: Okay. Those are all the questions I have. Thank you very much.

MR. SILVESTRI: Thank you, Mr. Harder. Just before we continue with cross-examination by Mr. Hannon, I did want to touch upon responses that were given to Mr. Morissette and Mr. Harder about the possibility of creating more buffer space, if you will, with the panels. There was talk about eliminating panels as a possibility. There was discussion about possibly using higher wattage panels. Two follow-up questions I have while it's still fresh in our minds: Is it possible to use a double-sided panel, or are the 500 watt panels already double sided?

THE WITNESS (Svedlow): Yes, it is certainly possible, and we are actually planning to use bifacial panels on this site, so the double-sided panel essentially.

Just to touch a little bit, if I may, on the issue of setbacks and sort of reducing some areas potentially to accommodate some additional setbacks. There's two megawatt values that we think about when we design a solar facility. We have an AC requirement, 120 megawatt AC requirement, and then there is the DC size of the facility. And the DC to AC ratio is important because it affects the amount of production. Essentially it's the amount of surface area on the facility. Reducing surface area affects the amount of production.

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9 So when Mr. Morissette asked the 10 question if there was flexibility in sort of the 11 size of the facility, there isn't on the AC side 12 because of our contractual requirements. There is 13 some flexibility certainly on the DC side. And as 14 part of our conversations with CT DEEP, in 15 particular, looking at setbacks and accommodating 16 some of their requests, specifically with Ketch 17 Brook, but in other areas as well, in some 18 discrete locations there may be some reduction in 19 DC. We try to keep DC as high as possible so that 20 we can assure that we're producing enough power 21 and we're meeting those AC targets. You can't 22 build a DC to AC facility with a one-to-one ratio; 23 it won't function properly. But there could be 24 some discrete areas where we may be revisiting 25 those setbacks as a result of conversations with

NDDB and ultimately incorporating those into what we would expect in the D&M plan.

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MR. SILVESTRI: One other follow-up question on that that I think will close the loop on the discussion. Could the panels be relocated somewhere else without necessarily causing impacts wherever they might be relocated?

THE WITNESS (Svedlow): Yeah, that's a good question. There would be some trade-offs potentially. We would need to certainly map that out and engineer that, but I could see a scenario where some wetlands were -- or sorry, some panels were relocated, potentially a few discrete panels or a string were relocated to another area on the site, and that would require us to do maybe some additional tree clearing, and it would be a trade-off of impacts essentially from a wetland setback to maybe some tree clearing in the upland area. We've maximized a lot of the buildable area on the site already, so we'd need to be fairly discrete, but I think that could be evaluated.

MR. SILVESTRI: Thank you, Mr. Svedlow.
Like I said, I had those and didn't want to lose
the thought while we were still discussing that
particular topic. So thank you. And I'll thank

our Council members for my interruption as well. 1 2 Let's continue cross-examination with 3 Mr. Hannon at this time, please. 4 MR. HANNON: Thank you, Mr. Silvestri. 5 I think, to start with, some of my 6 questions are going back to part of the previous 7 public hearing discussion, the evidentiary 8 portion. Can you tell me how much land is the 9 company actually purchasing where you have the 10 option to purchase, and how much land is the 11 company leasing, do you have those numbers? 12 THE WITNESS (Svedlow): I believe we 13 If you would bear with me, I can try to find do. 14 those. 15 MR. HANNON: If you want to work on 16 getting that, that's fine, we can come back to it. 17 But the reason I'm even raising the question is 18 because this to me sort of ties into the 19 decommissioning plan, and that's why I'm raising 20 the question on that. 21 But on the transcript on page 112 22 there's a comment that was made, "...obligations

of the decommissioning are governed by either the
leaseholder or the property owner..." So if you
are the property owner of a significant portion of

this project, what assurances would the Council have that you'll actually decommission that portion of the project that's on your property? I know it's a lot different if you're leasing the property and you've got to restore it back to some sort of natural state. So if you're owning a significant portion of this project, I'm just kind of curious what assurances the Siting Council would have on the decommissioning plan.

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THE WITNESS (Svedlow): Yeah, certainly. So we have presented the decommissioning plan, our draft decommissioning plan. We intend to implement that. One of the things that we try to do in that decommissioning plan is estimate the costs of decommissioning, estimate the scrap value of the decommissioning or the decommissioned equipment. Those numbers are based on sort of the current state of the market, our best guess at the moment, but they'll be refined over time as we proceed.

And it is our expectation that in year, let's say, 2025, in the later years of the project, closer to when decommissioning would potentially occur, year 30, we would have those numbers refined enough where we would potentially be comfortable committing to some sort of bonding or security associated with that decommissioning plan. But given where we're at and understanding the cost of decommissioning, you know, providing that surety now we think would be sort of ineffective and inaccurate, whereas we would be more than happy and very comfortable providing that security at a later date closer to decommissioning when we have a better understanding of what the actuals will be.

MR. HANNON: Okay. And then again sort of following up, in the application for certification, page 72, there's a statement, "GPS has prepared a draft decommissioning plan which is included in Exhibit S. GPS will remove buried infrastructure to a depth of 3 feet."

The reason I raise that is because in the application for the certification on page 12, it talks about "Any direct buried XPLE cable will be trenched in approximately 3 foot to 4 foot below grade."

So if you're putting in some cabling or wiring that's below 3 feet, is that going to remain on site, because in one spot you're saying you'll remove the infrastructure buried to a depth

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of 3 feet, but you've got an infrastructure that's below 3 feet. So I'm just curious as to what would happen with those components.

THE WITNESS (Svedlow): Yeah. Mr. Clevenger, would you like to address that one?

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THE WITNESS (Clevenger): I'm happy to. It is industry practice depending upon, for instance, a landowner has a removal requirement in the decom plan, we adjust this, but it is a very common industry practice to leave behind wire at a depth below 3 feet because it is not being impacted by future farming operations and things like that in agricultural land just because of its depth. It was buried at that depth for safety reasons when it was constructed and is still viewed that way. We do have the obligation to excavate at the points where it's usually AC collection wire comes up to a depth less than 3 feet. You cut it off at a depth below 3 feet, and it's then abandoned in place at that depth below 3 feet where it doesn't cause any harm.

MR. HANNON: And again, your response
kind of goes back to my original question dealing
with how much land do you guys own or will you
own, you're the one that actually makes that

decision. So this is why this is a little different scenario where I think the company is going to own a fair amount of the property and they're not leasing it, so we don't have an agreement to go back with the leasing party. So that's kind of why I'm raising some of these questions.

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But following up on that, also on page 14, you have a conversation with the applicant concluded that a jack and bore or horizontal direction drill method would be the least environmentally impactful method to install the collector lines, I'm assuming, beneath the Ketch Brook. So what's the depth of those lines, and would they stay, or would they be removed as part of the decommissioning plan?

17 THE WITNESS (Svedlow): Sure. I think 18 I can address your original question, and then we 19 can talk about the depth of those bores. So based 20 on my documents, the land control documents, there's 225.6 acres, gross acres that would be 21 22 leased out of the 737 gross acres. So that's not 23 impact area or project area, that's just sort of 24 the gross parcel size. I believe Mr. Kochis is 25 working on determining the amount of acreage in

that 225.6 that will be project area.

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So the depth, now going to your current question, the depth of the installed AC collector lines below Ketch Brook will vary as a result of the directional boring.

Mr. Gravel, if you want to talk a little bit about how that works and what those depths might be.

THE WITNESS (Gravel): Yeah, sure. Currently we're contemplating the HDD to be kind of where it bellies out, and underneath the Ketch Brook would be approximately 18 feet, so quite a bit of depth there underneath the brook.

And to your point about decommissioning the HDD lines, it is, I think, industry practice that those would be left in place and not to kind of further disturb the area. If they're kind of intact and not problematic, we would anticipate leaving those.

