STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Petition No. 1104

Petition From the United Illuminating Company for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is Required for the Proposed Construction, Maintenance and Operation for of a 2.2 Megawatt Solar Photovoltaic Facility and a 2.8 Megawatt Fuel Cell Facility on Approximately 22 Acres of the Former Seaside Landfill located at 530 Waldemere Avenue, Bridgeport, Connecticut

Council Meeting held at the Bridgeport City Hall, Council Chambers, 45 Lyon Terrace Bridgeport, Connecticut, Thursday, September 11, 2014, beginning at 3:00 p.m.

H e l d B e f o r e:

ROBERT STEIN, Chairman

A p p e a r a n c e s:

Council Members:

JAMES J. MURPHY, JR.,
Vice Chairperson
PHILIP T. ASHTON
DR. MICHAEL W. KLEMENS
ROBERT HANNON
EILEEN M. DAILY
DR. BARBARA C. BELL

Council Staff:

MELANIE BACHMAN, ESQ.,
Executive Director and
Staff Attorney
ROBERT MERCIER
Siting Analyst

For The United Illuminating Company:

UIL HOLDINGS CORPORATION
157 Church Street
New Haven, Connecticut 06506
By: BRUCE L. McDERMOTT, ESQ.
THOMAS JUDGE, ESQ.

Appearances:(cont'd)

For the City of Bridgeport:

PULLMAN & COMLEY, LLC

90 State House Square

Hartford, Connecticut 06103

By: LEE D. HOFFMAN, ESQ.

THE CHAIRMAN: Good afternoon ladies and gentlemen. I like to call to order the meeting of the Connecticut Siting Council. Today, September 11, 2014 approximately 3:05 p.m.

My name is Robin Stein. I'm Chairman of the Siting Council. Other members of the Council present are Senator Murphy; Mr. Hannon, who's designee from the Department of Energy and Environmental Protection; Mr. Ashton; Dr. Klemens; Dr. Bell; Eileen Daily. Members of the staff present are Attorney Bachman, our Executive Director and Mr. Mercier, our siting analyst.

This hearing is held pursuant to the provisions of Title 16 of the Connecticut General Statutes and of the Uniform Administrative Procedure Act upon a petition from United Illuminated Company for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is Required for the Proposed Construction, Maintenance and Operation of 2.2-megawatt Solar Photovoltaic Power Facility, and 2.8-megawatt Fuel Cell Facility on

Approximately 22 Acres of the Former Seaside Landfill Located at 350 Waldemere Avenue, Bridgeport, Connecticut. The petition was received by the Council May 27, 2014.

As a reminder to all, off-the-record communication with a member of the Council or a member of the Council staff upon the merits of this petition is prohibited by law.

The parties to the proceeding are as follows. Representing UI is Attorney McDermott. And also we have the City of Bridgeport, is a party. Attorney Hoffman represents them. And also as an intervener, Councilman Torres.

We will proceed in accordance with the prepared agenda, copies of which are available I think right here in front. Also available here are copies of the Citizen's Guide to Siting Council Procedures.

At the end of this afternoon's session we will recess and resume again at seven p.m. The seven p.m. hearing will be reserved for the public to make brief oral statements into the record. I would wish to

note that parties and intervenors, including their representatives and witnesses are not allowed to participate in the public comment session.

I also wish to note for those who are here and for the benefit of your friends and neighbors who are unable to join us for the public comment session, that you or they may send written statements to the Council withing 30 days of the date hereof and such written statements would be made part of the public record.

If necessary, party/intervener presentations may continue after the public comment session, if time remains. A verbatim transcript will be made of the hearing and deposited with the City Clerk's Office in Bridgeport for the convenience of the public.

A comment by public official Mayor Finch, I believe, if you would like to address the Council at this time?

Thank you.

BILL FINCH: Thank you, Chairman Stein and welcome to Bridgeport. I hope you enjoy your stay here. Members of

the Council, thank you for the opportunity to address you today. My name is Bill Finch. Mayor of the City of Bridgeport, as you know, the State's largest city.

The project before you is a key piece of our city's sustainability plan called BGreen 2020, which aims to make our city a place that our kids and our grandkids will choose to work and live and raise their families in. The Green Energy Park, which has been spearheaded by the United Illuminated consists of 9,000 solar panels and a 2.8-megawatt fuel cell. It would create up to 92 jobs and earn the City $7 million over the course of its lease.

My goal is to give you a new statement on this project. My last official statement on this project was April of 2012. At that time we were seeking approval of this project from the State's Public Utilities Regulatory Authority, and since receiving approval from PURA the project has generated overwhelming support at the local level. It's passed the Parks Commission, and most recently has been approved by the Bridgeport

City Council 15 to 5. That means that all of Bridgeport's regulatory bodies support this project.

It has also received support from our new State Senators Anthony Musto and Andres Ayala and from three of our State Representatives, Don Clemens, Ezequiel Santiago and Reverend Charles Stallworth.

This overwhelming support for this project at the local level is very simple. We have an old, polluted and dormant piece of property at our closed and capped landfill. But with the Green Energy Park we have the opportunity to change that by using this parcel as a green jobs creator that will bring in tax revenue to the City and power thousands of homes with clean energy that will ensure our kids breathe cleaner air.

The project will also help us to position the City of Bridgeport better for the future. As the cochair of the United States Conference of Mayors on Climate Protection Task Force, I know all too well cities like Bridgeport which account for significantly less greenhouse gas emissions

than the suburbs are the key to a sustainable future for our kids and our grandkids. For example, the University of Berkeley has found that a Bridgeport household produces less than half of the carbon omissions of an average Eastern Connecticut household on an annual basis.

With that said, in order to beat back climate change it's critical that city experience population growth, which means moving more kids and families from the suburbs to the cities. And in order to make our city a more enticing place for people to live, we need to create jobs and generate power through cleaner energy sources so our kids can breathe clean air and our companies will want to invest and hire our people.

The eco-technology park, a rundown section of Bridgeport adjacent to this in our city's west side has been revitalized through green job creation and green energy production. It's critical to this endeavor. So far the eco-technology park has resulted in more than 200 jobs and many more to come. And these new jobs have

resulted in more than $10 million of annual personal income to our city.

In addition to green jobs creation the eco-technology park is serving as hub for clean energy production. And North America's largest fuel cell, as you know, is housed within the eco-technology park adjacent to the green energy park. And there's enough virtually emissions-free energy in the eco-tech park to fuel 15,000 homes. And with this addition it will be another 5,000 homes. I daresay that very few cities are producing clean energy for 20,000 homes within their boundaries. With your help we can do that.

As the chief executive of our city, I view this as just the beginning. This is especially true since the developments cornerstone of the Green Energy Park has yet to launch. The Green Energy Park will create up to 92 jobs, as I said, and will power up to 5,000 homes virtually pollution free. This is particularly important since Bridgeport kids suffer from some of the highest asthma rates, nearly

three times higher than the state's average. But clean energy production results in less air pollution and leads to lower asthma and breathing ailments for our kids.

The project also converts a dormant parcel of land into a tax revenue generator for the City. With the United Illuminating plan for the Green Energy Park it will bring in, as I said, more than $7 million in tax revenue over the life of this project.

I have a vision for the City of Bridgeport. Some of it has already taken shape, which is evidenced by the establishment of the eco-technology park in our plans here today before you, but that vision will be compromised without the Green Energy Park being approved. That's not fair to our kids and that's not fair to our grandkids.

This project creates jobs, produces clean energy and helps ensure our kids will breathe cleaner air. It helps reduce asthma, breathing ailments that are at high rates, and it grows our tax base. And

it's proof that our City can heal from the sins of our past and move toward a cleaner and more prosperous future.

Members of the Council, I urge you to join Connecticut's largest city to help us build our way to a green energy future.

Thank you.

THE CHAIRMAN: Thank you, Mayor Finch.

Normally we reserve for other public officials this evening, unless somebody want to -- an elected official wants to speak at this time, it's okay.

Yes, please. Go to the podium and identify yourself for the stenographer. Thank you.

Our sound technician is on the -- is right -- right there.

ROBERT HALSTEAD: My name is Robert Halstead. I'm a City Councilman from the 132nd District, which is not too far from Seaside Park. But I'm a native of Bridgeport and an historian in Bridgeport. And I have a master's degree in city and regional

planning.

And growing up in Bridgeport we spent our childhoods down at Seaside Park. At the time it was burning constantly, so it was closed down back in the eighties and it's been growing over since that time. And there's a -- some sort wildlife growing there now and a lot of green growth there. And you go to the top of that mountain there as you did, and I've been there, there's a very beautiful view from up there of Frederick Lowe Olmsted, Seaside Park, of Black Rock Harbor and Black Rock Historic District, Fayerweather Island, Pleasure Beach and the whole coastline. Such as you probably won't get such a shoreline view until you get to Acadia State Park, a national park in Maine.

But the city did commission a plan, again and a few years back and they recommended that it be a wildlife refuge and a nature path. I'm all for it being a nature path where nature paths and greenways, linear parks are very popular now in other places and other cities.

So I think that would be the

best use, is to keep it a park because you can't be wasting our asset of that beautiful view and the beautiful wildlife. And if you go up there it's like you're in the middle of the country with all the grass and it's just beautiful up there.