MR. HANNON: Okay. Then in the decommissioning plan on page 4, this is where you've got like 3.1, the removal process, 3.2, 3.4 and 3.3. But 3.1, I don't see anything in that section regarding underground infrastructure. So my question is, are you addressing that in 3.2, because there you talk about connecting cables and combiner boxes will be de-energized, disconnected and removed to a depth of 3 feet. So I'm just trying to make sure that the underground infrastructure is addressed. So it may not be in 3.1, but is it in 3.2, is that the intention?

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THE WITNESS (Svedlow): Absolutely. I'm looking at it now. That is the intention of 3.2. I think 3.1 is just sort of generally describing the decommissioning, and then 3.2 is getting a little more granular with the electrical infrastructure itself. We would certainly be happy to clarify that further in a revised decommissioning plan as part of a D&M plan submittal, if required.

16 MR. HANNON: Okay. Thank you. And 17 then at 3.3 you talk about reuse, recycling and 18 disposal. One of the questions that comes up with 19 the solar panels is what can possibly be done with 20 them. Now, based on some reading I've been doing recently, it's my understanding that probably most 21 22 of the modern solar panels, whether they're like 23 the crystalline silicon panels or the cadmium, I 24 don't know if I'm pronouncing this the right way, 25 but the telluride panels, they will pass the TCLP

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test? If this project were in fact approved and got to the D&M state, would the applicant be willing to at least provide certification from the panel manufacturer that they passed the TCLP test?

And the reason I'm asking that is because if they don't pass the TCLP test, then they may be considered to be hazardous, and that's going to significantly jack up the cost of the decommissioning of the facility.

THE WITNESS (Svedlow): Mr. Clevenger, I think you deal with some of these issues on a day to day, if you don't mind.

THE WITNESS (Clevenger): I do. So I can answer a couple of those things directly and a couple of those things with what I think will happen. First of all, even at the age these modules will be, we see today a rather liquid secondhand market for modules which are of a certain age. I know that may be surprising, but there is a market for both the reuse of modules and the recycle.

Your question regarding the TCLP is the right one. That is the test which is the appropriate leaching test for a landfill. Unfortunately, the module manufacturers cannot and

do not provide that certification in advance. It's just not something we're able to get. We have had large projects that have had a portion that were damaged by a severe weather event or something and we had to put them in a landfill. We do go to the landfill and verify that they will accept them as hazardous or nonhazardous based on the local landfill for the modules that have to be disposed of that way. To date, we have not seen any in the last year that were not accepted by the nonhazardous landfill.

Unfortunately, the specific question regarding testing by the module manufacturer or a certification is not available. They will provide an MSDS, and that's about it, and even that is sometimes challenging to get.

MR. HANNON: Okay. I just thought I'd raise the question, because if the panels have to be treated as a hazardous material rather than sort of a solid waste --

THE WITNESS (Clevenger): You're right. MR. HANNON: -- you're looking at a much higher cost of decommissioning. So I think you had a price in there of roughly about \$3 million estimated to decommission, and if these

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panels were considered hazardous, my guess is you're looking pretty high northward of that amount.

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THE WITNESS (Svedlow): Certainly -sorry to interrupt. If I could just add?

MR. HANNON: No problem.

THE WITNESS (Svedlow): That is one of the reasons, and that's a good reason why we plan to revisit that decommissioning plan regularly. It's more of a living document. It's not necessarily something we stick up on the shelf and say okay we'll revisit this in 25, 30 years. It's a living document.

MR. HANNON: I appreciate that.

THE WITNESS (Clevenger): Just a note to that. We have a GAAP, generally accepted accounting principle, requirement to update that decommissioning plan because it's a contingent liability of the project. So we can't just put it on the shelf. We have an obligation to keep it updated.

MR. HANNON: Okay. I think I'm kind of
done with the decommissioning now. But also going
back to the evidentiary hearing last month, I have
to admit I'm confused about some of the language

that was stated in the record concerning the fixed versus the tracking system. In the transcript on page 118 your response was you're proposing that the fixed versus the tracker is the fixed are almost entirely correlated with the gravel mine areas, either current gravel mine, former gravel mine or planned gravel mine, and that the tracking systems have a very tight slope parameter.

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On page 119 you say that you're not talking about particularly steep, but rather steeper than the very flat former tobacco fields using the fixed arrays.

On page 120 you're saying a larger number of megawatt hours by putting fixed racking on the areas where we don't want to move earth. I mean, to me that sounds like in one respect you're talking about putting the flat panels in the gravel area, but you're also then saying it sounds like they would be going on the flat areas where you don't want to do much earth work.

And part of the reason I'm asking about the gravel is because of what was provided in the response to the comments by DEEP, Mr. Fred Riese, he's talking about the terrain within the two sand and gravel pits is extremely irregular with deep

excavations and various piles of materials on these properties. I'm just trying to get a better handle on where the fixed panels are going and where the tracking panels are going. So can you help me on that, please?

THE WITNESS (Svedlow): Yes, yes, absolutely. Apologies if it was poorly stated on my part. It seems like it might have been. The issue is as follows: The tracking systems need fairly flat areas, okay, so that's the reason why we're putting them in the tobacco fields primarily.

The fixed array systems, they are more tolerant of changes in slope and grade, and that is why we're proposing them in the gravel mine areas. You're absolutely correct, the gravel mines are undulating, there's, you know, a variety of different materials that have been used to restore some portions of them. The reason why we're not putting trackers in the gravel mines is because we would have to do an exceedingly large amount of grading to get those slopes within the gravel mines to a point where we would be able to put trackers in. And that would be prohibitively expensive. It would also be a larger impact.

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We'd probably need to bring fill in. But we are able to grade those gravel mine areas sufficiently for fixed arrays. So that is the intent is to put the fixed arrays largely in the gravel mines and the tracker arrays largely in the agricultural fields, the tobacco fields.

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THE WITNESS (Moberg): Aaron, this is Sue Moberg. If I could just add that the application, Exhibit A, the figures, included a project layout map that I think displays what you've just been describing pretty well. If I could just point out that the fixed panels are oriented in the east-west direction, so in that figure they appear as sort of lines running right to left. And the trackers are oriented at a north-south direction, and they appear as vertical lines running from the top to the bottom of the page. So that's the project layout map in Exhibit A of the application.

MR. HANNON: Okay. Thank you. That does help, at least I think I've got a better sense of it now.

This is on the DEEP letter that was dated November 2nd and submitted. On page 2 there's a question that was raised about -- this

is the last paragraph. It talks about an 8 inch diameter metal pipe extending above the ground before continuing underground. It talks about the pipe originates at a rectangular concrete pool of approximately 25 by 35 dimension, or 25 foot by 35 foot dimension, and is located just west of tobacco barn number 26, and it then runs underground for quite some distance disappearing underground behind the home of an abutting property.

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Do you have any idea what that is all about, what that pipe is, and would that pipe be staying if that's outside the work area that you're proposing?

THE WITNESS (Svedlow): So it's my understanding that that is an irrigation line on the property. And I don't think, as long as it doesn't interfere with our ability to construct the project, that we would intend necessarily to remove it, but I'd ask VHB if you have anymore color on that.

THE WITNESS (Kochis): Yeah, I'll chime in, Mr. Svedlow. Our understanding is also that that's an irrigation pond. I believe it's not currently being used, however, the piping does go
to the west presumably to the brook as a source of water. And nothing that we are proposing on this site would require us to change or remove that pipe or that irrigation pond.

MR. HANNON: Okay. Thank you. I think one of the other things that has been discussed is I believe that there was a discussion, or at least it's in the project schedule, about being able to do some of the work, some of the grading, but seeding the site and letting it stabilize before actually starting with the panel racking and the panel installation; is that correct?

THE WITNESS (Svedlow): Yes, that's absolutely correct. That's our intention. Our intention is to do the civil work, seed the site, if approved, next year, and then install the infrastructure in 2022. This is an approach to construction that we're moving towards actually at the vast majority of our project sites. It's something we did at Tobacco Valley, although in a more compressed schedule and timeline. We unfortunately ultimately had to seed in the winter and then start construction later in the spring. The intent here is to do it essentially a full year ahead of time. So do that civil work,

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restoration and seeding in '21, and construction of the infrastructure in '22.

THE WITNESS (Clevenger): I need to make one slight adjustment, Mr. Svedlow, to what you said. That is true given the schedule, but we will also be very conscious of doing that seeding, well, the civil work and the seeding work at a time of year where you have good germination and vegetation rates. So that schedule could be compressed if we're doing the work at the right time of year to get good germination. The goal is to have a good stand of grass to help with soil stabilization when equipment shows up on site. It's, you know, we give ourselves enough time that we can pick the right window to do that in.

16 MR. HANNON: In tying in with that, I 17 guess I'm wondering with the work, I guess the 18 regrading that needs to be done in the gravel pit 19 area -- and last time I checked it's kind of hard 20 to grow grass in a gravel pit -- so what are you 21 talking about doing as far as bringing in topsoil, 22 are you talking like 4 to 6 inches of topsoil 23 after you've reached the final grade in the gravel 24 pit areas as a way to sort of stabilize the grass? 25 THE WITNESS (Svedlow): So I think this

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ties in pretty strongly with our approach to stormwater, specifically in the gravel pit area.

So Mr. Kochis, if you don't mind addressing that one, that would be helpful.

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THE WITNESS (Kochis): Sure. I think it's still being discussed with CT DEEP as to whether those areas will have fresh topsoil brought in, or an alternative measure to promote vegetation may be used such as composting material. But that is the expectation is that every effort will be taken to get vegetation to grow in those areas once the regrading is complete.

MR. HANNON: Okay. Thank you. One of the other things that was in the application for a certificate is on page 54. It talks about vegetation maintenance, and you've got like outside the security fence there is the buffer zone, things of that nature. Have you thought about any type of pollinator plantings on site to again help out those species?

THE WITNESS (Svedlow): We have, absolutely, and we are committed to installing a certain amount of pollinator habitat.

I don't know, Ms. Moberg, or

Mr. Peterson, if you want to address a little bit.

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THE WITNESS (Moberg): I think we can hand it over to Gordon who actually designed the landscape screening that incorporates the pollinator habitat, and then I can probably add a little bit to the end.

THE WITNESS (Perkins): Thanks, Sue. Yeah, the mitigation plan, which is Appendix B to the visual impact assessment, speaks of one of the design modules would be a selection of plant material that includes pollinator species. And the location for that -- I'm just getting there in the report, one moment -- yeah, so it's listed as module 3 in the mitigation plan, and that would be a pollinator seed mix that's proposed for the entire length of the project area along Plantation Road. And then also many of the other planting modules that we have designed for the mitigation plan also include infill with pollinator species as well, and that would be a small portion of Apothecaries Hall Road, and actually that's the only location along those roads.

THE WITNESS (Moberg): And I can just add to that that we did, the subject of pollinator habitat did come up in our discussions with Dawn

McKay at NDDB. She stressed that we should make every effort to use native seed mixes, native seeds in the pollinator habitat, rather than, you know, a lot of the standard seed mixes that you can buy from suppliers include a mixture of species that might include non-native species that, while they might be great pollinator habitat elsewhere, are not so good here because of their non-native status, but also some of the mixes routinely include species that are protected in Connecticut. So it creates kind of a catch-22 for the project to be planting species that are on the NDDB's list.

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MR. HANNON: Okay. Thank you.

THE WITNESS (Svedlow): And I'll just add one last thing. Sorry to interrupt. Pollinator habitat has come up in both of our conversations with the Department of Agriculture. We are following some of their guidance on that.

MR. HANNON: Okay. I have another general question, and this is on page 39 of the application under Section 6.5, Stormwater. Down towards the bottom of the page you talk about when you're checking the soil it exceeds 250 to 300 pounds per square inch, the compacted layer is

considered impenetrable to roots and an impedance to infiltration. Every field sampled had an impenetrable layer or plow plan develop just below the tillage depth, typically 9 to 12 inches below the soil surface.

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How has this impacted your stormwater design if it looks as though you've got this hard pan 9 to 12 inches below the surface?

THE WITNESS (Svedlow): Mr. Peterson and Mr. Kochis, do you want to address that? And then I would ask Mr. DeJoia to chime in as well, if possible.

THE WITNESS (Kochis): I'll start it off. We did run infiltration tests in those areas of the farm field, in multiple areas of the farm field, to confirm that they do infiltrate. Those results are included in the stormwater report as well. So we did prove that those areas can infiltrate at the depth that we're looking for them to achieve infiltration.

MR. HANNON: Okay. So then is that statement on page 39 incorrect? Because to me if you're saying there's an impenetrable layer and that you're not going to infiltrate, I just want to make sure that I'm understanding what you're

saying on this.

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THE WITNESS (DeJoia): Yes, this is Aaron DeJoia. There's two separate items here. One is there is currently an impenetrable layer called a plow pan. Water can go through it. It just is at reduced rates. However, during construction of the site there will be mitigation so that we can get crops to grow or grass to grow and for water to infiltrate. So we will be doing deep compaction relief using tillage equipment, standard farm agricultural equipment, that will hopefully decompact that soil to a depth of 18 inches plus or minus a couple inches there. That will remove that plow layer.

15 And then we will have cover crops as part of our initial offering or seed mixture in there that will fill in those channels that we've 18 just created and help break up that soil, start the soil formation process, build soil structure, 20 put organic matter, and return that site back to a 21 more natural, won't have that hard pan, that plow 22 layer in there any longer, and be able to 23 infiltrate water at the natural rate at which NRCS is --

> Thank you. MR. HANNON: Okay. And so

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I guess the last question I have is in the DEEP letter dated November 2nd on the last page, second to last paragraph, under Miscellaneous Petition Commentary. Has the decision been made as to whether or not to maintain roughly that 6 inch gap between the ground and the bottom of the perimeter security fence? Because I thought that that was still sort of being discussed. I'm just curious if any decision had been reached on that. Because I know the agency is strongly recommending that that be incorporated, so I'm just wondering if you've come to a decision on that.

THE WITNESS (Svedlow): Certainly. Ms. Moberg, would you mind addressing that?

15 THE WITNESS (Moberg): Yeah. Τ 16 believe, I think we touched on this in our last 17 hearing. But the project will maintain, sections 18 of the project fence will be 6 feet above -- 6 19 inches, sorry, above the ground surface. The 20 terrain is somewhat variable, so it will be an 21 average of 6 inches. And I think what we've 22 reported during the last hearing was that it won't 23 be continuous around the project but generally 24 oriented in the portions of the project that front on sort of the more natural areas rather than,

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say, the road frontage to allow for migration of those small mammals.

MR. HANNON: Okay. Thank you. And actually I do have one more question. And this goes to I know one of the comments from the town, that they are thinking that this project could be a benefit to the town in terms of eliminating a lot of the ATV traffic on site. Have you had a chance to go around the site to see where some of the ATV vehicles have been coming in?

I mean, there may be some areas that come in off the main road, or it may be some of the roads in the inland portion of the site. But if there are some areas where they're coming in that are along some of the town roads, has any thought gone into putting some type of a barrier, whether it's rocks or something along those lines, to help keep some of the ATVs out of the site?

THE WITNESS (Svedlow): Yes, yes, absolutely. And we're having those conversations, and we'll continue to have those conversations. We expect it to be a little bit of a whack-a-mole kind of game here with the ATVs. We do plan to install gates and put some larger rocks and sort of windrow type rock barriers in some of the areas

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that are most frequently used for access.