Everything that the Mayor eloquently stated about greenhouse gases and our children, jobs and everything, a lot of that is true, but it kind misses the point because you can do it somewhere else. You don't have to do it here. We're pitting one green interest against another. Solar is a good thing.

I'm an environmentalist, but I think this is another green issue and an historic asset, an environmental asset, an asset to the City of Bridgeport that can be capitalized on and make this quality of life a lot better for people in Bridgeport, which is -- we can't afford to lose any opportunities because we're behind the eight balls in so many things, such as the Mayor stated.

So please consider there's

other places to put this operation. It's a good thing, but I think speaking as a city councilman, a lifelong resident, environmentalist, city planner, it's not a good idea and I hope that you feel the same way with your backgrounds and experiences and what your mission is as the Siting Council.

Thank you.

THE CHAIRMAN: Thank you.

We'll now proceed to the administrative notice. I wish to call attention to the items shown on hearing program marked as Roman numeral I-D, Items 1 through 51.

Does the Petitioner or any party or intervenor have any objection to the items that the Council has administratively noticed?

(No response.)

THE CHAIRMAN: Hearing and seeing none, these are accordingly noticed, these existing document statements and comments.

Will the Petitioner present the witness panel for the purpose of taking

the oath, and the Council's Staff Attorney will administer the oath.

MR. McDERMOTT: Good afternoon Mr. Chairman, Bruce McDermott from UIL Holdings Corporation on behalf of the United Illuminating Company and with me is James Morrissey.

The UI panel consists of Anthony Marone, Senior Vice President of Customer and Business Services; to my immediate left is Thomas Judge, Senior Project Manager. To my immediate right is Mr. Michael Libertine who's the director of siting and permitting at All-Points Technology Corporation.

Then there's Joseph Perugini from Weston & Sampson. And on the far right is Mr. Duane Himes also from Weston & Sampson.

And we also have other witnesses who may be called as necessary, but I think for purposes of oath we can just go with this panel.

THE CHAIRMAN: Would you please rise to take the oath, please?

A N T H O N Y M A R O N E,
T H O M A S J U D G E,
M I C H A E L L I B E R T I N E,
J O S E P H P E R U G I N I,
D U A N E H I M E S,
called as a witnesses, being first duly sworn by Ms. Bachman, were examined and testified on their oaths as follows:

THE CHAIRMAN: Let's please begin by numbering the exhibits of the filings you've made in making a request to administratively notice existing documents and verifying all exhibits by the appropriate witness?

MR. McDERMOTT: Thank you, Mr. Chairman.

UI has one administrative notice item which is the National Register of Historic Places inventory, the nomination form that was submitted by the company on September 4, 2014.

We have five exhibits, and then I'd like to discuss with the Council the introduction of a sixth exhibit. But Exhibit Number 1 for identification is the petition

that was filed with the Siting Council on May 27th of this year. Exhibit 2 is FAA determination. Three is the nation historic -- or I'm sorry, the State Historic Preservation Office response dated August 11th.

Petitioner's response to Council interrogatories is Number 4, and Number 5 is the habitat assessment report that was submitted to the Council last week on September 5th.

Mr. Judge, through you, did you prepare or oversee the preparation of the petition, Exhibit 1 for identification, as well as Petitioner's Exhibit Number 4, which is the response to the Council interrogatories?

THE WITNESS (Judge): Yes.

MR. McDERMOTT: You do have any changes or revisions to those exhibits?

THE WITNESS (Judge): No, I do not.

MR. McDERMOTT: And do you adopt them here today?

THE WITNESS (Judge): Yes.

MR. McDERMOTT: Regarding Exhibit Number 2, which is the FAA determination, as well as the State Historic Preservation Office Response, which is Exhibit number 3, did you prepare or oversee the preparation of the filings with those respective state agencies?

THE WITNESS (Judge): Yes.

MR. McDERMOTT: And are you familiar with the response that the company received from those agencies?

THE WITNESS (Judge): Yes.

MR. McDERMOTT: And do you adopt those as Exhibits 2 and 3 here today?

THE WITNESS (Judge): Yes.

MR. McDERMOTT: Regarding exhibit number -- I'm sorry?

No? Okay. Maybe it's just the feedback. Sorry.

Regarding Exhibit Number 5, which is the habitat assessment report that was filed with the Council on September 5th, did you oversee the preparation of that exhibit?

THE WITNESS (Judge): Yes.

MR. McDERMOTT: And are there any changes or revisions?

THE WITNESS (Judge): No.

MR. McDERMOTT: And with that, Mr. Judge, do you adopt Exhibits 1 through 5 as UI's exhibits?

THE WITNESS (Judge): Yes.

MR. McDERMOTT: Mr. Chairman, I move for Exhibits 1 through 5 to be introduced into evidence.

THE CHAIRMAN: Thank you.

Does either party or intervener object to the admission of these exhibits?

MR. HOFFMAN: No objection.

THE CHAIRMAN: Okay. The exhibits are admitted.

(Exhibits II-B-1 through II-B-5: Received in evidence - described in index.)

THE CHAIRMAN: I will now begin the cross-examination starting -- do you have any other additional exhibits?

MR. McDERMOTT: I just one more administrative matter which is we have

prepared an affidavit. Mr. Judge is the signer of it, evidencing in the placement of the signs regarding the hearing, the dates that they were posted and their locations, which I'll file with the Council. Tomorrow I can provide -- an electronic copy tomorrow. I have hard copies that I can give Attorney Bachman at the break. And we'd ask that be admitted as Exhibit Number 6.

I know I have not provided copies to the parties and intervenors and I can do so now if that's appropriate.

THE CHAIRMAN: Any objection?

MR. HOFFMAN: No sir.

MR. McDERMOTT: Thank you. That's also admitted.

(Exhibit II-B-6: Received in evidence - described in index.)

MR. McDERMOTT: And with that, the panel is ready for cross-examination.

THE CHAIRMAN: Okay. Mr. Mercier.

CROSS-EXAMINATION

MR. MERCIER: Thank you.

I'd just like to go over some

of the items at the field review. First we started off at the fuel-cell location. Just for the record, what is the current operation at the fuel-cell location? What kind of activities are occurring there?

I understand it's a town-owned parcel, but what are they doing?

THE WITNESS (Judge): In the fuel cell area you're referring to? Well, the City owns, currently owns and operates that area. We have a lease agreement for the space that the fuel-cell slash service entrance will be. My understanding is that the City uses that for parks department equipment. The -- they had an agreement with the Vibes Concert folks to store equipment on that facility, and John Patel from the City has more information on that area.

MR. MERCIER: And what was the approximate size of the fenced area that you'll be taking for the fuel-cell location?

THE WITNESS (Judge): The frontage along what's known as Cedar Creek Road is 300 feet. The rear is 280 feet and the depth is 80 feet, so approximately

290-by-80 feet.

MR. MERCIER: And what's the existing grade at the fuel-cell area?

THE WITNESS (Judge): The existing grade at the fuel-cell area ranges from about nine and a half to ten and a half.

MR. MERCIER: Okay. And I understand according to the plans you'll be raising it to a level grade of 14 feet. Is that correct?

THE WITNESS (Judge): The FEMA floodplain elevation in this area is -- the storm surge elevation is 13, and UI will be building to a FEMA plus one, that's our standard. So a 14 elevation.

MR. MERCIER: And is the fuel-cell area, will that be paved or is that a gravel surface?

THE WITNESS (Judge): I'm sorry. Excuse me?

MR. MERCIER: Will that be a paved surface or a gravel surface within your fenced area?

THE WITNESS (Judge): The fill material will be gravel and most of the solid

surface on top will be either concrete pad foundation or some paved area. And then the slopes will be either retaining wall or gravel.

MR. MERCIER: Or what?

THE WITNESS (Judge): Or gravel.

MR. MERCIER: Thank you.

THE WITNESS (Judge): And it will be fenced around the outside.

MR. MERCIER: And what's the height of that fence?

THE WITNESS (Judge): The height of the -- the design height of the fence is our standard fence there, would be eight-foot with the chain-link is what we're anticipating.

MR. MERCIER: And is there any barbed wire on that fence?

THE WITNESS (Judge): I'm sorry. Yes, there will be. We're anticipating barbed wire with that. That's just on the fuel cell area, that's --

MR. MERCIER: Yes. Thank you.

One thing I did notice in the

petition, the original petition on page 11, it talked about the fuel-cell site being designed to flood level of 500-year flood, excuse me. It would be designed to a 500 year flood, but yet it in your Interrogatory Response 32 I think it said there was no 500-year flood line in that area. Just can you please clarify?

THE WITNESS (Judge): Yeah, there -- I guess there was a misunderstanding regarding FEMA's floodplain maps. In coastal areas they do not define a 500-year elevation. That's generally defined in river areas. They have a hundred-year flood elevation and then they have a storm surge elevation in coastal areas.

So this area right here does not have a 500-year floodplain. It only has a coastal floodplain elevation.

MR. MERCIER: Okay. Did I just hear you correctly, they have a separate designation called "storm surge"?

THE WITNESS (Judge): If I can refer to Joe Perugini on this.

THE WITNESS (Perugini): Yes,

in the costal area according to FEMA maps there is only a 100-year flood elevation. The reference of a storm surge is what happens when -- when the water rises. That's the terminology for the flood -- floodwater rising to that elevation. But as Tom mentioned according to the FEMA, the latest FEMA maps there is no 500-year flood level in a coastal area. You -- you don't see it until you get to a watercourse tributary river area.

MR. MERCIER: Okay. Thank you.

On your site plan for the fuel-cell on EP-1, it was in the interrogatories, it shows a retaining wall on the north side. What's the height of that retaining wall?

THE WITNESS (Judge): That retaining wall will be designed. It will be starting just below grade. It will be two feet below grade. We don't have the exact design completed for that. And then will raise up, too. So the road frontage it varies around, like I said, nine and a half

to ten and a half from the -- the west side of the site, to east side. And it will go up to 14.

MR. MERCIER: Okay. Thank you.

There was some discussion at the site regarding fuel-cell operations. Would there be any visible vapors from the operation of these units?

THE WITNESS (Judge): We don't anticipate any visible vapors. This is a single fuel cell. There's been some, I guess, discussion over vapors coming out of the other fuel-cell facility. They collect all of the heat at the other fuel -- there's five fuel cells there. They collect the heat, and thus generating a lot more temperature to run a turbine, or an organic ranking cycling turbine to get increased generation. This site, with only one fuel-cell, we're not anticipating to see any vapors.

MR. MERCIER: Thank you.

What's the height of the fuel-cell unit?

THE WITNESS (Judge): So the -- the fuel-cell unit, there's different components. The fuel-cell stacks are the two large blocks. They're about 13 feet high. The inverters and the mechanical -- mechanical balance and plant is somewhere from eight to ten feet high. And the largest component is the exhaust stack itself, which is about 24 about the base grade.

MR. MERCIER: Would there be any lighting at night for the fuel-cell facility?

THE WITNESS (Judge): The fuel-cell facility, we anticipate putting some spotlighting for working area out there. It could be turned on at on nighttime, but there's no general lighting in that area anticipated.

MR. MERCIER: Now there was some mention about noise from the facility. I understand in your interrogatory response, I believe it was 72 decibels about 10 feet away. Would you expect any noise from the units being audible from the, say, the Seaside Park itself?

THE WITNESS (Judge): We don't anticipate there being any noise, any audible noise from Seaside Park. We have reached out to the -- to our vendor FuelCell Energy, asked their opinion, and their professional opinion was there will be no noise at that distance.

MR. MERCIER: Are there any other receptors in that area, like residences within, say, a thousand feet that you're aware of or any other type of --

THE WITNESS (Judge): Yeah, I have distances to noise receptors written down. Let's see.

The ballfields are approximately 700 feet from the facility. The Sikorsky building is 600 feet. Captain's Cove is approximately 1600 feet. The sewage treatment plant is about 800, 900 feet, and the nearest beach area is about a thousand feet away.

MR. MERCIER: Okay. So thank you.

One thing that was discussed that maybe I heard on the field review is

something regarding educational display. Is that something UI may establish in the fuel-cell area around that area?

THE WITNESS (Judge): Tony, would like to speak to that?

THE WITNESS (Marone): Sure.

We don't have the specific details of what the display would be. As part of our discussions with the City Council early on in the process there was a request that as part of the overall project that we look for a way to incorporate some sort of educational element. And we're open to doing that.

I did mention during the site walk that that would not include something in up at the top of the landfill around the area where the panels were, but something down at the bottom. And our thinking was it could be either over near the fuel-cell area or maybe something over near the beach, something that was a display that could let residents and people who were visiting the park understand what was going on around them there, but any of the specifics around that we haven't

worked out at this point.

MR. MERCIER: Thank you.

Okay. A number of questions regarding the solar field itself.

I guess the first question I have is that on page 7 of the actual petition, it basically said project area is about 22 acres, but Interrogatory Response 6 it said -- you said the solar field area was about 11.3 acres. I'm trying to figure out what the discrepancy is.

THE WITNESS (Judge): So the discrepancy there is the actual solar field area, where the panels and the equipment are going, reside on 11.2 acres. Our agreement with the City for the lease area, rather than drawing a very complicated boundary around that, we took areas, or we leased areas that were larger for the, you know, for shading and other purposes and more for simplicity of drawing a map for an agreement purposes and that came out to an area of 22 acres.

MR. MERCIER: Okay.

THE WITNESS (Judge): But the fence boundaries are only going to be 11.2.

MR. MERCIER: Okay. In the wetland report there was a Figure 2 and it showed a red dotted line. There was a -- you could turn to it. It's Interrogatory Response -- actually, Exhibit 5. It was a separate exhibit issued in September.

Figure 2, the red dotted line there. I see the solid red line, I guess, that covers 11.2 acres. Is that correct roughly?

THE WITNESS (Judge): That is correct.

MR. MERCIER: And is the red dotted line, is that the 22 acres you're referring to?

THE WITNESS (Perugini): Yeah, on -- that figure, the dotted line I believe you were questioning the project limits?

MR. MERCIER: Yes.

THE WITNESS (Perugini): That line was established as a hundred-foot limit from the actual development fenced-in area. And the reason for that was for the purposes of defining and delineating the wetlands. A rule of thumb is 100 feet from the project to

determine whether or not it's within a hundred-foot boundary of a wetland area. So that was what the -- that line was delineating.

MR. MERCIER: Okay. Understood.

Now going back to your fenced area of 11.2 acres, within that area UI is responsible for maintaining the vegetation growth. Is that correct?

THE WITNESS (Judge): Yes, it is.

MR. MERCIER: At what height would you be maintaining the growth in there?

THE WITNESS (Judge): We plan on mowing in that area two to three times a year depending on -- on the growth. And we don't want the vegetation to get above the lower-level of the panel. So at any time we don't want the vegetation to get above two feet.

MR. MERCIER: Okay. Now the remaining area within your lease, you know you have a 22-acre area, that remaining area, are you responsible for mowing beyond the

fence?

THE WITNESS (Judge): We are not mowing anything in that area. We're going to leave it grow as is.

Mr. Mercier, I'm sorry. Could I have one second?

MR. MERCIER: Go ahead.

THE WITNESS (Judge): So outside of our fenced area if there are trees that grow to the point where they will shade the facilities, by rights of our lease agreement with the City we have the right to trim those trees and maintain those trees.

MR. MERCIER: I also have a question on the trees. Is it typical on landfills to have trees growing on them or are the landfills supposed to be maintained as an emote state?

THE WITNESS (Judge): I'm going to refer to Duane Himes for that.

THE WITNESS (Himes): It's not typical to have trees growing on landfills.

MR. MERCIER: So UI will just be responsible for removing the trees within your development area and ones that

potentially could shade your facility?

THE WITNESS (Judge): That's correct.

MR. MERCIER: So no other trees that may be growing elsewhere you're not going to remove?

THE WITNESS (Judge): No, we're not.

MR. MERCIER: Now in preparing the solar field area will you be removing the existing vegetative layer across the 11.3 acres?

THE WITNESS (Judge): We will not be removing vegetative layer across the acreage. We will be cutting the grass down to -- as fine as possible, filling any depressions and then building on top of that and then we will restore the -- the vegetation areas that are -- that we destroy.

MR. MERCIER: Regarding the fence, page 11 of the petition says an eight-foot fence would be constructed, but I think the plans actually and in the interrogatory show a six-foot fence. What height fence are you proposing here?

THE WITNESS (Judge): I believe the plans show a six-foot minimum fence. We are proposing an eight-foot fence.

MR. MERCIER: Does that have barbed wire on top?

THE WITNESS (Judge): It does not have barbed wire on top?

MR. MERCIER: Is that a chain-link fence?

THE WITNESS (Judge): It is a chain-link fence, yes.

MR. MERCIER: Was a wood stockade fence considered?

THE WITNESS (Judge): No, it was not. We wouldn't really consider a stockade type fence for maintenance purposes.

MR. MERCIER: I'm sorry.

THE WITNESS (Judge): For maintenance purposes.

MR. MERCIER: You mean, like, a replacement or mowing around it? Or --

THE WITNESS (Judge): I guess there's multiple reasons. One is the maintaining a stockade fence will be difficult. In addition, the wind loads on a

stockade fence would make it very difficult to design the foundation system, which is ballasted in this case.

THE WITNESS (Libertine): There's also a benefit of having a chain-link fence so that the light can penetrate through it. A solid wooden fence would be much more visible to observers. So there was also that consideration.

MR. MERCIER: Going back to the wetland report, Wetland II was identified as 529 square feet on the, pretty much the west end of the top end -- excuse me, the top of the landfill and within your solar field. Does UI intend to fill this wetland in to develop the solar field?

THE WITNESS (Judge): So this wetland is, I guess -- I guess it can be described as a manmade wetland. It is low functioning. It is not part of a wetland system. It's independent.

We feel it would be appropriate to -- to fill in that area. However if it was -- if you felt it was appropriate or if -- if the DEEP felt it was

appropriate we could relocate and establish this wetland elsewhere on the property.

MR. MERCIER: Assuming you would eliminate the wetland, would there have to be any type of work to the vegetative layer or the underlying cap to eliminate why the water is collecting there?