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So, let me just back up. At sort of high level, the array area in the project site will be fenced, will be gated. That will prevent access to those areas. We're also removing the primary nuisance attracting feature, which is the gravel pits themselves, we're removing access from those areas. And then there are certainly some discrete areas that are not within our array but are elsewhere on properties that we control or will own that we will need to fence, or gate, rather, and potentially install boulders next to those gates to prevent access.

That is something that we've discussed with the town, we'll continue to discuss with the town. And my guess is unfortunately we may have to revisit the location of those gates, potentially add gates in the future, to assure that access is reduced and eliminated. My experience with the illicit ATV community has been that they're fairly persistent on gaining access. MR. HANNON: Okay. Thank you for your response. I have no other questions at this time.

MR. SILVESTRI: Thank you, Mr. Hannon. At this point, I think we all need to take a

1	slight recess, kind of stretch our legs, get
2	refills on water. Why don't we reconvene at 4:10.
3	It's about 15 minutes from now. So we'll see you
4	at 4:10. And thank you.
5	MR. HARDER: Mr. Silvestri.
6	MR. SILVESTRI: Yes.
7	MR. HARDER: Excuse me, this is Mike
8	Harder. I just wanted to mention I'll be leaving
9	the hearing, it looks like it might be a little
10	early, but I'll be leaving around 5:15.
11	MR. SILVESTRI: Very good. Thank you,
12	Mr. Harder. And when we do come back, we'll start
13	again with cross-examination by Mr. Nguyen. So
14	we'll see you in about 13 or so minutes. Thank
15	you.
16	(Whereupon, a recess was taken from
17	3:57 p.m. until 4:10 p.m.)
18	MR. SILVESTRI: All right. I'd like to
19	continue cross-examination of the applicant, this
20	time by Mr. Nguyen, please.
21	MR. NGUYEN: Thank you, Mr. Silvestri.
22	Just a couple of questions. Referencing the
23	application on page 8, the second paragraph of
24	that page 8 it's referencing Docket No. 18-04-04,
25	PURA Implementation of June Special Session Public

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1 Act 17-3. And I'm not sure who do I refer this 2 question to, so I'm going to refer to the panel. 3 It appears that 18-04-04 is an incorrect docket. 4 18-04-04 is the Application of Indeco North 5 America for Qualification of 135 Research Drive, 6 Milford, Connecticut, as a Class I Renewable 7 Energy Source in PURA's database. So could 8 someone clarify with a correct docket number? 9 MR. HOFFMAN: Mr. Silvestri --10 THE WITNESS (Svedlow): Yes. Sorry. 11 Go ahead, Mr. Hoffman. 12 MR. HOFFMAN: You go ahead, Mr. 13 Svedlow. 14 THE WITNESS (Svedlow): I was going to 15 apologize if there was a typo there and refer to 16 you, Mr. Hoffman, anyway. 17 MR. HOFFMAN: Very good. Mr. Nguyen, 18 I'll get you the correct docket number in just one 19 minute. You should continue with a different 20 question, and then I'll get that number back to 21 you. 22 MR. SILVESTRI: Thank you, both. 23 Please continue. 24 Referencing Late-File MR. NGUYEN: 25 Exhibit B, third paragraph, it mentioned that

1 Connecticut has 786 megawatts of installed solar 2 capacity. Does anyone know how many are utility 3 scale solar? 4 THE WITNESS (Svedlow): I do not. 5 Those numbers were not broken down that way in the 6 referenced document. 7 MR. NGUYEN: Okay. That's all I have, 8 Mr. Silvestri. 9 MR. SILVESTRI: Thank you, Mr. Nguyen. 10 And when Attorney Hoffman finds the citation, I'll 11 just ask him to provide that to you. 12 MR. NGUYEN: That would be great. 13 Thank you very much. 14 MR. SILVESTRI: Thank you. I'd like to 15 continue cross-examination of the applicant by 16 Mr. Edelson at this time, please. 17 MR. EDELSON: Mr. Silvestri, I don't 18 have any additional questions from the last 19 hearing, so I think I will turn it back to you. 20 MR. SILVESTRI: Very good. Thank you. 21 I know you had one bite at the apple before. 22 Thank you, Mr. Edelson. 23 MR. HOFFMAN: Mr. Silvestri, I have 24 the --25 Excellent. Go ahead. MR. SILVESTRI:

1 MR. HOFFMAN: It's Docket No. 18-05-04. 2 There was a typo. 3 MR. SILVESTRI: Mr. Nguyen, do you have 4 that? 5 Yes. Thank you very much. MR. NGUYEN: б MR. SILVESTRI: And you're all set with 7 your question on that one too? 8 MR. NGUYEN: I am. Thank you. 9 MR. SILVESTRI: Very good. Thank you, 10 Mr. Nguyen. 11 Thank you, Attorney Hoffman. 12 MR. EDELSON: Mr. Silvestri, maybe I do 13 have one clarification on the question Mr. Perrone 14 had about the cabling, AC and DC. I think it was 15 said that there is changing practices as far as DC 16 cabling and whether it be underground or above. 17 Can we expect that in the D&M plan that will be 18 resolved by the applicant and we'll see one or the 19 other at that point? The answer to the question 20 wasn't resolved. It was sort of indicated as 21 under review. 22 MR. SILVESTRI: On the assumption that 23 the project gets approved, then I'll ask the 24 question if that would be included in the D&M

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plan. Mr. Clevenger.

THE WITNESS (Clevenger): I honestly can't tell you. Here's why: The engineering procurement and construction contractor, they all have different practices. We have seen the very common practice of buried DC which is what occurred at Tobacco Valley Solar. We have also seen recently a shift towards aboveground DC. Because it is unlikely the contractor will be selected before a D&M plan is submitted, I'm not sure that I can commit. I can commit to the fact that it will be one or the other. I know that's a hard answer. If you'd like to know more detail about the pros and cons of each, I think we can provide that so you're comfortable with either method.

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16 MR. EDELSON: Well, I think in the D&M 17 plan I'd like to make sure that what we see is 18 that the environmental impact between the two of 19 them, we'd like to understand what the difference 20 is. I guess I'm sort of hoping that the answer 21 would be that it's insignificant between the two, 22 otherwise it really should be part of the D&M plan 23 and we would want to have a position on that, a 24 position that I would think would be part of your 25 procurement specifications. I might be

misunderstanding it, but it does sound -- I'm hearing a little bit of a chicken and egg kind of thing here. And it seems to me it's your call as the applicant to put that before us so we understand the environmental impact.

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MR. HOFFMAN: Mr. Edelson, if I may? Would an acceptable resolution of this be that if we submit the D&M plan before that determination is made, we would submit a modification to the D&M plan that would outline that determination once it's made?

MR. EDELSON: Well, that would be fine with me. I would defer to Attorney Bachman or Mr. Silvestri to expand upon that.

MR. SILVESTRI: I wouldn't have a problem with that, Attorney Hoffman, Mr. Edelson.

Attorney Bachman, would you like to
opine?

MS. BACHMAN: Thank you, Mr. Silvestri.
I agree, I think it's something that can be
accomplished in a D&M plan modification, if it's
something that arises after we review a D&M plan,
if the project is approved.
MP. EDELSON: Obay

MR. EDELSON: Okay.

MR. SILVESTRI: Thank you.

1 MR. EDELSON: Thank you, Mr. Silvestri. 2 Thank you, Attorney Bachman. 3 MR. SILVESTRI: Thank you, Mr. Edelson. 4 Anything else? 5 MR. EDELSON: No. 6 MR. SILVESTRI: Very good. Moving on 7 for continued cross-examination this time with Mr. 8 Lynch, please. 9 MR. LYNCH: Can you hear me? Can I be 10 heard? 11 MR. SILVESTRI: I can hear you, Mr. 12 Lynch. 13 MR. LYNCH: Now that you've made me the 14 Rodney Dangerfield of the Council, I'll continue. 15 Just on a comment that Mr. Clevenger 16 just made on contractors. Do you use an RFP to 17 select contractors, or do you have a contractor in 18 residence? 19 THE WITNESS (Clevenger): We do not 20 have a contractor in residence. We do go to 21 relationships we have in the industry and either 22 run an RFP or solicit on a less formal basis bids 23 from different contractors to select one. We do 24 not self-perform if that's what you're asking. 25 MR. LYNCH: That's what I was asking.

And would these contractors be union, would you have to agree to any PLA or anything?

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THE WITNESS (Clevenger): We have had discussions with labor in the area regarding an agreement in the future. We have had a very good dialogue with local carpenters and labor. Whether or not they require a PLA is to be determined, but we are willing to work with them when we go to contract this project with our EPC.

MR. LYNCH: Thank you. Like Mr. Hannon, I didn't get a chance in the last hearing to ask a few follow-up questions, so I'm going to go back. I'll start out with really when Mr. Hannon was talking about the decommissioning. Now a question I have, he's talking about your company agreeing to the decommissioning in 20, 30, 40 years, but my question really is during that time -- and I've been told by some energy people down in D.C. that a lot of these projects are going to be sold, so maybe this is more of a question for Attorney Hoffman -- would all your contracts be in place if the project is sold?

THE WITNESS (Svedlow): So I can address a little bit of that, and then I would ask Attorney Hoffman to address the remainder of it.

D.E. Shaw Renewable Investments is in the business of owning and operating these types of assets. Unlike some other companies, it is very uncommon for DESRI to sell an asset. The intent is for DESRI to own and operate Gravel Pit Solar for the life of the project.

But that said, Attorney Hoffman, if you wouldn't mind addressing the remainder of that question regarding the agreement.

MR. SILVESTRI: Attorney Hoffman, I'll just mention you're not a sworn witness, but if there's information that you can provide that will be helpful to answer Mr. Lynch's question, then I'll allow that.

MR. HOFFMAN: I can point you straight to that same docket that I defined earlier which is 18-05-04. If you look at the contract, there is a provision that allows for those contracts to be transferred. Facially it says essentially the utilities have to approve the transfer, as would the Public Utilities Regulatory Authority. But assuming those two entities approve, then you'd be able to transfer the contracts.

24 MR. SILVESTRI: Thank you, Attorney 25 Hoffman.

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MR. LYNCH: Thank you, Mr. Clevenger and Attorney Hoffman.

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I've got another question regarding SHPO. When you're dealing with SHPO, do you have to bring in any Native American people like the Narragansetts or the Wampanoags or the Podunks?

THE WITNESS (Kenney): I would like to ask David George from Heritage Consulting to answer the question on what triggers and whether, you know, the need for Native American consultation.

THE WITNESS (George): Hi, David George here. Can you hear me okay?

THE WITNESS (Kenney): Yes.

THE WITNESS (George): Okay. In this instance, since we are not using any federal funds or federal permitting, to my knowledge, we do not have an obligation to consult with the tribes for the project.

MR. LYNCH: Seeing that I live like four and a half miles away from this project, I know there's very active Indian history in the past, so I was just wondering if any Native American consultation was done. Thank you. I got your answer. I heard it. THE WITNESS (George): Okay, great. THE WITNESS (Kenney): Would it be helpful if Mr. George clarified the assessment that he did on potential cultural impact which would have included looking for native resources as well?

MR. LYNCH: Sure, that would help.

THE WITNESS (George): Sure. Okay. Yes, we completed a field survey of all of the acreage involved in the project, a survey that involved excavation of shovel test pits at regular intervals across the project area, to examine the ground for any potential archeological resources or Native American resources that may be in the project area. I can't remember exactly how many shovel tests we dug, but it was hundreds and hundreds of shovel tests, and only a few of them produced any Native American artifacts, all of which were very few in number, and could not be assigned to a particular time period in prehistory. So we applied the National Register criteria for evaluation for each of those locations and determined that it did not possess research potential or the eligibility under the National Register regulations. So therefore no

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additional archeological work was recommended for the project.

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MR. LYNCH: Thank you. That clarifies it.

I have a question on the FAA report. It seems that you missed out. When you clarified all the different airports around the area, you missed one very big one, which I happen to know because I'm both in the flight and glide pattern, takeoff and glide pattern for both Bradley and Westover Air Force Base, and you left out Westover. And if you haven't heard a C-130 take off, you haven't heard noise. So I just wanted to make you aware of it, you've got to include Westover, which is probably around 7 or 8 miles from your project.

Now, I want to go back to --THE WITNESS (Svedlow): I'm sorry --MR. LYNCH: Go ahead.

THE WITNESS (Svedlow): I just didn't know if you'd like us to follow up on that at all. I think Ms. Moberg was dealing with the FAA issues for the project.

MR. LYNCH: No. So I was just making
you aware that you left out Westover. No

follow-up is needed.

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THE WITNESS (Svedlow): Understood, sir. Thank you.

MR. LYNCH: I'd like to come back to Mr. Clevenger for a second. Now, if I heard you correctly at the last meeting -- I didn't get a chance to speak -- but you did talk about future improvements to your project, whether they be panels or so on, but you also mentioned something very important, that you were investigating battery storage. Now, you're the first application that I've been involved in that said you're looking to the future for battery storage. I want to compliment you on that. Because I can't see a project running for 30 or 40 years and meeting the Green Deal out of Washington that doesn't include batteries for solar projects. So, like I said, you're the first person that has actually come forward and said we are looking into that.

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THE WITNESS (Clevenger): Thank you very much.

MR. LYNCH: All right. A lot of these
notes I've crossed off already, but give me a
second to find a couple I haven't.

As far as dealing with the different fire departments, you know, East Windsor and South Windsor are both volunteer fire departments, and South Windsor's biggest fire department happens to be the closest one to your project. Are you going to -- I think you mentioned you were going to add some training. Would you add training as well as any material they may need?

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THE WITNESS (Svedlow): The plan is, sir, yes, sir, to do some training for East Windsor and South Windsor's fire departments. We don't expect that they would need any additional equipment or specialized equipment. The intent is to train them.

MR. LYNCH: Now, in that training you said they don't need specialized equipment, but isn't there a formula for fighting electrical fires?

THE WITNESS (Svedlow): Mr. Clevenger deals with this nationally for our projects.

Mr. Clevenger, do you mind? THE WITNESS (Clevenger): Yeah, I'm happy to try. Most municipalities and their fire departments, when they encounter an electrical

fire, make sure the fire does not expand or spread

beyond the bounds of the project in this case or a substation or whatever it might be. But generally speaking, not a rule, but a generality, firefighters don't fight electrical fires directly, especially not at solar generation facilities like this. They generally look to contain the fire to make sure no additional damage is done obviously given high voltage and water is an obvious difficult mix.

MR. LYNCH: That's what I've been told, Mr. Clevenger, but I can't testify. I've got another question regarding your facility as far as a fire is concerned. I've heard from the utility company that they have to turn off the transformer, you can't do that; is that true?

THE WITNESS (Clevenger): So if you're talking about the main power transformer which is the --

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MR. LYNCH: Yes, I am.

THE WITNESS (Clevenger): Correct. Both the utility and the operator have the ability to close or open that circuit in an emergency. If we are going to do so in a nonemergency, we do have to do so generally under the terms of the interconnect agreement which means with their

coordination. But I would have to review this document directly to see if it is allowable in an emergency. I can't imagine that it's not, but I think Aaron actually -- Mr. Svedlow probably knows the answer to this better than I do in this particular case.

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THE WITNESS (Svedlow): Yeah, it's my understanding that in our agreements we have the ability to unilaterally disconnect in the event of an emergency, otherwise, as Mr. Clevenger noted, we need to coordinate.