THE WITNESS (Judge): There's a depression that's settled, from settlement that occurred there. That was -- and water collected in that area and a, like I said, a low-functioning wetland formed. I think it's pretty small. It's approximately 25-by-25 feet or so.

MR. MERCIER: Okay. So you believe simple filling would take care of it?

THE WITNESS (Judge): Yes.

MR. MERCIER: Why it's collecting there? Okay.

Do you know if you need a federal U.S. Army Corps of Engineers permit to fill that particular wetland?

THE WITNESS (Judge): I will defer to Joe and --

MR. McDERMOTT: I can take the

question. It's my understanding, no. We have no plans to file an ACAE permit.

MR. MERCIER: Okay. In regards to the solar panels, in Interrogatory 13 it states the optimal pitch is 35 degrees, but for -- the reading of the interrogatory states you're going to have it at 20 degrees, but by doing so the capacity of the panels is increased. So I'm not sure I understood what the word "optimal" means.

THE WITNESS (Judge): I think the capacity of the available area is increased. With the size and shape of the -- the flight area up there and the slopes, to get the optimal interrow spacing, the higher the panels go the more shading you get. So we lower the panels and you increase the total efficiency of the entire area.

MR. MERCIER: Okay. What's the approximate distance between the rows? I don't know if you have a range or a set distance or?

THE WITNESS (Judge): I don't have the number. Joe, I'm not sure if we have that number.

THE WITNESS (Perugini): The distance between rows and between panels varies on the design of the panels, the angle at which they're positioned and that can vary between five and ten feet on average.

MR. MERCIER: For this project?

THE WITNESS (Perugini): Right. This would get designed by the solar contractor, so we don't have a definitive width.

THE WITNESS (Judge): I can tell you the design criteria around that spacing is there cannot be -- there cannot be shading on an adjacent row at 12 noon on June 21st, so the -- the summer equinox.

MR. MERCIER: Thank you.

Now in regards to wiring the modules, is the wiring between the modules over to the inverters, is that underground, or is that through conduits on the framing, or how is that installed?

THE WITNESS (Judge): The wiring is clipped to the frames. It collects in what's called a combiner box, so it's a

box that's mounted on the back of the panel frames. And then it runs through a conduit to a collector, which goes to an inverter. So there are no -- there are no wires that are exposed or dangling around.

MR. MERCIER: Are those conduits installed underground to the inverters?

THE WITNESS (Judge): Those conduits are installed above ground.

MR. MERCIER: Above ground?

THE WITNESS (Judge): Yes.

MR. MERCIER: From the inverters down to the access road, how is the wire going to be installed?

THE WITNESS (Judge): So the inverters sit on pads with transformer, so they're inverter transformer pads. The inverters take it from DC to AC. So to take it from 600 volts and convert it to AC 380 or -- and then it -- then it goes to the transformer, converts to our distribution voltage of 13,800 volts. It goes into a conduit on the ground down to the base of the landfill up onto a pole line and back out

towards our service entrance equipment.

MR. MERCIER: Okay. So that main conduit, is that running down the access road, under the access road?

THE WITNESS (Judge): It's running adjacent to the access road, yes.

MR. MERCIER: What would the depth of that conduit be installed to?

THE WITNESS (Judge): So the access road would actually be built up a little bit for construction vehicles coming up, so that will be designed. If there's any C code around that -- I believe it's 24 inches below grade. And it will also be encased in a concrete material. So it will be below grade, but also in a fill area, but not, you know, not getting into the cap, I believe the cap itself.

MR. MERCIER: Okay. So are you adding two feet of fill?

THE WITNESS (Judge): No, we're not adding two feet of fill, but we're adding a certain amount of fill. And we could mound that area above the conduit also.

MR. MERCIER: Are there new

overhead poles being installed to be connect to the distribution network?

THE WITNESS (Judge): So from the landfill to the service entrance there will be a few poles being added adjacent to that access road. Aerial cable will run down. It will dip in the underground, cross the road into our service entrance area.

From the service entrance equipment it comes back out into a new underground duct line, splice chamber and duct line system. It goes out on Cedar Creek Road, make a right onto Barnum Dyke Road. Continues in new underground up Atlantic Avenue just until we get past Sikorsky, the helicopter facility. And the we go up, go up onto an existing pole line and take a combination of existing pole line and existing underground facilities back to the Pequonnock Substation.

The reason we're building underground in that area is because there's restricted for poles in that area due to Sikorsky.

MR. MERCIER: You mentioned

construction of the access road on top of the landfill. You would have to -- is it 18 inches, you have to build up the road to a depth of 18 inches. Is that correct?

THE WITNESS (Judge): So as part of the disruption application with the Connecticut DEEP, we're going to have a design criteria for allowable bearing pressures on the cap. And that road is designed to take the bearing pressures from the vehicles that will be going onto the cap.

I can talk to Joe about what's the -- what's the typical construction of a -- or depth of construction for fill on j access road.

THE WITNESS (Himes): Under the -- because this is a soil cap, probably I would imagine typically be another foot of material we'd put on that. If it was a geo-membrane liner it would be different, but --

MR. MERCIER: Would the ballast, the concrete ballast, are they going to be constructed off-site and hauled the landfill?

THE WITNESS (Judge): So we have two different types of approved ballast that the contractor is approved to use. One is a cast in place system that is very similar to what you're looking at out on-site there. And the other is a precast system.

So they have the option to use -- I think there we're leaning towards the cast in place system, so they will be cast either on the landfill or off the landfill and brought up.

MR. MERCIER: Okay. So that would require a concrete mixer up on top of the landfill?

THE WITNESS (Judge): No, we would not. We would either pumping up in the landfill or we would be casting down on the -- on grade and them bringing them up to the landfill.

MR. MERCIER: Is that the same with the inverter pads?

THE WITNESS (Judge): The inverter pads are brought up with -- with machines. Oh, I'm sorry. The pads? I'm sorry. The pads themself are cast in place,

yes.

MR. MERCIER: Cast in place?

THE WITNESS (Judge): Yeah. And that will either be pumped up or -- any equipment that goes up on the landfill itself is going to be -- it's going to meet the design criteria for weight load -- weight limits.

MR. MERCIER: Okay.

Now you mentioned that the small wetland was formed by a settlement. Do you anticipate further settlement of this landfill cap while your project is functioning?

THE WITNESS (Judge): So we -- we conducted a settlement analysis based on the closure documents for the landfill, some survey information that was available. We went out and did some supplemental survey and we had analysis performed by Weston & Sampson and we had a second analysis performed by Black & Veatch just because we wanted to be sure.

They were both done independently. The conclusion of both

studies was that the landfill has settled, as -- as anticipated for a landfill of this -- of this makeup. It was solid waste material for a certain amount of years on bottom capped with a mechanically processed fill material. And the settlement was normal, as expected.

We do expect further settlement of the landfill. All landfills continue to settle, however this is expected in the landfill. And the material, as long as there's uniform settlements, which is as expected, the facilities are designed to settle with the landfill cap.

MR. McDERMOTT: Mr. Chairman, the settlement refers -- that Mr. Judge has referenced are not in the record. I'd be happy to submit those as a late-file exhibit, if Mr. Mercer is interested in reviewing them.

THE CHAIRMAN: Yeah, you can do that as a Late-File if you want.

MR. McDERMOTT: Thank you.

THE WITNESS (Judge): I can ask Mr. Himes if he wants to expand on any of

that.

THE WITNESS (Himes): Yeah, the landfill is expected to continue settling. It will get minimal and minimal each year as goes along. We don't expect it to settle much more and the actual system on the top of the landfill will not affect that at all.

MR. MERCIER: Just out of curiosity, is it settled by amounts of feet or inches?

THE WITNESS (Himes): A landfill normally settles in feet in the beginning. Now we're probably talking inches over a period of, you know, five years, ten years, something like that. So it's not going to settle much more, but it will continue to settle a little bit.

MR. MERCIER: Okay. With further settlement as projected, would that affect the angle of your panels and affect the output?

THE WITNESS (Himes): It could, yes. And that would be a maintenance issue with UI, whoever is running it, to make

sure the panels get adjusted. And most of those systems do have adjustments that are allowed. They'll go out, check it, adjust it and then keep on going.

MR. MERCIER: Would the weight of the facility, with the ballasts and the panels and the racking, would that affect the settlement, you know, accelerate it? Or --

THE WITNESS (Himes): It won't accelerate it, no. And from calculations we've done on similar systems to that, the system probably only affects the settlement by an inch, maybe two at the most.

MR. MERCIER: Is there any concern of settlement causing any fissures in the cap or anything like that?

THE WITNESS (Himes): No.

MR. MERCIER: What's the projected life of the facility? Is it 20 years or 25?

THE WITNESS (Judge): The -- the lease agreement we have with the City is 20 years. And the we have two options for five-year extensions. The design life of -- the warranty, I should say, on most of the

solar panels and equipment is 25 years. So what we are planning on doing is at 20 years see how the system is performing, extend the -- the lease for an additional five years and if it's still performing well, continue another five years.

MR. MERCIER: The State Historic Preservation Office had a recommendation regarding a certain style of plantings. Has UI come up with any type of scheme to satisfy that language?