MR. LYNCH: Now, as far as the inverters inside on your panels, how do you turn those off if there's a fire or a storm, is there somebody that is contracted to go on site and do that, or can you do that remotely?

17 THE WITNESS (Clevenger): It is handled 18 remotely. So the entire facility is monitored 19 24/7 by a remote operations center, that is, we 20 contract with a third-party O&M provider. They 21 are the operator of that control facility and also 22 each inverter and circuit. So they are able to 23 remotely open and close those circuits if you had 24 an event that required you to do so ranging from 25 an inverter that was not functioning correctly or

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an emergency.

MR. LYNCH: Mr. Clevenger, in the likelihood there was an event, even though the inverters are turned off, those panels are still hot; are they not?

THE WITNESS (Clevenger): They are still --

MR. LYNCH: If it's a sunny day.

THE WITNESS (Clevenger): Yes, they are still producing electricity.

MR. LYNCH: Could that be -- how much of a danger are those panels to anyone going in the facility in case there's an event?

THE WITNESS (Clevenger): The insulation that protects a person from that module and that circuit, whether the circuit is open or closed, is still in place. The safety protocol, or the safety mechanisms on the inverter, the combiner boxes and all the other equipment in the facility remain in place whether the circuit is open or closed.

MR. LYNCH: Thank you. Give me one
more second here. This may seem like a strange
question, but I'll ask it anyhow. I know you
provide breaks in the fence 6 inches on the bottom

of the fence. But have you ever had any larger animal at any of your facilities, more of a curiosity question, be it a bear or a deer or a moose, actually get into your facility or one of your facilities?

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THE WITNESS (Clevenger): We have. Accidents do happen with fences. It is the reason there are on-site personnel who do inspections. And in the event an animal, a larger animal, not a small mammal, got into the facility, we then use either a local contractor or get the animal out. It's actually something that's written into our O&M plans how you handle that. We have had animals trapped in fences that we had to release. So these are generally built in, you know, rural or semi-rural areas, so there are animals in the vicinity. It's a good question.

MR. LYNCH: For me it was a curiosity question. In Interrogatory Number 24 you talk about soft shading and hard shading. Can I get examples of both?

THE WITNESS (Svedlow): Yes, sir. If you could just bear with me for one minute to pull that up so I'm speaking to the correct item here. So I'll speak to soft shading. So soft shading is generally considered things like soiling, you know, dirt or other things that gets on the panels. I guess, snow could be considered soft shading as well.

And then hard shading would be something like tree shading, or if there was a building, for example, the barns potentially would be considered hard shading on the site.

MR. LYNCH: My last question has to deal with storms. We've had a few relatively recent wind storms, nor'easters, whatever you want to call them. And I'm sure some of your facilities, the panels have been damaged either by projectiles or just being blown off by wind. How long is the turnaround time for replacing these panels and getting back up to running at full capacity?

THE WITNESS (Clevenger): Sure, I can answer that question. I will answer it in two parts. The first part is, in the event a panel is damaged, we generally have an inventory of spare modules that are procured when we buy the initial order of panels that live on site, so very quickly. And we attempt to restock those panels as that inventory depletes, if it does.

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With regard to damage from wind, the tracking systems for single-access trackers have sensors that allow modules to be put in a safe wind stow position or angle in the event of a severe weather event.

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Fixed tilt systems, the fixed portion of the project is kind of always in that position where it's rated for the high winds.

MR. LYNCH: Thank you very much. That's all my questions, Mr. Silvestri.

MR. SILVESTRI: Thank you, Mr. Lynch. I heard the Rodney Dangerfield reference. I'm familiar with him, but I'll have to look up and see what you were referring to after the meeting. But thank you.

MR. LYNCH: No. What I was referring to, you forgot me at the beginning.

MR. SILVESTRI: Thank you, Mr. Lynch.

I have a couple follow-up questions
based on what our Council members and staff were
asking. Mr. Clevenger, you mentioned just now
replacement panel storage would be on site. Did I
hear that correctly?

THE WITNESS (Clevenger): I did say
that. I actually have to defer to Mr. Svedlow

1 whether or not on-site storage is contemplated 2 here. I think we had discussed having them stored 3 on site whether it's in barns or elsewhere. 4 THE WITNESS (Svedlow): That's correct, 5 we have discussed that internally. There would be 6 no new structures added to the property for 7 storage. We have talked about and contemplated 8 potentially using some of the existing structures 9 that we're required to keep on the site for 10 storage potentially. 11 MR. SILVESTRI: So there's some options 12 that you're considering maybe at this point? 13 THE WITNESS (Svedlow): Yes, sir, 14 that's correct. 15 MR. SILVESTRI: Okay. Thank you. Then 16 with discussions on fencing either for the Gravel 17 Pit Solar substation or the Eversource switchyard 18 or the panels in general, is there any 19 consideration on using a one-inch mesh? 20 THE WITNESS (Svedlow): So let me 21 address the substation and switchyard first. 22 Those have a more stringent and specific type of 23 fencing required. So the intent there is a chain 24 link with barbed wire. I would have to defer to 25 our regulatory compliance team to determine if an

alternative type of fencing can be used there. To my knowledge, that's just kind of what's used, the chain link with the barbed wire.

For the perimeter of the project, we've not investigated that currently. We've evaluated the visual impact of the potential 4 inch mesh fencing. We haven't looked at the one-inch. I would maybe defer to Gordon, if he wants to talk about that at all.

THE WITNESS (Perkins): Yeah, I think, yeah, exactly, Aaron, we used the 4 inch square mesh fence with the wooden posts in the visual impact assessment. I guess I'm searching for a justification for going to a one-inch. Was there something you had in mind regarding the potential visual?

17 MR. SILVESTRI: No, it was more related 18 on security that I was looking at. We were 19 discussing the ATVs and whatnot. My thought would 20 be that it would be more difficult to snap, if you 21 will, a one-inch mesh or cause a lot more problems 22 to try to get through a one-inch mesh than it would a 4 inch mesh. That was the only reason that I was asking that question.

THE WITNESS (Perkins): Sure, yeah.

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MR. SILVESTRI: Maybe something to think about if this goes through, again, just thoughts off the top of my head.

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But again, getting back to the substation part of it and touching on the fire prevention aspect, is there any type of fire prevention system that's being proposed for either the Gravel Pit Solar substation or the Eversource switchyard?

THE WITNESS (Svedlow): I'll defer to Mr. Clevenger what is typically done at some of our projects nationally. I'm not aware of anything specific to this project.

THE WITNESS (Clevenger): Nor am I. MR. SILVESTRI: Okay. The reason I bring that up, in my older days there used to be deluge systems just in case something might have happened to a transformer or some other type of, say, oil containing equipment should that catch on fire. That's why I had posed that question.

THE WITNESS (Svedlow): So a fair question. We are working closely with Eversource on the design. This hasn't come up, to my knowledge, to date.

I'm sorry, Mr. Clevenger, you were

going to say something?

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THE WITNESS (Clevenger): I was just agreeing that not to my knowledge, I have not seen anything recently that required that with Eversource.

MR. SILVESTRI: Okay. Thank you. Then, Mr. Clevenger, this goes back to the first hearing that we had with the discussions on repowering. And I can't quote you chapter and verse, but I believe that there could be a situation down the road where the panels could be replaced with a potentially higher wattage panel should they indeed come into the market. If that indeed would occur that you replace a 500 watt, say, with a 600 watt, would you have to change the inverters there as well?

17 THE WITNESS (Clevenger): So that is 18 one of many variables that has to be considered in 19 a repowering. To date, in solar facilities those 20 repowers, as they were described, have been 21 one-off decisions based on each individual 22 project. There are certain things that allow you 23 flexibility in the future. We try and provide 24 that flexibility, but at the end of the day, until 25 we know what the new technological advance is,

size of module, wattage of module, voltage of strings, things like that, it's very difficult to predict. We have to gauge that and determine that at the time that new technology comes to light.