THE WITNESS (Judge): To date we have not come up with any type of screening. We have agreed that we would screen the fence area. We do believe that the -- the vegetation out there is going to provide pretty adequate screening for that fence. The mugwort out there gross pretty high, so if there's additional screening that's required we believe we will step in.

MR. MERCIER: Does the project require any type of permit from the Department of Environmental Energy -- excuse me, Energy and Environmental Protection's Office of Long Island Sound program? I

believe they administer the coastal zone management act?

THE WITNESS (Judge): Not that we're aware of.

Joe, are we aware of it?

THE WITNESS (Perugini): Yeah. We would be required to get permitting through the coastal agency if we were within the coastal jurisdictional alignment, which in that area, I believe, is elevation five and a half. We're well above that elevation.

MR. MERCIER: There was a comment in the -- let's see, excuse me. The letter from the Department of Energy and Environmental Protection dated September 4th, there was a comment in there regarding glare from the solar panels. Would there be any effect of this potential glare on any pilots flying in the area to the local airport? Does anybody has any information regarding that?

THE WITNESS (Judge): We have a -- we have filed a -- with the FAA for a ruling on -- on this facility. And we got a determination of no hazard to air navigation

for this facility back from them and it was filed as record.

There has also been some glare studies done and to date there have been -- there have been no cases where solar facilities have been cited as a factor in air -- air accidents.

MR. MERCIER: I understand your filed with FAA and they gave you no determination letter. Do you know if they specifically look at that glare issue or is that just height?

THE WITNESS (Judge): Joe?

THE WITNESS (Perugini): Yes, glare is a consideration and it was deemed a no hazard.

MR. MERCIER: Thank you.

In regards to the fuel cells, they're fueled by natural gas. Is that correct?

THE WITNESS (Judge): Yes, they are.

MR. MERCIER: Okay. Can you comment on the -- give any information regarding any type of potential fire or

explosion hazards with the units used? What type of process is used in the units? And is there an explosive hazard, I guess, is my question?

THE WITNESS (Judge): The -- the process by which the gas is -- natural gas is used and it's used to get the hydrogen out of the gas. There is no combustion in the fuel-cell units themselves. So there's no potential for explosion through fire.

MR. MERCIER: So is there any specialized training the fire Department needs in case there's a fire at the fuel-cell facility, say, someone crashes a car into it? You know, some type of accident?

THE WITNESS (Judge): We -- we did have a meeting on site with the Bridgeport Fire Department, Police Department, Emergency Services, Parks Department, Public Works were all invited out just to review the project and concept. They will be involved in our design process and when the project starts they will be out for training.

The Bridgeport Fire Department

is well-versed in fuel cells. They have the 15 and a half megawatt fuel cell facility and they went through special training on that facility as part of that project.

MR. MERCIER: Okay. Back to my other just earlier comment. Is there any type of impact protection around the fuel-cell unit? Any kind of bollards or jersey barriers? Anything?

THE WITNESS (Judge): So the fuel-cell unit is raised up in elevation. There is a fence around it. The front will be on a retaining wall, so being struck from the front they're going to hit a retaining wall. The side entrance to the driveway is also partially a retaining wall. The back is the only part that has the grade coming up with the fence. There is no -- there are no plans right now for a bollard system in the back.

MR. MERCIER: Now in regards to the solar field, you know, if there was a grass fire or something up there, what type of damage could occur to the panels? Would they catch on fire? Would there be any kind

of electrical fire or anything of that nature? Do you have any information regarding that?

THE WITNESS (Judge): Joe, I'm not sure if I ever heard of any brushfires in -- yeah, there are no plans right now for a fire suppression system up on the -- the solar facility.

MR. MERCIER: I guess my question is, if there was a brushfires would the panels themselves catch on fire? And if the fire department went up there and started spraying water would they damage electrical units or get electrocuted or anything of that nature? Do you have any information as to the burn point for the materials?

THE WITNESS (Judge): I don't have information on that.

THE WITNESS (Perugini): The landfill area would be maintained to minimize the growth around it so there wouldn't be any brush adjacent to the solar system for that fire to occur.

MR. MERCIER: Okay. I'm just saying even the grass and it's a dry summer

and the grass catches on fire. Was there any concern that the panels themselves will combust or are they made of materials that don't burn?

THE WITNESS (Perugini): There's nothing on the system that would catch fire. It's all metal and concrete and wiring.

MR. McDERMOTT: Mr. Mercier, I'm happy to check with the company's contractor at the break and inquire further if you're interested. They're on standby by phone.

MR. MERCIER: Well, I'm sure -- yes, that would be fine. Thank you.

THE CHAIRMAN: If I can just follow up?

I mean, I think the concern might be that if somebody going up there could be -- the electricity that's generated, I assume there's a way that these can be turned off if that becomes an issue in an emergency. Is that --

MR. McDERMOTT: Mr. Judge can certainly address the safety issues.

THE WITNESS (Judge): Yeah, we could. The power could be should off from the main switch down at the service entrance area.

MR. MERCIER: I guess my final question is, would there be any cleaning of the panels over the year and any kind of chemicals used, manpower, wiping the panels down, or anything like that?

THE WITNESS (Judge): The -- our O&M agreement calls for cleaning one time a year and it's simply done with water.

MR. MERCIER: And how about snow. Do you have any snow removal or is it just going to be melt?

THE WITNESS (Judge): We do not to snow removal.

MR. MERCIER: Thank you. I have no further questions at this time.

THE CHAIRMAN: Thank you. We'll now continue with our Vice Chairman Senator Murphy.

MR. MURPHY: Thank you, Mr. Chairman.

I just have a few items. The

first question I have, really I feel -- I'll ask, although I think in this case the answer is pretty obvious.

But at least this member of the Council, we had an unpleasant experience with a petition in Somers where in effect they came in, as you are here today, not really set to do what ultimately they wanted to do.

They changed the type of panels from, originally fixed and mobile to didn't have that subtle -- changed the area in which they wanted to put the panels, the number of panels, the number of trees that had to be cut, the number of things in the D and M plan that really didn't belong in the D and M plan.

I think it's pretty obvious from what I've heard and read and what you've been through with the Town of Bridgeport, that, basically speaking, you've done your homework and what you've presented to us and we're hearing starting today is really the real nuts and bolts, the substantive part of what you're going to ultimately place here in

Bridgeport, if it's approved, has been thought through and agreed to.

THE WITNESS (Judge): Yes, I -- I will go even further in saying our design is advanced. We just have prepared our disruption application which includes advanced design, or a detailed design to go to Connecticut DEEP. Our design for permitting electrical and building permits have started already, so our design is very well advanced and what you're seeing is what we intend to build.

MR. MURPHY: Good. Thank you.

From what I've seen I'm sure that that's it, but I just felt that we don't want to go through that again.

Early on especially it was difficult in the acoustics here to hear, and in reference to the 15 feet for FEMA and the storm surge, did I understand your answer to be that the 13 feet is there for global and storm surge height both?

THE WITNESS (Judge): I'm sorry. You said you understand the 13 feet is what level?

MR. McDERMOTT: FEMA.

THE WITNESS (Judge): It is. FEMA defines the storm surge level.

MR. MURPHY: Right.

THE WITNESS (Judge): So it is the -- it is the anticipated for the water to be at during the storm surge.

MR. MURPHY: But I also thought I heard that that includes the storm surge.

THE WITNESS (Judge): Yes, it does.

MR. MURPHY: Is that correct?

THE WITNESS (Perugini): That's correct.

MR. MURPHY: Because my recollection was when Sandy was coming that the predictions for -- there was a difference between the storm surge and that's the reason I ask.

THE WITNESS (Marone): Just as a point of reference, during Storm Sandy, at our Congress Street Substation, which is just on the other side of town, we had issues with that substation which we had deenergize that.

So what we're pretty well aware of what the storm surge actually reached in the floor level at that substation. And the storm surge was about ten feet, and our substation critical equipment was just above ten feet at that time. And the substation yard was below ten feet. So during that event we reached in Bridgeport about ten feet, so the FEMA level for the storm surge is 13 feet, about three feet above what we saw in Sandy. And the plan for this is to have the fuel-cell facility at 14 feet.

MR. MURPHY: So it's your understanding they're both the same, that the storm surge is incorporated into the number that they give, in this case, 13 feet.

THE WITNESS (Perugini): Yeah, the storm surge is the description of the water rising. The 100 --

MR. MURPHY: For someone who lives in a floodplain zone who's up 11 feet above the ground I understand these things.

THE WITNESS (Perugini): Right. And the 100-year storm, the FEMA 100-year storm that is documented on their

website and in their mapping, the official line is the 13-foot elevation and various storms either have a surge that exceed or are below that, but that is the documented official line by which building code will allow construction of items like the fuel-cell or buildings to be above.

MR. MURPHY: And Mr. Libertine, I take it from your response regarding the chain-link fence and potential stockade fence that you, in your professional opinion, don't see any need fencing type screening for this facility?

THE WITNESS (Libertine): I don't see a need for going to that extent. I think the chain-link fence is really a security issue more than it is aesthetic. There will be areas where you could see through the fence, but there will be several areas from a distance where the fence will be actually at a lower elevation than the top of the facilities in some -- in several locations.

So when you compare -- when you combine all the issues, especially with

the wind blowing and some of the other structural issues and safety issues I think the stockade fence really doesn't make sense here.

MR. MURPHY: And with the suggested type of vegetation screening and what have you, what's your opinion as to what, if any, screening should be done outside the fence?

THE WITNESS (Libertine): I saw the SHPO's opinion on the screening. I personally don't believe there's a need for additional screening. We have sufficient buffer outside the fence line.

As you saw today, that vegetation grows substantially. The grasses, many of the weeds and the other herbaceous layers that grow there and shrub layers are fairly tall. They do stay through the winter even when they die back to a great degree. So I think there's already sufficient screening.

My bigger concern is probably the fact that I'm not sure what you could plant there. I don't know the extent of the

entire landfill, but I imagine some of those slopes are within the capped area and I think now you have some -- you have some serious considerations there in terms of doing any planting.

MR. MURPHY: All right. And again it was the exchange when it was hard to hear and understand, it's my understanding that the answer was your obligation is to maintain within the fenced area?

THE WITNESS (Judge): Our obligation is to maintain with the leased area.

MR. MURPHY: The leased area?

THE WITNESS (Judge): Yeah, our plan is to mow within the fenced area.

MR. MURPHY: Mow the?

THE WITNESS (Judge): The grass.

MR. MURPHY: The fenced area or the leased area?

THE WITNESS (Judge): To mow within the fenced area.

MR. MURPHY: Within the fenced area.

Okay. I have no further questions, Mr. Chairman.

THE CHAIRMAN: Thank you.

Mr. Ashton.

MR. ASHTON: Thank you, Mr. Chairman. I have a bunch of questions. I will try and make my time short.

We got talking a few minutes ago about talking about a fire in the solar field. My observation of the framework of those solar panels is aluminum. And given a lightning strike could it not possible that aluminum would ignite?

THE WITNESS (Judge): We actually had a grounding study performed on the property, and landfills are poor areas lightning strikes so they're not -- they're not primaries for lightning strikes.

MR. ASHTON: There is lightning protection on the system, I assume, that you're installing?

THE WITNESS (Judge): Yes. Yes.

MR. ASHTON: Anyway, a lightning strike would be what the service

people might call an act of God or something like that, so you have limits as to what you can protect on it.

Another miscellaneous item was I noticed in reading the material that the fencepost were going to be excavated down 12 inches. Is that correct?

THE WITNESS (Judge): So they're actually -- the fenceposts are ballasted, so there's a big concrete block at the bottom of each fencepost and that block will sit 12 inches into grade.

MR. ASHTON: So the 12 inches merely picks it -- or holds its position on the slope?

THE WITNESS (Judge): You've got it. Yeah, it keeps the --

MR. ASHTON: It doesn't do anything to give any structural stability?

THE WITNESS (Judge): It gives the concrete block some structural stability, but not much.

MR. ASHTON: And you're designing the fence to withstand 110 miles an hour wind per state code.

THE WITNESS (Judge): The fence? I'm uncertain about that.

The panels themselves are designed for 110 miles per hour. The fence? I'd have to check into and answer on that.

MR. ASHTON: May I suggest that I think you've got to take a look at what that fence is going to withstand.

THE WITNESS (Judge): A fence being a structural item, I'm sure it's designed to the same structural code as the -- as any building or structure.

MR. ASHTON: There was a question about fencing at the site. What kind of mesh are you proposing to put it for A, the fuel-cell site, and B, the solar sight? What size mesh?

THE WITNESS (Judge): So for the fuel-cell site we anticipate putting in a one-inch mesh, like our substations. And for the solar site we anticipate putting in a two-inch mesh.

MR. ASHTON: Is it fair to say that the chances of finding a one-inch mesh are slim to none, where it's a little bit

higher with a two-inch mesh?

THE WITNESS (Judge): Yes.

MR. ASHTON: Okay. Now that's a relatively new development.

There's mention of a $7 million tax benefit to the City from this facility. And it's unclear to me whether that's over the initial lease period or the initial lease period plus the two options?

THE WITNESS (Judge): That is only for 20 years period.

MR. ASHTON: Only for 20. So if you step it out for another ten years you get additional benefits. Is that fair to say?

THE WITNESS (Judge): Correct.

MR. ASHTON: It's roughly proportional?

THE WITNESS (Marone): The assets would be depreciated at that point, so I'm not sure exactly what the tax would be, but you would have fairly depreciated assets.

MR. ASHTON: Well, that applies for your county depreciation, but not for tax, property tax purposes. Does it?

THE WITNESS (Judge): It's for property tax purposes, however our agreement with the City is if the assets fall below a certain value there is a minimum lease of $150,000.

MR. ASHTON: Does either of these facilities have control from a remote location? Can you start up a fuel cell, or shut it down, or does solar run from some remote location?

THE WITNESS (Judge): The solar runs continuously. As long as the sun is our the solar runs. We will have SCADA to our switching equipment and to our protection equipment so that's the type of automation that we -- we will have.

MR. ASHTON: Okay. So you can do some --

THE WITNESS (Judge): Yes.

MR. ASHTON: Is there any black start capability to these devices? Do you know what I mean by black start?

THE WITNESS (Judge): You're referring to the fuel cell facility. Right?

MR. ASHTON: You know, if the

system goes down can you bring these up, begin feeding power into a system?

THE WITNESS (Marone): There's not -- there is a capability to do that. That is not part of this project. It does not have black start capability.

MR. ASHTON: In that regard was there any consideration of suppling the power from these facilities over to the Resco site which is, my memory serves me, has got about a 35-megawatt capability, and help that with the black start.

THE WITNESS (Marone): Technically that's definitely possible, but it was not included as part of the project simply because of the cost. And so some of the constraints with respect to the overall budget and what we filed with PURA did not include black-start capability for these facilities. Black-start capability is something that can be added in the future.

MR. ASHTON: Was there an economic study done of tying it to the Resco facility?

THE WITNESS (Marone): No.

MR. ASHTON: So we don't know whether that's more or less at this state. Is that fair to say?

THE WITNESS (Marone): There was not an economic study done to tie it to Resco.

MR. ASHTON: Okay. So my answer, my comment stands. We don't know?

THE WITNESS (Marone): No. Right.

MR. ASHTON: Is that something that UI might like to take a look at and see whether there's any advantage to firming up the supply?

THE WITNESS (Marone): We could take a look at that.

MR. ASHTON: Okay. Is there going to be a development management plan at all for the fuel-cell? I know it's a pretty stark neighborhood and you've got a lot of industrial property around it, but is there going to be, other than cleaning up the trailers, is there going to be any dressing up of the site?

THE WITNESS (Judge): Yes,

that area is going to be cleaned up around the fuel-cell area.

MR. ASHTON: That would be very nice.

Okay. Does ISO give you any credit for the capability of the -- either the fuel-cell or the solar panel, or is it strictly energy benefit that you get?

THE WITNESS (Marone): No, that these facilities will produce renewable energy credits that will be registered with ISO. Those will be sold into ISO market the REC value from the output of the PV panels as well as the fuel cell. Additionally the fuel cell, that capacity will be registered with ISO as it will be a capacity resource.

MR. ASHTON: Okay. So that takes care of the fuel cell, but there's no capacity credit, I assume, on the solar panel?

THE WITNESS (Marone): No, there's not.

MR. ASHTON: Okay. Is the distribution in this neighborhood of the Pequonnock bus?

THE WITNESS (Judge): Yes, it is.

MR. ASHTON: Okay. The fuel cell in the report -- oh, one other big question I have. As I read through this humongous document I was surprised to see a lot of wind. There's not any wind involvement with this site, is there, or this project?

THE WITNESS (Judge): No. That is -- that was part of a --

MR. ASHTON: That was a scoping survey or something?

THE WITNESS (Judge): You've got it. Exactly. What technology is available, what would be considered.

MR. ASHTON: The education was great, but it's just not germane to the issue before the Council.

I read in the report, and to my surprise that the fuel cell was going to take nearly 14,000 gallons a day of potable water. What does it use it for? Is that cooling or what?

THE WITNESS (Judge): It is

for cooling, yes.

MR. ASHTON: It has to be potable water for cooling?

THE WITNESS (Marone): I believe so.

MR. ASHTON: I'm sorry?

THE WITNESS (Marone): I believe so.

MR. ASHTON: Okay. All right.

We talk about the landfill settling. And I'm not quite sure how confident you are that this is not going to have a settlement. What if there is some settlement, which is not at all unusual in landfills? Have you done any tests of loading of the soil here to see what its capability is?

THE WITNESS (Judge): We have done specific tests on loading, however we're generally not, as we've talked about before we're not concerned with uniform settlement. Uniform settlement is natural.

MR. ASHTON: Right. No, I understand that. Everything goes down together, you're in good shape.

THE WITNESS (Judge): Yeah.

MR. ASHTON: But what happens when --

THE WITNESS (Judge): It's the differential settlement, so there are -- there's equipment out there that measures the panel and the output and the horizontal and anything that settles indicates and we know about.

And in our regular maintenance we'll go out there and fix depressions or whatever if we do get some differential settlement. The system can tolerate a certain amount of settlement, but if it goes beyond that we have to do the standard O&M on a -- on a landfill.