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MR. SILVESTRI: So holistically it could be panels, it could be inverters, it could be transformers, it could be whatever?

THE WITNESS (Clevenger): Yeah. My instinct is that it's the modules, it's the panels, because that is what generates the power, the capacity, obviously, inverters also. Transformers are providing a specific function to the grid, so I'm not sure that a transformer would be something. That's just something we're maintaining.

16 MR. SILVESTRI: Very good. Thank you. 17 I want to go back to the November 6, 2020 letter 18 from SHPO as a reference. And I believe, Ms. 19 Kenney, this might be in your area. On the second 20 page of that letter they talk about the 22 21 structures, and we had talked about this before. 22 I just want to get clear in my mind that the 22 23 structures they're referencing are internal to 24 Plantation Road. Is that correct? 25

THE WITNESS (Kenney): Well, so some of

them are south of Plantation Road and some of them are north of Plantation Road.

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MR. SILVESTRI: If I rephrase that, would the access to those structures only be from Plantation Road either going north or south?

THE WITNESS (Kenney): For most of them, yes, but for some of them you can access it off of -- Aaron, you're going to have to help me. Let me see if I can find it on a map, the road that you can access 14 and 13.

THE WITNESS (Svedlow): Yeah, I believe
it's Wapping Road.

THE WITNESS (Kenney): Wapping Road. Those two you can access from Wapping Road, but the other ones they would be from Plantation Road.

MR. SILVESTRI: Very good. Thank you.
Let's see, we might have touched on this one
already, new topic. If I reference you to page 54
of the application, are there any other methods
that might be employed to mitigate the loss of
forest habitat other than what's mentioned on page
54 of the application?

THE WITNESS (Svedlow): Certainly.
Just give me one second to get there.

MR. SILVESTRI: No problem.
THE WITNESS (Gravel): I can start this, and Aaron, if you have anything, you can add. Part of the project, we'll need to clear trees, obviously, for putting in the facility as well as for shading purposes to reduce any shading. So areas that aren't going to meet our facility proper, those areas we'll be cutting trees, but we're leaving the stumps in place and only really selectively cutting the trees that have the ability to shade the project. So what I'm referring to is leave kind of an understory there, leave stumps in place where stump sprouts can occur, where it wouldn't impact our facility. So we'll have kind of a limited touch, I quess, to the shading area required for clearing and allowing vegetation and the natural vegetation there to continue growing.

MR. SILVESTRI: Thank you. All right. I'm going to move on to a different question and a 20 different reference. This is the May 28, 2020 21 letter to Mr. Svedlow from Duraroot. And page 6 22 on this has the recommendation regarding 23 rototilling, if you have that in front of you. THE WITNESS (Svedlow): Yeah, I will

pull that up. We do have Mr. DeJoia from Duraroot

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here today. I think he's probably best suited to address that.

MR. SILVESTRI: Yeah. Let me pose my question to you. On the bottom of page 6, last paragraph, in order to maintain soil infiltration and percolation and associated hydraulic regradings, decompaction by mechanical and/or biological methods should be considered as part of the solar site construction and reclamation process, and then it goes on about a depth of 18 inches and a couple other things. My question to you, would those recommendations be employed should the project be approved?

THE WITNESS (Svedlow): Yes, we do commit to doing those reclamation actions if the project is approved. And I think that they are adopted as part of our soil preservation plan as well.

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MR. SILVESTRI: Okay.

THE WITNESS (Svedlow): Sorry, agricultural soil protection plan.

MR. SILVESTRI: Got you.
THE WITNESS (Svedlow): Mr. DeJoia, am
I getting that right, just confirm?
THE WITNESS (DeJoia): Yes, I believe

you are correct.

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MR. SILVESTRI: Very good. Thank you. Now I want to change gears again and go back to the trackers. You had explained where the power comes from to operate the trackers. The question I have is how do they actually move, is it a chain-driven mechanism, or is there something else that goes on to make them move?

THE WITNESS (Clevenger): It's a very 10 good question. There are a couple different technologies in the market used to move them. The 12 basic premise is the torque tube, which you would 13 view as the horizontal member that the modules are 14 mounted to, rotates east to west. That torque 15 tube sits in some form of bearing. All the 16 manufacturers or original equipment manufacturers 17 use a different form of bearing. That bearing is 18 usually turned by a gear called a slew drive. 19 That slew drive is driven by something. What is 20 what everyone kind of has as their own technological advantage. So one market leader uses an electric motor right at the slew drive. Another company uses a motor that is driving multiple arrays at the same time or multiple strings at the same time. So they all do it

1 slightly differently, but the basic premise is the torque tube rotates east to west in a bearing. 2 3 What is driving that, each of the manufacturers 4 has their own particular method. 5 MR. SILVESTRI: I think I got that. б THE WITNESS (Svedlow): Mr. Clevenger, 7 would it be fair to say that some of those methods 8 involve sort of a direct gear drive where it's a 9 portion of what you could see as a tooth gear kind 10 of moving along the motor? 11 THE WITNESS (Clevenger): That is one 12 way, yes. THE WITNESS (Svedlow): And would it be 13 14 correct to say another method is with a universal 15 joint type mechanism? 16 THE WITNESS (Clevenger): Correct, 17 called a slew gear. That is accurate. 18 MR. SILVESTRI: Very good. So there 19 wouldn't be chains involved here at all? 20 THE WITNESS (Clevenger): No, none that 21 I'm aware of. I'd have to really think hard about 22 all the different manufacturers. The two primary 23 that we use do not use a chain anywhere to my 24 knowledge. 25 MR. SILVESTRI: Okay. Is there any

type of maintenance that has to be done on those drives from time to time?

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THE WITNESS (Clevenger): They are monitored, and most of them have what's called a closed or sealed bearing that does not need to be greased, if that's what you're asking. That is the item that we look at from an O&M perspective. So there is maintenance done on them on a periodic basis, but they are not generally maintained the way you would think of a moving part that has to be greased frequently because these are closed and they move at a very, very slow rate of speed.

MR. SILVESTRI: Aside from the slow part, it would kind of be like a sealed transmission on an automobile?

THE WITNESS (Clevenger): Similar, correct, extremely slow.

MR. SILVESTRI: Yeah. Two follow-ups for you on that one. Any special consideration that needs to be done to the tracker mechanisms with below-freezing conditions?

THE WITNESS (Clevenger): To the tracker mechanisms, no, they are rated for ranges of temperatures, and we specify the tracker based on the average temperatures at a site. In this case, we don't have concerns at all about operating outside of a specified temperature.

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MR. SILVESTRI: Got you. Thank you. And how about noise?

THE WITNESS (Clevenger): Trackers make -- I would have to defer to someone on the sound study, but having been around them a lot, they make virtually no noise.

MR. SILVESTRI: Okay. Thank you.

THE WITNESS (Svedlow): I would just add that we did evaluate the small amount of noise that they do make as part of our sound assessment, acoustical assessment.

MR. SILVESTRI: I draw a very poor parallel with a screw drive garage door opener to which mine are very, very noisy, but I guess the mechanism is entirely different from what I'm referencing with the garage door opener. Very good.