MR. ASHTON: Have you thought about using any other kind of foundation? For example, a skirt-in-anchor type of thing that would presumably reach down far enough that you wouldn't get the settling?

THE WITNESS (Judge): Well, being a landfill we just didn't want -- we didn't want to penetrate the cap itself and disturb the integrity.

MR. ASHTON: I understand. Okay. So what you're saying is that potentially there could be a problem, but you're prepared to address it on a maintenance basis?

THE WITNESS (Judge): Yes.

MR. ASHTON: Okay.

There was -- I'm getting closer to the end. There were two things in here that I found contradictory. One was -- I think it's the recent reply that indicated there is no degradation of the efficiency of the cells, whereas with everything else I've read including the doorstop booklet and every other document I've read says there's about a half percent degradation in capacity per year.

What's happening here?

THE WITNESS (Judge): So it's not the --

MR. ASHTON: Have you found the answer to the, you know, the fountain of youth? Or what?

THE WITNESS (Judge): So the efficiency of the panel, of our panels is

approximately 14 percent or so. There is degradation of a half percent per year, but that's not the -- the actual panels. And it's the -- it's not the cells themselves. It's the -- the entire panel. So it's the 310-watt panel and with the wiring and --

MR. ASHTON: That's fine.

THE WITNESS (Judge): And so you lose about half a percent per year.

MR. ASHTON: So we're talking really two slightly different things?

THE WITNESS (Judge): Correct, yes.

MR. ASHTON: I'm talking the whole schmear.

THE WITNESS (Judge): You've got it.

MR. ASHTON: The total package, and you're saying that that does go down by roughly half a percent per year.

THE WITNESS (Judge): That's correct.

MR. ASHTON: Whereas the panel in isolation does not?

THE WITNESS (Judge): Correct.

It does slightly, but it's miniscule.

MR. ASHTON: Now I understand. That made me feel a little better.

Have you done any work on looking at the production of power from the solar site on a summer day versus on a winter day? And you've told me you've got a compromise angle of 20 degrees in there, where the optimal is 35. And I'm kind of wondering how you were able to optimize, if you will, the design of this.

Is it fair to say that a summer day at the optimal angle will produce a hundred percent of power, one unit of power, but then as you get off the noon, or the zenith, either direction, that does drop off a little bit?

THE WITNESS (Judge): Yes.

MR. ASHTON: Can you tell me roughly how much it does when you go from the zenith to, say, five o'clock? Any gut feel for it?

THE WITNESS (Judge): I don't have a number of that.

Joe, do you have any

information on that? That's another thing we can get for you in the --

MR. ASHTON: Okay. Before you make a lot of notes, let's go through this thing.

We shift now to the winter and the winter in Connecticut, we are not a winter peaking system. We're a summer peaking system. And the ideal would be to have maximum output at the summertime, which would -- to Phil, in Phil's law, favor the optimal angle of the panel towards the sun.

How much of a degradation from that 100 percent figure that I arbitrarily used is there when you get to the winter peak at the zenith? And how much then does it drop off further towards the latter part of the afternoon or the early part of the morning? I'm trying to figure out a sense as to how much energy you produce from these panels by the critical hours in both winter and summer and I really have none.

THE WITNESS (Marone): I understand the question. I don't think we

have the answer, but we'd be happy to get it.

MR. ASHTON: Okay. I'd like to hear a little bit about that. I'm concerned. I'm absolutely in favor of any better way to skin the cat energy-wise. I think the cheapest form of energy saving comes from increasing the efficiency of our utilization.

For example, do a first-class job of insulating and lighting a building like this, my home and all the rest of that. But given that, and there's also the other end of the spectrum I have to work on and that's the production end. And I think that societally-wise, our society is pushing solar because it doesn't have emissions, but it has a substantially high, higher cost than conventional generation.

That is matched -- or masked rather by the enormous subsidies that we're throwing on these things. And I am not sure that, for a societal benefit, is the way to go. I'd like to hear a little bit about how this generation works. How you pick that optimal angle, in this case, 20 degrees.

THE WITNESS (Marone): We'd be happy to provide some additional information that -- to give some -- some facts about that.

MR. ASHTON: Okay. That's all right. I'm not --

THE WITNESS (Judge): If I'm hearing what you're saying there correctly is that you're interested in finding that peak generation at peak times in the summer, what would the sacrifice be at the shoulders for that, for that purpose?

MR. ASHTON: Yes.

There was one thing mentioned in the report, and correct me if I'm wrong, the report of the consultant. Who was it? Weston & Sampson talked about, quote, visual gas emissions. I think they mean visible gas emissions, but that was just for the hazardous waste site, but not for the landfill itself. Is that correct?

The visual gas emission was referred to on page 7-1. I think it's a misspeaking, but I think you mean visible, not visual.

THE WITNESS (Judge): I am not familiar.

MR. ASHTON: Apparently they saw something bubbling up out the ground, but I have no idea what. I just want to make sure it's not on the landfill site. It's on the hazardous waste site.

MR. McDERMOTT: I'm sorry, Mr. Ashton. It's 7-1 of what report are you referring?

MR. ASHTON: What report? I believe it was the one that came with the Weston & Sampson report. Yeah, Weston & Sampson. It's on page 7-1, which is -- it's the Section 7.0, summary of findings. It's the second paragraph, that one, two, three, four, fifth line right in the middle. And it says, visual gas venting observed during a 1987 site inspection.

Okay, Counselor? You've got it?

MR. McDERMOTT: I have the report. I'm looking for the words now.

7-1?

MR. ASHTON: 7-1, second

paragraph, middle of the fifth line.

I assume the more correct word would be visible?

THE CHAIRMAN: And in what year was this?

MR. ASHTON: It was the study done, the site inspection done in 1987.

THE CHAIRMAN: You think we can move on? I mean --

MR. ASHTON: I assume it's not relevant because it's on the hazardous waste site. Ya vol?

THE WITNESS (Perugini): This is an historic report that visual gas venting was observed during this 1987 inspection.

MR. ASHTON: I can't hear him.

THE WITNESS (Perugini): And furthermore as a result they did several exploratory and testing programs to evaluate the source of the gas venting and the follow up revealed that none of the -- no --

MR. ASHTON: My question was really very simple, very, very simple. Visual means visible. Is that correct?

THE WITNESS (Perugini):

That's correct.

MR. ASHTON: Okay. Thank you.

That's the hazardous site, not to this site. Is that right?

THE WITNESS (Perugini): Yes.

MR. ASHTON: Okay. Good. Now we're making progress.

That's my questions. Thank you, sir.

THE CHAIRMAN: Thank you.

Senator Daily.

MS. DAILY: Thank you.

Will there be lighting?

THE WITNESS (Judge): There will be no lighting installed on top of the landfill in the solar area and there will be lighting, for task lighting installed down on the fuel-cell area at the service entrance.

MS. DAILY: What kind of lighting?

THE WITNESS (Judge): Task lighting that could be turned on and off.

MS. DAILY: Okay. Thank you.

That's it.

THE CHAIRMAN: Thank you.

Dr. Klemens.

DR. KLEMENS: Thank you, Mr. Chairman.

I have questions in three categories. The first is talking about the storm surge. Are you aware that Bridgeport received a grant of $10 million to look at surge flooding at Seaside Park and they are considering even putting a gate across Black Rock Harbor to control flooding?

THE WITNESS (Judge): I was not aware of that.

DR. KLEMENS: Okay. There are photographs online showing the storm surge flooding of Seaside Park and I'm looking at the elevational contours of that park and the location of the fuel cell. So I'm not comforted by the arguments that it only should be at 14 feet. I think it's at risk. I'd like you to look more into that.

Also your comment that you need to have a creek or some -- a creek, that's near a creek that causes the actual 500-year flood elevation. Could you explain to me the relationship of Cedar Creek to

that?

MR. McDERMOTT: I'm sorry. Mr. Chairman, before we go further, I wasn't sure if there was a request on the 14-foot elevation. Are you asking us to do additional work on that or are you just --

DR. KLEMENS: Well, I'd like you to try to answer it. And I'd also like you to explain to me you proffered a definition that you do not have a 500-foot elevation because those are generally near coastal creeks. And I'm looking at the map and your submission and I see Cedar Creek flowing right next to the site emptying into Black Rock Harbor.

So I'm a bit puzzled why there is not a 500-foot elevation on this site. I would like you to look more into it and comment on it, please?

THE WITNESS (Perugini): With regards to the FEMA 500-year flood elevation, that is directly from FEMA, that they -- they do not depict any 500-year flood line in the vicinity of the fuel cell.

DR. KLEMENS: There is no

flood line in the lands associated with Cedar Creek?

THE WITNESS (Perugini): Not in the vicinity of the landfill on that side.

MR. McDERMOTT: Mr. Chairman, we'd be happy to submit the FEMA map, if that would help.

THE WITNESS (Perugini): Yeah, we can provide that.

THE CHAIRMAN: Well, that would help, yes.

DR. KLEMENS: Well, as a precautionary safeguard, seeing the amount of flooding that occurred at Seaside Park, could that fuel cell be raised somewhat higher than the hundred-year storm? Because I'm also reading that Bridgeport had a 12.5 to 15-foot storm surge with Sandy.