I think I reached the end of the
questions and follow-ups that I had. But
generally when we ask questions and receive
answers, at times it kind of spurs follow-up
questions. So I'd like to take a couple moments
to go back to staff and our Council members just

1	to see if they had any follow-up questions for you
2	folks, and I'd like to start with Mr. Perrone,
3	please.
4	MR. PERRONE: I have none, Mr.
5	Silvestri.
6	MR. SILVESTRI: Thank you. Just
7	looking at time and making sure we still have him
8	online, Mr. Harder, do you have any follow-up
9	questions?
10	MR. HARDER: No, no follow-up
11	questions. Thank you.
12	MR. SILVESTRI: Very good. Thank you,
13	Mr. Harder.
14	Mr. Morissette.
15	MR. MORISSETTE: I have one follow-up
16	question, and it's kind of bothering me a little
17	bit, and it has to do with the PPAs and the fixed
18	capacity that's associated with each of the PPAs
19	for the individual offtakers.
20	When we were talking about the PPAs in
21	the form of capacity, typically those type of
22	renewable PPAs are based on energy. Is that where
23	the confusion, where I'm confused here is that are
24	the PPAs based on energy, a fixed amount of energy
25	that the company has to provide based on a

capacity value?

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THE WITNESS (Svedlow): I think I can address that. So these PPAs are a little bit atypical in that they don't have -- they do have a minimum, but it is a very low minimum number of megawatt hours, but they have a required nameplate capacity. So in the PPA the offtakers are obligated to purchase all of the energy coming from the facility up to their -- from their megawatt capacity allocation. So again, going back to Eversource, let's say they have an 18 megawatt AC capacity allocation. They are going to buy all of the megawatt hours produced from that 18 megawatt AC capacity allocation.

MR. MORISSETTE: Which theoretically is based on 18 megawatts divided by 120 to give you a percentage, so you're buying a percentage of the hourly output?

THE WITNESS (Svedlow): Yes, and that's where I think the confusion was earlier. That is correct, for the entire facility they are getting the output of a percentage of the 120 megawatts, but that is the 18 megawatt percentage. So I'm not required to give them 10 percent of a 120 megawatt project. I'm required to give them 100

percent of 18 megawatts.

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MR. MORISSETTE: Okay, I'll drop it, because I'm not with you on that primarily because of the fluctuation in hourly output from a solar facility you're very rarely going to get a full 18 megawatts allocated to CL&P based on a 120 megawatt 100 percent output. It's just not going to happen. So your hourly allocation is a percentage of that output.

THE WITNESS (Svedlow): That's correct, on an hourly basis that is correct. My point was that if the project were smaller, let's say if the project were 115 megawatts AC nameplate capacity, I am still obligated to give each of the offtakers their nameplate capacity worth of megawatts. I'm still required to give Eversource 18 megawatt AC capacity worth of energy, right? So that leaves somebody short. If I were to build a smaller project, I'm not giving one of those entities the full output that I'm obligated to give them.

MR. MORISSETTE: Okay. Thank you for that explanation. That's all the questions I have.

MR. SILVESTRI: Thank you, Mr.
Morissette.

Mr. Hannon, any follow-up questions? MR. HANNON: I have no follow-up questions. Thank you.

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MR. SILVESTRI: Thank you. Mr. Nguyen, any follow-up questions?

MR. NGUYEN: Yes, please. In terms of the training for local responders, is it a one-time training or is it a regular training for local responders?

THE WITNESS (Svedlow): Mr. Clevenger, do you want to talk about how we deal with training fire and safety staff, EMS staff?

THE WITNESS (Clevenger): I think what we would do is we would establish a coordinated plan with the local fire authority, whomever it is in East Windsor, and frankly get an agreement with them as to the periodic basis they would prefer, whether it's once every five years, one time. They may say to us we're very familiar with the facility and we're familiar with the protocols, we don't need the training. I would defer to them.

MR. NGUYEN: And to the extent that the
volunteer firefighters, they do come and go, to
the extent that they are in need for training,
would the company accommodate?

1THE WITNESS (Clevenger): Yes, we would2accommodate, yes.

MR. NGUYEN: Thank you. That's all I have, Mr. Silvestri.

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MR. SILVESTRI: Thank you, Mr. Nguyen.

Mr. Edelson, any follow-up questions?

MR. EDELSON: Yes. At the last hearing there was a series of questions about land ownership, and I believe at that time some was resolved and some were still up in the air. So the first part is any updates on that? Have you been able to finalize agreements with a lease or purchase on any of the other properties? What's the current status?

15 THE WITNESS (Svedlow): Sure. So just 16 to be clear, the entire array area, the entire 17 project area is already under full option to 18 purchase or lease. There was a small additional 19 area owned by the East Windsor Sportsmans Club of 20 approximately 1.4 acres. That's currently being 21 used informally as an entrance, a secondary 22 entrance to one of the gravel mines, the northern 23 gravel mine. We have been negotiating with the 24 East Windsor Sportsmans Club to purchase that 25 property. They're amenable to that deal. We're

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just working through papering that deal. So it's just 1.4 acres. The rest of the project site is under control.

MR. EDELSON: So not a show stopper from your point of view one way or the other?

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THE WITNESS (Svedlow): Not a show stopper. We want that piece so that we can relocate one of our access points so that we can accommodate the request from some abutters who felt like that access point could easily go to the existing one, and we wholeheartedly agree. If worst-case scenario, and I think this is very unlikely, that we can't get control of that property, we would move that access point anyway to avoid and minimize that impact on the abutters, potentially locate it adjacent to the existing access point that we're trying to purchase, but I think that's unlikely.

¹⁹ MR. EDELSON: And would it be fair to ²⁰ say, if we approve this project, that you would ²¹ only come to us with a -- you would prefer to come ²² to us with an D&M plan after these issues about ²³ the sports club are resolved and you know what you ²⁴ want to do?

THE WITNESS (Svedlow): That's

1 absolutely correct, yes, sir. 2 MR. EDELSON: Okay. Thank you, 3 Mr. Silvestri. 4 MR. SILVESTRI: Thank you, Mr. Edelson. 5 Mr. Lynch, any follow-up questions? б MR. LYNCH: No follow-up questions. 7 MR. SILVESTRI: Thank you. And I don't 8 have any follow-ups either at this point, so I 9 believe we came to the end of our 10 cross-examination of the applicant. 11 Before closing the evidentiary record 12 of this matter, the Council announces that briefs 13 and proposed findings of fact may be filed with 14 the Council by any party or intervenor no later 15 than December 31, 2020. The submission of briefs 16 or proposed findings of fact are not required by 17 the Council, rather we leave it to the choice of 18 the parties and intervenors. 19 Anyone who has not become a party or 20 intervenor but who desires to make his or her 21 views known to the Council may file written 22 statements with the Council within 30 days of the 23 date hereof. The Council will issue draft findings 24

of fact, and thereafter parties and intervenors

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1	may identify errors or inconsistencies between the			
2	Council's draft findings of fact and the record.			
3	However, no new information, no new evidence, no			
4	argument and no reply briefs without our			
5	permission will be considered by the Council.			
б	I hereby declare this hearing			
7	adjourned. I thank you all for you participation.			
8	Be safe, and have a great evening. Thank you.			
9	(Whereupon, the witnesses were excused,			
10	and the above proceedings concluded at 5:04 p.m.)			
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CERTIFICATE OF REMOTE HEARING

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3 I hereby certify that the foregoing 122 pages are a complete and accurate computer-aided 4 transcription of my original stenotype notes taken of the CONTINUED PUBLIC HEARING HELD BY REMOTE 5 ACCESS IN RE: DOCKET NO. 492, Gravel Pit Solar application for a Certificate of Environmental 6 Compatibility and Public Need for the construction, maintenance, and operation of a 7 120-megawatt-AC solar photovoltaic electric generating facility on eight parcels generally 8 located to the east and west of the Amtrak and Connecticut Rail Line, south of Apothecaries Hall 9 Road and north of the South Windsor town boundary in East Windsor, Connecticut and associated 10 electrical interconnection, which was held before ROBERT SILVESTRI, Presiding Officer, on December 11 1, 2020. 12 13 14 Yisa Wallel 15 16 Lisa L. Warner, CSR 061 17 Court Reporter BCT REPORTING SERVICE 18 55 WHITING STREET, SUITE 1A PLAINVILLE, CONNECTICUT 06062 19 20 21 22 23 24 25

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