I don't know what that translates to on the ground, but somehow it seems a little bit shaky to have that fuel cell protected only with that 14-foot elevation.

THE WITNESS (Marone): Right. So as we mentioned before that, you know, for

the FEMA map and guidance 13 feet would be the -- the required height. And we've gone one foot beyond that to make it 14 feet.

And just as the relative frame of reference, during Storm Sandy, Bridgeport, the peak at that point was just about ten feet. So we're about four feet above where the water rose to during Sandy with the current design.

DR. KLEMENS: And what happens when saltwater hits that fuel? Let's say it does get up into the fuel, what happens to the fuel cell when salt water hits it?

THE WITNESS (Marone): Like any electrical equipment, if -- depending on where the saltwater got to, it certainly could cause damage, so it's always a concern.

DR. KLEMENS: Could it cause an explosion?

THE WITNESS (Marone): No, I don't believe that that would be what the risk would be. When I think about explosion risk and saltwater, you know, we worry about that at substations. You know, you can create a lot of hypothetical scenarios, so

it's hard to -- to say exactly, but we believe that the height at 14 feet protects all the -- all of the sensitive equipment.

DR. KLEMENS: Thank you.

And I have trouble hearing back here. It's -- the acoustics here are very poor. And I know Mr. Ashton already discussed the declining output of the solar panels over time.

I looked today at the solar panel installed, the little clasps that are on the side, I think there were four. And I wondered, is that sufficient at a high wind to hold that panel down and not have it become airborne? It didn't seem very strong to me, four screws and a clip in a high-wind situation.

THE WITNESS (Judge): Well, that was a -- a mockup of what a panel would look like. The panels, the construction, the design, the manufacturing are all designed for wind load -- for wind speeds of 110 miles per hour in this area.

DR. KLEMENS: Those four clips will hold wind speed of 110 miles an hour?

THE WITNESS (Judge): Yes, and I'm not sure if those four clips were the actual clips that would be installed. That was -- that was a mockup in the field right there.

DR. KLEMENS: Well, indulge me for a minute. Let's think that it doesn't hold and one of those panels becomes airborne and blows, hits the ground and shatters. Can you tell me what's inside those panels?

THE WITNESS (Judge): There's silicone inside those panels.

DR. KLEMENS: Excuse me, sir?

THE WITNESS (Judge): There's silicone inside those panes.

DR. KLEMENS: There are no metals or any other thing we should be concerned about if they break?

THE WITNESS (Judge): No. I mean, I can get the -- we can get the information on the makeup of a solar panel to you, but not to my knowledge.

DR. KLEMENS: Silicone?

THE WITNESS (Judge): Yes.

DR. KLEMENS: Okay. My last

set of questions deal with the environmental reports that were submitted. And it I don't know if you're the person I should direct this to. I'd really like to speak to the one of the wetland scientists about these reports, if it's possible.

But my first question is, I'm a bit puzzled who actually did the delineation report and the functions and values analysis. There's a report there. Mr. Hagerman was supposed, I guess, did the delineation. A gentleman whose CV we don't have named Josh Weiss filled out the field forms and a planner did the functional evaluation. Laurel Stegna did the functional evaluation. So I really don't know who did this wetland report. It seems to have been cut into pieces and part of it compiled by people who are not wetland scientists.

MR. McDERMOTT: Mr. Chairman, I'm going to respond to the last part of that, but we actually do have in the audience the consultants who did the wetlands report on behalf of Weston and Sampson, Fitzgerald & Halliday, two representatives. They could

address the questions that we have on the wetlands report if we were going to peel back the onion and go down a few layers.

They would, of course, need to be sworn, but they are prepared to testify and answer any questions on the wetlands report.

DR. KLEMENS: I have no further questions. I'll defer those wetlands questions to the continuation.

Thank you.

THE CHAIRMAN: Dr. Bell?

We're going to break in about 20 minutes. So it's --

DR. BELL: I have a follow-up question about -- to Mr. Ashton's question about ISO, which again as Dr. Klemens said it's hard to hear especially when we're in the back row because the sound is projecting out to you.

But I believe you said that the fuel cell will count as capacity for ISO, but the solar panels, the solar installation will not. I'm trying to figure out how that could be the case since the RPS standards

that we have in Connecticut, which are -- essentially go through ISO, have to do with capacity. And I can't understand why a solar facility of this magnitude wouldn't be counted as capacity.

THE WITNESS (Marone): I won't proclaim to be an expert on all the rules of ISO, but it's my understanding that -- while the output, the energy output and the REC value of the PV part -- portion of this project does go into the ISO markets, the PV cannot be listed as a qualified capacity resource by ISO and that's just part of the ISO rules.

Now I -- we can check on the break. I know that there's some review where that may be changing over time, but as we stand here today that's not the case. The PV cannot be a capacity resource. It doesn't qualify under the ISO rules. Yeah, because it's an intermittent resource. It can't be relied on.

DR. BELL: Well, I understand what an intermittent resource is. That means you wouldn't be able to count wind either.

And it's -- again, just to go back to my basic question. We have an RPS standard. It's the standard that's administered through ISO. If they're not -- our RPS standards include wind and solar. So it's hard for me to understand how that, how a person, how ISO would not count it as capacity. I hear in your answer that it doesn't count. I guess that's why I can go on, but it's a hard answer to understand. Let me move on.

THE WITNESS (Libertine): Mr. Chairman, we'll add that to the list of growing homework assignments and report back at the continuation.

DR. BELL: Okay. To go back to the fuel cell for a minute, do you know what the actual type of fuels, what actual technology is being used? For instance, is this is a solid-oxide fuel cell?

THE WITNESS (Marone): I believe -- I believe it's molten carbonate, is the technology term.

DR. BELL: Molten carbonate?

THE WITNESS (Marone): Yes.

DR. BELL: Thank you.

I have some questions about the storm management system at the solar panels. And maybe -- I think maybe rather than ask the questions right now and run into the five o'clock deadline, it would be better if I just indicated what the questions were and then we could go onto the continuation.

My concern is -- has to do with essentially with putting a permeable surface onto this land and saying that you're not changing the ground in any way. One could simply ask, well, you're changing the ground by mowing down to less than two inches, because one could see out there today that a lot of the grass, the vegetation is higher than two inches.

But without going into that, I guess my specific questions would relate to what portion of the 11 acres, 11.2 acres of solar panels is actual solar panels, as opposed to spaces in between the solar panels, where rain could actually fall onto ground and be absorbed? So that's one type of question.

It looks to me from the

diagrams that I can see on the various site plans here that the solar panels are assembled in rows so that they're not separated. They are only separated by one long strip and then comes a row of solar panels, and then the next long strip.

So at what point -- it looks pretty impermeable to me. Okay. So that's one set of questions.

The second set of questions is -- has to do with the slope of the panels. Obviously there's the slope you've already described. The maximum slope is going to be seven feet because you're going to -- where the maximum slope is 14 feet, you're going to reduce it to seven feet. Okay? So that's the slope that the base of the panel would be on.

But then there's the slope of the panel itself because the bottom part is two inches -- two feet off the ground and the top part is 4.2 feet off the ground. So adding those two slopes together what is the slope that you end up with? And how can you -- have you adequately calculated for

that when it comes off the bottom of this impermeable surface onto the grass.

I saw what you said in your answers to 22, 23 and Number 24, but I'm asking for more detail on those questions. And that's -- those are my sum of questions about the storm management statements that you make in the application and in the responses to interrogatories.

Thank you.

THE CHAIRMAN: I just want to ask -- I don't want to cut you short, but do you have -- Mr. Hannon, do you have questions that they might need time to clarify so we can at least get them out?

MR. HANNON: Hard to say.

If you want to adjourn at this point in time I have no problems picking up questions at the continuation. I'm fine with that.

THE CHAIRMAN: Okay. We're going to adjourn the meeting. I see somebody is about ready to press a button. Do you have a -- no?

MR. McDERMOTT: Just my

natural position at this point in the hearing.

THE CHAIRMAN: Okay. And we're going to reconvene for the public portion of the hearing at seven p.m.

Thank you.

(Whereupon, the witnesses were excused and the above proceedings were concluded at 4:51 p.m.)

CERTIFICATE

I hereby certify that the foregoing 98 pages are a complete and accurate transcription of my original verbatim notes taken of the Public Hearing in Re: DOCKET NO. 1104, PETITION FROM THE UNITED ILLUMINATING COMPANY FOR A DECLARATORY RULING THAT NO CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS REQUIRED FOR THE PROPOSED CONSTRUCTION, MAINTENANCE AND OPERATION FOR OF A 2.2 MEGAWATT SOLAR PHOTOVOLTAIC FACILITY AND A 2.8 MEGAWATT FUEL CELL FACILITY ON APPROXIMATELY 22 ACRES OF THE FORMER SEASIDE LANDFILL LOCATED AT 530 WALDEMERE AVENUE, BRIDGEPORT, CONNECTICUT, which was held before ROBERT STEIN, Chairperson, at Bridgeport City Hall, Council Chambers, 45 Lyon Terrace Bridgeport, Connecticut, September 11, 2014.

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Robert G. Dixon, CVR-M 857
Court Reporter
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I N D E X

EXHIBITS

(For Identification.)

I N D E X (Cont'd.)